Cognitive Dissonance Shaping Consumer Behaviour within Generation Z:

A Case of the Indian Healthcare Industry

A thesis submitted to Middlesex University in partial fulfilment of the

requirements for the degree of Doctor of Philosophy

Durga Vellore Nagarajan

M00375155

Department of Market, Branding and Tourism

Business School

Middlesex University London, UK

July 2022

Abstract

This thesis integrates two cognitive dissonance concepts in a pre-decisional context: (i) Festinger's, 1957's initial understanding of cognitive elements as drivers arousing dissonance and dissonance becoming a motivator for behaviour; (ii) the premise of the action-based model of dissonance developed by Harmon-Jones in 1999 including the notion that cognitive elements arousing dissonance, already stem from a goal-oriented place due to brain and mind developments among generations to understand the cognitive underpinning of the shift from mainstream to complementary alternative medicine currently happening worldwide. Given that a cognitive heuristic element can be anything from inner knowledge to self-beliefs etc.), to enhance specificity for this thesis, latent needs have been chosen as the focus of cognitive drivers. Specifically, the literature in this study has delineated theoretically and conceptually that a latent need as a cognitive heuristic element is capable of arousing pre-decisional dissonance. This is because latent needs in this study have been exemplified as arousing from the pre-reflexive self-awareness state in an individual, which is the arena from which cognitive elements as drivers operate. Thus, this thesis becomes the first to establish a typology of pre-decisional cognitive dissonance states in a highly cognitive and reflexive cohort as generation Z. Moreover, to establish that pre-decisional cognitive dissonance states affect information processing and guide the individual from the need recognition stage of consumer decision-making which has been underexplored in academic literature.

After an extensive integrative literature review wherein cognitive dissonance theory's evolution and studies were scrutinised and gaps/omitted themes delineated chronologically from 1957 till 2022, the conceptual standing was cogently established. Following this establishment, the neurological and behavioural presence within the cohort in question, Zers, was explicated. Post the conceptual delineation, qualitative data were collected to achieve the objectives set out and to answer this thesis's research questions. The data constitutes 35 Generation Z members using semi-structured interviews. For this thesis, the context chosen was first India as demography, and within that – healthcare as a sector. This demography was because the largest Zers population in India is currently surpassing China, and there has been no study on this specific context and theory. Second, the generalisability and application can be more far-reaching from demography with the maximum Zoomer population, along with

the insights gained from a complex setting such as healthcare. Third, there is currently a significant shift from mainstream to alternative medicine the world over, so the generalisability will increase manifold by detailing the cause of the shift of a substantial section of the cohort. The sampling technique to recruit the participants was purposive sampling. Every participant was weighed upon this study's specific inclusion and exclusion criteria. After data collection, the data was analysed via the thematic analysis approach. Following this, the data was interpreted alongside critically reviewed literature to bring out novel conceptual understandings aligned with the objectives and questions.

The findings from this study indicate that four main categories of latent needs perform the role of cognitive heuristic elements within generation Z members. From the data, these latent needs are observed to arouse pre-decisional action-based cognitive dissonance within Zers. Resulting from the data analysis, this thesis has addressed the following research gaps theoretically and practically. First established pre-decisional cognitive dissonance states. Second, established latent needs as a cognitive heuristic element that arouse pre-decisional action-based cognitive dissonance enforcing in selective exposure due to affect-regulation of the ACC mechanism prevailing within Zers. Thus, the thesis has delineated and developed a novel data-driven consumer decision-making process for the new-age digital native consumer, to name a few. Practically speaking, this study enables an in-depth understanding of a new-age cohort and their cognitions and motivations, understanding how and why they will upend various market sectors. Second, what sort of content marketing should be undertaken for Zers and their successors-gen Alpha. Third, what should allopathic healthcare providers consider appealing to, and how concerning this cohort; one that is refraining from partaking in their treatments.

Publications

Research Output in Peer-Reviewed Journals

Priporas, C.-V., Vellore-Nagarajan, D. And Kamenidou, I.(E). (2022). Stressful Eating Indulgence by Generation Z: A Cognitive Conceptual Framework of New Age Consumers' Obesity. **European Journal of Marketing**, Vol. Ahead-Of-Print No. Ahead-Of-Print. https://doi.org/10.1108/ejm-06-2021-0386

Priporas, C-V. & Vellore-Nagarajan, D. New-Normal Market Entry Mode for Pharmaceuticals: An Internet of Things (IoT) Market Entry Framework Stemming from COVID-19 (Accepted – **International Marketing Review**).

Priporas, C-V., Vellore-Nagarajan, D. & Kamenidou, I. A Technology-People-Integrated Toolkit for Retail Care Management During an On-Going Pandemic. (Accepted - **Journal of Retailing and Consumer Services).**

Book Chapter

Vellore-Nagarajan, D., Priporas, C-V & McPherson, M. (2021). Sustainable Branding in Healthcare within Generation Z in a Developing Economy. In P. Foroudi & M. Palazzo (Eds.), *Sustainable Branding: Ethical, Social, and Environmental Cases and Perspectives*, (1st edition), London: **Routledge** DOI: 10.4324/9780367855703-21, pp. 324-343.

Conference

Vellore-Nagarajan, D., Priporas, C-V & McPherson, M. (2021). Pre-Decisional Cognitive Dissonance Shaping Consumer Behaviour Within Generation Z: Preliminary Evidence, In **Proceedings of the 14th International EuroMed Academy of Business Conference**, (September 22nd – 24th, 2021).

In-Review

Nagarajan, D.V., & Priporas, C.V. Post Pandemic Digital Healthcare Considering Generation-Specific Technical Knowledge: A Hybrid Conceptual Framework of Digital Healthcare Onboarding and Appropriate Technology. **Technology and Social Forecasting Change**.

Acknowledgements

Dedication

With pride and joy, I dedicate this thesis that I hold so close to my heart to...

My constants in life – Dr Veronica H. Carter and Dr John D. Carter, your encouraging and insightful thoughts have kept me going always...

My dearest parents, Vyjayanthimala and Nagarajan, I don't say this often but thank you for everything.... including learning and growing with my growth...

My 17-year-old younger self, it took a while for you to get here...fly high and soar onwards...

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION

CHAPTER 2: LITERATURE REVIEW

LIST OF TABLES

LIST OF FIGURES

LIST OF BOXES

APPENDICES

CHAPTER 1: INTRODUCTION

1.1 Introduction

Cognitive dissonance is a theory deemed to be of vital importance for understanding post-purchase evaluation and repetitive engagement behaviour of consumers by marketers (Jha & Jha, 2016; Liu, Osburg, Jayawardhena & Babu, 2019; Marikyan et al., 2020; Rothgerber, 2020; Zhang & Huat, 2019). However, Leon Festinger introduced the theory in 1957 and stated, "The holding of two or more inconsistent cognitions arouses the state of cognitive dissonance, which is experienced as uncomfortable tension. This tension has driver-like properties which prompts action" (Festinger, 1957, p. 8). Until now, scholars and marketers believed cognitive dissonance appears only in the post-purchase stage. Increasingly though, we can observe that in the digital age, with increased media at a consumer's disposal, there is more caution and verification of information and the following of needs exercised before purchase. This exercising of caution has hiked in terms of the new generation Z (Moriningconsult, 2020; Shear, 2020; Wearesocial, 2020; Wood, 2020), having witnessed several social and economic disruptions.

According to Deary, Johnson and Houlihan, "Intelligence may be read as cognitive abilities, mental abilities, and IQ in its lay and broad usage. Individual differences in intelligence are a prominent aspect of human psychology. These differences influence important life outcomes" (Deary, Johnson & Houlihan, 2009, p. 216). Cognitive differences in generations are majorly affected by the time of birth of a cohort and are multi-dimensional in their manifestation (Schneider & Newman, 2014). As a cohort, generation Z members are known to reflect more than previous generations (Patel, 2017). Furthermore, research indicates that from one generation to another, negativity/scepticism as a mannerism increases (Legg, 2019; West Virginia University, 2015).

Progressively, psychologists and scholars believe that for psychological theories to be adequate, they must factor in both organism and environment (Aebli, 1978; Endler & Magnuson, 1976; Festinger, 1957; Greenfield, 1976; Kramer, Bherer, Colcombe, Dong & Greenough, 2004; Martin et al., 2019). Demetriou and Spanoudis (2017) illustrate that individuals differ in three distinct areas: intellect, social environment, and genes. The latter is

biological and thereby not of concern to marketing as a field. However, the former two hold immense significance in a marketing context for businesses. Erickson (2009) illustrates that the influx of new age experiences alters the belief systems of individuals, thereby creating different impressions for each cohort. This explains how each generation is demarcated by individualistic characteristics based on the influx of technological and societal advancements (Erickson, 2009; Piaget, 1936; Tsapralis, 2020).

From Jean Piaget's cognitive development theory of 1936, the effect of critical national and worldwide occurrences during the early 11-15 years of growing up impacts how an individual sees the world and characterises what they become as a grown-up. Significant events like wars, economic development or decrease, fights, demonstrations of fear, leaps forward in innovation, changes in correspondence and child-rearing styles that happen in high schooler years influence esteems, practices, and convictions that represent the contrasts among ages and plans every generations point of view on fundamental business issues, administration, correspondence with people and critical thinking (Piaget, 1936). In line with this, Table 1.1 indicates the difference in characteristics, conditions of existence and cognitive development, cognitive abilities, and information processing in the consumer decision-making process among generations X, Y and Z.

Table 1.1 presents the generational differences table depicting changes in cognitive abilities based on time of existence.

Generation	Profile	Conditions of Existence and Major Events	Cognitive Development	Information processing during the consumer decision-making process
X: 1965-1979	1)Consume print media, TV and radio (Kasasa, 2019).	1) End of the cold war, Arab oil debacle of 1976 to the first gas shortage in the	1) Forward thinking and proficient in identifying and solving problems	1) Highly influenced by word of mouth.

Names: Generation X/Latch Key Generation				
	2) Purchasing power constitutes 61% of the U.S. economy (Barnett, 2017; EnGarde, 2019; Koch, 2019).

3) Slow adopters and more resistant to immediate changes having grown up in a tumultuous time (Koch, 2019).

4) Older Gen Xers are now entering their 50s and enjoying their peak income earning years and will make substantially more money. The youngest of this cohort may | US, the falling of the Berlin Wall and the splitting apart of the Soviet Union (Kasasa, 2019; Robinson, 2020).

2) Large-scale layoffs start of the AIDS epidemic and the first major energy crisis (Crosby, 2014; Erickson, 2009; Zonkel, 2016).

3) A time of not much technology and also time of the dot com boom (Barnett, 2017).

4) Technological evolution pierced into their surroundings (Rosen, 2001). Therefore, as a cohort even though they use smartphones, many prefer face-to-face interactions as | and organizing and manipulating ideas and images giving them a name of chameleon personality (Rosen, 2001).

2) Cognitive ability is marked by being transitory and flexible being more malleable than other generations (Lister, 2020).

3) Their brains are forced by nature to act in a more "have to accept and fit in" style as they are a hybrid generation (Lister, 2020). purchasing choices being highly influenced by the ongoing trend for that particular time. | 2) They tend to disregard their own feelings in terms of a particular service with email marketing and direct mail characterised by brochures at their doorstep taking precedence.

3) Generation X similar to previous generations are more for coupons and saving money, however they are also easily driven by the 'early adopters syndrome' in a bid to stay relevant amongst their cohort (Kane, 2019; Valentine, |

	still have kids in school or college, but older Gen Xers are becoming empty nesters (Sway, 2018). 5) Their persona could also be explained due to their generation being sandwiched between baby boomers and millennials forcing generation X to be relevant to either (Barnett, 2017; Pew Research Centre, 2014).	friendships and relationships were strong during the growing up years some of which still exist today (Erickson, 2009; Kasasa, 2019).		2018; Wroblewski, 2018). 4) Sequential processing of information (finishing one task to move to another) (Carrier et al., 2009; Koch, 2019). Therefore, as a cohort they are unable to follow too many cues at one time which leads to missing out on information, making them prefer brochures and visiting retail outlets for their purchase decisions as they can try samples and understand via

				customer service representatives, what they are purchasing in its totality (Hertwig, Frey & Mata, 2015; Koch, 2019; Kamber, 2017).
				4) They also have a longer attention span which prompts visiting places to check and validate their notions (Nielsen, 2013; Reisenwitz & Iyer, 2015; Schaie & Willis, 2006; Young & McCulloch, 2015).
				5) Purchasing choices are highly influenced by

				the ongoing trend for that particular time.
Y: 1980 - 1994 Names: Generation Y/Millennials/Gen Next	1) First to see more affluence than previous generations (Farris, Chong & Danning, 2002). 2) Intensely impacted by innovation and the web, they are more developed uniquely in contrast to past ages making them a strong generational influencer (Lester et al., 2005). 3) Higher confidence levels than previous generations owing to	1) Advancement of cognitive abilities can be attributed to the use of technology for every single task, more like a second brain (Goyal & Gupta, 2018; Palmer, 2009). 2) Social media penetrated the market (Bilgihan, Peng & Kandampully, 2013; Lyon, 2010) and was gaining high momentum and was seen to be in rampant usage (Kol & Lissitsa, 2016). 3) Saw the emergence of influencers as a way of marketing (Duffet, 2015; Liddle, 2010; Lu, Lin, Hsaio &	1) Cognitions guiding by FOMO (Fear Of Missing Out) culture that encapsulates this generation. 2) Follow a 'bandwagon effect' due to their mentality of wanting to be relevant socially (McRoberts, 2018). 3) The millennials, process information fast. However, it is more simultaneous than both generations X and Z.	1) This cohort's decisions are based on 'what the trend is' (Bilgihan, Peng & Kandampully, 2013; Parment, 2013). 2) Purchase guided by a feeling of not wanting to be missing out and being relevant (Bolton et al., 2013). 3) Consumer susceptibility to interpersonal influence' (Bilgihan, Peng & Kandampally, 2013) is seen to be a key influencer in generation Y's

	innovation and technological advancement, which they have never been without (Coombes, 2009; Dorman, 2000; Griffiths & Brophy, 2002; Martzoukou, 2004; Tapscott, 1998).	Cheng, 2010; Seigel, Tullis & Djamasbi, 2010). 4) The advent of COL (Consumer Opinion Leaders) took shape and is explicit with the steady influx of micro bloggers, social media influencer, youtubers etc. (Durfy, 2019).		decision-making capabilities (Bilgihan, Peng & Kandampally, 2013; Palmer, 2009) leading to impulse purchasing.
Z: 1995 – 2010 (widely accepted as these dates) Names: Generation Z/Gen Tech/iGeneration/Digital Natives/Next Gen/Zoomers	1) Zers are more influenced by world occurrences than past ages (Abrahmovich, 2019). 2) 62% of Zers live with their parents and 63% of this cohort individuals live in urban locations. Furthermore, Zers are	1) As they are digital natives, have an innate understanding of GDPR and Big Data (Bayindir & Kavanagh, 2019). 2) 62% say they worry about how their personal data is used by companies, and 56% saying that they prefer to be anonymous online (Bayindir &	1) Trying to hold informed decisions. 2) Shorter attention spans (Arya, 2019). 3) Filter information pushed out to them (Finch, 2015; Kavanagh & Bayinidir, 2019; Mediakix, 2018)	1) Self-initiated search for information prior to purchase decision based on heuristics (Erlacher, 2019; Kleinschmit, 2019).

students (Bayindir & Kavanagh, 2019). 3) High levels of self-confidence and self-beliefs (Erlacher, 2019; Mercer, 2018; Vennare, 2019; Young, 2019).	Kavanagh, 2019; Urquhart, 2019). 2) Witness to the Great Recession (Wood, 2020). 3) Information age keeps them informed about every happening across the world (Claveria, 2019).		

Source: (multiple – indicated in the table) designed and modified by the author.

Drawing from the above Table 1.1, further research indicates that impulse buying as a trait (seen in Generation X and Y) is attributed to affective aspects. For example, feelings of pleasure and excitement, an urge to buy, have no mental processing, but are more an emotional instinct (Dincer, 2010; Laverie & Madhavaram, 2004). Studies demonstrate that generation Y's purchase decisions are not entirely internally motivated (Jain & Viswanathan, 2013; Youngson, 2014). They are extrinsically informed and inspired by eWOM in need of satisfying their materialistic tendency (Jain & Viswanathan, 2013; Langfield, 2013). Generation X and millennials overlap in this trait. Since this is the case, cognition and cognitive dissonance as a factor affecting decision-making cannot be seen to play a role in previous generations as impulse purchase is a by-product characteristic of having to fit in within generations X and Y (Dincer, 2010; Kol & Lissitsa, 2016; Parment, 2009).

However, in terms of Zers (the cohort in the study context), according to Erlacher, "Gen Z possesses a healthy sense of curiosity, and they have the tools to pursue their interests and find information quickly. One result of this is the elimination of natural opportunities for mentoring. Instead of asking a teacher, parent, or coach for information, providing an opportunity for an intergenerational conversation, they often go to their devices to find

answers" (Erlacher, 2019). Further organisational reports also re-affirm this trait of Zers, highlighting the tendency to operate on inner beliefs and internal cues (Dotson, 2020; Gomez, Mawhinney & Betts, 2018).

In line with the above understanding, in terms of generations and cognitive dissonance, research indicates that generations learn from each other (Burcham, 2019; Euronews, 2011; Hoberman, 2017). Further research accentuates that cognitive dissonance is higher when there are consequences to an action, i.e., the intensity of dissonance felt is more (Cooper, 2019; Cooper & Worchel, 1970; Cooper & Fazio, 1984; Geothals, Cooper & Naficy, 1979; Cooper, 1999). Taking into consideration the above studies on generations learning from each other, we can say that Zers are currently functioning with higher caution and scepticism regarding the consequences an action would entail, portrayed by offline and online authentication before purchase (Carrall-Green, Sorensen & Hayllar, 2019; Rooney, 2019).

Thus, cognitive dissonance as a factor influencing consumer decision-making in the first stage, i.e., the problem recognition stage, is logically derivable and further observable within Zers. This is explained below and in the other chapters of this thesis. From the perspective of the study context, such a strong 'conscious contradiction' to previous generations' behaviours, cautious behaviour coupled with corroborating sought-after details, and reliance on heuristics, it is a worldwide concern as to how the new generation is disrupting medicine and what could be the remedies (Harpaz, 2019; Jenkins, 2019; Transamerica Center for Health Service, 2019).

This chapter focuses on introducing the foundation of the study. The chapter delineates the study's research problem and purpose, and research questions. Following this, the chapter will provide the research questions in the study context and the significance of the study. In the conclusion of the chapter, an organisation of the thesis is outlined following the definition of central concepts in the study.

1.2 Background of the Study

Marketing as a function always followed a funnel approach in appealing to consumers when decision-making, a.k.a. decision touch points (Stankevich, 2017). The steps so far have been

awareness, familiarity, consideration, purchase, and loyalty (Spence, 2020; Stankevich, 2017). Healthcare marketing dates back to 1977, when the American Hospital Association held their first marketing strategy meeting (Course Researchers, 2019). From then on, the desire to be 'profit oriented' has impacted the industry's receipt of products and services (Gaynor, Mostashari & Ginsburg, 2017). Due to the growth of competition, consumers have resolved to look for better providers if they are unsatisfied (The Health Foundation, 2011). Healthcare marketing recently has undergone a significant shift in terms of dissemination and adoption of care and products due to the heavy influx of technology in the industry and the age of informed consumers (Altran, 2020; Mehta, 2020; Spence, 2020; Vivekanadarajah, 2019).

In today's time, every healthcare-providing organisation is an information organisation and, subsequently, an innovation organisation (Spence, 2020). Increased informed clientele and their desires and quick, innovative advances in society and technology are disrupting the healthcare industry, making more mHealth and digital players enter the market after sensing an emptiness (Spence, 2020). Given this, companies that use data to enrich consumer experience will be favoured above others. Within this thesis, it is imperative to note that consumers has been used as a term for both patients (currently on treatment) and consumers (generic), The reason for not using the term patient is because extant organizational report demonstrates "a 'consumer' tends to choose and get involved in decision making whereas traditionally a 'patient' tends to be a person who receives care without necessarily taking part in decision making" (Health NSW, 2022). Therefore, since this thesis is about healthcare choice and decision-making, we henceforth will only be using consumers as a term for the Zers. Furthermore, Stephanie Price states, "The healthcare industry's steady shift toward improved patient outcomes, cost containment, and value-based care is expected to drive the global digital healthcare market from an estimated \$147bn in 2019 to \$234.5 billion in 2023" (Price, 2019).

Futuristically and in a global sense, reports suggest a primary ask from the mainstream healthcare consumers is that of 'highly personalised care in a transparent way (Allen, 2020), which is also why an increasing number of consumers prefer mHealth approaches (Safavi, 2019; World Economic Forum, 2020). In line with this, the ascent of customised medication and the novel utilisation of computerised reasoning and AI will bring forth another time of

advanced diagnostics (Wharton, 2020). Non-obtrusive, digital agents will be utilised for diagnostics and follow-ups to decide individualised treatments (Fried, 2020). Computerised analytic instruments will become essential elemental allies to drug therapy (Allen, 2020).

According to a Nielsen study, "In the U.S., younger generations—including Millennials (between 18 and 36 years old)—are taking a personal interest in their health and are increasingly driving sales in health care categories, such as supplements, vitamins and preventive care. This presents a huge opportunity for companies who understand the nuances of each consumer segment's needs" (Nielsen, 2014). Further to the Nielsen study, Walters (2019) reports that perceptive and conscientious consumers, such as Zers, see more involvement in the healthcare process as a requisite. Priporas, Stylos and Fotiadis (2017) state that Zers are "expected to heavily influence marketing practices both from a technological and product-specific point of view". Further studies (Gaur, Sobhani & Saxon, 2019; Hogan, Laughlin, Reynolds & Trenkle, 2019; Spitzer, 2018; Stanek, 2019; Trends Healthcare, 2019) report that consumers are additionally welcoming the flexibility that innovation brings to their fast-paced lifestyle.

Increasingly consumers are taking essential steps for their wellbeing and are all the more ready to supervise their treatment. They insist on being kept abreast regarding their health. Employing new wellness gadgets and m(health) approaches, the educated customer knows more, needs more, and can support themselves more (Robbins, 2019; Sinhasane, 2019). Such a substantial shift in consumers' understanding of themselves, their needs and institutions furthers the necessity to understand the new age consumers' cognitive process and dissonance triggers at the pre-decisional stage, i.e., the problem recognition stage of consumer decision-making shaping their healthcare consumption behaviour and patterns.

Furthermore, today's unrestrained and globalised world (with online and offline purchase options) has increased the freedom to choose. It has affected higher levels of cognitive dissonance within ourselves at every moment in our lives. When it comes to decision making, usually we are not confronted with one ideal option; we generally have to weigh two flawed options against each other (there are pros and cons to either), which generates dissonance (Shultz, Leveille & Lepper, 1999). The degree of dissonance experienced by people can

depend on various factors, including how highly they hold/cherish a particular belief and how much their beliefs are discrepant. It can be observed that the more personal the cognition, the greater the resulting dissonance (Cherry, 2019; Banerjee, 2017). The perception of a psychological/mental conflict between beliefs and actions can prompt individuals to resolve their habits and align their behaviours with their principles (Leonard, 2019).

Healthcare is one of the most self-cognizant sectors as beliefs and actions determine the quality of life of an individual (Devasagayam & Hanspal, 2017; Halligan, 2007; Vasiliadis, Priporas, Bellou & Adronikidis, 2013). Globally, research so far has demonstrated that it costs more in mainstream medicine to treat a chronically ill person than to promote prevention and a health and wellness lifestyle (Center for Medicare and Medicaid Services, 2017; Hajat & Stein, 2018; Kelland, 2011; Stinson, 2013; Waters & Graf, 2018). Healthcare marketing in the mainstream system of treatment has been primarily focused on the question, "What leads to customer satisfaction?" (Angiating & Potlouri, 2018; Asadi-Lari, Tamburini & Gray, 2004; Kalaja, Myshketa & Scalera, 2016; Parasuraman, Zeithaml & Berry, 1994).

Recent research from worldwide documents a growing affinity toward alternative medicine (Allen, 2019; Deloitte, 2018; Grand View Research, 2019; Ibis World, 2019; NCCIH, 2017). A recent report by Safavi (2019) as part of Accenture's 2019 Digital Health Consumer Survey informs that, Zers as consumers are not satisfied with healthcare's status quo and are more willing to try alternative treatment methods like Yoga, Acupuncture and Naturopathy, to name a few. Further, in addition to Accenture's report, many organisations' recent reports also emphasise this growing trend among Zers (Duffy et al., 2019; Musco & Ryan, 2019; Reisinger, 2019). The shift reported could be ascribed to stem from the increasing belief among consumers seen above that they want more control over their treatments, complemented further by the heavy availability of online healthcare content (Arnold, 2018; Cancer Research UK, 2018; Koeppel, 2014; Meyers, 2017; Patel, 2017).

Furthermore, alternative medicine, as seen in the Eastern and Orient World, focuses on using the consumer as an experimenter of their health (Forrester, 2016; Kala, 2017; Naskar, 2017; Pilkington and Butler, 2013; Thirthalli et al., 2016) which inherently produces a feeling of

being in control of their health in terms of the consumer. Current research in mainstream medicine focuses on the apparent needs found via market research (Calvert, Kyte, Keeley, Rivera & Aiyegbusi, 2017; Galea, Ettman & Vlahov, 2019; Ricci et al., 2019; Warner, Parr & Cusack, 2019). As proposed in this study, an understanding would aid mainstream healthcare systems in engaging appropriately with the new age consumers since the trend is predicted to continue in the future (Davis, Betts & Batra, 2019; Reno, 2016).

1.3 Research Problem

Recent investigations show that Zers are set to capsize almost every sector (Demeritt, 2018; Gassam, 2019; Mendoza, 2019; Morriss, 2019; Waters, 2018). The life preferences and purchasing culture of Zers are very different from previous generations, as Ozkan and Solmaz (2017) have stated. It can be seen that the materialistic characteristics of previous generations ushered in a want-based marketing framework (Bronwyn, 2017; Pichhi, 2015). However, the growing minimalistic attitudes of the Zers (Desjardins, 2018; Pankowski, 2019) warrant a more need-based approach to marketing. Given this, the study will focus on latent needs as a prime focus considering their importance in arousing dissonance in an individual.

Consumer needs are categorised in two main ways: explicit and latent needs. Explicit needs are easy to communicate to the service provider or seller and are known to the consumer (Ahola, 2006). According to Ahola, "Latent needs are defined as needs that a consumer is not aware of and needs that the consumer cannot communicate to the supplier with relative ease" (Ahola, 2006, p. 1). All human beings have latent needs (Gardner, 2004). Being innately drawn inwards to make meaning of their feelings, as we will see further on, Zers are more likely to act on their latent needs owing to the dissonance perceived overtly.

Cognitive dissonance so far has never been seen to be used in a pre-decisional study (Costanzo, 2013; Hasan & Nasreen, 2014; Nasir, Roslin & Chui, 2020; Oshikawa, 1970). However, earlier research by Oshikawa (1970) suggests that understanding mental factors that contribute to purchase behaviours is more critical to businesses than explaining how consumers feel after a decision. In principle, Salzberger and Koller (2007) suggest that cognitive dissonance proved to be applicable in the pre-decision phase. However, we have seen little implementation in terms of research. The reasons for such a scenario can be many.

Costanzo (2013) illustrates that dissonance being ephemeral, can occur at any stage in a consumer's decision-making journey. However, what needs to be understood is that cognitive abilities change from generation (Fischer, 1980). Moreover, extant literature indicates that cognitive dissonance has a robust evolutionary foundation (Egan et al., 2007; Kaaronen, 2018).

Several studies have also established experimental paradigms to test cognitive dissonance. One significant development in cognitive dissonance was established by Harmon-Jones (1999) called the 'action-based model' of dissonance. This thesis undertakes to posit the action-based model of cognitive dissonance into a pre-decisional scenario in today's digital native consumer whilst incorporating the understanding and intent of Leon Festinger's (1957) aspect of 'cognitive elements' as drivers for arousing cognitive dissonance. The model was developed by Harmon-Jones (1999) to answer, 'why dissonance processes occur other than to state that inconsistency is motivating in itself. The action-based model is in line with theories in different areas of psychology in recommending that perceptions and cognitions can induce activity propensity (Berkowitz, 1984; Dijksterhuis and Bargh, 2001; Fiske, 1992; Gibson, 1979; James, 1890; McArthur and Baron, 1983; Smith & Semin, 2004).

This viewpoint on cognition is congruous with the approach of Smith and Semin (2004), which proposes, in addition to other things, (1) that psychological representations are activity situated; (2) that perception is exemplified in that it draws on our sensorimotor abilities, environment, brain, and bodies; and (3) that cognition and action are the consequence of dynamic procedures of communications between agent and environment (Harmon-Jones, Harmon-Jones & Amodio, 2009). From the literature, if cognitive dissonance based on the action-based model of dissonance and environment engagement can persuade action, then it should act as an antecedent to consumer decision-making in a highly cognizant sector such as healthcare. Thereby enabling the identification of pre-decisional cognitive dissonance states among the studied cohort, generation Z, as proposed in this study. The derivation of this insight and inference will be evidenced in the literature chapters of the thesis.

Furthermore, drawing on the understanding of the action-based dissonance model, we find that action and cognition are evoked differently based on the interactions with the

environment. If that is the case, given that each generation has different circumstances, the role of dissonance will also vary. Furthermore, Clark's (2016) inference that cognition exists especially to direct conduct and that the "negative affective state of dissonance is stimulated by not only by psychological conflict but rather, especially, when discernments with action implications are at discord with one another, making it hard to act" further warrants the existence of the research problem being addressed in the study. Beauvois and Joule (1996) appear to have a similar stance as Clark (2016), recommending that the "psychological work of dissonance reduction is oriented by a generative cognisance which is behavioural in nature" and that behaviour specifically "possesses a special status in establishing the total amount of dissonance". The literature ties in with research demonstrating a gradual shift towards rational consumerism (also referred to as reflexive consumerism) (Beckett & Nayak, 2008; Lupton, 1997; Zardoroznyj, 2001).

Reflexive consumerism is a more rational form of purchasing wherein the consumer reflects before purchasing, and there is no impulse purchasing (Chappelow, 2019; De-Lanauze & Siadou-Martin, 2019; Monrad, 2019). In line with this, Antevenio (2019) noted that such a digitised era presents Zers with the feasibility of starting their consumer experience before purchasing. It also allows this cohort of consumers to investigate the attainable satisfaction of their needs by products or services, wherever they are geographically, on any gadget they use (Antevenio, 2019). New-age consumers, a.k.a. 'hypercognitive race of individuals' (Mckinsey, 2018), combine their online searches with the influence of marketed information and product or service descriptions. Post these afore-mentioned steps; a final decision is arrived at (Gurski, 2019; Ozdemir, 2020). However, the searches are initiated by the consumer, i.e., an internal stimulus that instigates the second step of consumer decision-making: information search within the purchaser.

Studies demonstrate that the brain continuously engages in modelling the world through self-generated activity with the rest of the body (Carvalho & Damasio, 2013; Fazelpour & Thompson, 2015; Pessoa, 2013). Brain activity is intrinsically dynamic, whether at rest or performing a task (Garret, 2020). Recent research in cognitive neuroscience suggests that most research in cognitive neuroscience explores how external stimuli are processed by the brain whilst making decisions or performing a task (Crichley & Harrison, 2013). However, the

brain also receives input from the internal body (Azzalini, Rebollo & Tallon-Baudry, 2019). In line with this is Immanuel Kant's 'spontaneity' of cognition (1724-1804). According to Pippin, "Kant's theory holds true in that, to explain perception in an individual before an action, we cannot proceed just by considering stimulus-induced responses to sensory input (external stimuli); rather, we must take into account the ongoing intrinsic and spontaneous, self-organising activity of the mind and the rules and laws governing it" (Pippin, 1987, p. 470).

Research indicates that 'perception', as stated by Kant, constitutes aggressive interactions between two fundamental processes of feedforward and feedback pathways at multiple levels (Fazelpour & Thompson, 2015; Grossberg, 1980; Grossberg, 2013; Rao & Ballard, 1999). In this process, feedback carries expectations of incoming stimuli, and feedforward comprises information conveying the mismatch between an individual's expectations and sensory input (Jaramillo, Meijas & Wang, 2019). This constant process of the brain stimulates cognitive dissonance and affects the intake of information (Breitmeyer, Ogmen & Kafaligonul, 2015; Kaaronen, 2018; Khorsand, Moore & Soltani, 2015; Pennartz, Dora, Muckli & Lorteije, 2019). Furthermore, the behavioural implication regarding tendencies in individuals of such a feedback and feedforward brain mechanism could be higher heuristic reliance. As the literature indicates heuristics to be a learning curve (see chapter 2), the brain's functions and heuristic tendencies within individuals seem to align themselves. If such is the case, then it can further explain how in a cohort such as generation Z, this network of feedback and feedforward could lead to faster filtering of information, affecting information processing even before consumption of information. That is to say, blocking out information which is felt to be irrelevant, thereby portraying the significant impact of a cognitive heuristic element guiding the consumer decision-making process (Clark, 2016; Festinger, 1957; Friston, 2010) during the digital era as we will explore in chapters 2 and 3.

This style of functioning in cognitive terms is referred to as the 'free energy principle. This notion exemplifies how organisms try to ensure their equilibrium is unhampered (Kaaronen, 2018). This notion and Festinger's (1957) match in that the drive for equilibrium prompts one to interact with information in a selective manner or by avoiding it altogether. Deriving from the above literature, cognitive dissonance may then be understood as a critical precursor to enabling individuals to avoid proprioceptive (bodily surprise), interoceptive (attitudinal or

emotional surprise) and exteroceptive (environmental surprise) caused as a result of the fast-paced proliferation of information (Clark, 2016; Kaaronen, 2018). Such an understanding further exemplifies the foundation of cognitive heuristic elements arousing cognitive dissonance as a pre-decisional determinant of consumer behaviour in a highly cognitive and reflexive consumer cohort like the Zers.

Furthermore, studies have shown a close link between information processing and cognitive dissonance, especially regarding exposure choices to information conveyed (Case, Andrews, Johnson & Allard, 2005; Da Silva, Matsushita & Ramos, 2019; Schulz-Hardt, Frey, Jonas & Thelen, 2001; Thomas, Bourdeau & Tagler, 2019). Withstanding the aim above, this study aims to recognise the need to account for cognitive dissonance theory and latent stimulants of cognitive dissonance at the top of the information processing model. Given the age of informed consumers currently growing in the marketplace, the understanding proposed in the study will aid in enriching data factored in by marketers during targeted promotional activities and understanding why there is a need for value co-creation mechanisms in healthcare. Therefore, in summary, the research problem deals with understanding why there is a shift to alternative medicine from allopathic medicine. This is arrived at by detailing how Zers perceive and act on their perceived and identified pre-decisional dissonance states wherein these pre-decisional dissonance states have a chain effect of affecting information processing and guiding an individual from the need recognition stage of consumer decision-making.

1.4 India as a Case Study

Instead of pursuing a generic approach to achieve the research objectives, India was chosen as a case study to facilitate a thorough analysis of pre-decisional cognitive dissonance among the studied cohort. India is one of the rapidly growing emerging economies and has the world's second-largest population. The population growth rate for the country is 1.14%, and a vast number of the country's population, approximately 50%, is below the age group of 25 (Jack, 2018; Plecher, 2019). A current population of 356 million belong to Generation Z. This has provided the nation with a large consumer population and workforce for many decades.

Furthermore, India is characterised as a country with a current account deficit (CAD), both historically and currently (Behera & Yadav, 2019). This is mainly because the Indian growth story is driven by the strength of national demand, which encourages both domestic production and import consumption (Deloitte, 2019). However, the Indian economy is currently facing a consumer demand slowdown (IMF, 2019; Slater, 2019). Previously the country had adopted a promoting consumer demand model for goods and services produced, which has backfired (Sharma, 2019). The rebound could be attributed to two main reasons. Firstly, India's demonetisation of currency and its ramifications (Varghese, 2019). Secondly and more principally, due to cognitive dissonance felt by consumers when instructed to purchase or consume an offering that conflicts with their belief (Chakravarthy, 2019).

IBEF's recent 2020 report informs that healthcare has become one of India's largest sectors in revenue and employment. The industry is growing remarkably owing to its strengthening coverage, services and increasing expenditure by the public and private sectors. According to India Health, "India has adopted a multi-sectoral approach towards the health sector. The country is focusing on four main pillars of universal health. These are preventive health, affordable healthcare, supply-side interventions and mission mode intervention" (India Health, 2019). In India, the healthcare delivery system is categorised into two major components - public and private (IBEF, 2020). The Government, i.e., the public healthcare system, comprises limited secondary and tertiary care institutions in key cities and focuses on providing basic healthcare facilities in the form of primary healthcare centres (PHCs) in rural areas (India Health, 2019).

The private sector provides the majority of secondary, tertiary, and quaternary care institutions with a significant concentration in metros, tier I and tier II cities (IBEF, 2020). India's competitive advantage lies in its vast pool of prepared clinical experts. India is additionally cost-effective contrasted with its friends in Asia and Western nations. The expense of medical procedures in India is around one-tenth of that in the US or Western Europe. India is 145th among 195 countries in quality and availability of medicinal services (Bussinesswire, 2019; IBEF,2020). Furthermore, the healthcare market is predicted to increase to Rs 8.6 trillion (US$ 133.44 billion) by 2022 (Bajaj, 2020). However, with the

increasing younger population at hand, Indian healthcare faces a dilemma of addressing highly informed consumers born into the digital age who are joining the workforce.

As computerised gadgets penetrate the modern-day lives of more Indians, the advancement of patient conduct is prompting a significant move in the doctor-patient relationship (India Health, 2019). Patients are very much educated, can examine any illness with the click of a mouse and expect on-request care from their primary care physician (Ghosh, Mehra, Reddy & Rao, 2019). A majority of specialists which is around 83%, state that their patients are progressively educated about their ailment and treatment choices contrasted with five years prior, and almost 92% of healthcare providers surveyed anticipate that consumer awareness should exponentially increase in the following five years (Ghosh, Mehra, Reddy & Rao, 2019; Mehta, 2019; Spence, 2020). Consumers are additionally more effectively dealing with their wellbeing, utilising advanced apparatuses for wellness and healthcare (Businesswire, 2019; Mathur, 2019). The focus of this research will have positive implications that would address the above concern.

Contemporary and earlier research for mainstream healthcare industry marketing in India reveals two primary themes centred on two questions, "Why is the current model not working?" and "Who externally influences the consumer?" (Basu, Panda & Kondasani, 2019; Guha & Ghosh, 2018; Pant, Roy, Jain & Upadhyai, 2019; Sharma, Sharma & Sharma, 2011). The focus of studies is on consumer satisfaction with services delivered, i.e., on the result after treatment is completed. Only one paper was found attempting to address the shift being discussed in context. However, that too only focused on millennials. Mohan, Sethi, Reddy and Bhan (2019) studied that changing epidemiology, rapid urbanisation, and rising expectations of the millennials are creating new challenges in the operation of India's mainstream healthcare system.

In light of this, identification of latent needs contributing to the dissonance felt and, thereby, behavioural patterns would remedy the lack of understanding prevailing as to why such a shift is occurring. It would also illustrate latent needs' existence and effects at the problem recognition stage of consumer decision-making within Zers as a future cohort affecting their information consumption choices. Furthermore, India is chosen as a setting because having

the world's largest adolescent and youth population (UNFPA, 2019). To date, little research has been undertaken about the studied generation and the growing shift from mainstream medicine to alternative medicine.

According to Pascal Geldsetzer, cited in the public health report of Harvard T. C. Chan School of Public Health, "The prevalence of diabetes is 8% across India, and the prevalence of hypertension is 25%; even among 18 to 25-year-olds in India, hypertension prevalence is high (12%); and both diabetes and hypertension prevalence is higher in urban areas" (Geldsetzer, 2018, p. 34). Further research also backs Geldsetzer's findings of young age chronic conditions prevailing in India (DTE, 2017; Mahendran, 2015; Sethi & Bharat, 2019; Sinha & Pati, 2017; Singh & Gopalkrishna, 2014).

Additionally, within India, there is a dearth of recent studies regarding cognitive dissonance and, in particular, its effect before purchase, shaping consumer behaviour. Research has been carried out concerning post-purchase dissonance (Kalavathy & Ramachander, 2019; Parsad, Sahay, Vijay & Prashar, 2019; Pasricha, Gautam & Jain, 2018; Sharma, 2014). The research study herein will focus on two critical future contexts. Firstly, cognitive dissonance is aroused by latent needs as a cognitive element and its effect on consumer behaviour and patterns—secondly, the focus is on a new growing and empowered cohort – Zers.

1.5 Research Gaps

Apart from the above case of global healthcare (as a sector) and India (as a demographic), both portraying evident exigency for the study, below are further conceptual research gaps addressed in the thesis.

1.5.1 Cognitive Dissonance Theory and Consumer Behaviour

Bearing in mind that the core element of the study is cognitive dissonance, there has been contemporary literature surfacing about Leon Festinger's (1957) cognitive dissonance theory. In their study, Mills and Harman-Jones (2019) noted that the existence of dissonance being psychologically uncomfortable motivates people to reduce the dissonance and leads to avoidance of information likely to increase dissonance. De-Lanauze and Siadou-Martin (2019)

suggest that the reflexive consumer listens to and assesses claims made by groups and organisations and then evaluates their activities based on their legitimacy.

Given the increase in 'reflexive consumer behaviour' in successive generations and Zers showing more signs than previous generations to be self-gauging decision makers, the aforementioned study findings stand true to enable us to find the latent needs arousing cognitive dissonance. Whilst all these findings support the study, the gap is regarding latent needs as a focus and dissonance arousal about those needs leading to changes in consumer behaviour and patterns. In this regard, the study will further Bran and Viadis' (2019) research that found a need to study the state of dissonance. The latent need found would reveal a state from which dissonance is felt in an individual.

Amaral, Stice and Ferreira (2019) studied a controlled trial of a dissonance-based eating disorders prevention program in Brazil and suggested that the tested program is culturally sensitive. However, this study focused on cognitive dissonance from a cultural angle rather than an individualistic sense. Underlining that an individual's latent needs and the dissonances experienced are distinctive, cognitive dissonance as a theory will aid in finding the core latent drivers for particular behavioural patterns among the studied cohort. The study's findings apply to a market segment in the population not impeded by cultural and demographic frames of reference.

Further research has been conducted regarding cognitive dissonance about consumer behaviour in food and nutrition (Ong, 2019; Rothgerber, 2020) and other sectors like travel and tourism (Dolchai & Walanchale, 2019; Vos & Singleton, 2020), counterfeit consumption (Rosely, Yusof, Hashim & Adzharuddin, 2019), pro-environment behaviour (Odou, Darke & Voisin, 2019), social networking service context (Jeong, Zo, Lee & Ceran, 2019), technology adoption (Markiyan et al., 2020) and education industry (Stephen, Ademola & Adepeju, 2019). There is a dearth of studies linking cognitive dissonance theory and healthcare with latent need as a cognitive heuristic element arousing sensed dissonance. Furthermore, there is a dearth of pre-decisional cognitive dissonance studies.

1.5.2 Information Processing and Cognitive Dissonance in the Digital Era

Perception further constitutes information processing. Research has demonstrated that the self-control of information to be processed based on cognitive dissonance is a vital study in the consumer decision-making process as that leads to selective information exposure (Carter, Pyszka & Guerrero, 1969; Kastenmuller, Peus, Frey & Fischer, 2008). As consumers become savant technologically, they are becoming insular toward marketing messages sensed as intrusive (Zoghby, 2019). Over 25% of Zers smartphone users have installed ad blockers, increasing rapidly (Nageswari, 2019).

The literature indicates that there currently is no comprehensive theory that could predict consumer behaviour in the digital age, and further research should be undertaken. Here the study was quantitative. Moreover, consumers being individuals, predicting their behaviour is near to impossible. However, qualitative research into latent drivers stimulating dissonance brought into the decision-making process by the consumer will enhance the understanding of how information marketed is processed in current times and could be processed by forthcoming generations.

Krijestorac, Konana and Garg (2018) and Moreno, Moreno, Lafaunte and Avila (2017) indicate from their research studies that the then emerging millennial workforce's high reliance on computerised sources influenced their buying choices. The literature advances the contention that consumers nowadays acquire data using new media, which reduces dependence on heuristics. In any case, these investigations were directed at generation X, who have buying practices not the same as our examined cohort and developing segment of the working population, Zers.

The iGeneration gives indications of scrutinising the past ages' (including their predecessors – the millennials') purchasing conduct, as will be seen, and the weight owed to online data sources to re-assert purchase choices can be said to be insignificant and, on a decrease (McCoy, 2019). Additionally, being individuals who are often described as self-contained people who question data passed on to them, they are known to settle on their own choices based on their own needs sensed. Cognitive dissonance is at the root of the consumer decision-making process of this self-estimating cohort.

There is a dearth of studies, more so contemporary research, factoring in cognitive dissonance at the start of the chain as part of the informed consumer's approach to purchasing decision-making. This study enhances the information processing model by filling in a vast gap seen in cognitive dissonance and the dissonance arousing latent drivers (cognitive elements) affecting initial information consumption.

1.5.3 Consumer Decision-Making Process and Cognitive Dissonance in the Digital Age Consumer

Any form of decision-making involves cognition. Furthermore, decisions to be made are usually unclear when there are many choices, as with today's online and offline purchasing. The consumer decision-making model is a framework which explains the mental process of undertaking a decision (Stankevich, 2017). Initially, the consumer decision-making model comprised seven steps: stimulus, need recognition, information search, evaluating alternatives, purchasing decision, post-purchase behaviour, and evaluation of the decision (Davey, 2019). However, it has evolved to keep in line with consumers' behaviours and increased technological advancement. The steps in the process can be outlined in the digital era as problem/need recognition, information search, evaluation of alternatives, assessing the evidence, selecting an option, implementing the decision and evaluating the decision (Pryer, 2019).

The current era has been regarded as one with the maximum degree of information overload, i.e., the creation and proliferation of vast volumes of information (Forstmann, 2019; Stein, 2017). Given the rapid rate of expansion of technology seen in disrupting sectors, coupled with highly engaged consumers, the shift seen from seven to five steps seems apt. It further directs us to understand that external stimuli no longer play a crucial role in consumer decision-making given higher reliance on heuristics (Del Campo et al., 2016; Dietrich, 2010) by new age consumers, as we will see in chapter 3.

Further research indicates that such reliance on inner beliefs helps consumers make decisions when it's tough and there are many options coupled with time constraints (Dale, 2015; Del Campo, Pauser, Steiner & Vetschera, 2016; McKay, 2017). Primarily, what is seen is that

reliance on heuristics speeds up the decision-making process and aids in the faster reaping of benefits by consumers (Cherry, 2020). An aspect of heuristics is latent need, highlighted as part of the research problem and further on in the literature review (see chapter 2). So far, the literature indicates that consumer decision-making and cognitive dissonance have only been undertaken as a study in the context of 'post-purchase evaluation' in the consumer decision-making process (Bolia, Jha & Jha, 2020; Brooksbank & Fullerton, 2020; Durmaz, Demirag & Cavusoglu, 2020; Gera & Jain, 2020; Dioitauiti, Velente, Mancone & Grambone, 2020; Bach, Da Silva, Souza, Kudlawicz-Franco & Da Veiga, 2020; Al-Damat & Al-Damat, 2019).

In light of this, however, previous literature has indicated that dissonance sensed leads to selective exposure to information likely to arouse cognitive dissonance or information avoidance (Bardin, Vidal, Facca, Dumas & Perrissol, 2018; Johnson, Neo, Heinjen, Smits & Veen, 2020; Tsang, 2019; Smith, Fabrigar & Norris, 2008; Stroud, 2017). In this context, we can say that the latent need being an aspect of the heuristic by arousing sensed dissonance dictates information processing. If so, based on the consumer decision-making model, the latent need and cognitive dissonance would be felt in an individual in the first step 'problem/need recognition' stage before information search. Information search is the second step of the consumer decision-making model (Stankevich, 2017). When there is such cognitive dissonance in the first step of problem recognition, information processing as a framework is bound to be impacted.

Moreover, research also demonstrates that the problem recognition stage affects every other step in decision-making, starting with the second step of information search (Bloch, Sherrell & Ridgway, 1986; Bruner II, 1986; Bruner II & Pomazal, 1988; Srinivasan & Punj, 1992). This further accentuates the interplay of cognitive dissonance and its cognitive elements (latent needs in the case of our study) as an influential factor in a pre-decisional context of a highly cognitive and self-belief-driven cohort, Zers and the necessity of this study in these times for this generation warranting further exploration. Furthermore, there is a dearth seen in studies of this concept in play of cognitive dissonance and consumer decision-making for the new generation Z.

1.5.4 Generation Z as a cohort

This study will explore the concept and states of pre-decisional cognitive dissonance in the problem recognition stage of consumer decision-making among Zers. The trend of embracing alternative medicine more than mainstream medicine will be studied, and the cognitive processes that go in whilst making the decision will be studied. Zers are often known to be the entitled race with technological advancements and changes in social constructs (Boodman, 2018; Lerman, 2017). However, they are also a generation which is a challenge since it appears that they behave differently from earlier generations, which can lead to changes in consumer behaviour (Carrall-Green, Sorensen & Hayllar, 2019; Schlossberg, 2016; Shukla, Bharadwaj & Gupta, 2019).

Generation Z is chosen because, according to Priporas & colleagues (Priporas, Stylos & Kaminedou, 2019; Priporas, Stylos & Fotiadis, 2017), "there is a dearth of empirical studies" of Generation Z in the marketing field. In addition, according to Deloitte's Research conducted on Generation Z, it was discovered that "due to continuous technological and societal disruption, Zers are disillusioned with traditional institutions, sceptical towards business' motives and pessimistic about economic and social progress" (Deloitte Millennial Survey, 2019).

Further, a Barclays Bank review on Generation X and Generation Z in 2018 uncovered that by 2020, Zers would constitute 40% of buyers in the United States, Europe and BRIC (Brazil, Russia, India and China). They are more powerful than previous generations in re-defining production and consumption (Priporas, Stylos & Fotiadis, 2017). Being the newest generation of consumers with good and unconstrained spending power, there is a need for further research to be carried out on this consumer group as future consumers.

1.6 Aims and Objectives

1.6.1 Aim

This study aims to identify and conceptualise the impact of latent needs as an influential cognitive element arousing cognitive dissonance within individuals in the problem recognition stage of the consumer decision-making process in the studied context. Therefore, establishing

pre-decisional applicability of cognitive dissonance among Zers and determining pre-decisional cognitive dissonance states within consumers of this cohort.

Upon the foundation of cognitive dissonance theory, the latent needs (cognitive elements, a.k.a drivers) that are causing the shift towards alternative medicine by Zers in India will be discovered. The study further enhances the understanding of how latent needs (cognitive elements) arousing observed cognitive dissonance affects the ways of information processing as part of the consumer decision-making process, potentially leading to shifting notions and consumption behavioural change towards healthcare offerings among chosen consumer group, Zers.

1.6.2 Specific Objectives

The three main research objectives of this study are: -

1) To establish pre-decisional dissonance states by identifying latent needs among generation Z in healthcare in the problem recognition stage of consumer decision-making. That is to say, using an abductive research strategy, cognitive dissonance theory will be extended from a pre-decisional perspective. This will be based on the factors that emerge from fieldwork owing to various types/categories of latent needs in consumers. Also, further examine how each of the identified latent needs differs in their degree of influence from each other in the cohort's consumer decision-making process (i.e., magnitude of cognitive dissonance aroused). Identifying the pre-decisional effects of latent needs and the aroused cognitive dissonance will further the understanding of information processing in a cohort newly emerging into the market with untold spending power and one that increasingly uses ad blockers. Furthermore, identifying pre-decisional dissonance states among this cohort allows for evaluating and refining a healthcare service provider's marketing strategy, which is generationally compatible and relevant.

2) To deduce how cognitive dissonance is recognised by generation Z as a cohort. In light of this, the study also aims to propose a conceptual framework based on propositions for healthcare service choices in correspondence to the above-found typologies via the abductive research strategy. The framework will be formulated primarily through fieldwork, cogent interpretation of the literature review and intuition. In the interdisciplinary literature review

(covering marketing, psychology and neuroscience fields), the primary emphasis will be on discovering ideas and processes which the framework can integrate.

3) To detail how the new consumer decision-making process of Zers takes place due to the identification of pre-decisional dissonance states. In this, the thesis explores as well how the developed framework can also be used to pre-empt the effects of latent needs on the intensity of cognitive dissonance aroused as part of consumer decision-making as according to the literature (see chapter 2), the magnitude of dissonance can be ascertained from cognition (Sakai, 1999; Shultz & Lepper, 1999).

1.7 Research Questions

1.7.1 Foundation of the research questions

It can be seen that having grown up in a perpetually connected environment, Zers are accustomed to having all the knowledge they could ever want at their fingertips (Dooley, 2019). Given this, an attempt by Tsang (2019) to demonstrate how cognitive dissonance relates to information choices revealed that exposure to inconsonant information produced psychological discomfort. Further literature above (and as part of the literature review) reaffirms this finding. Considering Generation Z's insights on being digital natives, these findings reveal a vital understanding of how the new generation may process information conveyed by marketers. It further affirms the significance of using cognitive dissonance theory as part of this study to expose latent needs at the root of consumer consumption patterns in the digital age.

Furthermore, Bloomberg's analysis using United Nations data suggests that "Generation Z will represent 32 per cent of the global population of 7.7 billion of 2019 moving ahead of millennials who will constitute 31.5 per cent share, using a generational split of 2000/2001" (Miller & Lu, 2018). Claveria (2019) noted that many Zers are now entering the workforce and that their spending power, estimated to be $44 billion, will continue to grow exponentially. Given Generation Z's increasing market presence and spending power, understanding the dissonance causing latent needs of Zers' shift to alternative medicine is vital to enabling appropriate, cost-effective care to be given to the new generation joining the workforce.

1.7.2 Main research questions

To fulfil the research objectives of this study, the main research questions and their foundations are as below: -

Because 77% of this cohort (Generation Z) feel it is imperative to be informed about everything in life, which can be seen to take effect in their wanting to be well-informed before making any decision (Bayindir & Kavanagh, 2019), further reports from various organisations depict this cohort tends to live by the 'power of self-belief' (Crouth, 2019; Urquhart, 2019). Moreover, further research also indicates that generation Z as a cohort instinctively is drawn inwards to create meaning with their feelings and attempt to have their own personalised experience in anything they do (WGU, 2019). Tying this with the literature reviewed suggests that cognitive elements act as drivers in arousing dissonance in an individual (Festinger, 1957) and integrating it with Harmon-Jones's (1999) action-based model of cognitive dissonance, which addresses a scenario wherein people are in an increased momentum of 'completing the task at hand', the first research question focuses on recognising: -
RQ1) What are the latent needs (cognitive heuristic elements) arousing cognitive dissonance among generation Z?

From a neurophysiology perspective, according to Stevens et al. (2011), "The cingulate cortex has projections to both the amygdala and the prefrontal cortex. For example, when the pACC is activated by emotional conflict resolution, reduced activity is seen in the amygdala. Top-down control provides the capacity to regulate an over-activated emotional response" (Stevens et al., 2011, p. 122-123). Considering the age of information faced by generation Z and the abundance of content pushed out (Forbes, 2019; Ismail, 2019; Benselin & Ragsdell, 2015), this generation has become experts at filtering out irrelevant content while browsing (5784 Commerce, 2020). When this is the case, Zers owing to scepticism over previous generations' behaviours as well as cognitive information overload (Interaction Design Foundation, 2020; Roetzel, 2018; Jamison, 2019; Levitin, 2015; Hemp, 2009) are seen to take a step back and reflect before acting on a decision (Happy Neuron, 2020; Interaction Design Foundation, 2020). The stepping back mentioned above is characterised by the more

profound feeling of wanting to slow down and listen to intrinsic internal cues (Guberman & Layow, 2017), a.k.a. the heuristic process of meaning-making (Proust, 2013). Therefore, the second research question addresses: -

RQ2) How does Generation Z perceive cognitive dissonance discerned?

Additionally, post the understanding of the process of perceiving cognitive dissonance in digital natives, Generation Z, it is imperative to understand its effects on theories and frameworks in context within consumer behaviour regarding healthcare owing to extant literature reviewed in chapters 2 and 3. Therefore, based on a synthesis of the theories and frameworks, the following question emerged from the critical literature reviewed to enhance the proposed conceptual framework: -

RQ3) How does the consumer decision-making process (including effects on information processing – as information processing is the second step) unfold in light of identified pre-decisional cognitive dissonance states within Zers (including pre-empting pre-decisional dissonance states effects)?

1.8 Significance of the Study

The contributions of this study to healthcare in India and healthcare across the globe are theoretical and managerial.

1.8.1 Theoretical Contributions

The study extends previous studies on cognitive dissonance by emphasising a certain consumer group to explore latent needs at the core of causing cognitive dissonance, thereby affecting behaviour and consumption patterns.

Theoretically, the six significant contributions are: first, using qualitative techniques to establish latent need(s) as a cognitive dissonance arousing cognitive heuristic element, which extends the theory of cognitive dissonance by establishing the internal ground on which cognitive dissonance as a theory rests within individuals and from where it is recognised. Second, proposing a new typology of pre-decisional dissonance states for generation Z owing to identified latent needs (cognitive elements), which, based on the proposition, will reflect a consumer's mental process/mindset at the need recognition stage of consumer decision-

making. Third, using cognitive dissonance in a pre-decisional study to address consumers' latent needs (cognitive elements as drivers). Fourth, enhancing the information processing model by illustrating the significance of cognitive heuristic elements and aroused cognitive dissonance at the start of the framework. Fifth, extending the new age consumer decision-making process of the digital age in light of identified pre-decisional dissonance states. Sixth, these will be findings from a new consumer group, Generation Z.

1.8.2 Managerial Contributions

From a business perspective, the three significant contributions are: first, the studied cohort based on consumption and behaviour patterns is said to upend almost every sector (Devrix, 2019; Fuse, 2019; Jenkins, 2019). This study will equip businesses to operate in a Generation Z-dominated environment via a deeper understanding of the cognitive processes undertaken during consumer decision-making by the generation in the context of the digital era.

Second, a significant issue facing businesses today is target audiences' increasingly shorter attention spans. Statistical data (Banfi et al., 2018; Rommelse et al., 2017; Rosenberg, 2015) indicates that as IQ (intelligence quotient) increases from generation to generation, attention span decreases, giving rise to a population comprising ADHD, ADD and other attention deficient people. Such an inverse relation impacts a marketer's timeframe to capture a cohort's attention. Therefore, by establishing latent needs arousing cognitive dissonance sensed and their importance at the start of the information processing model, this study will equip businesses to understand how to deal with the rise in shorter attention spans, a.k.a filtering of content by the iGeneration.

Third, from the study, businesses will be able to adequately account for the 'Flynn Effect to account for the 'Flynn Effect'. This phenomenon describes that the IQ of successive generations increases every decade. Given cognitive dissonance and IQ being constant components within an individual, findings from this study will appraise businesses about the informed consumer's mental processes during the need recognition stage of the consumer decision-making process. This would enable companies to understand how to tailor generation-compatible marketing content and adopt generation-relevant marketing activities.

1.9 Definitions Relevant to the Study

Cognitive Dissonance: Discomfort felt when faced with decisions based on two imperfect choices (Festinger, 1957; McLeod, 2018).

Latent Needs: A consumer need which cannot be explicitly known to the marketer and, in most cases, is not known by the consumer (Ahola, 2006; James, 2020).

Generation Z: Widely accepted as the generation born in the mid-1990s. Generation Z is generally observed from 1995 to 2010 (Dimock, 2019; Kasasa, 2019; Priporas et al., 2017, 2019). They are deemed digital natives, having been born into the age of technology. They have witnessed various societal disruptions.

Information Processing Framework: The framework replicates the thinking process of human beings to that of how a computer works – rather than behaviourist ideas that people merely respond to stimuli (Culatta, 2019; David, 2015; Lawless, 2019).

Consumer Decision-Making Process: The consumer decision-making process entails the process consumers undertake whilst making a decision, i.e., problem/need recognition, information search, evaluation of alternatives, assess the evidence, selection of an option, implementation of the decision and evaluation of the decision (Pryer, 2019; Shaw, 2018).

Heuristics: Heuristics refers to common sense, intuition and the gut feeling that people rely on to help them when faced with a decision (McKay, 2017). Heuristics also means a process of 'making meaning' on one's own based on beliefs, inner cues and situations (Del Campo et al., 2016; Gigerenzer & Gaissmaier, 2011).

1.10 Organization of the Thesis

The study comprises seven chapters and is divided into two parts. The first part is concerned with the theoretical background. The second part discusses the research methodology and analysis of findings.

Chapter one is introductory and provides the context of the thesis. The chapter constitutes the problem statement, research aims and objectives, research gaps addressed along with research questions, the study's significance and primary constructs.

Chapter two deals with a specific literature review on cognitive dissonance, latent needs, information processing in the digital age, and consumer decision-making. It describes, critically reviews, and summarises the significant concepts related to the areas above and the previous empirical research findings relevant to the study.

Chapter three focuses solely on generation Z. The chapter presents distinct cognitive and behavioural tendencies and what makes generation Z the right cohort for pre-decisional cognitive dissonance study. Further, a profile comprising environmental effects on cognitive abilities of generation Z is presented. This chapter also presents cognitive dissonance and the process of consumer decision-making among the cohort in focus.

Chapter four is divided into two parts; firstly, it presents the understanding of research methodologies (both quantitative and qualitative), followed by a detailing of why qualitative as a methodology was chosen. Secondly, the chapter recognises the appropriate research methods utilised in the thesis. It presents the research methodology adopted by this study whilst highlighting why it was chosen and critiquing other qualitative methods. The details regarding the fieldwork undertaken, the methodology procedures, the research design, data collection, and analysis are identified and elucidated.

Chapter five illustrates the findings of the study. It focuses on findings ascertained from data analysis that is reviewed in terms of contribution to the existing literature.

Chapter six is a summary chapter. This chapter summarises the research findings of the thesis. Furthermore, it assesses the extent to which the set-out aims and objectives have been achieved and offers suggestions for future research and conclusions. Finally, the research's limitations and contributions (managerial, theoretical and societal) have been explained.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Cognitive dissonance is a highly enduring theory in social psychology with facets that, if explored and conceptually mapped together, can lead to explanations that aid businesses in the current and future dynamic atmosphere. Literature on cognitive dissonance suggests that cognitive dissonance can be sensed primarily in individuals with higher self-esteem, i.e. those with higher degrees of 'self-regard', 'self-confidence' and 'pride' (Carpenter, 2019; Ronis & Greenwald, 1978). Further research indicates that a consumer's self-confidence influences how they adhere to their latent needs (Bearden, Hardesty & Rose, 2001; Jover, Montes & Fuentes, 2004; Veale, Quester & Karunaratna, 2006; Wansink et al., 2000; Wilson & Brekke, 1994). Furthermore, literature accentuates those individuals with lower self-esteem allow their individual needs to be overridden by popular belief. However, persons with higher degrees of self-confidence, even though not an expert in a particular field, due to their strong beliefs, would go ahead with their inner cues and perform a purchase or action (Rao & Olson, 1990; Veale, Quester & Karunaratna, 2006).

If such is the case, then information processing, which up until now has primarily only considered a reaction to external stimuli by people (De Sand, Frison, Zotz Reiner & Holl, 2020; Fahle, 2019), will be impacted by a higher reliance on heuristics among highly reflexive individuals. These can be seen by choosing what content to indulge in (Duffy, Shrimpton & Clemence, 2017). Furthermore, whilst information processing is affected due to the afore-mentioned circumstance, consumer decision-making will also be impacted as selective information processing affects the degree of certainty of a choice within an individual (Zizlsplerger, Sauvigny & Haarmeier, 2012).

This chapter focuses on the critical integrative review of the literature regarding cognitive dissonance theory, latent needs in consumers, information processing model and their interplay in consumer decision-making in past studies and how these elements portray themselves in the digital native consumer. This review will explore and analyse past studies on the afore-mentioned concepts and theories, which shall then culminate, following critical and logical reasoning, into a synthesis of the theories and frameworks, which shall establish the conceptual framework for this study. The integrative literature review follows a temporal

and conceptual structure for dissonance theory and a conceptual structure for the subsequent frameworks in context. To undertake this, figure 2.1 illustrates the roadmap for the literature review.

Figure 2.1 depicts the integrative literature review map owing to various concepts addressed in the chapter with the objective in sight.

Explore 'if' and 'what' the impact of cognitive elements and aroused dissonance is on consumer decision-making in the digital age consumer.

Premise of cognitive dissonance	Information Processing Theory	Consumer Decision-making process
Cognitive Elements	Reasons for Selective Exposure/Information Avoidance	Effects of higher need for cognition on consumer decision-making in the digital age
Action-based model of cognitive dissonance	Cognitive Heuristic Elements during information processing	Effects of cognitive heuristic elements and aroused dissonance on consumer decision-making
Needs in Consumers	Effects of Cognitive Dissonance on Information Processing	
Latent Needs as a cognitive heuristic element		
Cognitive Dissonance in Consumer Behaviour		

Source: The current author.

2.1.1 Need for Reconceptualization of Cognitive Dissonance Theory within Consumer Behaviour

Behavioural science theories tend to transform with the influx of new generations (Lambert, 1972; Laufer & Bengston, 1974) and technological and social advancements due to different engagement choices (Mannheim, 1927/1928; Obmann, 2014). Conceptually, cognitive dissonance theory exists in the pre-decisional phase of consumer decision-making (Costanzo, 2013; Hasan & Nasreen, 2014; Koller & Salzberger, 2007; Oshikawa, 1970). However, its application thus far has been limited to a post-decisional context (Brooksbank & Fullerton, 2020; Jha & Jha, 2016; Liu, Osburg, Jayawardhena & Babu, 2019; Marikyan et al., 2020; Rothgerber, 2020; Zhang & Huat, 2019).

Current marketing reports and contemporary literature demonstrates that the new age consumer landscape is growing into a highly reflexive mindset (Beckett & Nayak, 2018) as technological advances have given the iGeneration the ability to indulge in 'digital research' before purchase (Antevenio, 2019; Gurski, 2019; Ozdemir, 2019). Thus, indicating a growing need to understand the cognitive processing of generation Z. Literature demonstrates cognitive dissonance theory to be regarded as a hypernym for beliefs and self-knowledge stimulating action to re-establish equilibrium within the individual (Aronson, 1960; Festinger, 1957; Harmon-Jones & Amodio, 2009; Montgomery, 2012). Taking this understanding and further tying it in with insights from table 1.1 (see chapter 1), we can observe that with increasing reliance on self, higher self-esteem and greater need for cognition, cognitive dissonance as a pre-decisional influential factor can be perceived in generation Z (Carpenter, 2019; Ronis & Greenwald, 1978) as a result of (i) evolutionary ground of cognitive dissonance as a concept (Egan et al., 2007; Kaaronen, 2018) and (ii) generational changes giving rise to appropriate generational applicability (Fischer, 1960).

In line with this, literature on cognitive dissonance suggests that recent studies have discovered brain mechanisms involved in dissonance (Harmon-Jones, Harmon-Jones, Fearn, Sigelman, & Johnson,2008; Jarcho, Berkman, & Lieberman, 2011; Kitayama, Chua, Tompson & Han, 2013; Kitayama & Tompson, 2015; Van Veen, Krug, Schooler & Carter, 2009). According to Kitayama and Tompson, "this work has shown that dissonance may be based on a network of various brain functions such as conflict detection, reward processing, self-referential processing and self-regulation, to name a few. But implications of this newly emerging evidence have yet to be fully articulated and evaluated" (Kitayama & Tompson, 2015, p. 74-75). Conceptually, cognitive dissonance's premise of cognitive elements as drivers arousing dissonance (Festinger, 1957) and the action-based dissonance model (Harmon-Jones, 1999) have been studied separately. However, combining the two concepts can aid in understanding 'driver-based action' within action-oriented individuals.

Taking all the above insights together into the context of a highly cognitive cohort, generation Z (McKinsey, 2018), who have an action-oriented mindset (Bisaria, 2019; Mercer, 2018; Young, 2019; Vennare, 2019), a reconceptualisation and understanding of cognitive dissonance's impact is possible and further warranted for, to enable businesses to operate

among higher IQ and EQ generations entering the market. Hence, developing a conceptual framework on an under-researched proposition is a first step towards further developing and contributing to the pre-decisional applicability of cognitive dissonance and its impact. Furthermore, considering cognitive dissonance to be highly contextual (McLeod, 2018), developing theories that acknowledge context rather than general theories that pay little attention to contextual importance is significant to cognitive dissonance theory research.

2.1.2 Choosing a Framework Methodology

Conceptual frameworks and theoretical developments involve integrating previous literature, intuition, experience, and logical reasoning (Eisenhardt, 1989; Liehr & Smith, 1999). Furthermore, Creswell (2003) and Rocco and Plakhotnik (2009) suggest that qualitative studies frequently investigate fields that are understudied and look for "emergent theories". According to Rocco and Plakhotnik, "When searching for emergent theory, however, a conceptual framework is important for situating the study." (Rocco & Plakhotnik, 2009, p. 126).

Towards this goal, Miles and Huberman (1994) suggest that a conceptual framework should categorise and describe concepts relevant to the study and map relationships among them. This study will utilise MacInnis's (2011) guidelines for a conceptual framework within an envision-based marketing orientation. Literature indicates that an envisioned conceptual contribution involves two processes: (i) identifying and (ii) revising. In the context of this thesis, we shall utilise 'identification' as a ground for arriving at a conceptual framework which integrates all theories in context (MacInnis, 2011).

Therefore, following MacInnis's (2011) suggestions, cognitive dissonance's inconsistencies since its introduction will be highlighted and its underlying constructs identified. Building on the identification, their impact on consumer decision-making in the digital age consumer will be logically derived, giving the base for the conceptual framework. Furthermore, 'identification' is chosen over 'revision' as the envisioning conceptual framework process, as according to MacInnis, "identifying is more closely related to the context of discovery because it involves observing that reality for the first time." (MacInnis, 2011, p. 144). Considering, contextual importance for understanding cognitive dissonance (McLeod, 2018), this process

will aid in appropriately addressing the phenomenon at hand in line with the new age consumer landscape of the digital era.

2.1.3 Choosing a Literature Review Methodology

To get the best results from a literature review, it is essential to understand the aim of the literature review in correlation with the research's objectives. Considering that the research's objective is to understand and propose the pre-decisional applicability of cognitive dissonance theory via establishing pre-decisional states of dissonance about new consumer cohort, generation Z, Cooper (1988) classified literature reviews and identified goals that every literature review entails. The goals recognised were "critically analysing the literature, integrating diverse and sometimes conflicting perspectives from the literature, and identifying central issues or methodological problems in existing literature" (Cooper, 1988, p. 122). Therefore, it is vital to understand the various types of literature review and why an integrative literature review is apt for this study.

According to Whittemore and Knafl, "Meta-analysis is the review method that combines evidence of multiple primary studies by using statistical tools to enhance objectivity and validity of the findings" (Whittemore & Knafl, 2005, p. 547). Meta-analyses studies are also known to focus mainly on empirical data (De Menezes & Kelliher, 2011; Tranfield et al., 2003) and to consider the fact that the research's objective largely depends on qualitative theoretical grounds of the theories in context, a meta-analysis would not give the proper foundation of validity/contextual applicability. Systematic literature reviews, on the other hand, follow a rigid criteria-based approach which mainly focuses on experimental studies (De Souza, De Silva & De Carvalho, 2010, p. 34). Because cognitive dissonance as a theory was introduced in a specific frame of reference, with a motivational attribute and having been in different contextual bases (studies) so far, a systematic literature review will not enable a thorough understanding of the phenomenon's scope at hand.

Furthermore, owing to the appropriate contextual necessity of cognitive dissonance theory (McLeod, 2018), it is imperative to deploy an integrative literature review that contextually brings concepts together in behavioural science, thus reviewing the related phenomena thoroughly in context. Thereby enabling a potent form of the conceptual framework owing

to the reviewed conceptual background. Therefore, an integrative literature review was chosen as, according to Torraco, "An integrative literature review can be written to: (i) review, update, and critique the literature, (ii) conduct meta-analysis of the literature, (iii) review, critique and synthesise the literature, (iv) reconceptualise the topic reviewed in the literature, and (v) answer specific research questions about the topic reviewed in the literature." (Torraco, 2016, p. 68).

2.1.4 Rationale for the Methodology of the Literature Review

The rationale for choosing such an integrative literature review as the methodology for this chapter is because "integrative review is the methodology that provides a synthesis of knowledge and applicability of results of significant studies into practice" (De Souza, De Silva & De Carvalho, 2010, p. 34). Additionally, literature on integrative literature reviews indicates that keeping in line with our objectives and research strategy of the thesis being an abductive approach will be befitting as integrative reviews are the most far-reaching comprehensive methodology of reviews. It permits including "experimental" and "non-experimental" studies to comprehend the phenomenon being analysed thoroughly (Whittemore & Knafl, 2005). It additionally consolidates information from hypothetical and experimental writing. It has a broad scope of purposes, "such as the definition of concepts, review of theories and evidence, and analysis of methodological problems of a particular topic" (De Souza, De Silva & De Carvalho, 2010, p. 46).

Furthermore, considering the scope of the study is set by the objectives and further guided by the questions of the study, the questions of this thesis are exploratory in trying to address cognitive mechanisms and map causal relationships. The study explores the possible design mechanisms and the contextual issues involved with cognitive dissonance. Thus, the importance of 'setting the context via an integrative literature review' is heightened in such a frame of reference. Hammersley (2008) explained that the possibility of human activity must be comprehended in "context". The literature contends that human activities are "situated in context", and individuals' actions and words cannot be deciphered without a contextual understanding (Hammersley, 2008). Such insight also corroborates the understanding that cognitive dissonance is a highly context-oriented phenomenon (McLeod, 2018). Thus, the integrative review approach and primary theory in focus align to enable the

best exploratory outcomes. The process of writing this integrative literature review is temporal (i.e., chronological) for cognitive dissonance theory alone. Further building on the temporal data analysis, the review is conceptually oriented for dissonance as a theory and subsequent frameworks to form the ground of conceptual applicability of the study to context.

This is because Torraco (2016) elucidates, "Integrative literature reviews are conducted on dynamic topics that experience rapid growth in the literature and that have not benefited from a comprehensive review and update during an extended period. Thus, integrative literature reviews provide review and critique to resolve inconsistencies in the literature and provide fresh, new perspectives on the topic" (Torraco, 2016, p. 404-405).

Additionally, every literature review has a particular approach, which sets out the protocol to follow to achieve the best outcomes for the theories in context. The reasons for choosing to follow a temporal approach and conceptual approach are (i) cognitive dissonance, albeit studied constantly in various contexts, as a concept, it has not benefited from a fresh perspective and comprehensive understanding of 'what was initially introduced?', 'what has it been seen as over the years?' and 'what it can be if elements are grouped?', (ii) any behavioural science theory is stipulated to change with the onset of newer generations (Lambert, 1972). However, theories like cognitive dissonance, information processing and consumer decision-making have not been exploited fully regarding the implementation of the theories and frameworks in newer generational contexts and (iii) finally, behavioural science theories are generally highly interdisciplinary and inter-relational between frameworks and theories, where one small change in a theory/inconsistency spotted can impact the others in a big way. Therefore, the primary theory and subsequent theories and frameworks in this thesis, when seen together in a generational context, give the applicability of cognitive dissonance and its impact – a new premise.

2.1.5 Description of the Integrative Literature Review Methodology

This section describes the methodology undertaken to carefully understand every theory and framework. In terms of an overall method, the literature review follows Torraco's (2016) updated guidelines of writing an integrative literature review integrated with the rigour for

bringing credibility to the integrative methodology proposed by Whittemore and Knafl (2005). The full literature review is divided into three parts.

The reason for undertaking such a demarcated approach is, in line with the research's objectives and research questions, as cognitive dissonance has been questioned in terms of its pre-decisional applicability and use, it is imperative to establish the essential structural elements needed to perceive cognitive dissonance within individuals and further derive its cogent applicability in the pre-decisional stage. Additionally, drawing from Table 1.1 and on the extant literature understanding gained from chapter one, it is essential to break down the phenomenon of cognitive dissonance theory to present a clear and logically derived picture for the reader in line with the generational context.

Furthermore, considering the vastness of cognitive dissonance as a theory, it is imperative to approach the theory and its impact using a funnel approach supported by logical reasoning within the context of the study. Otherwise, there is a risk of having too many touchpoints/derivations resulting in an unimpactful review. However, it is vital to note that the study's intent did not affect literature search mechanisms and inclusion and exclusion criteria, as we will see explicitly described and depicted below.

2.1.5.1 Detailing the Three-Part Approach

2.1.5.1.1 Cognitive Dissonance Theory: Temporal Analysis

First, cognitive dissonance theory has been observed since its inception till 1999. Following this, cognitive dissonance as a theory's evolution from 2000 to 2020 has been closely critiqued. An elucidation of this chronology can be seen in figure 2.2. The reason to understand the initial years of the dissonance theory is to grasp (i) the premise of the theory, (ii) the intended impact of the drivers (as Festinger introduced in 1957), i.e., the cognitive elements and (iii) why dissonance theory has been regarded as a post-decision phenomenon all this while when its premise fosters an understanding of pre-decisional existence. Furthermore, understanding post 2000 studies to date was undertaken to explicitly observe the impact of methodology and contexts (especially cohorts within the studies) on the process of ascertaining dissonance within individuals.

Additionally, as seen earlier in chapter 1 and early on in this chapter, since cognitive dissonance is highly generationally oriented in its presence and effects on individuals, an initial temporal analysis of cognitive dissonance was undertaken to assess and draw on inconsistent themes. These themes found via logical analysis are utilised to inform the conceptual focus and questions further to be addressed as part of the integrative literature review to enable an appropriate synthesis of the frameworks in context to the theory.

Figure 2.2 depicts the chronological timeline of the key times within cognitive dissonance theory. A more detailed critique and understanding are produced in the respective section below.

Cognitive Dissonance Theory – Leon Festinger	Modelling Responsibility as a factor – Cooper & Fazio	Action-based Model of Cognitive Dissonance – Harmon-Jones	Pre-decisional existence of Cognitive Dissonance – Costanzo
1957	1984	1999	2013
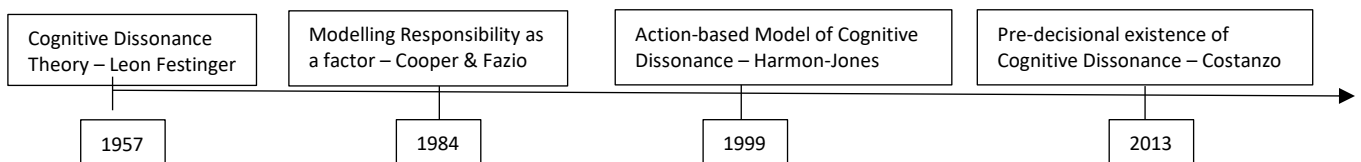
Source: The current author.

2.1.5.1.2 Cognitive Dissonance Theory: Conceptual Analysis in Relation to the Temporal Analysis

Post the temporal analysis, the focus is on the action-based model of cognitive dissonance, which is the conceptual base for the thesis, whilst combining Festinger's (1957) notion of cognitive elements as drivers of the cognitive dissonance theory i.e., omitted theme. A detailed understanding of the action-based model of cognitive dissonance (Harmon-Jones, 1999) is ensued leading to:-

(i) In-depth understanding of cognitive dissonance as a motivator of action and cognitive elements as drivers for arousing dissonance.

(ii) Logical derivations of furthering the applicability and implementation of the model into a pre-decisional context owing to the premise of cognitive elements in the introductory theory of Leon Festinger (1957) coupled with neurological brain mapping evidence of the action-based model of dissonance (Harmon-Jones, 1999).

2.1.5.1.3 Perusing the Impact of Identified Structural Elements of Cognitive Dissonance on Related Frameworks within Consumer Behaviour

A literature synthesis matrix for cognitive dissonance theory was ascertained due to the temporal and conceptual analysis of cognitive dissonance theory. This highlighted categories of omitted themes and inconsistencies. The synthesis matrix and categories therein were later critiqued to enable the identification of key structural elements within dissonance theory, which form the pre-requisites to perceive cognitive dissonance. The identified structural elements of cognitive dissonance are detailed and logically reasoned by reviewing extant neurological and psychological literature. Thereafter the effects of the structural elements are (i) reviewed and critiqued about cognitive dissonance theory – conceptually, and (ii) the effects of the structural elements on the information processing model and the consumer decision-making process are critically reviewed with cogent reasoning. Within the aforementioned first part, heuristic reliance is detailed concerning cognitive dissonance within individuals. After this, cognitive dissonance studies within consumer behaviour are highlighted using extant literature. Following this, latent needs as a cognitive heuristic element and its ground have been exemplified concerning understanding the structural element of 'cognitive elements' within cognitive dissonance theory.

Within the above-mentioned second part, the understanding of information processing as a framework in the digital age is addressed with emphasis on how cognitive elements arousing dissonance give way to selective exposure and information avoidance. Moreover, heuristics as a learning curve affecting information processing has also been emphasised. All the findings of each theory have implications for the next. That is to say, consumer decision-making is a constantly evolving process based on the influx of technological advancement since its inception (Herbert, 1960) to 2017 and, most recently, 2019. Following the understanding of the evolution of the consumer decision-making process and highlighting that the number of steps in the process has been reduced as of 2019, the "why" relating to the decrease in the number of steps is addressed. It has been discussed using the rapidly growing concept of cognitive heuristics within consumer decision-making and its impact on consumer behaviour. The conclusion of the decision-making process is done by tying it in with cognitive dissonance and cognitive heuristic elements affecting the second stage of consumer decision-making (information processing). Finally, a logical synthesis of all the reviewed and

critiqued literature and its impact is proposed within an evidence-based conceptual framework.

Considering the review method is temporal and conceptual for cognitive dissonance, and after that conceptual for the subsequent frameworks, the procedure of scoping studies was more to ascertain the developments by year in the theories and frameworks and after that stipulate the inconsistencies and effects of cognitive dissonance (within the phenomenon) and in the frameworks in the new age generational context. Figure 2.3 below describes, via a flow diagram, the scoping mechanism undertaken along with the keywords for the theories/frameworks in respective databases and explains the inclusion and exclusion criteria for the integrative literature review.

Figure 2.3 describes, in brief, the scoping mechanism undertaken along with the keywords for the theories/frameworks in respective databases and explains the inclusion and exclusion criteria for the integrative literature review. As seen from the 'N' numbers, there is an increase in studies included. This is due to the behavioural implications of cognitive dissonance within individuals and its properties of directly proportional effects on information processing and consumer decision-making frameworks within consumer behaviour.
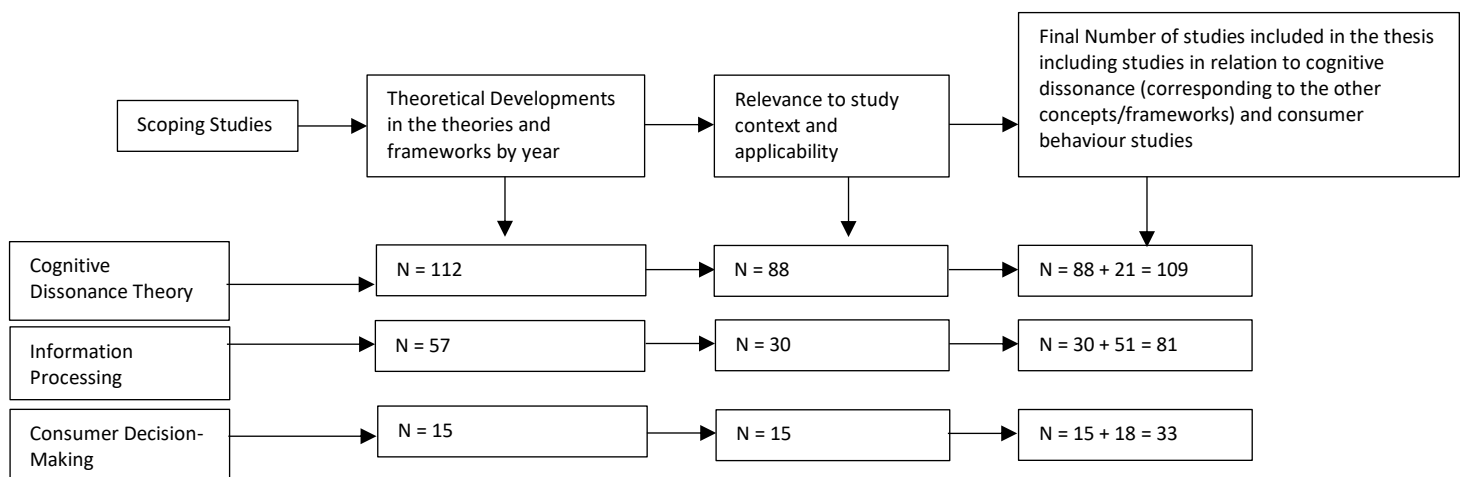
Database	Search String Per Theory	Scope	Publication Outlet	Date Range
Web of Science	"Cognitive Dissonance Theory" or "Cognitive Dissonance and Consumer Behaviour"; "Information Processing Framework" or "Information Processing and Consumer behaviour" or "Information Processing and Cognitive Dissonance"; "Consumer Decision-Making Process" or "Consumer Decision-Making Process and Cognitive Dissonance"	Title, Abstract, Introduction	Peer-reviewed (Scholarly Journals)	Any (temporal search till date)
Science Direct	"Cognitive Dissonance Theory" or "Cognitive Dissonance and Consumer Behaviour"; "Information Processing Framework" or "Information Processing and Consumer behaviour" or "Information Processing and Cognitive Dissonance"; "Consumer Decision-Making Process" or "Consumer Decision-Making Process and Cognitive Dissonance"	Title, Abstract, Introduction, Keywords	Peer-reviewed (Scholarly Journals)	Any (temporal search till date)
American Psychological Association	"Cognitive Dissonance Theory" or "Cognitive Dissonance and Consumer Behaviour";	Title, Abstract,	Peer-reviewed (Scholarly	Any (temporal

	"Information Processing Framework" or "Information Processing and Consumer behaviour" or "Information Processing and Cognitive Dissonance"; "Consumer Decision-Making Process" or "Consumer Decision-Making Process and Cognitive Dissonance"	Keywords, Discussion	Journals), Book Chapters	search till date)
Scopus	"Cognitive Dissonance Theory" or "Cognitive Dissonance and Consumer Behaviour"; "Information Processing Framework" or "Information Processing and Consumer behaviour" or "Information Processing and Cognitive Dissonance"; "Consumer Decision-Making Process" or "Consumer Decision-Making Process and Cognitive Dissonance"	Title, Abstract, Keywords, Discussion	Peer-reviewed (Scholarly Journals), Book Chapters	Any (temporal search till date)
Springer	"Cognitive Dissonance Theory" or "Cognitive Dissonance and Consumer Behaviour"; "Information Processing Framework" or "Information Processing and Consumer behaviour" or "Information Processing and Cognitive	Title, Abstract, Keywords, Introduction, Discussion	Peer-reviewed (Scholarly Journals)	Any (temporal search till date)

Dissonance"; "Consumer Decision-Making Process" or "Consumer Decision-Making Process and Cognitive Dissonance"	

Inclusion Criteria	Exclusion Criteria
Types of studies (theoretical, conceptual, reviews, empirical studies)	Non-article documents
Quantitative Studies (methodological impact on dissonance)	Papers or book chapters that do not primarily focus on the theory or framework in context
Qualitative Studies (methodological impact on dissonance)	Non-English Language Papers or book chapters
All Papers and Book Chapters thus far, based on year of theoretical or conceptual development of the theories in context	
Articles in Press	

Source: The current author.

Heuristics as a theory in a temporal manner hasn't been accounted for, albeit extensively researched, reviewed, and critiqued in the sections below. This is because heuristics as a concept is malleable in every behavioural science theory such that it adopts the context in which it is used. Thereby performing the role of a catalyst in conceptual derivations within behavioural science theories. It is a fundamental concept in understanding human behaviour, which will be seen under each theory/framework below.

2.1.5.2 Approach Undertaken to Report, Critique and Synthesize into a Logical Framework

According to Post et al., "Articles that review a body of work contributes to theory when they do not merely report on previous literature but, rather, analyse and synthesise the research to generate new ways of conceiving of a given field or phenomenon. Uncovering such novel

insights requires approaching and questioning the focal body (or bodies) of work from critical and distinctive avenues" (Post et al., 2020, p. 354). There are various avenues discussed over the years for advancing theory as part of a review; Table 2.1 presents them below.

Table 2.1 presents theory-generating avenues with analytic processes and resultant synthesis propositions.

Theory Generating Avenue	Analytical Approach	Potential Resulting forms of Synthesis
Exposing emerging perspectives	Identifying an emerging theoretical perspective on an important business phenomenon and contrasts it with more established ones	1) A research agenda on further examining the emerging perspective 2) A taxonomy that illustrates the theoretical dimensions along which the new perspective and the more established perspectives differ 3) Alternative model or conceptual framework that is contrasted with more traditional frameworks
Analysing assumptions	Analysing underlying assumptions in a body of literature, demonstrating the consequences of such assumptions or alternative assumptions on theorizing	1) A research agenda on research that is based on different assumptions or relaxes previously used assumptions 2) A taxonomy that shows the key dimensions along which assumptions vary 3) Alternative models or conceptual frameworks based on different assumptions 4) Meta-theory: key underlying assumptions in management theory
Clarifying constructs	Locating potential ambiguity around a construct and provides	1) A research agenda that offers suggestions on what aspects of the

	construct clarification in a way that extends theory	construct studies should focus on, report and clarify 2) A taxonomy that depicts the key aspects along which constructs differ 3) Alternative models or conceptual frameworks of the phenomena based on different constructs 4) Meta-theory: key conceptual ambiguities in management theory 5) Meta-analysis: showing how empirical results differ across main measurement types
Establishing boundary conditions	Theorizing alternative or shifting (expanding/ contracting) boundaries phenomenologically, contextually or across disciplinary boundaries	1) A research agenda that shows boundary conditions and how to further examine them 2) A taxonomy of boundary conditions 3) An alternative model or a conceptual framework of the phenomena that integrates important boundary conditions 4) Meta-theory: theorizing boundary conditions across phenomena, contexts, and disciplinary boundaries 5) Meta-analysis: revealing moderators that explain conflicting results
Testing New Theory	Exploiting accumulated research to derive new frameworks and empirically test new insights	1) A taxonomy that is tested on prior studies to show how it explains key aspect

		2) Alternative model or a conceptual framework is confirmed by its ability to organize and explain prior research findings
		3) Meta-theory: Showing how the new theory applies across prior research findings in different theoretical domains
Theorizing with systems theory	Adopts a system as the unit of analysis and theorizes about its system states, their trajectories, transformational conditions of a system, or values of units in a system	1) A conceptual classification of states or stages in a system
		2) Alternative model or a conceptual framework that depicts a phenomenon as a system and identifies its key elements
		3) Meta-analysis to evaluate the relative importance of different system states and conditions
		4) Meta-theory: Using the elements of the system to depict other phenomena
Theorizing with mechanisms	Theorizing how and why specific mechanisms explain dynamic processes underlying a social process	1) A taxonomy of the identified mechanisms based e.g. on the part of the process that they relate to
		2) Alternative model that shows how conflicting results may be explained by unidentified mechanisms or depiction of unidentified mechanisms that have not been discovered because they may cancel each other out in empirical results

		3) Meta-analysis to test mechanisms in prior studies
		4) Meta-theory: Applying the mechanisms to other phenomena

Source: Post et al, 2020; Torraco, 2016.

Within this thesis, integrative literature review is defined as "a review of literature in a temporal (chronological) and conceptual manner done systematically to detail inconsistencies so far, that form the new ground for new knowledge" (Torraco, 2016, p. 34). In view of the fact that this literature review aims to extend theory by addressing essential elements overlooked thus far (inconsistencies – Integrative Literature Review) (Torraco, 2016) and synthesize in the development of an envision-based conceptual framework, which describes categorises and maps relevant theories together thereby creating essential relationships, applicable to the new age context (MacInnis, 2011), the theorising avenue also should support this aim. Hence, the analytical approach for extending cognitive dissonance theory is that of "clarification of constructs" integrated with "exposing emerging perspectives" (Post et al., 2020). The reason for such a combination is the following: -

(i) need to establish omissions and inconsistencies and identify important structural elements to perceive cognitive dissonance within an individual.

(ii) understand the possibility of applicability by exposing cognitive dissonance's elements' effects on related frameworks in the context of a highly cognitive, self-reliant, and neurologically viable cohort as the new generation Z who are rapidly indulging in reflexive consumerism (Antevenio, 2019; Beckett & Nayak, 2018).

Additionally, the critique approach combines data analysis with logical and conceptual reasoning to enhance the development of the theory within the context of the research. The reason for doing so is, according to Torraco, "logic and conceptual reasoning are as valuable as other elements of the synthesis model to the new knowledge generated since they explain the author's thinking as (s)he assimilates the elements of a new theory or model, fitting and reshaping ideas and meaning, and integrating larger constructs into the emerging conceptual model" (Torraco, 2016, p. 66). Furthermore, Weick (1989) suggests that "in general, a theorising process characterised by a greater number of diverse conjectures produces better

theory than a process characterised by a smaller number of homogeneous conjectures" (Weick, 1989, p. 522).

Furthermore, when it comes to qualitative research, according to Torraco, "presenting a framework or model without a description of the origin of its constructs, their interrelationships, and the conceptual reasoning used to build it is akin to presenting the results and conclusions of an empirical study without discussing data collection and analysis" (Torraco, 2005, p. 363).

2.1.5.3 The Literature Synthesis Matrix for Cognitive Dissonance Theory Utilised as a Base for Further Conceptual Understanding and Critique

Considering the expanse of cognitive dissonance theory as a phenomenon and application thus far, a synthesis matrix was utilised to adequately undertake the rigour of data analysis as prescribed by Whittemore and Knafl (2005). According to the literature, in an integrative literature review, the elements of data analysis include "noting patterns and themes, seeing plausibility, clustering, counting, making contrasts and comparisons, discerning common and unusual patterns, subsuming particulars into general, noting relations between variability, finding intervening factors and building a logical chain of evidence." (Whittemore & Knafl, 2005, p. 551).

Therefore, a synthesis matrix was utilised as a part of the temporal and conceptual analysis for cognitive dissonance theory, which aided in categorising the main ideas studied thus far and identifying the categories of inconsistencies within the theory. These inconsistent categories were further critiqued in detail to identify the structural elements required in an individual to perceive cognitive dissonance. It is briefly presented below in Table 2.2. The full detailed matrix of every study is shown in appendix A.

Table 2.2 presents, in brief, the literature synthesis matrix.

Main Idea	Source #1	Source #2	Source #3	Omitted Theme/Inconsistency Detected

Dissonance cannot initiate an action, but more reconcile inner beliefs to rationalise action.	Aronson and Mills (1959) studied women in the early 60s to test for dissonance as an influence.	Losch and Cacioppo (1990) studied dissonance as a motivator in a post-decisional context.	Brooksbank and Fullerton (2020) studied B2B consumers and sales reps in a post-decisional context.	1. Cognitive Capacity of Cohort and Self-Esteem 2. Post-decisional context
Experiments and Induced Compliance mechanisms to test existence of Cognitive Dissonance	Aronson, Devine & Patricia (1994) used induced compliance mechanism was utilised	Gosling, Denizeau & Oberle (2006) conducted three experimental trials to test for dissonance	Odou et al., (2019) utilised induced compliance mechanism as was most studies.	Conducive Methodology
* Omitted theme in studies thus far	* Omitted theme in studies thus far	* Omitted theme in studies thus far	* Omitted theme in studies thus far	* Heuristic Reliance in Individuals
Self-affirmation, re-orientation to match inner beliefs rather than act to change behaviour or environment.	Aronson (1960) people reconcile their beliefs and actions to reduce dissonance	Aronson and Carlsmith (1962) experimented with kids, and ascertained re-orientation of beliefs is resorted to, in order to	Swan and Read (1981) experimented with undergraduates and ascertained self-rationalisation to be the approach.	1. Cognitive Dissonance as a motivator of action. 2. Conducive Methodology 3. Cohort of study considering the 90s.

		address dissonance.		
Dissonance generates internal cues	Joule (1986) dissonance generates internal cues	*Omitted theme in studies post introduction with the exception of Joule (1986)	* Omitted theme in studies post introduction with the exception of Joule (1986)	* Cognitive Elements as a driver arousing dissonance

Source: The current author. Since the sources vary, they have been inserted as source #1, source #2 and source #3, and have been identified in each cell with reference information. (*) indicates omitted themes as opposed to inconsistencies spotted.

Extant literature suggests that, a "constant comparison method" is one underlying mechanism utilised in a broad range of qualitative literature designs that "converts extracted data into systematic categories, facilitating the distinction of patterns, themes, variations and relationships" (Glaser, 1978; Miles & Huberman, 1994; Patton, 2002; Whittemore & Knafl, 2005). Furthermore, this was an essential step to be done, as the inconsistencies, in theory, are also seen as replicated within the consumer behaviour studies domain.

2.1.6 Main Conceptual Focus of the Study and Questions Addressed

Because cognitive dissonance theory is an umbrella term used for beliefs and motivations affecting action (Aronson, 1960; Festinger, 1957; Harmon-Jones & Amodio, 2009; Montgomery, 2012), it is imperative to signify at the outset the conceptual focus of the study. Therefore, owing to the temporal and conceptual data analysis on cognitive dissonance theory, the conceptual base of this study, whilst intertwining previous studies' cognitive elements aspect (Festinger, 1957), is the action-based model of cognitive dissonance (Harmon-Jones, 1999). Although this model was studied and introduced in a post-decisional context, as part of this thesis's literature review, the model is looked at from a pre-decisional context application following the evidenced inconsistencies in addressing/focusing on cognitive elements arousing cognitive dissonance in individuals. The derivation of this ground

and conceptual focus is explicitly indicated as part of the literature review sections of the theories and frameworks below.

Figure 2.4 below presents the themes pertaining to inconsistencies emerging within the synthesis matrix and their impact patterns when frameworks are combined about cognitive dissonance theory, giving rise to further questions addressed as part of the literature review and the review's structural orientation.
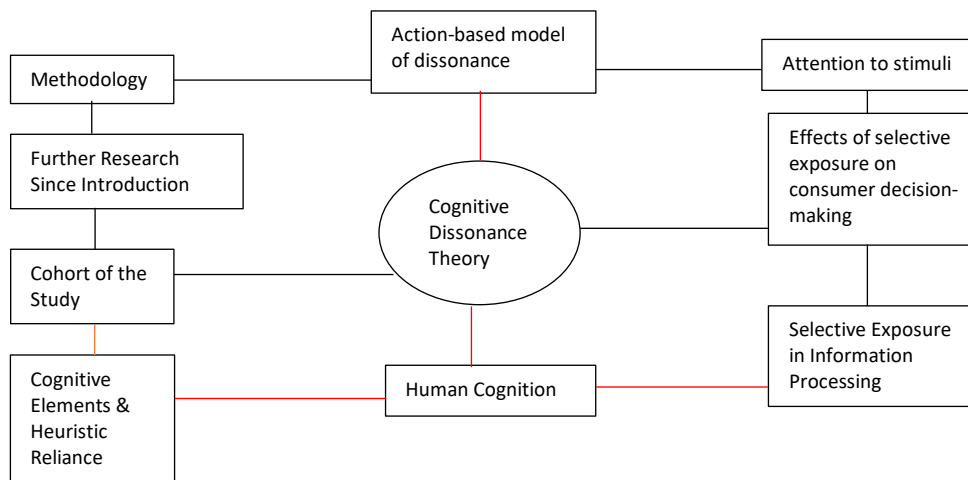
Source: The current author.

Understanding these themes has led to each section having a set of underlying questions that are of prime focus for the study and follow the continuum of linking the various theories and frameworks into the study context. Table 2.3 presents the questions addressed.

Table 2.3 presents the questions addressed for every theory or framework in focus.

Theory/Framework in Focus	Question Addressed
Cognitive Dissonance	What was the original theory?
Cognitive Dissonance	What did Festinger see cognitive dissonance as?
Cognitive Dissonance	What did Festinger mean by cognitive elements?
Cognitive Dissonance	What is meant by magnitude of dissonance?

Cognitive Dissonance	What sort of research stemmed from the introduction of the theory?
Cognitive Dissonance	How were the studies conducted – both from a cohort perspective and methodology perspective?
Cognitive Dissonance	Were the methodologies conducive to ascertain the implications of cognitive dissonance in individuals?
Cognitive Dissonance	What changes in context when generations change?
Cognitive Dissonance	How does the self-concept and responsibility attributes factor in within cognitive dissonance?
Cognitive Dissonance	What is the action-based model of cognitive dissonance?
Cognitive Dissonance	How does the action-based model of cognitive dissonance if put into study context unfold?
Cognitive Dissonance	What are the structural elements identified within cognitive dissonance theory, which form a pre-requisite for perceiving cognitive dissonance?
Heuristics	What is Heuristics?
Heuristics	How has it evolved in meaning?
Heuristics	How does it play the role of a learning curve in individuals?
Cognitive Dissonance/Heuristics	How does heuristic reliance play a part in sensing the cognitive elements arousing dissonance?
Latent Need	What is a latent need?

Latent Need	Where is latent need's ground in an individual exemplifying it to be a cognitive heuristic element as per Festinger's terminology?
Latent Need	How does latent need unfurl in the action-based model of cognitive dissonance?
Latent Need	How does latent need affect information processing and thereby consumer behaviour?
Information Processing	What does the information processing model entail?
Information Processing	How does a computer system (as the model replicates that for individuals) differ from human cognition?
Information Processing	How does cognitive heuristics (cognitive elements) influence information processing in higher IQ and EQ cohorts?
Consumer Decision-Making	How has consumer decision-making evolved to account for the new age of consumers?
Consumer Decision-Making/Heuristics	How can the effect of cognitive elements and cognitive dissonance be seen in consumer decision-making in the digital age consumer?
Synthesis of all of the theories and focus – Attention as a concept	How does attention play a vital role in adhering to cognitive heuristic elements in the digital age consumer thereby affecting selective exposure and consumer decision-making subsequently shaping consumer behaviour?

Source: The current author.

The methodology explained above, can be explicitly seen below in the respective sections.

2.2 Cognitive Dissonance – A theoretical and conceptual roadmap till date

2.2.1 Inception to 1999

Since its inception, the definition of cognitive dissonance has remained the same, as was stated by Leon Festinger in 1957, "a mental discomfort leading to an alteration in one of the attitudes, beliefs or behaviours to reduce the discomfort and restore balance" (Festinger, 1957, p. 8). However, the contexts of studies and their results have been different and primarily more focused not on a causal perspective but more on an after-effect perspective. Some examples of which were cited as part of the previous chapter.

After the introduction of cognitive dissonance as a theory in 1957, more than 60 odd years ago, we can sense its relevance again in today's context in the same frame of reference as it was introduced. In Festinger's (1957) view, the influential factors influencing individuals' lives are dynamic. Individuals are roused, driven, and pushed by elements in the social world just as from inside their characters. He underlined that angle in his theory of 'social comparison processes' (Festinger, 1954), from which stemmed the cognitive dissonance theory of 1957, in which he attested that, to the degree that individuals are questionable of the accuracy of their assessments and capacities, they are headed to contrast themselves with that of others' opinions (Cooper, 2019). When taken in the context of the above studies in chapter one, we can relate to why previous generations were oblivious to dissonance and why the studied cohort is more inclined to sense and listen to their latent needs and felt dissonance.

Breaking down the theory of cognitive dissonance, the term 'cognitive' precedes dissonance. Festinger believed that all types of thoughts, behaviours and perceptions were represented in people's thinking by way of their cognitive representations (Cooper, 2019; Festinger, 1957). In line with this, due to the volatility of individual behaviours and mental processes, several studies later took on the aspect of ascertaining the magnitude of dissonance and how the degree of importance/level of intensity is matched with how life-changing the dissonance felt can be (Festinger, 1957; Gotz-Marchand, Gotz & Irle, 1974; Gotz-Marchand & Kumpf, 1973; Metin & Camgoz, 2011; McGrath, 2017). Such literature further highlights the validity of the

ground of the research objectives and study, especially as healthcare is a highly self-oriented sector with intense consequences for actions undertaken. In a more mathematical sense, Sakai (1999) and Shultz and Lepper (1999) attempted to illustrate the magnitude of the dissonance with cognition (Harmon-Jones & Amodio, 2009).

The literature proposed that magnitude can be ascertained by D/D + C, where D is the sum of cognitions dissonant with a particular cognition and C is the sum of cognitions consonant with that same specific cognition weighted for importance (Harmon-Jones & Amodio, 2009; Sakai, 1999; Shultz, 1999). Further research indicates in his theory whilst introducing Leon Festinger mentioned, "the magnitude of dissonance depends on importance or value of the elements (e.g., knowledge, belief, attitudes) that are dissonant" (Festinger, 1957, p. 89).

Following Festinger's introduction of the theory, Festinger and Carlsmith tested dissonance theory in various scenarios. The most famous one was in 1959, the first time the idea of dissonance was tested. It was a forced compliance test (Festinger & Carlsmith, 1959). The resulting literature showcased that if an individual partakes in an uncomfortable errand that is deficiently compensated, their perception of undertaking this assignment conflicts with their insight of getting no prize. Consequently, the individual decreases dissonance by looking for justifications, for example, increasing the appeal of the goal (Festinger & Carlsmith, 1959; Metin & Camgoz, 2011; Nasir, Roslin & Chui, 2020).

Further research was undertaken by Aronson & Mills (1959), wherein women who joined a group were given various degrees of inductions. It was found that those with highly intense experiences were more appreciative of the group than the other two groups. However, what is important to note is that this study was undertaken in the late fifties and with the studied cohort solely women. Therefore, in such a period, the attitude of consumerism in general (as indicated in the previous generations table in the introduction chapter) and more so for the studied consumer group (women) was one of balancing out the dissonance by way of reinforcement of the belief that the choice is right (Ad Age, 2003; German, 2017; Gurney, 2005; Lamb, 2012; Stentz & Macce, 2013; Thorn, 2006; Weebly, 2014; Whiteley, 1987) and not one that would explicitly work to sense the psychological conflict and thereby change the choice based on personal cognitions.

Subsequent studies by (Aronson, 1960; Aronson & Mills, 1960, 1968; Aronson & Carlsmith, 1962, Swan & Read, 1981) respectively also focused on the same reinforcement of choice made by rationalising the beliefs. Although, they did further the theory of dissonance by bringing more emphasis to the concept of 'self' and re-emphasizing that dissonance resides in an individual when actions/behaviours conflict with the 'self-concept' (Metin & Camgoz, 2011) as according to Aronson, "If a person sees himself as a schnook, an un-schnooky behaviour arouses dissonance" (Aronson, 1969, p. 28). However, what differed from the original theory was the explanation of how dissonance was reconciled by the justification of the action taken and that it did not prompt any further action. Festinger, however, saw dissonance as a driver forcing people to act and the elements that arouse the dissonance to be cognitive elements upon which produced dissonance rested (Festinger, 1957; Harmon-Jones & Amodio, 2009; Kaaronen, 2018; Metin & Camgoz, 2011). Cognitive elements are inner cues and self-knowledge, including beliefs (Festinger, 1957).

Literature indicates Festinger viewed dissonance as a motivator; he also saw cognitive elements around which dissonance aroused to be drivers (Aronson, 1992; Brannon & Gawronski, 2019; Bran & Viadis, 2019; Carpenter, 2019; Elliot & Devine, 1994; Girandola, 1997; Metin & Camgoz, 2011). Now, this insight of Festinger's implications of cognitive elements and dissonance aroused via them accentuates two distinct understandings for marketing field research. First, in line with the premise of Festinger, drivers and dissonance can only be seen as influential factors in the pre-decisional phase of the consumer decision-making process. In addition, states of dissonance concerning internal cues that prompt action are further accomplishable as a study in the 'pre' phase and not in the 'post' of consumer decision-making. Second, dissonance in the post-consumer decision-making scenario is a product of the wrong choice, and further actions depend on changing the option or the brand. However, what is important to note from a theoretical standpoint is that dissonance in the post-decisional context is only one of the mental states of an individual and not a notion that can disintegrate further mental processes (Brooksbank & Fullerton, 2020). Therefore, in the 'post' phase of decision-making, researchers will be able to validate the existence of dissonance or the intensity of dissonance produced but cannot further the states of

dissonance as the number of influential factors in a 'post-purchase' scenario vary and are not solely driven by internal cues and beliefs.

Additionally, studies by Aronson and colleagues in 1960, 1962 and 1974 suggested three propositions whilst elaborating the concept of self: -

1) To preserve a consistent, stable and predictive sense of self.

2) To preserve a sharp sense of self.

3) To preserve a morally good sense of self.

Each of the above propositions matches with later literature and further research. The first proposition follows the harmony-based approach of Festinger (1957). The second concerns self-esteem, and the third addresses the responsibility factor.

Fazio, Zanna and Cooper, in 1977, reviewed literature concerning self-perception and cognitive dissonance. They further proposed detailing factors in each of the theories individually, that the two theories are not contradictory but complementary. Ronis and Greenwald (1978) studied and observed that the mental character of the inspiration for personal change could be deciphered, in ongoing explanations of the dissonance theory, as a need to save one's 'self-esteem' as opposed to a need to keep up rationale among perceptions. Thus, they questioned, what if the cognitive dissonance theory, which had been undergoing massive change and variations then, was correct from the time it was introduced?

In 1984, Cooper and Fazio introduced a model. They suggested that the stimulation of dissonance is an antecedent to the psychological conflict that persuades people to change behaviours, primarily when people feel a sense of responsibility (Cooper, 2019; Cooper & Fazio, 1984; Metin & Camgoz, 2011). This model gave more recognition (regarding its impact on individuals and their behaviours) to Leon Festinger's initial theory. Such insights were earlier ascertained by Brehm and Cohen (1962) and Cooper (1971), and further was attempted once by Geothals, Cooper & Naficy (1979). However, the model of Cooper and Fazio (1984) is highly acclaimed. The insight from the 1984 model led to further studies conducted by scholars into responsibility and dissonance and comparative magnitude (Beauvois & Joule, 1996, 1999; Mahaffy, 1996; Sande & Zanna, 1987; Viswesvaran, Deshpande & Jacob, 1998).

Joule's (1986) study stood to address and further cognitive dissonance from the angle of highlighting the importance of internal cues as proposed by Leon Festinger (1957). The literature indicated after analysis of dissonance ratio (mathematical equation cited earlier) that a decrease in dissonance isn't introduced as a procedure that orients cognitive activity toward more consistency; however, as a "rationalisation of conduct" which may adjust to growth in specific inconsistencies, and even produce them (Joule, 1986). This study orients dissonance as a theory toward generating internal cues and not being driven by them. Considering the fact that new research is built from previous study and combined with cognitive abilities and reliance on heuristics being negligible in previous generations (cited earlier), such an insight could explain 'why cognitive dissonance was looked through for all these years in marketing and other fields from a post-decisional perspective'.

To further understand the depth of cognitive dissonance, Scher and Cooper (1989) tested empirically the notion that discrepancy is not a prerequisite to arousing cognitive dissonance. Amongst students who were asked to write an essay (some who wrote pro-attitudinal articles and some who were asked to write against their beliefs), the data demonstrated that in both situations, dissonance was triggered. Considering the testing scenario of high school students, the findings were congruous with the model of Cooper and Fazio (1984) that the incentivising base for dissonance is the perceived liability toward repugnant outcomes. If this is the case, we can say that the magnitude of dissonance discerned will be the differing factor in scenarios. However, dissonance will be felt due to inner cues, a.k.a inner beliefs and knowledge (Festinger, 1957). Further reviewing this understanding from the study's literature, dissonance can be a motivator, inner beliefs can be cognitive elements arousing dissonance, and the cognitive elements can be the pre-decisional dissonance states arousing the dissonance.

Succeeding the 1989 model studies conducted relating to terms such as 'reconfirmation', 'self-affirmation', 'bias' and 'balance theory', including 'reinforcement' came under the broad umbrella of cognitive dissonance studies (Aronson, 1992; Harmon-Jones et al., 2007, 2009; Metin & Cogmaz, 2011). The aforementioned individual theories later became various paradigms within cognitive dissonance theory. Six major paradigms emerged: free choice, induced compliance, effort justification, self-consistency, self-affirmation and aversive

consequences. These paradigms can be seen as constructs among various studies conducted during this period (cited earlier and in further studies below). Literature indicates that these paradigms were modelling of the above notions to test the applicability and whether dissonance (i) could cover all the leading social psychology theories and (ii) if dissonance affected personalities (Aronson & Mills, 1959; Beauvois & Joule, 1996; Cooper, 2007; Harmon-Jones & Mills, 1999; Festinger & Carlsmith, 1959; Olson & Stone, 2005).

In 1990 Losch and Cacioppo conducted two experiments using misattribution sources to examine the motivational state underlying dissonance-induced attitude change in a post-decisional context. The study highlighted interesting results of dissonance being aroused in both settings. However, what stands out is that if attitudinal change as a product of dissonance-induced is to be studied as was the purpose of the 1990 study, logically, it should be evident in a pre-decisional phase. Kunda (1992) examined whether dissonance theory can explain all the neo-dissonance theories brought under the dissonance banner. For example, more minor theories like 'self-affirmation theory' (Steele, 1988), 'symbolic self-completion' theory (Wicklund & Goll-Witzer, 1982), 'self-evaluation maintenance' theory (Tesser, 1988), 'self-discrepancy' theory (Higgins, 1989), 'action-identification' theory (Vallacher & Wegner, 1985), 'self-verification' theory (Swann, 1984), 'self-regulation' theory (Schieir & Carver, 1988) and 'the concept of motivated interference' (Kunda, 1990).

Now whilst, Aronson and colleagues' studies in 1960, 1962 and 1974 informed three propositions, which in reality address that the smaller theories brought under the umbrella of cognitive dissonance are justified, Kunda, in her review, refuted this understanding by stating, "inferring that all motivational findings boil down to dissonance as a theory, is not very useful without showing how dissonance theory can account for the full range of motivational phenomena" (Kunda, 1992, p. 338).

In light of this, in 1994, Aronson, Devine and Patricia experimented wherein in two induced compliance tests including an aggregate of 112 students, a self-report proportion of effect was utilised to show that dissonance was experienced as a mental inconvenience and that this psychological uneasiness was eased on the execution of demeanour change. The first experiment yielded supporting proof for both of these recommendations. The second

experiment imitated the first examination and precluded a self-discernment-based elective clarification for the dissonance decreased discoveries in the first instance. Results enhance Festinger's 1957 conceptualisation of psychological discord as an influential factor (Aronson, Devine & Patricia, 1994). Thereafter, Stone (1999) focused his study on what role cognitions about the 'self' play in cognitive dissonance theory. He emphasised that the primary question "what have I done?" is a defining factor for individuals in their efforts to understand themselves. This furthers the concept of self and responsibility (Cooper & Fazio, 1984) as a defining influence on perception of cognitive dissonance. Additionally, the inference of having generation Z perceive dissonance owing to this concept of 'what have I done?' can be seen to fully take effect as they are wary of their choices and risk aversive tendencies characterise them (see chapters 1 and 3).

2.2.2 2000 to date

The early 2000s and further recent studies relating to dissonance automatically embedded responsibility as a component in dissonance, and the self-concept developed in abundance (Beauvois & Joule, 2019; Gosling, Zeneau & Oberle, 2006; Levy, 2014; Miklosovic, 2010; Ping-Kun & Pi-Yueh, 2012; Stone, 2003; Thogersen, 2004; Wan & Chiou, 2007; Wicklund & Brehm, 2013). Cooper and Stone (2000) presented a new model of self-standards and cognitive dissonance. Literature indicates that it was designed to create a synthesis of all the concepts. However, they believed dissonance begins when people commit to acting and then assess the same after acting. This, again, focuses on after-action dissonance, which is a contrast to Festinger's theory. Even then, since the idea of the model was to synthesise all self-concepts under one model, stemming from previous literature seen above, this would be an obvious outcome.

In 2004, Thogersen tested cognitive dissonance in Denmark with 309 consumers in an ERB (environmentally responsible behaviour) context. The results from this quantitative study suggested that the influence of the desire to be consistent in behaviour depended on the perception of the moral importance of conducting oneself in a responsible way towards the environment (Thogersen, 2004). Now, this finding emphasises that the more one feels morally responsible, the more behaviour would be consistent with internal cues, i.e. in this scenario, it was to partake in responsible behaviour toward the environment. Furthermore,

let's consider it from the study context of new consumer generation Z. We can observe a greater need (within the cohort) to be consistent with internal cues to avert unwanted consequences perceived in other generations. As such, this mentality would affect their decisions and behaviour patterns.

A study conducted in 2006 by Gosling, Denizeau and Oberle studied the facet 'denial of responsibility' to achieve consonance. Three experiments were conducted, of which two experiments reaffirmed the hypothesis that individuals following a different behaviour appreciated having the 'mode of reduction' of dissonance offered to them first regardless of whether they were "trivialisation", "attitude change", or "denial of responsibility". The third experiment highlighted that denial of responsibility affected the unfavourable intuitive state generated by dissonance (Gosling, Denizeau & Oberle, 2006). However, we can question whether an experimental approach used in this study is appropriate to test responsibility as a factor to be accepted or denied and its effects on dissonance. Literature suggests that in trial circumstances, the experimenter simultaneously gives members the opportunity of decisions and exerts enough pressure for them to acknowledge their solicitation (Festinger,1957, 1999). Therefore, members can say they had a choice and, simultaneously, reject their 'responsibility' within the experiment because of the researcher's pressure. Such an examination of dissonance in levels of responsibility clarifies why members would be in a position to separate the impression of decision from a sentiment of responsibility.

In such a circumstance, would the results depict the proper sense of 'self', vital to dissonance studies? It can be logically understood as not. However, literature also indicates (Beauvois & Dubois, 1988; Jellison & Green, 1981; Weiner,1995) that responsibility has been ingrained since the first stage of education. So, won't it still be a factor that would affect test results? As depicted in Table 1.1, what needs to be understood is that the notion of 'self-belief' was very low in previous generations, including millennials (of the recent times). More power of influence was provided to others, which meant a lower sense of self. In such a low sense of self, dissonance does not present its full potential as an influential qualitative component in individuals (Carpenter, 2019; Keelan, 2016; Stone, 2003) which means that 'testing of dissonance' in relation to 'responsibility' is likely to have a very biased result. However, this study enables ascertaining the necessity to study the dissonance theory qualitatively.

Wan and Chiou (2007) studied the roles of personal responsibility and justification of cost play among adolescents in a cognitive dissonance-induced framework in a gaming context. Two experiments were undertaken to examine whether moral obligation and cost explanation may be essential factors affecting youth players' demeanour change and their eagerness to participate in dissonant cognitive conduct. Experiment 1 uncovered that youthful players who felt a solid awareness of others' expectations seemed to show more noteworthy demeanour change. In the second experiment, the discoveries demonstrated that players would generally utilise justification of cost to diminish or eliminate the dissonance between their disposition toward web-based gaming and paid-up cost. Adolescent players who saw greater internet gaming expenses were less ready to participate in mentally conflicting conduct (Wan & Chiou, 2007). The findings of this study further establish tying in of earlier cited literature on 'effects of responsibility', 'sense of self' and mainly Festinger's ideology of dissonance driving behaviour. However, the stimulants of this study were external in the sense that they were attributed to monetary terms and beliefs attached to money. Festinger (1957), however, stated that inner beliefs guide behaviour.

Stemming from this research were Koller and Salzberger (2007), who studied tourists visiting hotels and confirmed that principally, cognitive dissonance could be found in the pre-decisional stages. In 2009, Keng and Liao studied post-purchase dissonance among consumers buying durable products. The study highlighted that dissonance felt after purchase affected repetitive purchase intentions. During the same time, the contexts of dissonance as a theory to implement saw an increase in marketing as a field to further the research. This is because consumer decision-making as a context for understanding dissonance was relevant. Furthermore, consumer decision-making was also evolving at that time concerning consumer post-purchase evaluation (Stankevich, 2017). Consumers had started studying their purchase decisions after following 'call-to-action' marketing followed rampantly during that period (Eisenberg & Eisenberg, 2006; Maclaran et al., 2012).

In line with this, Hamza and Zakariya (2012) investigated the outcomes of cognitive dissonance (again, a post-purchase study) and the different variables related to this among college understudies. Literature indicated that cognitive dissonance existed in the post-

purchase stages when respondents felt a sense of regret about their purchase. This circumstance prompted dissonance. Respondents who experienced such psychological conflict were not likely to indulge in WOM (word-of-mouth). Aside from that, they were probably going to decline the repurchase of the items and look for better options in the market. Again, the findings from the study were in a post-purchase context contrasting with the 'initiation of an action' proposition as in the research thesis here and suggested by Festinger (1957). However, yes, it could inform the initiation of repeat actions.

Costanzo (2013) was the second researcher after the study conducted by Koller and Salzberger (2007) to reiterate the existence of dissonance in a pre-decisional context. Other literature from the study suggests that cognitive dissonance gives a substantive arena to research consumer behaviour (Costanzo, 2013). The investigation further explained that pre-decisional dissonance is significant as it indicates market-driven activity. Pre-decisional (in the consumer decision-making process) study of cognitive dissonance is vital as this phase will determine how well consumers would buy/avail of a product/service. The literature from this study furthers the ground of this thesis to be of significant value and achievable.

Furthermore, the contexts of studies within the marketing field increased (Banerjee, 2017; Bolia et al., 2016; Hasan & Nasreen, 2014; Pandey & Jamwal, 2016; Sharma, 2014; Yap & Gaur, 2014). However, these studies above did little to contribute to research, as they all related to post-purchase dissonance in various contexts within marketing. The cognitive dissonance and consumer behaviour section will highlight some of these studies below.

After a gap from 2013 to 2018, in terms of conceptual and theoretical enhancement except understanding the effects of various advances to date, in multiple scenarios (Jain, 2019; Lin, Chen, Wang & Lin, 2018; McFaddin, 2018; Owuamalam, Rubin & Spears, 2018), two critical papers came up in 2019 and 2018 respectively. These two papers reiterated the need for re-conceptualising and addressing many of the inconsistencies that have cropped up due to the nature of research conducted around Festinger's cognitive dissonance theory (Brannon & Gawronski, 2019; Bran & Viadis, 2019).

Bran and Viadis (2019) critically reviewed Festinger's theory and the developments after that to highlight what they felt were discrepancies in terminology leading to conceptual

discrepancies. The literature reviewed also pointed out that in Festinger's view (1957), regulating inconsistencies should decrease 'dissonance', yet does that mean 'resolving the inconsistency' or 'alleviating the dissonance'? According to the duo, this issue is never explained in the first introduction of the theory. It contrasts with researchers' varied understanding, which could bring about drastically various perspectives about the idea of dissonance reduction. The review further suggested that bringing about one consensual conceptualisation of 'cognitive dissonance theory' requires determining that the regulation takes the place of a 'cognitive dissonance state' and not really 'the dissonance'. To fill that need, a terminology was introduced which would fit best. Thus, the cognitive dissonance state was brought to clarify what is resolved and what is aroused. Earlier research ties in with this concept (Jonas et al., 2014; Levy et al., 2017; Proulx et al., 2012; Vaidis & Bran, 2018).

However, if we re-evaluate previous studies, the terminology factor is essential; studies have only primarily been in the post-decision scenario and focused more on realigning internal beliefs to external behaviour (cited in the literature above). Therefore, such an understanding was not warranted as a 'state of influence' of dissonance. This, thus, could lead us to interpret three underlying reasons for the 'need for cognitive dissonance state' as terminology and a concept now more than before. First, conceptually and theoretically ascertaining states of dissonance can only be addressed in the pre-decisional stage of decision-making (logically derived and emphasised earlier), whilst dissonance is one of the post-decision states (Brooksbank & Fullerton, 2020).

Therefore, before Costanzo (2013) attempted and highlighted the pre-decisional applicability of dissonance theory, it never really would have occurred to researchers before this as research is augmented on previous research (Jacquin et al., 2003; Snyder, 2019). Second, cognitive dissonance and its state could not have played a role in pre-decisional contexts in previous generations due to factors highlighted in chapter one (Carlo, 2019; Belyh, 2019; Denniston, 2017; Grohol, 2018). Third, Festinger's theory, in its totality, did emphasise the "negative affective state of dissonance" and cognitive elements and their roles as stimulants in the process of dissonance arousal (Brehm & Cohen, 1962; Costanzo, 2013; Festinger, 1957; Hasan & Nasreen, 2014; Hinojosa, Gardner, Walker, Cogliser & Gullifor, 2017; Metin & Camgoz, 2011; Nasir, Roslin & Chui, 2020). However, this aspect of cognitive elements has

been overlooked highly in previous research, as indicated above and in other research (Costanzo, 2013; Kaaronen, 2018; Markiyan et al., 2020; Rothgerber, 2020; Warren et al., 2020).

Borrowing on the knowledge of 'cognitive state' and the need to ascertain it, Brannon and Gawronski (2019), however, draw light onto Festinger's (1957) theory and re-affirm the emphasis on cognitive elements, inconsistency and their effects. The literature suggests that not only do people realign their beliefs with their behaviour. They can also hold on to their beliefs when confronted with conflicting information (Brannon & Gawronski, 2019). This understanding's implications are far-reaching, as such notions are bound to impact information consumption in the marketing context and lead to 'selective exposure' and 'information avoidance', as we will see explicitly depicted below.

2.2.3 Conceptual Background of the Study: Action-Based Model of Cognitive Dissonance

The action-based model of cognitive dissonance (Harmon-Jones, 1999) is the main conceptual frame of reference for this study, integrated with understanding the premise of 'cognitive elements' proposed by Festinger (1957). Arising out of the above literature, there were six major conceptual paradigms 'free choice', 'self-affirmation', 'self-consistency', 'effort justification, 'induced compliance' and 'aversive consequences' (Carpenter, 2019; Harmon-Jones & Amodio, 2009; Kastenmeuller, Peus, Frey & Fischer, 2008). These have been addressed in several contexts in cited studies above. However, the modelling of paradigms highlighted that an essential aspect was left out by Festinger (1957), which was 'why dissonance motivated people to act a certain way'.

The action-based model was introduced in 1999 by Harmon-Jones and corresponded closely with previous paradigms and models of self-regulation. This framework brought the understanding of placing neural processes in motivating cognition (Harmon-Jones & Amodio, 2009). According to this model, the post-decisional state is like an 'action-oriented' state (Beckmann and Irle, 1985; Gollwitzer, 1990; Kuhl, 1984), where the individual is in an increased momentum of 'completing the task at hand'. Once a choice is made, an individual ought to be motivationally tuned toward implementing their choice and carrying on adequately for it (Harmon-Jones & Amodio, 2009; James, 1890; Kastenmueller, Peus, Frey &

Fischer, 2008; McArthur & Baron, 1983; Mills & Harmon-Jones, 2019). An action-based attitude is one in which plans are made to execute the choice (Gollwitzer and Bayer, 1999). Literature indicates that this action-oriented state is like a driver (Berkowitz, 1984; Dijksterhuis & Bargh, 2001; Fiske, 1992; Gibson, 1979; Smith & Semin, 2004). When an individual is goal-oriented, the follow-through on decisions is enhanced (Gollwitzer and Sheeran, 2006). Further research suggests that the model is similar to Jones and Gerard's (1967) idea of behaviour orientation.

Research indicates that theoretical and conceptual studies on the action-based model of dissonance have been extremely scarce. Even though its implications are many and further neurologically backed. Database searches indicate constant publishing are for two years Harmon-Jones (1999) and Harmon-Jones & Amodio (2009). Figure 2.5 presents the flow diagram of the scoping study undertaken for the 'action-based model' and its results.

Figure 2.5 the flow diagram of the scoping study for the action-based model of cognitive dissonance
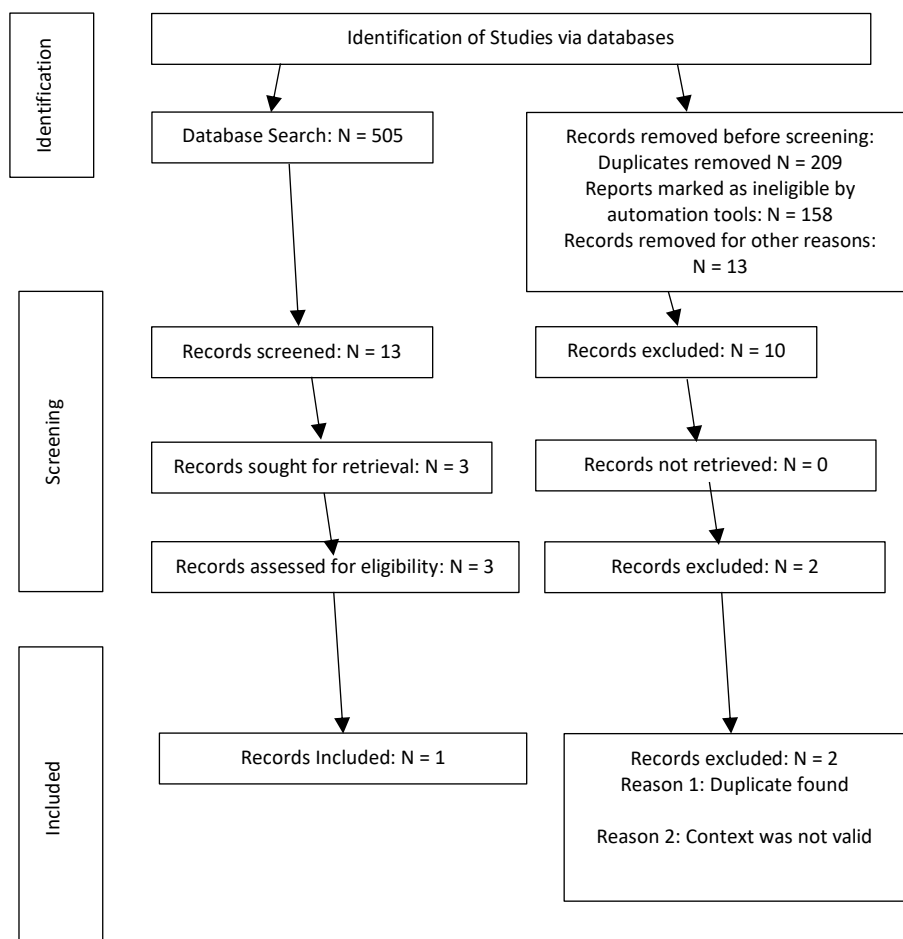
Source: The current author. PRISMA model. Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) flowchart.

Harmon-Jones, Schmeichel, Inzlicht and Harmon-Jones (2011) found by conducting two studies testing the action-based model of cognitive dissonance that dissonance reduction in individuals is an approach-motivated process. However, their understanding was to prove a hypothesis that dissonance reduction can be matched to revised reinforcement theory. This, in a way, did not further the model but reconciled itself with past neo-dissonance theories (according to previously cited literature). Staying with the pure-action-based model introduced, although the model by Harmon-Jones (1999) focuses more so on the post-decisional follow-through belief and thereby clarity in choice and dissonance reduction, it opens up an exciting aspect of goal-oriented action by individuals. Suppose this is the case in post-decisional scenarios. How would it play in a pre-decisional scenario if we were to integrate the understanding of 'cognitive elements' and 'the action-based model' of dissonance?

Tying the concepts together: (i) Festinger's (1957) initial understanding of cognitive elements as drivers arousing dissonance and dissonance becoming a motivator for behaviour; (ii) the notion that cognitive elements arousing dissonance already stem from a goal-oriented place (Chacko & McElroy, 1983; Flavell, 1999) due to brain and mind developments among generations (Piaget, 1936). Can we then say that applying this notion of the action-based model of dissonance, with the understanding of cognitive elements of Festinger (1957) and their dissonance arousing capability, the internal cues a.ka. "beliefs, inner knowledge" (Festinger, 1957, p. 10) are bound to perform the role of 'guides and drivers' of consumer decision-making from the moment they are felt, i.e. in the need/problem recognition stage of the consumer decision-making process in a highly cognitive and reflexive cohort?

To logically bring an understanding, research studies on brain mapping and neural networks indicate that the 'anterior cingulate cortex' plays a vital role in monitoring the 'moment-to-moment' representations of activity inclination for potential processing clashes so that other 'neurocognitive mechanisms' may focus on overriding the unwanted tendency and on promoting an effective goal-directed response by the brain (Botvinick et al., 2001; Carter &

Van Veen, 2007; Harmon-Jones & Amodio, 2009; Harmon-Jones, 2004). Extant literature also suggests that such brain functions affect cognition and emotions equally, thereby also indulging in bypassing cues to focus on the action to be completed, which in neuroscientific terms is referred to as 'affect regulation' (Lovstad et al., 2012; Stevens et al., 2011; University of Nevada, 2017). According to Stevens et al., "The anterior cingulate cortex (ACC) lies in a unique position in the brain, with connections to both the "emotional" limbic system and the "cognitive" prefrontal cortex. Thus, the ACC likely has an important role in the integration of neuronal circuitry for affect regulation" (Stevens et al., 2011, p. 121).

Furthermore, various studies indicate that participants with stronger 'anterior cingulate cortex' action perceive dissonance reactions and are bound to participate in controlled conduct (slower, progressively cautious reactions) (Amodio et al., 2008; Harmon-Jones & Amodio, 2009). The resulting literature from these studies gave a foundation for understanding the 'anterior cingulate cortex' and its conflict monitoring capacity (Amodio et al., 2008; Stevens et al., 2011; University of Nevada, 2017), as the brain's neural procedure underlining cognitive dissonance. Now, if we take the above understanding and insert it into the pre-decisional research context of the thesis, then once a driver is felt (latent need in our case), it would be followed by dissonance and goal-oriented follow-up action (undertaken by the individual). Upon the feeling of a latent need (cognitive element/driver), the 'affect regulation' mode of the brain would take over, which would impact the flow and follow up on additional content which can be processed by individuals, which is referred to as 'selective exposure' and 'information avoidance' (Carter, Pyszka & Guerrero, 1969; Kastenmuller, Peus, Frey & Fischer, 2008; Tsang, 2019).

This further heightens the understanding and foundation of the thesis to be appropriate. Furthermore, Farah and Fellows (2005) demonstrate that being a neural connector network, "functional neuroimaging studies in humans suggest that dorsal anterior cingulate cortex (dACC) plays an important role in cognitive control. This brain area is reliably activated when tasks require the ongoing adjustment of the allocation of attention" (Farah & Fellows, 2005, p. 788). Thus, the understanding produced as part of dissonance studies of the ACC as an underlying dissonance mediating brain mechanism via the action-based model is neurologically possible in humans.

Further research on neurophenomenological aspects suggests that whilst the 'anterior cingulate cortex' works as described above, the 'prefrontal cortex' works to reduce dissonance as well (Kerns et al., 2004; Miller & Cohen, 2001). According to Purves et al., "The anterior cingulate cortex has two regions: the dorsal and the ventral. The ventral part is involved in emotional tasks, like evaluating emotional relevance and salience. It is directly connected to the Amygdala, Nucleus Accumbens, the Insular cortex and the Hypothalamus (all of them "emotional circuits"). On the other hand, the dorsal part is quite involved in cognitive tasks, particularly complex or conflicting problems that require overall system coordination. The dorsal part of the ACC is connected to the Prefrontal and Parietal cortices, both "association cortices" and helps with all manner of conflict resolution and coordination, both motor and sensorial" (Purves et al., 1997, p. 520). Because of its neural circuitry connection, ACC can produce affect regulation and associate with information from the PFC to complete a cognitive task through the process of 'affect regulation' (Stevens et al., 2011).

Extant literature also indicates that neural structures assisting cognitive functions involve simultaneous processing within matrices of widely apportioned regions of the brain whose "functional connectivity is mediated by coherent oscillatory activity across the affiliated of the networks themselves" (Fazelpour & Thompson, 2015, p. 224).

2.3 Structural Elements Identified Within Cognitive Dissonance Theory

Deriving from the detailed temporal analysis and further understanding of the action-based model of cognitive dissonance above,combined with inconsistencies, omitted themes and impact patterns seen from the literature synthesis matrix arrived at for cognitive dissonance, certain underlying constructs are identified as vital structural elements to perceive cognitive dissonance as a phenomenon affecting consumer decision-making.

2.3.1 Generation

Firstly, generations and their characteristics play a vital role in perceiving cognitive dissonance as a phenomenon. Within a generation, however, specific attributes and their increase is

observed to be vital in furthering the perception of cognitive dissonance within that cohort. They are the following:

2.3.1.1 Importance of Risk-Aversive Tendencies

The literature reviewed thus far indicates a direct correlation between risk-aversive tendencies and dissonance (Cooper & Fazio, 1984; Scher & Cooper, 1989). To understand risk-aversion to foreseen consequences, it is imperative to consider Scher and Cooper's (1989) model of dissonance in the face of expected consequences in correspondence with Fazio and Cooper's (1984) model. Studies indicate that testing (quantitative experiments) in both the models gave rise to an understanding that "dissonance reduction-oriented attitude change occurs only when participants make counter-attitudinal arguments which are followed by aversive consequences." (Johnson, Kelly & LeBlanc, 1995, p. 854).

Furthermore, studies indicate that perceived responsibility for aversive consequences and cognitive inconsistency is required for dissonance arousal (Carpenter, 2019; Johnson, Kelly & LeBlanc, 1995). Research also demonstrates that interpreting dissonance as a motivation arising out of responsibility regarding aversive outcomes onto the self comprehensively extends the application of dissonance theory (Scher & Cooper, 1989). For instance, if a companion approaches an individual for a favour and the individual neglects to satisfy the solicitation, it brings about antagonistic ramifications for the companion and the companion's assessment of the individual. Here, the undesired outcome at that point includes harming a regarded other (Cooper, Zanna & Goethals, 1974; Davis & Jones, 1960), and one can expect dissonance arousal (Scher & Cooper, 1989).

Thus, if such is the case, then given generations learn from the previous (one another) (Burcham, 2019; Euronews, 2011; Hoberman, 2017), the risk-aversive tendency is bound to be stronger/increased in a subsequent generation (University of Nevada, 2017). In such a mental frame of reference, the dissonance can be perceived before action as the consequences may be foresighted (Scher & Cooper, 1989; Legg, 2019; West Virginia University, 2015), thereby giving rise to risk-aversive tendencies in a cohort. The sense of self (responsibility) is also bound to be higher (Cooper & Fazio, 1984; Legg, 2019; West Virginia University, 2015) to avoid repetitive mistakes owing to prior learnings.

2.3.1.2 Importance of Self-Esteem

Studies reviewed indicate a direct correlation between self-esteem and cognitive dissonance (Carpenter, 2019; Ronis & Greenwald, 1978). That is to say, higher self-esteem higher the perception of cognitive dissonance. In order to understand, the importance and impact of self-esteem within a generation and its implications, it is essential to consider Stone and Cooper's (2001) SSM (Self-Standards Model) of dissonance. Literature suggests, "If personal standards are situationally or chronically accessible in memory, the behaviour is compared to one's own, idiosyncratic expectancies for behaviour, i.e., self-expectancies are directly related to self-esteem" (Stone & Cooper, 2001, p. 231). Resulting experimental literature further demonstrates that, the "higher a person's self-esteem, the more likely it is that the behaviour will be perceived as foolish and immoral, and the more likely it is to lead to dissonance arousal. Dissonance arousal, in this case, is "idiographic" and will be moderated by individual differences in the content of self-knowledge (e.g., self-esteem)" (Stone & Cooper, 2001, p. 231).

Stone and Cooper's (2001) seminal work further reports that "If normative standards of judgment are situationally or chronically accessible in memory, the behaviour is compared to the perception of what most people in the culture believe is foolish or immoral." (Stone & Cooper, 2001, p. 231). That is to say, if individuals see a disparity from the normative standards, dissonance will be "nomothetic" and won't be directed by "self-esteem" (Stone & Cooper, 2001). The SSM suggests that once dissonance is aroused either nomothetically (i.e., utilising regularising guidelines) or idiographically (i.e., utilising individual gauges), individuals will experience uneasiness and be roused to look for its reduction. How they lessen their distress relies on the perceptions about the self that are made available following dissonance arousal. If no different discernments about the self are brought to mind, the SSM expects that the fallacy will remain open, and individuals will look for a defence of their behaviour to diminish their inconvenience (Carpenter, 2019; Spencer et al., 1993; Stone & Cooper, 2001).

However, if new comprehensions about oneself are made accessible in the specific circumstance, at that point, dissonance reduction will take the following paths: (i)Firstly, if self-properties that are made accessible are positive and relevant to the conduct in question,

at that point they will build the inspiration to legitimise behaviour (e.g., mentality change), if significant positive properties make self-anticipations accessible to individuals with high confidence, they will show more justification of their conduct than individuals with low confidence. (ii) If self-qualities that are made available are positive but not relevant to the conduct being referred to, at that point, they will serve as an asset for dissonance reduction and finally, (iii) further, if constructive irrelevant traits are perceived as self-distinct, individuals with high confidence will show less justification of their conduct contrasted with individuals with low confidence (Stone & Cooper, 2001).Figuree 2.6, illustrates the various scenarios discussed above about the importance of self-esteem in arousing and reducing cognitive dissonance.

Figure 2.6 presents the SSM (Self Standards Model) of Dissonance in relation to an individual's self-esteem.
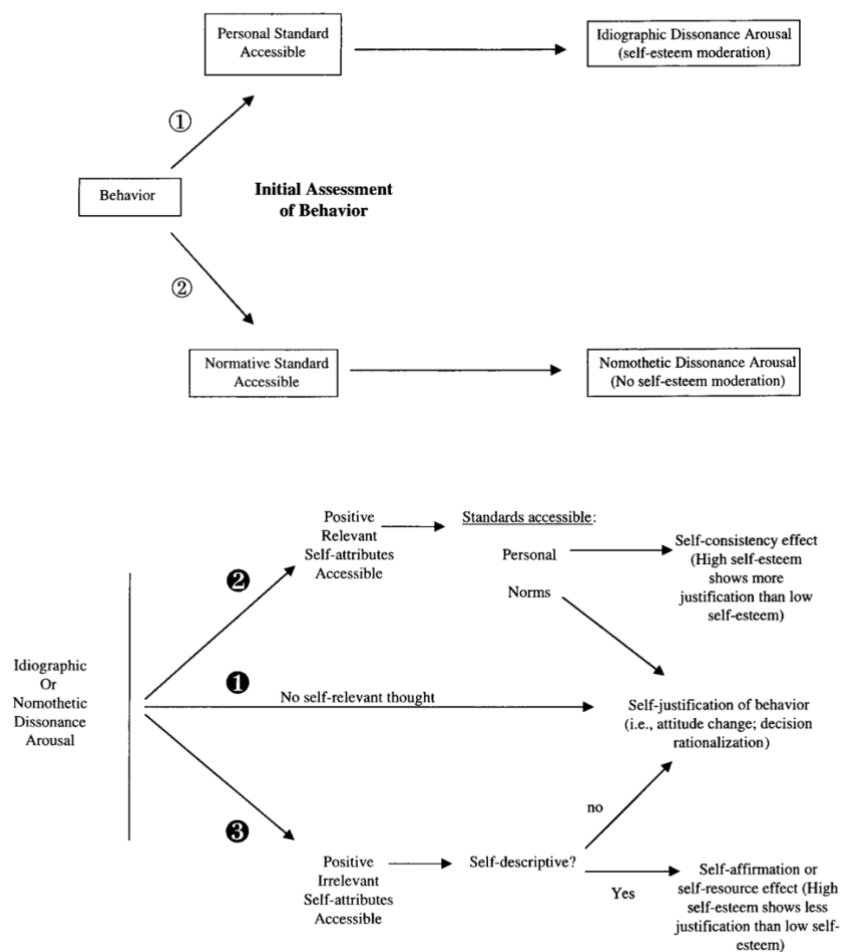
Source: Stone & Cooper, 2001

From the SSM model above and subsequent figure 2.6, Zers fall in the characteristics depicted for 'path (3)' or 'understanding (iii)'. If such is the case as defined within the model, then, Zers would use the 'self-distinct trait' as a driver for action and less for justification of action given their higher levels of self-esteem. In other words, self-distinct traits, as mentioned herein, can be interpreted as 'cognitive elements' in Festinger's understanding (1957) due to the previous insight provided by Stone and Cooper (2001) of the idiographic capacity of people (i.e., implying the reliance on self, self-knowledge, beliefs) – which comes from the Greek word 'Idios' meaning own, self, private, personal etc. (Collins English Dictionary, 2020). That is to say, essentially to do with inner knowledge; if such is the case, it further affirms the self-descriptive trait as an action driver to reduce dissonance than a "self-affirmation" entity. Moreover, from this, we can also ascertain why previous generations could not perceive and recognise dissonance and why generation Z would. Furthermore, from this, we can also derive how higher self-esteem orients action in individuals disregarding a need to justify.

2.3.1.3 Role of Neurological Mechanisms (Cognition and Action-Oriented Mindset)

According to Kitayama and Tompson, "Dissonance theory revolutionised social psychology by emphasising the role of cognition in social behaviour. More importantly, it also provided the first testable framework in which to conceptualise how cognition could be motivated and how the motivated cognition could yield some intriguing forms of social behaviour" (Kitayama & Tompson, 2015, p. 5). In line with this, Harmon-Jones & Amodio (2009) demonstrate that as per the action-based model of dissonance, dissonance ought to be increased as the understanding of the actions' implications of cognitions associated with a dissonant relationship are increased. Furthermore, several theories consider feelings to include activity propensities (Brehm, 1999; Frijda, 1986). According to Harmon-Jones and Amodio, "To the extent that an emotion generates an action tendency, as the intensity of one's current emotion is increased and is involved in a dissonant relationship with other information, dissonance should be increased" (Harmon-Jones & Amodio, 2009, p. 141).

Neurologically speaking, studies indicate that Event-Related Potential (ERP) is an integrant that affirms the detection of behavioural conflict (Kitayama & Tompson, 2015) called error-related negativity (ERN), which is believed to be derived from dACC (Carter & Van Veen, 2007;

95

Kitayama & Tompson, 2015). Such an insight re-affirms that behavioural conflicts related to demanding and vital decisions can stem from the dorsal-anterior-cingulate-cortex (dACC) (Kitayama & Tompson, 2015). Further research indicates that dACC constitutes a critical neural substrate of dissonance (Harmon-Jones & Harmon-Jones, 2008; Kitayama et al., 2013; van Veen et al., 2009). Several studies on brain mechanisms suggest that dACC and aINS correlate with autonomic arousal, which is known to occur when dissonance is induced (Croyle & Cooper, 1983; Elkin & Leippe, 1986; Losch & Cacioppo, 1990), inducing an action to complete the task at hand. Extant literature too indicates the function of the neural circuitry system of the ACC in effecting task completion based on emotional cues (Stevens et al., 2011). The figure below 2.7 explicitly depicts (a) areas involved in dissonance arousal and (b) areas of the brain activated by difficult choices.

Figure 2.7 depicts (a) areas involved in dissonance arousal and (b) areas of the brain activated by difficult choices.

Figure 2.7 (a)

Some key brain regions involved in arousal and reduction of dissonance as specified in the biosocial model. (A) Dorsal anterior cingulate cortex (dACC). (B) Caudate nuclei. (C) Orbital/ventral medial prefrontal cortex (om/vmPFC). (D) Ventral striatum/nucleus accumbens (vSTR/Nacc). (E) Anterior insula (aINS).

Figure 2.7 (b)

Areas of the brain that are activated by difficult choices, relative to easy choices in a free-choice dissonance study
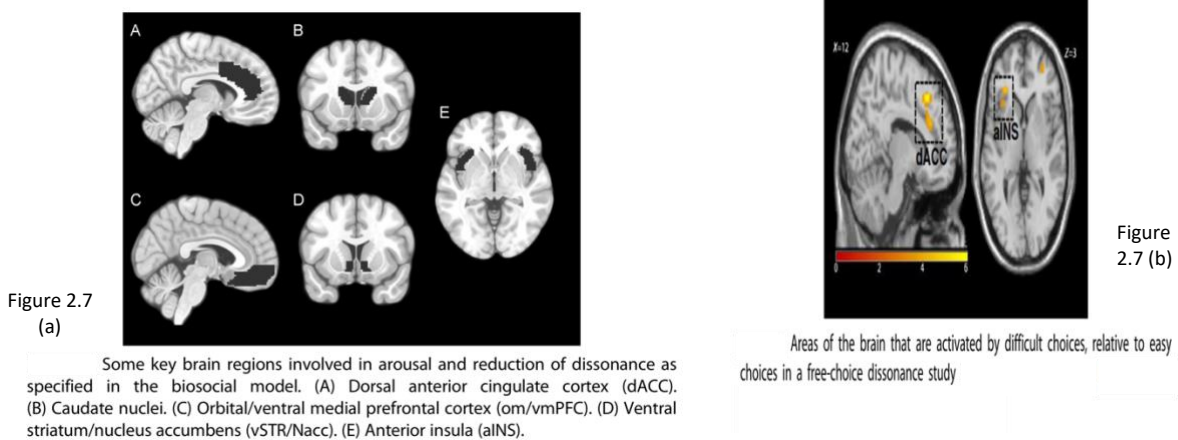
Source: Kitayama & Tompson, 2015

The dACC is a brain region situated within the ACC (anterior cingulate cortex) wherein the ACC is located in the "medial surfaces of the brain's frontal lobes and encompasses subdivisions that play key roles in cognitive, motor, and emotional processing" (Bush, Luu & Posner, 2000, p. 216). Furthermore the aINS, according to Pasquini et al., "is a functionally heterogeneous region implicated in functions ranging from interoceptive awareness and emotion processing to time perception and cognitive control" (Pasquini et al., 2020, p. 207).

Several neuroimaging studies have started to parcellate the aINS in light of its valuable and auxiliary availability examples. For example, Smith et al. (2009) and Fox et al. (2005) have demonstrated that the ventral, agranular aINS is practically connected to limbic and autonomic control areas that incorporate the "pregenual anterior cingulate cortex (ACC), the amygdala, and subcortical structures, for example, the thalamus and periaqueductal gray" (Seeley et al., 2007; Deen et al., 2011; Kurth et al., 2010; Touroutoglou et al., 2012; Uddin, 2014). Further research indicates that these regions make up the "salience network", a large-scale distributed system that represents the homeostatic significance of prevailing stimuli and conditions (Critchley, 2005; Critchley & Harrison, 2013; Pasquini et al., 2020; Sturm et al., 2018; Guo et al., 2016; Zhou & Seeley,2014).

Tying this in with the literature studied above, we can infer that as a structural element, the ACC is of crucial importance to attend to stimuli for understanding cognitive elements and inner equilibrium, i.e. homeostatic requirements (Pasquini et al., 2020), and further, the ACC is key to enforcing the "affect regulation" mechanism of the brain, prompting action to complete the task at hand blocking other stimuli (Stevens et al., 2011). In line with this, extant literature too furthers the understanding of the impact of ACC on its conflict monitoring capacity - 'affect regulation', and the dissonance area of the salience network as studies indicate that the frontoinsula represents the significant afferent SN 'salience network' centre point, highlighting "feeling states" by coordinating contributions from the interoceptive stream with those different detailed systems (Craig, 2002, 2009; Critchley, 2005; Damasio, 1999; Heimer & Hoesen, 2006; Martino et al., 2009; Mesulan & Mufson, 1982a, b; Ongur & Price, 2000; Saper, 2002; Von Economo, 1926; Zhou & Seeley, 2014). Moreover, the ACC fills in as an efferent SN hub for assembling "visceroautonomic, emotional, psychological, and behavioural reactions" to the salience recognised in the frontoinsula (Zhou & Seeley, 2014), i.e., neural circuitry effecting 'affect regulation' (Stevens et al., 2011). Figure 2.8 below describes that functioning as a model.

Figure 2.8 depicts the working functional-anatomic model of the salience network in relation to other large-scale brain systems.
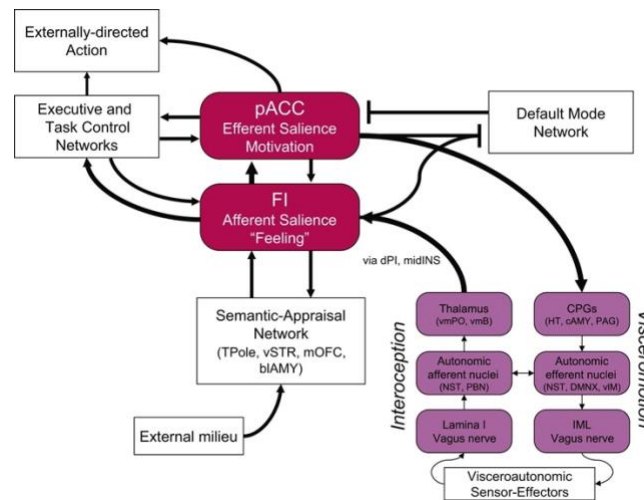
Source: Zhou & Seeley, 2014.

2.3.2 Cognitive Elements

The analyses further highlight the importance of understanding and situating 'cognitive elements' as drivers in line with the proposed functionality by Festinger (1957) initially. This is one of the main inconsistencies seen as part of the data analysis, i.e. the omission of 'cognitive elements' even though the initial theory states its importance as a driver of action (Festinger, 1957). As we saw earlier, Festinger believed cognitive elements to be "beliefs and inner knowledge within an individual" (Festinger, 1957, p. 10).

Furthermore, according to the theory, the variation of the impact of cognitive elements is only the ability of the belief/inner knowledge to produce a weighted magnitude of dissonance (Festinger, 1957; Sakai, 1999; Shultz & Lepper, 1999). According to Festinger, "(i) If two cognitive elements are relevant, the relation between them will either be dissonant or consonant. (ii) The magnitude of the dissonance (or consonance) increases as the importance of the value of the elements increases. (iii) The total amount of the dissonance that exists between two clusters of cognitive elements is the function of the weighted proportion of all relevant relations between the two clusters which are dissonant" (Festinger, 1957, p. 18).

2.3.2.1 Importance of Reliance on Cognitive Heuristic Elements

Considering the previous literature insight that higher self-esteem yields higher reliance on self and that perceiving dissonance is possible in such a circumstance (Carpenter, 2019; Ronis & Greenwald, 1978), in such individuals, reliance on inner cues is said to be higher (Walsh, 2018). According to Walsh, "Self-reliance is reliance on one's powers and resources rather than those of others. Whereas self-esteem is having confidence in one's worth or abilities; having self-respect" (Walsh, 2018, para 5). Furthermore, Cambridge Dictionary defines self-confidence as "a feeling of trust in one's abilities, qualities, and judgement" (Cambridge Dictionary, 2020). In line with this, extant literature cited earlier in this chapter and as part of chapter 1 demonstrates that as a functional element, reliance on cognitive elements and self-belief is imperative in perceiving cognitive dissonance, thereby enabling adherence to inner cues (Bearden, Hardesty & Rose, 2001; Jover, Montes & Fuentes, 2004; Rao & Olson, 1990; Veale, Quester & Karunaratna, 2006; Wansink et al., 2000; Wilson & Brekke, 1994).

Furthermore, experimental research documents that cognitive dissonance is not produced if inconsistency can be attributed to external forces (Festinger & Carlsmith, 1959; Collins & Hoyt, 1972; Thogersen, 2004). Tying in all the understanding of 'cognitive elements' and their magnitude's impact further reaffirms the sense of 'cognitive elements' to be drivers of cognitive dissonance (Festinger, 1957) and its impact in:

(i) Enforcing the action-based model of dissonance into effect as both the 'driver notion' of Festinger (1957) and the action-based model of dissonance conjoin in their orientation of reinstating the equilibrium in an individual by prompting action, which is a survival mechanism (homeostatic need) within individuals (Festinger, 1957; Harmon-Jones, 1999).

(ii) Establishing a resolute base that the two perspectives of cognitive dissonance theory, i.e. 'cognitive elements' (Festinger, 1957) and the 'action-based model' (Harmon-Jones, 1999) can be combined to understand further and instate pre-decisional applicability of cognitive dissonance theory.

These identified structural elements within cognitive dissonance theory enable perceiving cognitive dissonance within an individual to effect action. The impact of these structural elements of cognitive dissonance is deconstructed as influences within (i) cognitive

dissonance theory and (ii) within information processing and consumer decision-making within the Zoomer consumer further on in the respective sections of this chapter.

2.4 Cognitive Dissonance and Heuristics within Individuals

Drawing on all the above literature, we can observe how 'cognitive state' is essential (Bran & Viadis, 2019), how it can be produced in a pre-decisional stage cogently derived above, and further how the brain's functioning impacts dissonance and information intake. In light of this, it is imperative to understand cognitive dissonance and heuristics conceptually in-depth and their interplay within an individual.

Heuristics refers to common sense, intuition and gut feeling that people rely on to help them when facing a decision (McKay, 2017). Heuristics also means a process of 'making meaning' on one's own based on beliefs, inner cues and situations (Del Campo et al., 2016; Gigerenzer & Gaissmaier, 2011). Kanheman and Tversky (2010) inform us that many decisions are based on beliefs. Further research indicates that relying on heuristics is more likely when there is added uncertainty of the outcome (Marewski, Schooler & Gigerenzer, 2010; Kahneman & Tversky, 1974). According to Newkirk, "Given the sheer number of decisions the average person makes on any given day, the brain's use of shortcuts to help assess different choices makes perfect sense. It would be a waste of time and energy if someone had to do an exhaustive cost-benefit analysis to decide which brand of laundry detergent to buy or which kind of pizza to order. As a result, people use several mental shortcuts, or heuristics, to help make decisions, which provide general rules of thumb for decision making" (Newkirk, 2014, p. 1).

Reflexivity is another word for heuristic (meaning reflecting to make meaning). Sales, Fivush & Merill (2013) demonstrate via their study on making meaning that certain types of narrative meaning-making language may, for certain individuals, be constructive and aid cognition. Reflexivity as a meaning-making function was not necessary for a marketing context earlier; however, because of globalisation, secularisation, and individualisation, conventional structures lost impact, leaving people answerable for their convictions and decisions throughout everyday life (Bauman, 2013). Since occurrences no longer have a prominent spot in an individual's point of view on life, they need to locate their understandings and responses

per their own needs, wants and desires (Scherer-Rath et al., 2012). Thus, heuristics as a factor affecting cognitive elements in an individual arose further (Giovanni et al., 2020; Metzger & Flanagin, 2013; Raab & Gigerenzer, 2005). This ties in with the understanding of why Zers, having learned from previous generations, are more cautious and subsequently more cognitive and reflexive.

Furthermore, in line with this is Fazelpour & Thompson's (2015) understanding of the brain as a complex, self-organising structure with 'non-linear dynamics'. Pessoa (2013) demonstrates that what the brain perceives at a given time is organised into varying degrees of significance, relevance and attention needed. Further literature indicates that this process also depends on the individual's current state regarding experience, expectation, motivation, and emotion (Bayne, 2010). This is where a cognitive element (Festinger, 1957), a heuristics component, affects the information processed. Thereby correlating with the literature on the action-based model of dissonance, which states that "discrepant cognitions create problems for the individual when those cognitions have conflicting action tendencies" (Harmon-Jones & Amodio, 2009). Moreover, according to Manwell, "Dissonance as a factor of influence arises when new information conflicts with previously formed ideologies, accepted beliefs, and corresponding behaviours" (Manwell, 2010, p. 857).

With increasing intuitive nature among individuals (Spotify, 2019; WGU, 2019), owing to previous literature above, we can understand how cognitive dissonance could be felt, reflected upon and thereby acted on with a goal-oriented focus (according to the action-based model and brain dynamics) of addressing the internal cue (understood further by the individual due to heuristic and making meaning). That is to say, the heuristic process undertaken by individuals (especially by studied cohort) paves the way for an individual to act in terms of (i) understanding the latent need (cognitive element) which ought to be addressed, (ii) discerning the corresponding cognitive dissonance and (iii) acting on the dissonance and shaping decisions and choice. Thus, following the process true to Festinger's (1957) foundation of the impact of cognitive elements in theory whilst incorporating the action-based model of dissonance by Harmon-Jones (1999).

Furthermore, literature by Christopher Mole (2011) and Fazelpour and Thompson (2015) demonstrate that individuals can only act with full attention when they are in a state of 'cognitive unison,' i.e., all cognitive elements are focused on solving a problem/complete a task. This very well ties in with previous literature insights on cognitive dissonance, especially with the focus of the study context, being the conceptual offshoot from the action-based model of cognitive dissonance, brain dynamics and 'affect regulation' (Amodio et al., 2008; Harmon-Jones & Amodio, 2009) which thereby affects an individual in the first stage of consumer decision-making and eventually, information processing choices (Stevens et al., 2011). Further research experiments have indicated that as part of action-oriented (action-based model) dissonance studies, the frontal lobe activation is increased in an action-oriented mindset of individuals (Harmon-Jones & Amodio, 2009). The frontal lobe constitutes the ACC (anterior cingulate cortex) for cognition and neural circuitry (Stevens et al., 2011). Figure 2.9 below presents the graph of brain activation in relation to mindset.

Figure 2.9 presents the findings of the study on action-oriented mindset conditions in a post-decisional phase.

Relative left frontal activation as a function of mindset condition.
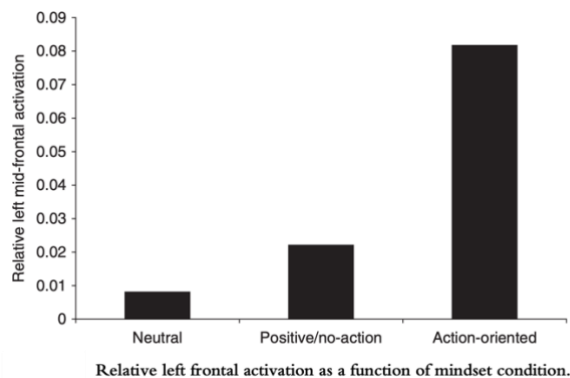
Source: Harmon-Jones et al., 2008.

The study conducted expected the action-oriented mindset would increase relative left frontal cortical activity. This further affirms the conceptual proposition derived above and previously reviewed literature of the ACC being imperative and an active part of the neurological mechanism underlying cognitive dissonance. Thereby dictating the impact of cognitive elements and dissonance in information processing and consumer decision-making.

Now how does generation Z deduce the whole proposition? Will be uncovered in further chapters of the thesis.

2.5 Cognitive Dissonance within Consumer Behaviour

Several studies have supported the concept of cognitive dissonance from the consumer behaviour context (Bolia, Jha & Jha, 2016; Costanzo, 2013; Cummings & Venkatesan, 1976; Festinger, 1957; Hamza & Zakkariya, 2012; Hasan & Nasreen, 2014; Kaish, 1967; Keng & Liao, 2009; Koller & Salzberger, 2007; Sharifi & Esfidani, 2014; Sharma, 2014; Pandey & Jamwal, 2016; Banerjee, 2017; Yap & Gaur, 2014). Previously, we noted how in the timeframe that consumer decision-making evaluation practices increased among individuals, the studies regarding cognitive dissonance and consumer behaviour post-purchase increased. In line with this, an examination by Pandey and Jamwal (2016) in assessing the effect of the dissonance on consumer behaviour demonstrated that individuals who took additional time in decision-making experienced less dissonance later contrasted with those who took less time. This is because individuals have more opportunities to think carefully before they decide. The investigation further explained that the magnitude of dissonance diminishes as the time taken to decide increases, i.e., an inverse proportion (Pandey & Jamwal, 2016).

However, the above study focused on post-decisional cognitive dissonance evaluation, which is fine considering the time of the research and cohort investigated. Furthermore, an interesting point is raised on time taken for decision-making and its resultant dissonance. Now, given such a fast-paced world and changes in consumer decision-making models (Stankevich, 2017), how does the time taken to decide fare in the process? Does it at all? If we are to go by previous seen derivations and literature, then based on the reduction in the number of steps in the decision-making framework (from seven to five as of 2019) (Pyre, 2019), individuals would be guided by their heuristics in the first stage of consumer decision-making which is the need recognition stage.

Furthermore, 'need recognition' occurs when a consumer discovers an unmet need that must be fulfilled (Stankevich, 2017). If such is the case, then where is the concept of time taken? Time taken mattered when consumers undertook the earlier model of consumer decision-making (before 2019) as it started with 'stimulus', i.e., an external stimulant, which followed

a step of 'need recognition', which focused on finding 'what the external stimulus addressed within an individual' (Davey, 2019; Stankevich, 2017).

Moreover, Hasan and Nasreen (2014) investigated the connection between post-dissonance and consumer behaviour and found that impulse purchasing brought out higher rates of cognitive dissonance contrasted with planned purchasing. The reason for this could be that consumers felt anxiety about the performance of the products after purchase due to various factors (the price of the product, desire to be right etc.). Unlike impulse purchases, people who spend their time on planned purchases are more confident and experience less dissonance. However, again this study is focused on post-purchase dissonance. Furthermore, drawing from the literature, if more informed purchases lead to decreasing dissonance in an individual, this ties in with how purchases are conducted in today's times with online and offline corroboration of information before purchasing by generation Z (Antevenio, 2019). Furthermore, it could be said that if the same concept found is reversed, it can be observed in today's times as a process undertaken (Gurski, 2019; Ozdemir, 2020) to reduce dissonance except in the thesis' context of cognitive dissonance and its latent need precedes the information search.

Tying in with the above finding, Bolia et al. (2016) found that with regards to financial offerings, consumers who investigated numerous options experienced less dissonance contrasted with those who took a look at none. This is because consumers who study multiple choices are increasingly confident with their selection and know the advantages when purchasing (Bolia et al., 2016). A conceptual paper by Banerjee (2017) discussed the consequences of cognitive dissonance from a consumer behaviour perspective. The paper re-affirmed all cited literature above about Festinger's initial theory of 1957.

Recent 2019 and 2020 literature on cognitive dissonance and consumer behaviour have been highlighted in the research gaps section of the thesis and see appendix A. Most of them were quantitative again and from a post-decisional perspective. However, Ong (2019) examined the influence of cognitive dissonance on communication and consumer behaviour toward food and nutrition. The results reaffirmed earlier cited literature on cognitive dissonance resulting in selective exposure and information avoidance. Furthermore, Odou et al. (2019)

conducted a trial with the induced compliance hypocrisy paradigm of cognitive dissonance in promoting pro-environment behaviour. Results depicted that when the contradiction between what individuals say and what they do is made salient in environmental protection, i.e., in a situation of induced hypocrisy, it indirectly reduces the resulting dissonance. However, taking this study into perspective with all the theoretical and conceptual literature reviewed above, a testing scenario of induced hypocrisy would not be the right frame of reference to measure cognitive dissonance levels (Festinger, 1957, 1999). This further emphasises why the literature indicated significant issues in measuring cognitive dissonance.

Jeong et al. (2019) observed 425 participants in South Korea and found in a social information consumption behaviour context on an SNS that consumer behaviour is associated with uncomfortable feelings from exposure to external-self-differing opinions. These opposing views give rise to dissonance (Jeong et al., 2019). This further ties in with the literature cited earlier and understanding of dissonance and information processing (Manwell, 2010). Brooksbank and Fullerton (2020) studied post decisional dissonance states in a 'new task' B2B context in New Zealand. They found three more 'cognitive states' in addition to PPCD (Post-Purchase Cognitive Dissonance).

However, there is only one post-purchase cognitive dissonance state. The other additional states: PPCC (Post-Purchase Cognitive Consonance), PNCC (Post Non-Purchase Cognitive Consonance), identified as part of the literature of the study tie in with previous literature on how consumers achieve consonance post a decision, i.e. 'realignment of beliefs', 'self-affirmation', 'self-consistency', 'effort justification' regarding consumers (Addison et al., 2017; Donthu & Unal, 2014; Festinger, 1957; Harmon-Jones & Amodio, 2009; Hinojosa et al., 2017; Shah, 2015). Further, PNCD (Post Non-Purchase Cognitive Dissonance) is a state wherein the consumer lives with their dissonance without undertaking a purchase, i.e. it would have been the initial state a consumer was in before purchase. Therefore, dissonance as a feeling exists as raw without any occurrence or change before or after. This state, other than being a recognised sense of dissonance (Festinger, 1957), does not indicate any behavioural implications and, therefore, can be observed to be insignificant based on previous empirical studies cited earlier (Aronson, 1960, 1962; Festinger, 1957) as it only further validates cognitive dissonance as an emotion within individuals.

2.6 Needs in consumers

Consumer behaviour as a concept's basis is on fulfilling needs (Pincus, 2006). These needs motivate individuals to partake in consumption behaviours (Duggal, 2018). Thus, needs shape consumption behaviour (Ahola, 2006; Pincus, 2006). However, consumer needs as a driving force can be categorised into explicit and latent needs (Ahola, 2006). According to Ahola, "Explicit needs are defined here as needs that the customer is aware of and can relatively easily communicate to the supplier" (Ahola, 2006, p. 1). "Latent needs are defined as needs that the customer is unaware of and needs that the customer cannot communicate to the marketers with relative ease" (Ahola, 2006, p. 1). Thus, along these lines, the latent needs of a consumer are not noticeable to the provider and further not apparent (remains unknown) to the consumer themself. Withal, with purpose and determined attempts to reflect to find a root cause, latent needs can surface to become explicit needs in consumers (Ahola, 2006; Cribett, 2020; Slater & Narver, 2000; Wagner & Hansen, 2004).

Thus, the total of explicit and latent needs makes up the concept of 'needs' in consumers. The relative appearance and importance of explicit and latent needs will likely differ in correspondence to the settings (Ahola, 2006). For instance, if the customer is buying a relatively simple product or service, e.g., cleaning services, it is likely that relatively few latent needs are present (Ahola, 2006; Slater & Narven, 2004). When complex scenarios arise, expected latent needs are often present to a significant degree (Ahola, 2006). Furthermore, literature on unmet needs and consumer behaviour report that current theories (both biological and cognitive) of human behavioural motivation synthesise the impact of latent needs as an influential factor in consumer behaviour (Kragulj, 2016; Pincus, 2006; Williams & Norris, 2016).

Recent research on latent needs and their impact on decision-making uncovered that during consumer purchase decisions, people may be everything but rational (Karalic & Krajina, 2017), as instincts and beliefs are vital characteristics as well (Glimcher, 2009). Furthermore, extant literature indicates that behaviour models of individuals to explain consumer behaviour so far are not solely enough (Karalic & Krajina, 2017) as studies demonstrate that consumers'

minds are substantially more intricate than it has been understood thus far (Ayidonat, 2010; Bray, 2008; Damasio, 2006). Furthermore, research indicates that habits as indicators will fall flat, and the irregularities in the manner consumers process information will be corresponding to their reliance on emotions, gut and beliefs, i.e., heuristics (Ahola, 2006; Karalic & Krajina, 2017; Pincus, 2006; Politser, 2008). In this respect, needs fall under the banner of heuristics as a need is commonly referred to as a "strong requirement rather than just a desire" (Cambridge Dictionary, 2020). These insights further tie in with the cognitive elements' aspect of Festinger's (1957) theory. That is, 'needs' are a motivator to alleviate inconsistency and restore equilibrium. However, how does latent need delineate as part of the cognitive element in Festinger's 1957 theory?

2.6.1 Latent Need as a Cognitive Heuristic Element

From a historical perspective, heuristics has its roots in ancient Greek 'heuriskein' and Latin 'heuristicus', meaning "to find out, discover." (Romanycia & Pelletier, 1985, p. 48). According to Romanycia and Pelletier, in 1860, however, Whewell remarked after many iterations of the word 'heuristics', "If you will not let me treat the art of discovery as a kind of logic, I must take a new name for it, Heuristic, for example" (Romanycia & Pelletier, 1985, p.49). Scholars like Immanuel Kant, and Edward Caird, after that all agreed that "the ideas of reason are heuristic, not ostensive: they enable us to ask a question, not to give an answer" (Romanycia & Pelletier, 1985, p. 49). Further research indicates that in 1961 Polya used the term heuristic in an experiment, thereby registering its first use of the word in a research context. Furthermore, the literature indicates that from 1961 to 1980, Polya worked towards modest modern meanings of the term heuristics. Given this, heuristic as a study evolved to "understand the process of solving problems, especially the mental operations typically useful in the process" (Romanycia & Pelletier, 1985, p. 49).

In early 1963, Fegenbaum and Feldman defined heuristics as "a process that may solve a given problem, but offers no guarantees of doing so, is called a heuristic for that problem." (Fegenbaum & Feldman, 1963, p. 114). We could then gather from this that it was accepted that there are just two different ways to tackle an issue: one by negligently following a definite calculated measure; the other by utilising complex procedures (heuristics) that are innovative and intuitive in investigating ways to attain a solution. Earlier experiences of satisfaction and

disappointment played vital roles in choosing between these two critical thinking techniques for individuals (Romanycia & Pelletier, 1985). Furthermore, the literature indicates that many authors have given varied meanings to 'heuristics'; however, the ground of the definition has remained one of 'using the self to create and understand a solution, before acting' (Barr & Fegenbaum, 1981; Boden, 1977; Jackson, 1974; Nilsson, 1980; Raphael, 1976; Solso, 1977; Slagle, 1971; Winston, 1977). However, these understandings were overlooked whilst the rule of thumb phenomenon appeared to explain human behaviour. Therefore, from 1980 until almost 2013, heuristics was referred to as "a rule of thumb mechanism for quick and efficient decision-making" (Newkirk, 2014).

However, from 2013 onwards, heuristics emerged in a new frame of reference. The concept evolved from just being instincts and 'rule of thumb' (Newell, 1980; Newkirk, 2014) to rely on for problem-solving to a process of making meaning within an individual (Proust, 2013; Seitz, Borde & Koster, 2016). This has further given rise to what is often referred to as 'cognitive heuristic,' i.e., utilising self-knowledge to understand internal and external stimuli to arrive at a decision. Cognitive Heuristic is an umbrella term combining "'representative heuristic' (comparing the present situation to the most representative mental prototype), 'affect heuristic' (strongly influenced by the emotions that an individual is experiencing at that moment), and 'availability heuristic' (how easy it is to bring something to mind)" (Cherry, 2020, para 8).

Research indicates that to arrive at a logical notion, it has to start with an intuition (Gabbay & Woods, 2005) which can be seen in the reflexive consumerism trend in current times. Furthermore, in the context of latent needs and heuristics, drawing from earlier literature and the identified structural elements of cognitive dissonance, we could say that cognitive development within an individual is key to understanding internal cues (Fazelpour & Thompson, 2015) and the higher the cognitive ability in an individual, the higher the reliance on heuristics and the elements thereof in addition to making meaning of sensed feelings (Bauman, 2013; Stanovich & West, 2000). A latent need, albeit unknown to marketers or consumers, does portray itself in other manifestations, which, when heuristically interpreted, leads to the understanding of the latent need (Crockford, 2020).

According to Seitz, Borde and Koster, "In general, cognitive heuristics are (i) ecologically rational (i.e. they exploit structures of information in the environment), (ii) founded in evolved psychological capacities in individuals such as memory and the perceptual system, (iii) fast, frugal and simple enough to operate effectively when time, knowledge and computational might are limited, (iv) precise enough to be modelled computationally, and (v) powerful enough to model both good and poor reasoning" (Seitz, Borde & Koster, 2012, p. 45). Further research demonstrates that cognitive elements are developed in individuals in a quick way (Kirschner, Yan Kam & Ward, 2012). Taking the above insights of cognitive heuristics into perspective, if we reverse the understanding of cognitive heuristics being founded in perceptual systems, we can say that latent needs being an element sensed via the perceptual system (Ahola, 2006; Gardner, 2004) in individuals by way of aroused dissonance, is a cognitive heuristic element (Seitz, Borde & Koster, 2012). However, from a cognitive aspect, where is a latent need's ground within an individual?

Studies above indicate that perceptual systems control intention as they are developed by peoples' ability to grasp and construct cues through their ability to create meaning using snippets of information from various sensory sources (Walter, 2008). Given this, it is essential to understand what forms the 'a priori formal structures of an individual's mind' in a neurophenomenological manner. Research demonstrates the concept of 'pre-reflective self-awareness' (Khachouf, Poletti & Pagnoni, 2013) and its role as a foundation for intentionality. According to Khachouf, Poletti and Pagnoni, "Pre-reflective self-awareness can be seen as the most basic form of noesis, i.e., the fundamental a priori form within whose limits all experience arises. It is in this sense that we can view intentionality as a manifestation of the transcendental: to use a metaphor, it can be likened to the founding act of the fisherman casting his net out into the sea to begin his catch; without this initial lighting up of consciousness, which embeds an essential predictive component, nothing could be perceived at all" (Khachouf, Poletti & Pagnoni, 2013, p. 39).

When we take this understanding into context and tie it in with the cognitive heuristics above in corroboration with Festinger's 1957 understanding of cognitive elements arousing cognitive dissonance, we can then say that latent need is a pre-reflective self-awareness component (by way of the cognitive heuristic processes of making meaning) within an

individual, i.e., cognitive element, which arouses 'cognitive dissonance'. That is to say; cognitive dissonance can be perceived in the pre-decisional phase due to the reflexive and self-awareness properties in an individual formulating a cognitive heuristic element – the latent need (Varela et al., 1991; Wider, 1997; Zahavi, 2002). Additionally, literature indicates the self-organising capacity of the brain on a neural network level to coincide with the pre-reflective self-awareness stated above, i.e., a bodily manifestation of embodied awareness (Thompson, 2004, 2007), furthering the latent needs' (cognitive heuristic elements') representation in individuals.

2.7 Information Processing Model

Previous literature above (including cogent derivations above) and (see chapter 1) indicates that cognitive dissonance as a theory affects information processing within individuals (Bardin, Vidal, Facca, Dumas & Perrissol, 2018; Johnson, Neo, Heinjen, Smits & Veen, 2020; Smith, Fabrigar & Norris, 2008; Stroud, 2017; Tsang, 2019). American psychologists introduced information processing around the late 50s and 60s. George A. Miller was the most noted of them. He introduced two concepts central to information processing and cognitive psychology (Culatta, 2019). The first was 'chunking' and focused on the short-term working memory (Hatague & Nabua, 2019). The second was introduced in 1960 and focused on mirroring the human brain to that of a computer (Hatague & Nabua, 2019; Miller, 1960). Miller (1956) introduced the possibility that the short-term memory could just hold 5-9 pieces of data (seven, give or take two) where a 'chunk' is any critical unit. This unit could allude to digits, words, chess positions, or individuals' appearances. The idea of 'chunking' and the constrained limit of short-term memory became a fundamental component of every resulting memory theory. The subsequent concept, information processing (Miller, 1960), utilises the computer as a model for human brains (Hatague & Nabua, 2019; McLeod, 2008). In light of this, cognitive psychology sees the human brain as a processor of information, similar to a computer (McLeod, 2008).

This development gave cognitive psychologists a way to express the workings of the human brain, and the reference of the human brain's working to that of computers is often called 'the computer analogy' (McLeod, 2008). The information processing theory suggests that similar to how a computer stores data, processes it and gives a final output, so does the brain.

For example, the eye gets visual data and codes data into electric neural action, which is taken back to the mind where it is "put away" and "coded". This data can be utilised by different pieces of the mind identifying with mental exercises, for example, memory, recognition and consideration. The outcome (for example, behaviour) may be, for instance, to peruse what you can see on a printed page (Hatague & Nabua, 2019; McLeod, 2008; Miller, 1960). McLeod states, "Hence the information processing approach characterises thinking as the environment providing input of data, which is then transformed by our senses. The information can be stored, retrieved and transformed using 'mental programs', resulting in behavioural responses." (McLeod, 2008).

However, given the complexity of the human brain, is a serial approach (within an individual's brain) alone a rightful model to explain the various factors that can influence a mental process? Furthermore, brain volatility and uncertainty in the context of stimuli are significant characteristics of study whilst explaining cognition in individuals (Gollo et al., 2018; Livni, 2018). Besides, from a neurophysiological perspective, homeostasis is a mechanism by which humans strive to maintain equilibrium by understanding external and internal stimuli as every change in the environment causes an equivalent change internally and vice-versa (AQA, 2020; BBC, 2020; Eschooltoday, 2020). In other words, psychologically viewed, homeostasis is the survival instinct in individuals about stimuli they are confronted with (Montgomery, 2012). Additionally, this biological and neural understanding ties in with literature on the action-based model of dissonance, demonstrating that the action-based model concludes that "emotion", "cognition", and "action" compose "adaptive regulatory processes that ultimately serve survival needs" (Harmon-Jones & Amodio, 2009, p. 129). When such is the case, the complexity of information processing as a framework cannot be assessed only from an external stimuli perspective, as was the case with the early information processing framework.

However, interesting research was conducted by Robert Axelrod in 1973, which focused on the development of schema, i.e., a schematic model in information processing concerning perception and cognition. The resulting model and literature emphasised that 'logical consistency' in consuming information was a significant factor in an individual's cognitive schema (Axelrod, 1973). The literature, however, acknowledging the need for consistency

whilst consuming information was limited in its approach to explaining further the cognitive processing of individuals concerning making meaning of their inner cues in correspondence with external stimuli.

In view of this, the information processing framework has served to join quite a bit of what we comprehend as intellectual procedures in individuals (Gurbin, 2015). However, examining the social elements of discernment keeps on uncovering the framework's limitations. Focusing on tangible attributes as improvements to the model with little consideration regarding an individual's increase in cognitive abilities highlights the limitations to the computer analogy and the absence of acknowledgement of social impacts (Gurbin, 2015; McLeod, 2008). The insights of social environments are broad enough to incorporate different segments frequently considered adjuncts to the information processing model. Existing background knowledge of a scenario, an individual's recently procured information and experience that educate the individual and his interaction with the task at hand have an immense impact on how information is processed (Garth-McCullough, 2008; Ryan, 2010).

Further to this are the executive functions of a person, i.e., the multi-faceted brain and neural segment that manages and controls an individual's intellectual procedures (Anderson, 2002; Lan, Legare, Ponitz, Li, & Morrison, 2011). Numerous natural components require portrayal, as do the interrelation of perspectives, for example, people's age, time of cognitive development, creative capacity, and ability to retrieve information. Among the convincing contentions, Kohler (2010) stated that a progressively natural perspective on discernment is required, which perceives a human experience, organisation, and versatility, asking us to think of humans outside the machine worldview (Gurbin, 2015).

2.7.1 Information Processing within Consumer Behaviour in the Digital Age

Increasingly, due to high levels of technological advancement, the process and medium of information consumption have also changed (Antevenio, 2019; Gurski, 2019). In line with this, recent studies on information processing and consumer behaviour highlight the impacts of advances in technology. Ismagilova, Slade, Rana & Dwivedi (2020) studied the characteristics of source credibility on consumer behaviour and noted that during the internet period, buyers progressively search for data about items and companies online to improve their consumer

experience (Alalwan, 2018; Dwivedi et al., 2015; Lee et al., 2008; Shareef et al., 2017; Shiau et al., 2018). Customers who preferred listening to 'advertising content' and 'professional advice from peers' a couple of years prior presently are shifting to use online reviews by other consumers (Lee et al., 2008, Misirlis & Vlachopoulou, 2018, Purnawirawan et al., 2015, Shareef et al., 2018). E-WOM (e-word-of-mouth) is characterised as "the dynamic and ongoing data trade process between potential, real, or previous clients concerning an item, brand or organisation, which is accessible to a large number of individuals and establishments using the internet" (Ismagilova et al., 2017, p.18).

E-WOM correspondences about items and companies function as a type of free 'pre-purchase help' (Chen & Xie, 2008; Kamboj et al., 2018; Purnawirawan et al., 2015), which helps consumers to find out about items/brands (Book et al., 2018; Lee & Hong, 2016; Kapoor et al., 2018; Pacauskas et al., 2018) and reduce the aspect of 'buying uncertainty' while settling on a choice (Reimer & Benkenstein, 2016; Shaikh et al., 2018). The literature, whilst indicating the importance of pre-purchase research by individuals today, does not consider the stimulant that invokes a sense of having to cross-check their options. This is where an innate 'need,' i.e., latent need (cognitive heuristic element) felt arousing sensed cognitive dissonance, stimulates the necessity of 'information search'.

Further, if we observe if sought-after information corresponded with information received and was enough, then an individual need not cross-check (from various sources) (Dore, 2020; Fern, 2013) during the information search stage. The reason for feeling a need to check umpteen sources of information could be attributed to stem from having to feel a 'cognitive unison' with inner beliefs (Festinger, 1957), i.e., consistency within oneself tying in with the goal-oriented action-based model of cognitive dissonance (Harmon-Jones & Amodio, 2009). Such an insight furthers the understanding from previous sections of the literature review of 'inner knowledge', 'heuristics' and resulting dissonance affecting 'information search' and processing. Furthermore, the extent of information processing within a consumer behaviour context may be limited to a constricted representation of information processing stemming from the original model thus far.

Research within information processing and consumer behaviour points to factors such as SMI (social media influencers) to affect consumption (Ong, 2020) or how digital age advertising messages affect FMCG consumer behaviour (Capelli & Racat, 2020; Okoro, Mmamel & Okolo, 2019). However, these are all external factors to an individual. Furthermore, the rapid increase of ad blockers (Nageswari, 2019; Zoghby, 2019) on digital media can be correlated to the fact that consumers now have an increased sense of self-belief (WGU, 2019) which they would employ while choosing to consume information pushed out. In the current scenario of reflexive consumerism, we see the increased involvement of consumers as part of the purchase process in conscious assimilation and dissection of information received, a.k.a. making meaning. The literature further accentuates that self-congruity positively elevates a consumer's product inclusion mentality and acts as an inspiration and antecedent of consumer behaviour since consumers would be motivated by their need for self-consistency (Hung & Petrick, 2012; Kang et al., 2015; Kressmann et al., 2006; Sirgy, 1986).

In line with this, we see a rise in reflexive consumerism within successive generations, which could be further attributed to this dual process play of heuristics in individuals (especially those with higher IQ and EQ cohorts) (Stanovich & West, 2000). Furthermore, in today's cognitive information overload scenario with varying extents of societal disruptions seen by generation Z, they are more inclined to move towards their inner beliefs in a bid to feel secure in themselves as having control over their environment and their actions which is seen to be of paramount importance amongst this cohort (Schroeder, 2017; Williams, 2020).

Consumption choices assume a pivotal role in this character development (Beckett & Nayak, 2018; Schippers, Edmondson & West, 2014). Though traditionally, consumption was an impression of one's current social character, present-day people actively construct their social personality through their consumer decisions. Self-identity is built from a scope of components that the individual reflexively amasses to project or occupy a specific personality (Beckett & Nayak, 2018; Lupton, 1997). Reflexive consumerism, it is asserted, liberates customers from promoting social control, offering another type of freedom where purchasers express their independence and personality (Bauman, 1988). If such is the case, cognitive heuristic elements will affect information processing more now than before in the studied

cohort who pride themselves on their 'need for cognition' (Mavrina, 2017; Murray & Cherrier, 2007; Stoneham, 2005).

Studies indicate that characterised as "the match between customers' self-concept and their picture of a given item, brand, store, and so forth" (Kressmann et al., 2006, p. 955), the self-congruity theory proposes that consumers are driven by their psychological instinct to communicate their self-identities by buying an item or availing a service that is a match between their mental self-concept and their purchase decision (Sirgy, 1985). Self-congruity has four distinct aspects related to the four diverse self-idea measurements: genuine self-congruity, perfect self-congruity, social self-congruity and perfect social self-congruity (Sirgy & Su, 2000). These four parts are coordinated without any external influence and only by the requirement for self-consistency (Kang, Tang & Lee, 2015, Kressmann et al., 2006; Sirgy, 1986), rousing shoppers to secure their character through favouring products or brands which are harmonious, or as such, reliable to their mental self-portrait (Sirgy, 1985). Despite the extant literature on self-congruity, there is a dearth of their effects on information processing (Ong, 2020).

If we flip this understanding, we can say self-congruity, in other words, is cognitive consonance (opposite of dissonance) (Brooksbank & Fullerton, 2020; Festinger, 1957) which affects consumers' information processing. Thereby, this further validates the significance and 'effect capacity' of cognitive elements arousing cognitive dissonance within information processing, thereby affecting consumer decision-making – by orienting an individual from the need recognition stage to feel congruent within, by behaving in a goal-oriented manner (Harmon-Jones, 2009) to alleviate the dissonance thereby shaping their consumption behaviour and pattern.

In this regard, it would be helpful to highlight that most of the research thus far, on information processing and consumer behaviour has two distinct influential factors affecting the results and understanding. However, they have not been appropriately accounted for. First, heuristic processing of information was not posited as essential as it was believed it leads to cognitive biases, thereby lessening accuracy (McLaughlin, Eva & Norman, 2014). Second, the generation of individuals studied so far all have been cohorts that have believed

others' opinions over themselves (including millennials and their belief in their peers and need for peer validation to remain relevant) (Bilgihan, Peng & Kandampally, 2013; Carrier et al., 2009; Durfy, 2019; Kane, 2019; Kol & Lissitsa, 2019; Lister, 2020; Palmer, 2009; Valentine, 2018; Wroblewski, 2018).

Banyte and Radzevice (2020) demonstrated that the rapid advancement of technological innovation has brought a change in perspective in the retailing business sector and, thereby, consumer behaviour. Consumers no longer consider each medium of information of a product or service in isolation/separately but instead consolidate them and settle on choices depending on their mindset and lifestyle preferences (Blázquez, 2014). Now, this was about the retail sector. However, as we closely observed in the previous chapter, the shifting dynamics of the healthcare sector (from service to a more retail-style approach) (Walters, 2019; Wharton, 2020), these insights will hold for the healthcare sector as well. Other extant literature validates the shift in consumer behaviour due to a shift in information processing, from 'simple acceptance of information' to 'deploying various sources and having an informed purchase decision' (Barreiras, 2020; Vlad, 2020).

2.7.2 Cognitive Heuristic Element's Influence on Information Processing

Cognitive heuristic elements as influential factors started to be considered in the late 90s and early 2000s, although previous literature implied its effects (Beck, 1992, 1994; Giddens, 1990, 1991; Lash, 1993). However, its prominence theoretically and conceptually rose from 2015 onwards, around the same time when parallel processing of information within individuals was noted (David, 2015; Lawless, 2019). Furthermore, the analogy between human cognition and computer functioning adopted by the information processing approach in the early stages is limited in its insight-generating capacity. To adduce, computers can be regarded as information processing systems insofar as they: (i) combine information presented to provide solutions to various problems, and (ii) most computers have a central processor of limited capacity. However, (i) the human brain has the capacity for extensive parallel processing (Linde, 2020; Sigman & Dehaene, 2008; Zeki & Shigihara, 2014) whilst computers often rely on serial processing (McLeod, 2008) and (ii) more importantly, humans are influenced in their cognitions by several conflicting emotional and motivational factors (Phelps, 2004; Tyung, Amin, Saad & Malik, 2017).

In 1999, Miller and Noirot brought the aspect of attachment theory and memories into information processing, which is considered a breakthrough in incorporating the humanising elements of individuals. The research quantitatively assessed participants tested for attachment orientation and its effects on information processing. The resulting literature indicates two types of information processing within individuals, i.e. 'attachment-schematic information processing' and 'attachment constraint information processing' (Miller & Noirot, 1999). Furthermore, the literature suggests that information processing is closely linked to the growing up years of individuals and can be generationally patterned as memories and attachments impact an individual's information processing through the years (Miller & Noirot, 1999; Piaget, 1936).

Research indicates that in humans, memories and attachments also act as triggers (Bowlby, 1973; CNS, 2014; Lamia, 2012, 2017; Shaver, Collins & Clark, 1996) as they assume the form of working models in the subconscious parts of the brain (Ayan, 2018; Baars & Franklin, 2007; Wang, 2012). From this angle, we can observe and say information processing is also a learning framework aiding the development of cognitive schema in people as it rests on learnings of past experiences to impact future decisions and behaviours for individuals (Baldwin, 1992; Main, Kaplan & Cassidy, 1985). If such is the case, we could say all the more reason cognitive heuristic elements play a vital role in directing information processing. Drawing from the above literature, latent needs being a cognitive heuristic element (Cass & Sunstein, 2005; Gigerenzer, 2008) could then be seen to affect the direction (i.e. a course along which someone would move) of 'search for information' in studied context.

Given this, Mawreski and Gigerenzer (2012) questioned if lesser information to process can be more in a medical context? Results indicated that contrary to notions that more information is better in every case, the utilisation of heuristics could support doctors and patients to settle on quality choices. Heuristics are basic choice systems that overlook some portion of the accessible data, putting together choices concerning just a couple of essential indicators (Newkirk, 2014) and leading to greater accuracy in line with an individual's beliefs (Gigerenzer, 2008; Mawreski & Gigerenzer, 2012). However, heuristics have come under scrutiny for its role in information processing. It is seen to create a trade-off scenario in

people's cognitions by trading off accuracy for efficiency (McLaughlin, Eva & Norman, 2014). Although this was seen as a consideration in the research, literature further depicts that heuristics lie in the causal pathway between 'content knowledge' and 'diagnostic' success or failure (McLaughlin, Eva & Norman, 2014). Like in all considerations relating to emotion, wherein a medium is needed (medium being the individual/person), will not the success or failure of heuristics depend on the individual's response to it? That is to say, whether the individual adhered to the inner cue or not. Additionally, considering the higher 'need for cognition' (Spotify, 2019; WGU, 2019) and cognitive capacities (McKinsey, 2018) found in this generation Z, the influence of cognitive heuristic elements and function of heuristics too will be more significant.

Furthermore, the literature demonstrates that the influence of heuristic as an influential factor increases when continuously used (Norman et al., 2007; Shanteau, 1992), and that is in the hand of those feeling the inner cues. In line with this, it is important to note that heuristics have evolved in meaning (from meaning only internal cues to a process of making meaning based on cognitive ability and self-awareness of situations) (Charles, 2003; Proust, 2013). The literature further informs us of the significance of heuristics in a dual fashion, one of guidance, i.e., directing information search, and the other of stimulating logical reasoning (Evans, 2008, 2009; Evans & Over, 2010; Stanovich & West, 2000). Research studies further indicate the importance of reflexivity in affecting information processing (Schippers, Edmondson & West, 2014). Tying this with what we have seen above on cognitive heuristic elements, the understanding is that the advanced race of people (those with a higher need for cognition) need to effectively build a meaningful, viable and sound feeling of self-character through reflexive decision (Stanovich & West, 2000).

As demonstrated by literature, suppose such an effect is said to be there. In that case, we can say that information processing as a framework for explaining mental processes has to change to incorporate the nuances of reflexivity and meaning-making. That is to say, a more profound effect of cognitive heuristic elements and arousing dissonance is factored in at the top of the model, affecting the intake of information. We could ask why cognitive dissonance? However, cognitive dissonance, as seen previously, is an umbrella manifestation for addressing varied needs (beliefs and inner cues) within individuals, all having one bottom line, i.e., reinstating

the equilibrium in an individual by prompting action, which is a survival mechanism within individuals (Aronson, 1960; Festinger, 1957; Harmon-Jones & Amodio, 2009; Montgomery, 2012).

Extant literature cited above, too, depicts this understanding. However, how do individuals deduce it, and how can the advancement be depicted? We shall uncover this in later sections of this review and as we progress on later chapters of the thesis.

2.7.3 Effects of Cognitive Dissonance on Information Processing

Drawing on literature from the section on cognitive dissonance, we can see recent studies suggesting that cognitive dissonance affects information avoidance and selective exposure in individuals (Bardin, Vidal, Facca, Dumas & Perrissol, 2018; Johnson, Neo, Heinjen, Smits & Veen, 2020; Smith, Fabrigar & Norris, 2008; Stroud, 2017; Tsang, 2019). Further research posits a close link between information processing and cognitive dissonance in consumer decision-making (Martinez, Lallement, Dejean & Euzeby, 2019; Prollochs, Adam, Feuerriguel & Neumann, 2018). How does this effect take place? Above, as part of cognitive dissonance studies, we saw 'affect regulation' caused by beliefs and reflexivity as part of an individual's brain dynamics. According to Walsh, "The simplified mental representations individuals employ to give their information environments form and meaning have been called implicit theories, cognitive maps, assumptions, schemata, and belief structures. The term "belief structure" seems to be the most accurate descriptor" (Walsh, 1988, p. 873).

Fiske and Taylor further defined a belief structure as a "cognitive structure that represents organised knowledge about a given concept or type of stimulus.... It contains both the attributes of the concept and the relationships among the attributes" (Fiske & Taylor, 1984, p. 40). A belief structure decreases information-processing pressure and renders coherent knowledge by organising experience for an individual (Bower, Black, & Turner, 1979), encouraging data securing and recovery (Cantor & Mischel, 1977), and by giving a premise to surmising (Snyder & Uranowitz, 1978). Thus, a belief structure, owing to literature, acts as a guide for information search and processing (Evans, 2008, 2009; Evans & Over, 2010; Stanovich & West, 2000; Walsh, 1988).

If such is the case, then the premise of Festinger (1957) that beliefs (cognitive elements) arouse dissonance combined with Harmon-Jones's (1999) action-based model of dissonance understanding that "the dissonance effect is aroused because conflicting action-based cognitions have the potential to interfere with effective action" (Harmon-Jones, 1999, p. 120-121) will prompt an individual to act is accurate. However, how does it manifest in information processing? In line with this, Max Velmans (1991) noted that within the information processing model, two questions are of paramount importance: (i) where does consciousness enter into human information processing? And (ii) how does conscious processing differ from pre-conscious and unconscious processing? Results and previous literature indicated that awareness of a stimulus precedes pre-conscious information processing (La Berge, 1975, 1981; Libet et al., 1979; Posner, 1978; Shiffrin & Schneider, 1977; Velmans, 1991). In line with this, cognitive heuristics, as we saw earlier, is a process of making meaning nowadays, i.e., it is a process by which individuals become aware of their inner cues (Chen, 2019; Cherry, 2020; McNeill, Pinheiro & Andre, 2012).

Now, heuristics within cognitive dissonance, as seen earlier, aids in understanding cognitive heuristic elements arousing dissonance (via processes highlighted previously in this chapter). Taking this into context, we can observe the facet of cognitive heuristic elements (latent needs, in the study context) as impacting information processing at the beginning even before the process is consciously undertaken (pre-conscious processing) by an individual as latent needs derived earlier, is part of the "pre-reflective self-awareness" aspect in an individuals' mental apparatus. That is to say, the effect of the cognitive element arousing dissonance prompting an action will be perceived in the need recognition stage of consumer decision-making (considering information search is the second stage in the process). This further corroborates with the neural function of 'affect regulation' (Lovstad et al., 2012; Stevens et al., 2011; University of Nevada, 2017) which initiates bypassing external cues to further stick to deduced heuristics. Such an approach to information processing further correlates with the derived proposition of cognitive elements enforcing the action-based model of cognitive dissonance and thereby directing behaviour (Festinger, 1957; Harmon-Jones, 1999; Harmon-Jones & Amodio, 2009; Metin & Comgaz, 2011).

2.7.4 Information Processing during Consumer-Decision Making

Increasingly, research corroborating information processing and consumer decision-making suggest that due to the change in consumers' attitudes towards attributes such as trust, risk perception, self-identity and past behaviour, the information processing styles and the type of engagement in the consumer decision-making process has changed as well (Carfora, Caso, & Conner, 2016; Kahawandala & Peter, 2020; Lobb, Mazzocchi, & Traill, 2007; Mazzocchi, Lobb, BruceTraill, & Cavicchi, 2008).

A recent study by Fischer and Lis (2020) demonstrates that negative online reviews do not affect a consumer's decision unless it is a product functional defect which is higher in number. Furthermore, this understanding correlates with the new age self-identity and beliefs that are held on to by the new generation. It also further indicates self-confidence as a prime influence in decision-making (D'Souza, Taghian & Brouwer, 2020). Higher self-confidence is brought about in an individual due to higher self-esteem (Walsh, 2018) (one of the identified structural elements of perceiving cognitive dissonance). In such a context, how is information processed during decision-making? Sicilia and Ruiz (2020) illustrate quantitatively that the amount of information available and a consumer's ability from a cognitive perspective determines their behaviour.

Previous literature on information processing about consumer decision-making suggests that providing consumers with an excess of information results in negative consequences (Lurie, 2004). Most of these studies (Jacoby et al., 1974; Lee & Lee, 2004; Lurie, 2004; Malhotra, 1982; Owen, 1992) were concerned with the quality of the decisions made and inferred that "decision quality diminishes when there is too much information" (Sicilia & Ruiz, 2020, p. 34). This insight could be attributed to the consumer's inability to handle or manage the information pushed out (Hwang & Lin, 1999; Sicilia & Ruiz, 2020; Wilson, 1995). This understanding aligns with the "inverted U-curve" earlier proposed by Schroder, Driver, and Streufert (1967), i.e., decision quality increases as the amount of information increases, but on reaching a certain point, it decreases as the number of information increases (Schroder, Driver & Streufert, 1967; Sicilia & Ruiz, 2020).

Additionally, from a 'cognitive' and 'need for cognition' perspective, research indicates that people adjust their decision-making strategies to match their circumstances and conditions of existence (Haubl & Trifts, 2000; Payne, 1982). In this scenario, consumers are often referred to and depicted as "cognitive misers" (Haubl & Trifts, 2000) who endeavour to diminish the stress of psychological exertion related to decision-making scenarios (Shugan, 1980). Further, such an attitude is especially resorted to when options are numerous in number and "difficult to compare, i.e., the complexity of the choice environment is high" (Payne et al., 1993, p. 21). Drawing on the above understanding of research outcomes on consumer decision-making quality, it has been contended that an excessive amount of information can cause high levels of selectivity during information processing, i.e. selective exposure (Herbig & Kramer, 1994; Lurie, 2004; Malhotra, 1984), "consumer confusion" (Mitchell & Papavassiliou 1999), and, "dysfunctional processing" (Maity, Zinkhan & Kwak 2002).

In light of this, Mitchell and Papavassiliou (1999) and Hahn et al. (1992) proposed that there is a degree of information where the consumer will sufficiently be able to process and assess the content to arrive at a decision. This insight from previous literature can lead us to understand why successively generations (especially generation Z) have started to refrain from tolerating large amounts of marketing information (Zoghby, 2019) and further rely on their heuristics (Moriningconsult, 2020; Shear, 2020; Spotify, 2019; Wearesocial, 2020; WGU, 2019; Wood, 2020) owing to the current era of cognitive information overload (Interaction Design Foundation, 2020; Roetzel, 2018; Jamison, 2019; Levitin, 2015; Hemp, 2009). Furthermore, as research accentuates, the attention span of Generation Z is 8 seconds and below (Arya, 2019); if that is so, tying in all these insights via evidenced literature, we could say that cognitive elements (latent needs in our case), the aroused dissonance and added reliance on heuristics thereby can be seen to guide the new generation's consumer behaviour, cognitive dissonance and its elements affect consumer behaviour. This understanding shall be explicitly evidenced as part of the synthesis section of the literature review and further in chapter three (in the context of the cohort of study).

2.8 The Consumer Decision-Making Process

Although there have been various models, the most commonly used and accepted traditional model of consumer decision-making from a cognitive perspective entails seven stages and are: (i) stimulus, (ii) need recognition, (iii) information search, (iv) evaluation of alternatives, (v) purchase, (vi) post-purchase behaviour and (vi) evaluation of the choice of the decision (Davey, 2019; Stankevich, 2017). However, many scholars have questioned the traditional model of the consumer decision-making process. For instance, Kotler and Keller (2012) and Belch and Belch (2009) suggest that psychological moderating factors must be considered to explain the consumer decision-making process. The literature demonstrates that each of these seven stages has an equal mental state for the consumer (Belch & Belch, 2009; Kotler & Keller, 2012). If the mental states were to be correlated and depicted, they would be as follows in Table 2.4:

Table 2.4: psychological states to corresponding stages in the consumer decision-making process derived and integrated from Belch and Belch (2009) and Kotler and Keller (2012) studies.

Stage in Traditional Consumer Decision-Making Model	Corresponding Psychological State
Stimulus	Acceptance
Need Recognition	Sense of Motivation
Information Search	Perception
Evaluation of Alternatives	Attitude Formation
Purchase	Integration
Post-purchase behaviour	Learning about the Choice from experience
Evaluation of the decision	Learning the feelings towards the choice (satisfied, not satisfied, corresponding dissonance etc.).

Source: Belch and Belch (2009) and Kotler and Keller (2012) studies, derived and integrated by the current author.

2.8.1 Evolution of Consumer Decision-Making Due to Higher Need for Cognition during the Digital Era

With the effective changes in involvement in the consumer experience, the consumer decision-making process has evolved to accommodate the umpteen technological and cognitive advancements of new-age consumers (Pryer, 2019; Stankevich, 2017). Consumer decision-making is one of the frameworks that inherently constitutes various emotional instincts and cognitive aspects informing the individual. However, the prominent part until recently within the commonly used traditional model was to focus on stimulus (external stimulus) and gauge consumers' decisions (Hermann, Heitmann, Morgan, Henneberg & Landwehr, 2009; Hill & King, 1997; Mittal, 1988; Pras, 1978) and emotional appeals about pushed out content. Heuristics as a recognised concept within consumer decision-making started to be of immense importance in late 2007 (Keltner, Lerner & Han, 2007). Furthermore, heuristics within consumer decision-making studies gained more prominence (Mandl, Felfernig, Teppan & Schubert, 2011; So et al., 2015; Thogersen, 2009) owing to relatively higher 'need for cognition' among consumers than in previous generations (Shen, Sun & Chan, 2013) the stages of consumer decision-making as a process started to change. Literature indicates that the process has become more unstructured (Haziri, Chovancova & Aliu, 2018; Stankevich, 2017).

Additionally, with the influx of online media, consumer decision-making has become more complex (Shen, Sun & Chan, 2013). Therefore, the newly evolved decision-making process accounts for technological and environmental advancements and can be outlined as (i) problem/need recognition, (ii) information search, (iii) evaluation of alternatives, (iv) assess the evidence, (v) selecting an option, (vi) implement the decision and (vii) evaluating the decision (Pryer, 2019). Furthermore, according to Haziri, Chovancova and Aliu, 2018, "Consumers' purchase decision is affected by emotions, information availability, supplements, time, technology evolution and risk" (Hazari, Chovancova & Aliu, 2018, p. 34). In light of this, today's consumer decision-making process accounts for a deliberative process which is more of a learning curve than previously (Keltner, Lerner & Han, 2007). This ties in with the previous understanding of individuals' heuristics as dual purpose – guiding information search based on learning from making meaning and prompting logical reasoning (Evans, 2008, 2009; Evans & Over, 2010; Stanovich & West, 2000). Thus, decision-making

inherently encompassing this dual role of heuristics will innately be guided by cognitive elements in an individuals' cognitive schemata.

From a neuromarketing perspective, previous literature's insights on early studies enable us to ascertain further that consumer decision-making is highly individual-oriented as individual experiences and mental states guide the process (Haziri, Chovancova & Aliu, 2018). In 2007, Keltner, Lerner and Han demonstrated the effects of emotion-specific influences on consumer decision-making and judgements. The resulting literature in this context suggests that "specific emotions give rise to specific cognitive and motivational processes, which account for the effects of each emotion upon judgment and decision making." (Keltner, Lerner & Han, 2007, p. 158). Achar, So, Agarwal and Duhachek studied 'why we feel what we feel' and how it influences consumers' decisions. Literature indicated that "each specific emotion is associated with a set of cognitive appraisals that drives the influence of the emotion on decision-making through nuanced psychological mechanisms" (Achar, So, Agarwal & Duhachek, 2016, p. 166).

In light of this, Lynch and Zauberman (2007) conducted an uncovering study of the processes involved in consumer decision-making. They indicated that what comes to mind is not the most critical factor but what gets considered from a psychological perspective (Lynch & Zauberman, 2007). This correlates with the concept of 'cognitive heuristics' in that the 'consideration set' of information ought to be known, i.e. 'cognitive heuristics' nowadays (Cherry, 2020). Furthermore, research indicates that individuals indulge in transient activities uniquely (Liberman & Trope, 1998) and consider far-off occasions and items more than when similar occasions are confronted (Liberman, Sagristano & Trope, 2002). Therefore, the categories of mental "consideration sets" during decision-making vary individually and collectively from the uniqueness of the scenario perspective and the mental perception of the activities' closeness or nearness to the required 'consideration sets'.

Extensive literature demonstrates that psychologically distant events lead to a focus on "high-level aspects of decisions rather than low-level constraints because the constraints either are not represented in memory-based decisions or are ignored in stimulus-based decisions" (Lynch & Zauberman, 2007, p. 109). This understanding ties in with the above studies on

information processing and recovery from memory stages, i.e., mental actions in individuals. However, from the perspective of consumer decision-making affecting consumer behaviour, there is a primary distinction that recognises specific antecedents better preferred by others (Lynch & Zaubermann, 2007). This influences the consumer decision-making process style and behavioural outcomes that an individual could most productively contemplate (Lawson, 1998; Messner & Wanke, 2011). For vulnerable/uncertain situations, there is generally more inside individual 'cognitive heuristics', a.k.a consideration sets that make the intrapersonal disappointment or lesser satisfaction possible to avoid (Lynch & Zauberman, 2007; Messner & Wanke, 2011). Thus, if mental consideration sets/frames of references, a.k.a cognitive heuristics and recall ability, determine styles of decision making, they will obviously, affect the second stage of within the model of information search. That is to say, cognitive heuristics like latent needs affect an individual's adoption of a particular style of decision-making based on the 'need recognised' about the 'cognitive elements' within an individual.

Such insights tie in with the conceptual understanding derived above, combining Festinger's (1957) understanding of cognitive elements with Harmon-Jones's (1999) model of cognitive dissonance. Furthermore, from the consumer decision-making model, we can understand that information search is the second step after need recognition, so we can thus confirm the proposition that 'latent needs (cognitive element)' as prescribed by Festinger (1957) guide the whole consumer decision-making process from the 1st stage of consumer decision-making which is the need recognition stage due to the orientation of action-based model of cognitive dissonance (Harmon-Jones, 1999) within individuals. Hence, this demonstrates that pre-decisional cognitive dissonance states are a definite possibility (in the need recognition stage of the consumer decision-making process), affecting consumer decisions from the beginning, further guiding information processing and thereby shaping consumption behaviours and patterns.

However, how can we further specify cognitive elements arousing cognitive dissonance and their impact on consumer decision-making?

2.8.2 Effects of Cognitive Dissonance and its Drivers on Consumer Decision-Making Process

Considering the importance of 'cognitive heuristics' has risen only recently, dissonance as a factor was never really accounted for except in one study (Costanzo, 2013). The literature above demonstrates the impact of cognitive dissonance and its cognitive elements as influential factors affecting a consumer's decision-making style and its process. However, to answer the concept's delineation, we must understand the consumer decision-making process as a learning approach. In line with this, Belch and Belch (2009) examined the contrast among low-and high-strain scenarios within consumer decision-making from a psychological direction. The new model positions the consumer as a problem solver and information processor (in line with previous studies) who takes part in an assortment of mental procedures to assess other options and decide how much they may fulfil their needs and purchase intentions (Stankevich, 2017).

There have been different viewpoints concerning how customers get the information and experience they use in settling on purchase choices. We saw previously stemming mainly from frames of psychological reference (Stankevich, 2017). The consumer 'learning curve' has been characterised as "the procedure by which people obtain the purchase and utilise information and experience which they apply to future related conduct" (Boyd et al., 2002). Furthermore, as we have seen above, consumer decision-making often is made between high and low association buying, which implies that practically speaking, the actual purchasing procedure can be less of a mirror of the actual model and more from a contingency perspective upon the consumer's understanding of risks (Belch & Belch, 2009; Messner & Wanke, 2011).

Considering all we have studied above, consumers nowadays operate with a higher sense of caution (especially generation Z) (Vennare, 2019; Young, 2019). That is, more significant amounts of negativity and scepticism (University of West Virginia, 2015). In such a scenario, the consumer decision-making process will be more unstructured than before, as the contingency and risk aversion aspects would assume a higher degree of importance. From the previous understandings of Belch and Belch (2009), Shen, Sun and Chan (2013) and Messner and Wanke (2011), learnings affect how an individual would act when confronted with a choice (Paiget, 1936). This operating with more caution could be seen as a by-product of

wanting to avoid consequences - 'a characteristic of previous studies on cognitive dissonance' (Banerjee, 2017) and identified as an essential structural element to perceive cognitive dissonance. Further another reason is that the amount of information generation Z is faced with has exceeded their ability to keep up (Messner & Wanke, 2011). Consequently, as indicated by the literature above, consumers resort to understanding their cognitive heuristics and letting their 'cognitive elements' guide their consumption behaviour as their belief in themselves is higher (McKinsey, 2018; Vennare, 2019; Young, 2019) together with the fact that cognitive dissonance as evidenced by literature above, can be sensed more when self-esteem is higher (Carpenter, 2019) – another one of the structural elements identified to perceive cognitive dissonance.

Increasingly, the above understanding is reflected in recent reports wherein iGeneration buyers practically begin their consumer experience before the actual purchase (Antevenio, 2019). The pattern among new age customers, a.k.a. 'hypercognitive race', is to consolidate their online research based on their 'cognitive heuristic' stimuli warranting the research, with the impact of promoted data. After this self-indulged activity based on inner cues and personal meaning-making of information (external and internal stimuli), a decision is made by the consumer (Gurski, 2019; Ozdemir, 2020). Thereby, this further accentuates how 'cognitive ability', 'cognitive heuristics', i.e., cognitive elements arousing dissonance, affects the style adopted of consumer decision-making in consumers seen currently by bringing into effect a cognitive element-driven action-based model of cognitive dissonance.

However, how do all of these theories/frameworks, derivations, insights and literature demonstrated viability of pre-decisional states of cognitive dissonance come to the forefront in a consumer cohort such as generation Z?

2.9 Synthesis of Concepts and Relation to Generation Z – Conceptual Framework of the Study
The aspect of' attention' is a binding force among all the theories. Recent research underlines that currently, it is the "era of mind wandering" (Fazelpour & Thompson, 2015, p. 225). Callard and colleagues (2012) demonstrated empirically that mind wandering could be operationally defined as "task unrelated thought" (Callard et al., 2012, p. 54). This fosters a continuous ongoing self-organising process of the mind owing to intrinsic and spontaneous stimuli

building different frames of reference (cognitive heuristic elements within) (Fazelpour & Thompson, 2015). If such is the case, the emphasis of attention on external stimuli during a continuous process, as highlighted above, is questionable in a time we live in now – one of cognitive information overload.

Extant literature indicates that the increased attention deficiency and shorter attention spans (Arya, 2019) growing in successive generations (Bluth, 2018; CDC, 2019) is an active psychological action of choosing what to attend to and what to ignore (Khan Academy, 2020; Posner, 2020). This choice of what to give attention to and what to ignore, given the multitude of options and limited time at their disposal, has been adopted by generation Z (Finch, 2015; Lambert, 2019). In such a context, derived from earlier cited literature, cognitive heuristic elements become the driving force (Cherry, 2020; Zhang, Zhao, Cheung & Lee, 2014), i.e., latent needs in this thesis. Literature indicates that although the 'need for cognition' is sought by consumers, their idea of indulging in various sources and getting involved is backed by an understanding of 'what they want to consider' based on their feelings (WGU, 2019) and 'what they want to disregard' (Zoghby, 2019) in a bid to produce 'cognitive unison' which is a state of 'full attention' when all cognitive elements are focused on solving a problem/complete a task (Fazelpour & Thompson, 2015; Mole, 2011; Shen, Sun & Chan, 2013).

Thus, when attention in itself is a choice, then decision-making as an exercise would also be driven not by choice but more so by a pre-conceived idea of what needs to be attended to i.e. individuals deploy the action-based model of cognitive dissonance (in a pre-decisional context) triggered by a cognitive element (driver) (Chacko & McElroy, 1983; Festinger, 1957; Flavell, 1999; Harmon-Joes, 1999; Harmon-Jones & Amodio, 2009). This will thereby impact evaluated content (information search – 2nd stage of consumer decision-making), i.e. information processing (as was explained above). Hence, this further demonstrates how all the theories integrated will be impacted by cognitive elements arousing pre-decisional cognitive dissonance in a highly cognitive group such as generation Z. Below, the proposed conceptual framework, Figure 2.10, details the impact of cognitive elements arousing cognitive dissonance within a generation Z individual thereby enabling 'the process of affect regulation' and guiding a consumer's purchase journey from the beginning.

Figure 2.10 presents a proposition for the conceptual framework for the ground of pre-decisional states of cognitive dissonance at the 1st stage of consumer decision-making and its effects among digital natives, new generation Z.

Latent Need (Cognitive Element) → Action-based cognitive dissonance aroused owing to the cognitive element → Affect Regulation i.e. ACC (Anterior Cingulate Cortex) in the brain takes over to complete a task owing to the dissonance felt, overriding other cues and information → Selective Exposure and targeted digital research based on cognitive element (Antevenio, 2019) to address the need.

Types of latent needs, will result in pre-decisional cognitive dissonance states

Affects, 2nd step of consumer decision-making (information processing) and establishes a goal-oriented consumer decision-making approach owing to pre-decisional cognitive dissonance states

Source: The current author.

2.10 Conclusion

This chapter, an integrative literature review, started with adopting a temporal and conceptual approach to the theories/frameworks in context: cognitive dissonance, latent needs, information processing, and consumer decision-making, commencing with their inceptions respectively, to date. Further on, each of the subsequent theories after cognitive dissonance theory has been corroborating with the main study focus, i.e., cognitive dissonance theory wherein, the focus has been combining Festinger's (1957) aspect of cognitive elements combined with Harmon-Jones's (1999) action-based model of cognitive dissonance.

Each framework focuses on cognitive heuristic elements by individuals and their influence in the models from a goal-oriented approach as a base for peoples' actions. Following this, a synthesis of concepts was derived, highlighting the inconsistency and elimination in cognitive dissonance theory studies thus far. That is to say, highlighting the overlooking of the impact of cognitive elements in arousing dissonance as a driver for action, culminating in a proposed conceptual framework that informs the study's premise. The proposed conceptual framework underpins post-logical derivations, the process of consumer decision-making within a digitally native consumer – generation Z. This framework has been derived by critiquing literature

from neuroscience, psychology, behavioural sciences and marketing, furthered by cogent interpretations backed by theoretical evidence.

The next chapter will also inform how the structural elements of cognitive dissonance identified earlier are prevalent within generation Z giving rise to deducing the proposed conceptual framework, Figure 2.10.

CHAPTER 3: GENERATION Z

3.1 Introduction

Generation Z constitutes the buyers of tomorrow (Jones, 2020). The conditions of existence largely determine the way a generation behaves during the period (Piaget, 1936). Moreover, behaviour is often moulded by emotions, beliefs and experiences (Marchant, 2015). However, in today's scenario, technology and its advancement shape information consumption considerably (Vigo, 2019), thereby affecting preferences and behaviours in cohorts (Lautiainen, 2015). In a recent study on invisible manipulators of the mind, Tamsin Shaw highlighted Kahneman and Tversky's research and foundation of a new definition of behavioural sciences and said, "it was their findings that first suggested we might understand human irrationality in a systematic way. When our thinking errs, they claimed, it does so predictably" (Shaw, 2020).

Furthermore, Kahneman in 2011 presented a model developed by both Kahneman and Tversky in the book 'Thinking Fast and Slow'. The model highlighted two modes of operation by the human mind. One is a fast one, where the reliance was on beliefs, emotions, instincts, guts and learned associations. The second mode of operation was characterised by deliberation and slow thinking, allowing a re-check on the propositions made by the first mode (Kanheman, 2011; Shaw, 2020). If we take these insights into the study context, can we say that (i) the predictable aspect of erring in thinking is due to a cognitive element within an individual arousing a dissonance/unpleasant feeling warranting an action, (ii) as a generation bombarded by hundreds of messages a day (Wearesocial, 2020), generation Z, is better equipped cognitively to perform the 'thinking slow and fast' approach whilst processing information?

First, drawing on the literature critically reviewed, the predictability of 'erring in thinking' can be attributed to cognitive elements within an individual stimulating an action coupled with listening to heuristics (Festinger, 1957). Second, heuristics is (as seen earlier) a learning tool individuals use to base their decisions. Therefore, as seen from previous literature, due to the ability to parallelly process and scrutinise umpteen sources of information (Arnold, 2019; Kasasa, 2019; McKinsey, 2018) along with reliance on making meaning (Spotify, 2019; Wearesocial, 2019; WGU, 2019), generation Z is more attuned to perform both 'thinking fast

and slow,' i.e., both forms of human mind functions, when arriving at a decision. However, how do all these functions and processes manifest among the Zoomers?

Marchant (2015) demonstrates that behaviour is driven by feelings, emotions, contemplations, and convictions for each individual. One cannot act except if one has premises on which to start the activity and a context (McLeod, 2018). The literature indicates there is constantly a motivation behind why we do what we do: activities do not spring up without cause (Marchant, 2015). Furthermore, the literature stipulates that the causes of actions are our sentiments and feelings and our contemplations and convictions (Cherry, 2019). Obviously, we are unaware of specific causes in some cases, yet that does not discredit the depiction (Marchant, 2015; Shaw, 2020).

Figure 3.1 depicts the diagram of the concept of behaviour being guided by internal cues.
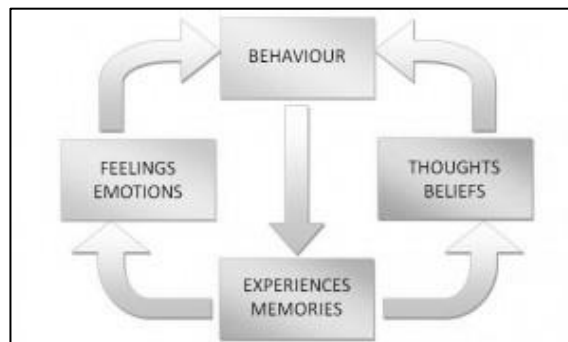
Source: Marchant, 2015.

The scope of this chapter is to provide a holistic view of the Generation Z cohort. The chapter highlights the cohort's lifestyle preferences, behavioural implications due to conditions of existence, their cognitive abilities and neural frameworks as underpinnings of their evidenced behaviour, including their added scepticism in light of the recent pandemic and further reliance on heuristics as a generation. Furthermore, by evidencing adequately neuroscientific, psychological and cogently derived insights, the chapter explicitly indicates how cognitive dissonance can be understood as a motivator of action and how generation Z is an apt ground (research setting) for the study.

3.2 Generational Cohort Theory

At the outset, it is imperative to note that the findings of a generation have far-reaching implications for that unit cross-culturally (Mannheim, 1927/1928). Pinder (1926) suggested that "each generation builds up an 'entelechy' of its own by which means alone it can become a qualitative unity" (Pinder, 1926, p. 23). Entelechy comes from the Greek word, 'entelechia' and refers to "the supposed vital principle that guides the development and functioning of an organism or other system or organisation" (Brittanica, 2020, para 1). From this, we can infer that each generation develops its principle. If such is the case, what principles guide generation Z? The principles will be detailed below as we extract their behavioural nuances and preferences. However, what is important to note is that as a cohort, their principles will be the same as a generation across any cultural reference as "the entelechy of a generation is the expression of the unity of its 'inner aim' – of its inborn way of experiencing life and the world" (Pinder, 1926, p. 23). Tying the concept of entelechy to identify latent needs arousing cognitive dissonance within the cohort and shaping their consumption and behaviours within healthcare, we can say that the findings will be uniform across the cohort.

Given this, Mannheim (1927/1928) suggests that an individual's way of life is created by people who come into contact again with "accumulated heritage". Literature indicates that in our psychical make-up, a new connection consistently implies a changed relationship of space from the object and a novel methodology in acclimatising, utilising, and building up the proffered material (Mannheim, 1927/1928; Obmann, 2014). Further research indicates that such an approach by the new generation slightly alters the social context due to 'selection of' and 'emphasis on' certain aspects of the social context and preferences of the previous generation (Obmann, 2014). The implications of this understanding lead us to understand further the root of certain behavioural tendencies of age Z. For example, 'deliberation' – taking more 'space' (Mannheim, 1927/1928) than previous generations whilst making decisions (Spotify, 2019; Wearesocial, 2019), 'conscious contradiction to previous generations' (Wearesocial, 2019) – novel methodology in acclimatising themselves with their surroundings (Mannheim, 2019) and as learning from the past consequences of generations' actions (Euronews, 2011; Fentiman-Hall, 2018; Sterling, 2017).

Moreover, further extant literature indicates that although there is a lot known about previous generations regarding Generation Z, there is not much known – figure 3.2 exemplifies this below.

Figure 3.2 depicts the current understanding of generational cohorts based on Karl Mannheim's generational cohort theory and the gap in understanding Generation Z.
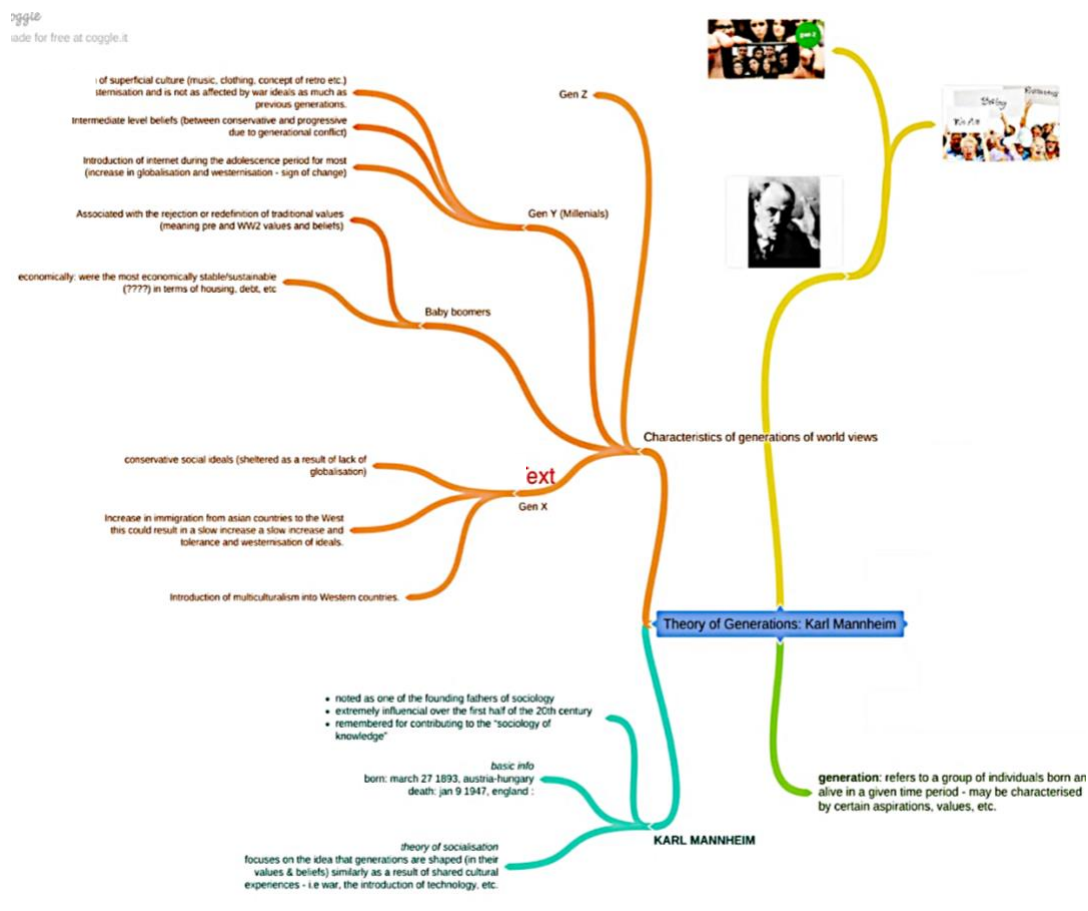
Source: Coggle, 2020.

The reason for the gap is, as Mannheim suggests, "generational location is determined by how certain patterns of experience and thought tend to be brought into existence by the natural data of the transition from one generation to another" (Mannheim, 1927/1928, p. 292). Generational location is a term coined by Mannheim in 1927/1928 to indicate the designated beginning and ending dates of generations (IGI Global, 2020). If such is the case, will not engagement with the surrounding be the right indicator of a generational location? Therefore, only when generation Z become consumers with disposable decision-making, i.e., starting around the teenage years of 16, but shaping wholly coupled with added

independence around 18 years of age, without any parental influence would they ideally be able to be studied in a behavioural context and as a cohort with clear beginning and end based on engagement behaviours. Until then, there would be fluidity in their exact determinants of the period.

In line with this, Mannheim (1927/1928) identifies late adolescence (18 through to at least 21 years) as the period during which individuals' key outlooks are formed. The literature further affirms that if significant events occur during the late adolescence period of a group of individuals, that gives rise to a collective consciousness (Mannheim, 1927/1928; Obmann, 2014; Piaget, 1936) and belief systems. Such an observation is further backed by why generation Z is currently in a high-study context based on research seen (Jones, 2020; Lasser & Brooks, 2018; McKinsey, 2018; Premack, 2018; Ryerson, 2018; Seemiller & Grace, 2018) as they are coming of age and joining the working population (Claveria, 2019). This further exemplifies the need for this cohort's study and context to understand their underlying drivers and mental processes.

3.3 Demographic Overview

Generation Z are known to be comprised of individuals born from 1995 to late 2010 (most commonly agreed) (Brand et al., 2022; Dimock, 2019; Kamenidou et al., 2019a, b; Kasasa, 2019; Nigam, 2022; Priporas et al., 2017, 2019, 2022; Vellore-Nagarajan et al., 2021a). Furthermore, Generation Z is referred to by various names. Some are iGeneration, Gen Tech, Gen Wii, Homeland Generation, Net Gen, Digital Natives, Plurals and Zoomers (Kasasa, 2019). According to Bayindir and Kavanagh, "62% of Gen Z live with their parents, 63% live in urban areas, and 55% of Generation Z are students" (Bayindir & Kavanagh, 2019, p. 5). Furthermore, a 2018 McKinsey report suggests that generation Z are digital natives who prefer mobility and maintain multiple realities due to social networks (Francis & Hoefel, 2018). They prefer communities such that now, they call themselves "communaholics". They believe in dialogue and being authentic (Francis & Hoefel, 2018). According to Scholz and Vyugina, "Gen Z are self-actualized based on Maslow's hierarchy of needs as they want to know, to be able to understand and to explore" (Scholz & Vyugina, 2019, p. 278).

Francis and Hoefel (2018) inform us that for Generation Z, it is important not to define themselves through only one stereotype. The literature indicates that generation Z believe in being "identity nomads", that is to say, that this cohort believes in experimenting as individuals by being "themselves in different ways" (Francis & Hoefel, 2018). In line with this, a recent report by Wearesocial calls them the most fluid generation (Wearesocial, 2019). According to Wearesocial, "They don't see themselves in binary terms anymore—they can be many things all at once. This fluidity applies not only to sexual orientation or gender but also to their wider interests. The concept of fluidity has been extended beyond the self and into how they see and interact with the wider world" (Wearesocial, 2019, p. 61).

3.3.1 The Gen Z Life Cycle

An individual's life cycle is determined in a consumer context to be of three kinds – student, traveller and professional. Below, figure 3.3 represents the breakup of generation Z into various attitudinal perspectives within the three kinds above.

Figure 3.3 represents various attitudinal perspectives of Generation Z students, travellers and professionals.
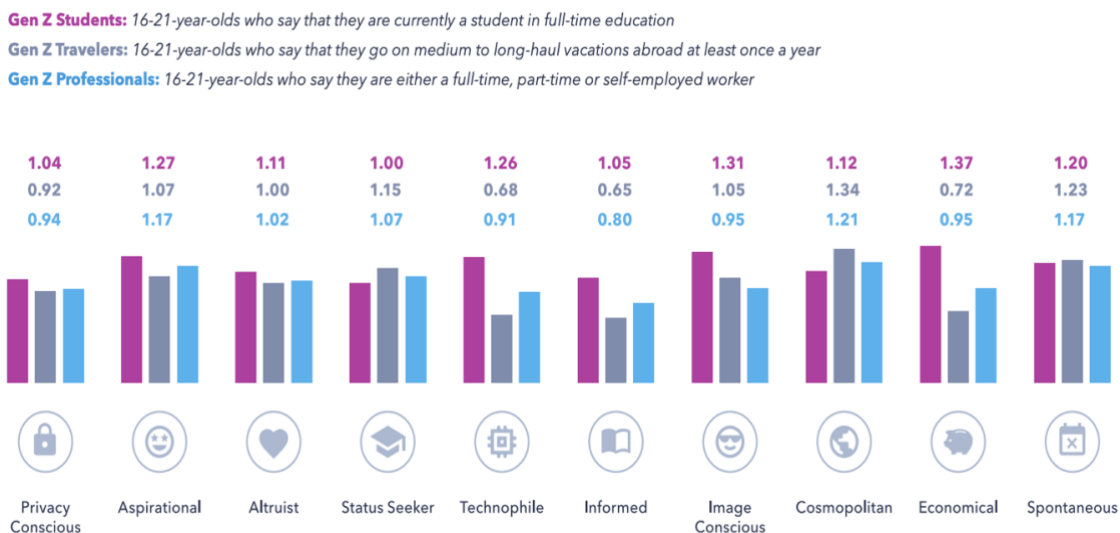
Source: Bayandir & Kavanagh, 2019.

Furthermore, deriving from the above figure, it can be observed that Gen Z students are 1.45x more likely to state that a brand should make them feel cool and in vogue; Gen Z travellers

are 1.6x more likely than the regular web client to say a 'purchase now' button on a "social network" would most likely improve their probability of purchasing an item; A third of Gen Z professionals use social media to build their network (Bayindir & Kavanagh, 2019). Literature also indicates that generation Z (students, travellers, and professionals) are 2.2x more likely to donate to a charitable cause weekly whilst purchasing online (Bayindir & Kavanagh, 2019; Keve & Bryzek, 2019; Lein, 2019; Shear, 2020; Yeomans, 2019).

Additionally, from the above figure, although the age range of this cohort varies with the table (i.e., 18-25 in the study context), we can understand specific nuances that characterise Generation Z further. Generation Z individuals are highly privacy-conscious, aspirational, altruistic, technophiles, and highly economical and spontaneous. These characteristics are very much shown in their online and offline behaviours. These characteristics are also more due to the conditions of their existence, i.e., the period of the cohort – the digital age (Boyle & Townsend, 2019; Claveria, 2019; Crouth, 2019; Urquhart, 2019; Woo, 2018).

3.3.2 Conditions of Existence

Currently, we are living in an age in which the behavioural sciences have become inescapable (Shaw, 2020). The discoveries in the fields of social psychology and behavioural economics are being employed by businesses to determine what news we read (Luxton, 2016), what products we buy (Suh, 2019), the various cultural and intellectual spheres we as individuals inhabit, and the human networks, online and in real life, of which we are a part – all culminating in AI (artificial intelligence) and Big Data programs equipped to trace and map our activities for us (Hassan, 2018).

Generation Z they were born into the current technology-guided consumption sphere (Dimock, 2019; Kasasa, 2019; Priporas et al., 2017, 2019) and do not know a time of lesser technology (Bayindir & Kavanagh, 2019). Jorg (2020) suggests that this cohort grew up with different family structures and a progressively changed blend of ethnic groups. Kasasa (2019) reports that the events shaping this cohort's behaviour include smartphones, social media, never knowing a country, not at war, and seeing the financial struggles of their parents (Gen X) are vital considerations. Furthermore, these financial struggles have engrained Generation

Z's cautious and prudent banking habits (Jorg, 2020; Kasasa, 2019). We could also add the recent COVID-19 pandemic to the list of events shaping this cohort.

Several reports further suggest that one of the most notable highlights of generation Z is their diverse representation and need for inclusion (EnGarde, 2020; Jordan, 2018). Gen Z has grown up with assorted variety and will generally anticipate it as the default (Jordan, 2018; Kasasa, 2019). Even though Millennials are technically knowledgeable because of growing up with quickly booming innovation, their perspectives via web-based networking media are not quite the same as those of Zoomers, who experienced childhood in reality as we know it, where online life was at that point ubiquitous (Jordan, 2018). Furthermore, according to Jordan, "Due to the fast-paced and demanding nature of modern life, generation Z have to identify their unique brand and embrace their authenticity rather than trying to closely emulate the actions of their peers" (Jordan, 2018, para 5).

3.3.3 Attitudes and Lifestyle

Generation Z's attitudes and lifestyle are demarcated mainly with higher levels of scepticism (Morningconsult, 2020; WGU, 2019). A recent report by Global Web Index indicates that the top five self-perceptions by percentage among generation Z are: (i) it is crucial to develop the skillset constantly– 82%, (ii) it is crucial to seize opportunities – 77%, (iii) it is essential to be well informed about things – 77%, (iv) Family is the most critical thing in life – 76% and (v) Always strive to be better – 76% (Bayindir & Kavanagh, 2019).

Regarding ideas further guiding their lives, 51% are noted to be risk takers with an entrepreneurial attitude (Bayindir & Kavanagh, 2019; Crouth, 2019). According to Crouth, "Gen Z is characterised by a tremendous entrepreneurial spirit, founded on hope and a sense of self-created liberation. Many have started businesses at a young age; they no longer save to spend; they save to reinvest" (Crouth, 2019, para 7). Moreover, due to the power of self-belief (Spotify, 2019), many individuals of this cohort have explicitly showcased that their relationship with fiscal appropriations is not quite the same as in past ages (WGU, 2019). That is to say, while they place immense value on credibility in a rapidly changing world, many live by the view that "money is life, and life is money". Simultaneously, they have demonstrated a craving to spend all the more cautiously and deliberately, often called "cautious

contradiction" to the habits of previous generations (Crouth, 2019; Kasasa, 2019; Shear, 2020; Wearesocial, 2020). This is an age with various perspectives on spending, contributing/investing, and saving (Crouth, 2019). They are strongly "debt-averse, treat credit with caution and are more inclined to online purchasing than previous generations" (Crouth, 2019, para 9).

Morning Consult (2020) reports that the iGeneration is bound to characterise themselves by what they do, as opposed to their identity. Career decisions and interests are the two most significant ideas for moulding their personality, eminently more than thoughts like race or religion. About a fourth of Gen Z young adults have a yearning to be well known: 23% state that being celebrated is essential to them – eight points higher than recent Gen Y and 15 points higher than Gen X (Morningconsult, 2020). Further research suggests a similar attitudinal shift in the cohort (Francis & Hoefel, 2018; Wearesocial, 2019; Wood, 2020). A recent investigation into Generation Z by Criteo (2020) indicates that since they have significant spending power estimated at $44 billion (Claveria, 2019), their spending varies into their closely held interests. For example, most generation Zers spend on consumer electronics, apparel, games (mainly video games) and sporting goods (Criteo, 2020).

Their interests are categorised as music, film/cinema, food and drinks and technology with a breakdown of 68%, 59%, 57%, 55% and 54%, respectively (Bayindir & Kavanagh, 2019). Furthermore, most of their information consumption is via social media, which is different in consumption. That is to say, younger Generation Zers prefer Tik Tok, Snapchat and Instagram, whilst older ones prefer Facebook and Twitter. The usage breakdown is as follows: 42% Tik Tok, 52% Snapchat, 55% Facebook, 52% Instagram and 23% Twitter (Criteo, 2020). The low usage of Twitter could be attributed to character restriction and the characteristic of the portal being a fast-moving platform with mentions and tweets staying on the walls of others for shorter periods than other portals. Given the philosophy of wanting to leave a mark and be known among this cohort, such a disparity in usage distribution is understandable.

Furthermore, the scepticism in previous generations' habits as a "cautious contradiction" attitude and prudence in indulgence within the Generation Z cohort can be seen in the activity engagement figure 3.4 below.

Figure 3.4 depicts activities engaged in and preferred by the generation Z cohort i.e. gaming, adventure sports and urban art, vis-à-vis a stark aversion to gambling, gardening and local issues (as a pass time activity of previous generations).
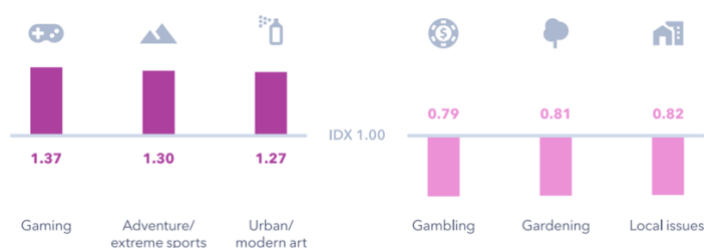
Source: Bayandir & Kavanagh, 2019.

The preference of activities indulged in by generations can say a lot about their intended behaviour patterns and cognitive abilities. Gaming, Adventure Sports and Modern Art are all activities with physical and intellectual involvement for individuals. For instance, gaming is proven to involve and develop an individual's critical thinking ability (Gerber & Scott, 2011). On the other hand, adventure sports consist of a person understanding risks and taking on challenges and is more hands-on in experiences (Ko, Claussen & Park, 2008). Modern art, in reality, is all about critically interpreting and inferring what has been communicated, i.e., giving it the name abstract art (Charman & Ross, 2004). Now, all these sectors involve characteristics which are in line with the attitudes and preferences of generation Z highlighted above – such as engagement with the context, self-belief and meaning-making and finally, understanding information and taking a call for themselves (McKinsey, 2018; Spotify, 2019; WGU, 2019).

3.4 Behavioural Implications of Conditions of Existence for the iGeneration

3.4.1 Online Behaviours

Wearesocial (2020) demonstrate via interviewing people from the Gen Z cohort that this generation has a contrasting experience with online modes of communication, as they have constantly been at the centre of and quickly adapted to the advancements. As opposed to depending on it as a "wealth giver of data", this cohort is, in reality more uncertain than Millennials to aimlessly agree with data gathered on the internet. Because it's on the internet and "fake news" has become rampant (Viola & Wainwright, 2020), Generation Z is very wary

of online information consumption alone. In line with this, this cohort better understands GDPR and Big Data analytics' use by businesses to re-market, re-target and track a consumer's online shopping journey using crawlers (Wheeler, 2018). Furthermore, another report indicates that due to such an added understanding, "87% of generation Zers have confirmed their privacy is more important than being 'well-liked' online" (Taylor, 2018, para 3).

It is interesting to note that such online scepticism is relatively newfound. A recent 2020 report on online privacy concerns and contrasts of millennials with generation Z notes that, amid prominent information breaches and mounting investigation into how organisations like Facebook and Google have tackled clients' information, generation Z has become increasingly suspicious about information gathering. This cohort's individuals are progressively doubtful that web organisations are mindful stewards of their most sensitive information, regardless of whether it's being utilised to target them with business/marketing offers or for increasingly iniquitous purposes (Jacobson, 2020). Increasingly, generation Z has been observed to resort to erasing their tracks online by clearing 'browsing history' (Bayindir & Kavanagh, 2019; Taylor, 2018). This results in an inability of companies to remarket or retarget as there is a loss of data (Barnhart, 2019; Allaboutcookies, 2020).

The figure below will give a better understanding to further elucidate the above insights of Gen Z's online behaviour.

Figure 3.5 depicts a survey of online behaviours of Generation Z conducted in 2018.
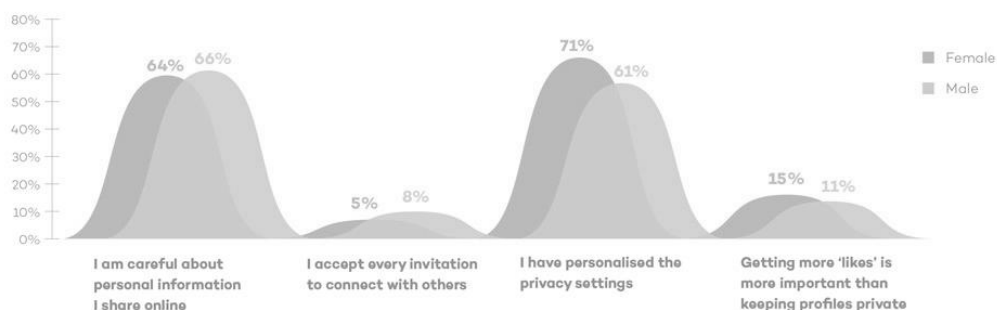
Source: Taylor, 2018.

Furthermore, Generation Z has also been adept at increasingly using ad blockers to protect themselves from irrelevant content in an era of cognitive information overload (Bayindir & Kavanagh, 2019; Nageswari, 2019; Zoghby, 2019).

Figure 3.6 depicts the reasons for online privacy measures undertaken by Generation Z owing to an overload of marketing content.

Online Privacy Measures
% who have done the following in the last month

62% IDX 1.26 — Used a private browsing window

51% IDX 1.10 — Used an ad-blocker

50% IDX 0.98 — Deleted cookies

38% IDX 1.27 — Used a VPN or Proxy Server

Top Ad-Blocking Motivations
% of ad-blocker users who say they block ads for the following reasons

49% IDX 0.99 — There are too many ads on the internet

48% IDX 0.99 — Too many ads are annoying or irrelevant

46% IDX 1.01 — Ads are too intrusive

40% IDX 1.04 — Ads take up too much screen space

39% IDX 1.02 — Ads sometimes contain viruses or bugs

Source: Bayandir & Kavanagh, 2019.

Such an approach by new generation Z warrants redefining the way content marketing is undertaken, which furthers the foundation of this study to understand the latent needs causing dissonance, thereby affecting information processing and consumer decision-making. That is to say, finding the mental processes of new generation Z whilst consumer decision-making.

Furthermore, the above figure 3.6 enables us to infer that, on average, every month, 1 out of 2 erase their cookies (i.e.,50%), which is an issue for some sites and online retailers (National Retail Foundation, 2017) that depend on this information to modify their approach to consumers and customisation of content pushed out (Bayindir & Kavanagh, 2019). Private browsing windows, utilised by 62% of this generation, i.e., incognito modes of web surfing, will likewise be having an effect. Moreover, ad blocking is ostensibly the most significant danger here, and Gen Z is 10% more likely than others to block advertisements on their

computers and mobiles (Gansca, 2018). Among the cohort, an excess of adverts online is the greatest disappointment (49%), with the majority saying they block marketing content since they are irritating/unessential, i.e., more than 25% of this cohort (Bayindir & Kavanagh, 2019; Nageswari, 2019). This diverse group has been forced to be immersed with marketing content that they are exceptionally mindful of the number of advertisements they are confronted with (Bayindir & Kavanagh, 2019; Gansca, 2018; Jacobson, 2020; WGU, 2019; Wheeler, 2018).

Additionally, an interesting breakdown from an engagement perspective to note would be online behaviours by a device which, when surveyed, amounts to the below figure 3.7

Figure 3.7 depicts online behaviours by device followed by Gen Z.

Online Behaviors by Device
% who did the following online last month via...   O Mobile   O PC/Laptop

95% 76%		Visited/used a social network
92% 36%		Used a chat or instant messaging service/app
91% 62%		Watched a video clip or visited a video-sharing site
90% 76%		Visited/used a search engine
80% 56%		Visited an online retail site or store such as Amazon
76% 21%		Used a map or directions service/app
73% 41%		Searched for a product or service you want to buy
71% 40%		Visited a news website/app/service
66% 25%		Uploaded/shared a photo
61% 32%		Purchased a product online

Source: Bayandir & Kavanagh, 2019.

Deriving from the above figure 3.7, we can observe that purchasing a product online can be said to be relatively on the lower end of the scale at 61% to 32%, whereas visiting an online store is on the higher end of the scale at 80% to 56% (mobile and laptops respectively). Now that being said, these behaviours have severe implications for marketing to this generation. For instance, there is a relatively disproportionate behavioural occurrence between visiting

an online store such as Amazon, Flipkart, or eBay to purchasing from them. One inference we can make is that, nowadays, consumers tend to visit multiple websites, see reviews, and perform their preferential research before buying (Antevenio, 2019). According to Aleksandra, "Google receives 63,000 product reference searches per second on any given day" (Aleksandra, 2018, para 3). Thus, between visiting an online store multiple times to check on and research products to buying, there is a function performed by today's consumers, commonly referred to as "digital research", which precedes arriving at a final consumer decision (Antevenio, 2019). The information accrued via these searches determines the "yes" or "no" for a product on an online store.

From several reports cited above, we can observe that marketing has changed in this new generation Z. It has come to be viewed more sceptically than in previous generations, and marketers are finding it more challenging to capture the audience. Such scepticism can be attributed to the times of existence of Generation Z, along with negativity as a factor multiplying in successive generations (Legg, 2019; West Virginia University, 2015). Furthermore, characterised as having an attitude of risk-aversion having seen the scenario they are put into due to previous generations and as one generation learns from the other (Burcham, 2019; Euronews, 2011; Hoberman, 2017), such online behaviours are understandable. However, how do these understandings affect marketing-oriented behaviours within Generation Z?

3.4.2 Marketing-Oriented Behaviours

With such a scenario of attitudes and lifestyles seen above, marketing has undergone many changes (Kareh, 2018) from a marketing mix perspective. The role of consumers has changed significantly as well in a highly interconnected world, warranting consumer involvement with organisations in product and service development (Ecrsey, 2017; Martinez-Canas, Ruiz-Palamino, Linuesa-Langreo & Blaquez-Resino, 2016; Oertzen, Oderkerken-Schroder, Brax & Mager, 2018; Ranjan & Read, 2019) for competitive advantage. From a consumer perspective, specifically generation Z consumers, the approach to marketing-related content and marketing, in general, has shifted considerably (Murray, 2020; Pollicott, 2019). Ad blockers have been used frequently and are seen to be on the rise, and marketing is now viewed more sceptically than before (Zoghby, 2019). This has resulted in an increased feeling of 'being involved' in 'value creation'. That is to say, consumer engagement by businesses during marketing (i.e., from the stage of market research to final product/service) has become an essential pre-requisite for this cohort, generation Z (Brownsell, 2017; Pollicott, 2019; Wylie-Harris, 2018).

In line with the above understanding, a recent 2019 report suggests that "76% of Gen Zers have stated they want brands to respond to feedback and view this responsiveness as key to determining the authenticity of a brand. 41% of this generation read at least five online reviews before making a purchase" (Pollicott, 2019, para 10). Previously, albeit there was a considerable technological influx, the weight of negativity and scepticism was not so overpowering (as seen in the literature cited above). Several reports suggest that when self-reliance and self-belief are high, there is a direct proportionate relation to an increase in scepticism (Albarracin & Johnson, 2016; Matheson, 2018). The higher self-belief, the higher the doubt about information received. In line with this, we can see a stark contrast between previous purchase behaviours of Gen X,'see and buy' to Gen Z ', know what to buy, review, then buy' (Antevenio, 2019; EnGarde, 2020).

The above literature shows us that the consumer landscape has changed (Crouth, 2019). Generation Z consumers do not believe in only buying a product/ service; they buy an experience/they avail of an experience which should have a holistic perspective (Bayindir& Kavanagh, 2019; Pollicott, 2019). This holistic perspective also entails how well a company

links their presence and values with environmental and societal change and benefits (Antevenio, 2019; Keve & Bryzek, 2019; Lein, 2019; Shear, 2020; Urquhart, 2019; Yeomans, 2019). Such motives, when communicated, become an added advantage to listening to businesses and making purchase decisions (Bayindir & Kavanagh, 2019). The webpage of Amazon has a pop-up box upon visiting which states "pick a charity" to entice this new cohort and perform the function of passing on unsold charity items/returned products as well as donations in monetary terms as part of their CSR (Stevens, 2019). Furthermore, a 2018 study by Provoke states, "Consumer activism is taking a new turn. Buyers are more likely to spend money with brands whose values they support rather than boycotting the companies they oppose" (Marszalek, 2018, para 1). Moreover, according to Antevenio, "83% believed that it was more important to support companies that "do the right thing when they buy their products" (Antevenio, 2019, para 8).

The effects of such behaviour by generation Z do not only affect their own decisions but affect the household decisions they live in. According to a report by National Retail Federation on generation Z, "87% of households say their children affect their decisions, 48% decisions specifically for another child is affected by Gen Zers, and 36% purchases of the households are influenced by Gen Zers" (National Retail Federation, 2019, p. 2). The below figures 3.8 and 3.9 explicitly showcase the impact Generation Z has on purchase decisions in a household.

Figure 3.8 represents how Gen Z influences buying behaviour within households.
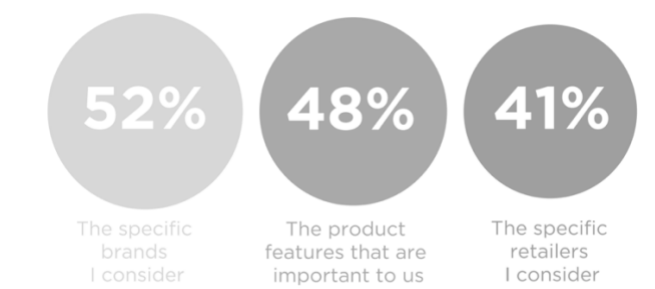
Source: National Retail Foundation, 2019.

Figure 3.9 depicts the top categories where Gen Z influence a household's buying behaviour.

Top categories where children either influence spending or spend their own money

Any influence or spending

Category	Percentage
Toys and games	92%
Clothes and shoes	91%
Food and drink	88%
Dining out	87%
Event and outings	85%
Books and music	85%
Electronic goods	81%
Personal care	81%
Travel	79%
Apps	78%
Sports equipment	78%
Digital streaming	74%
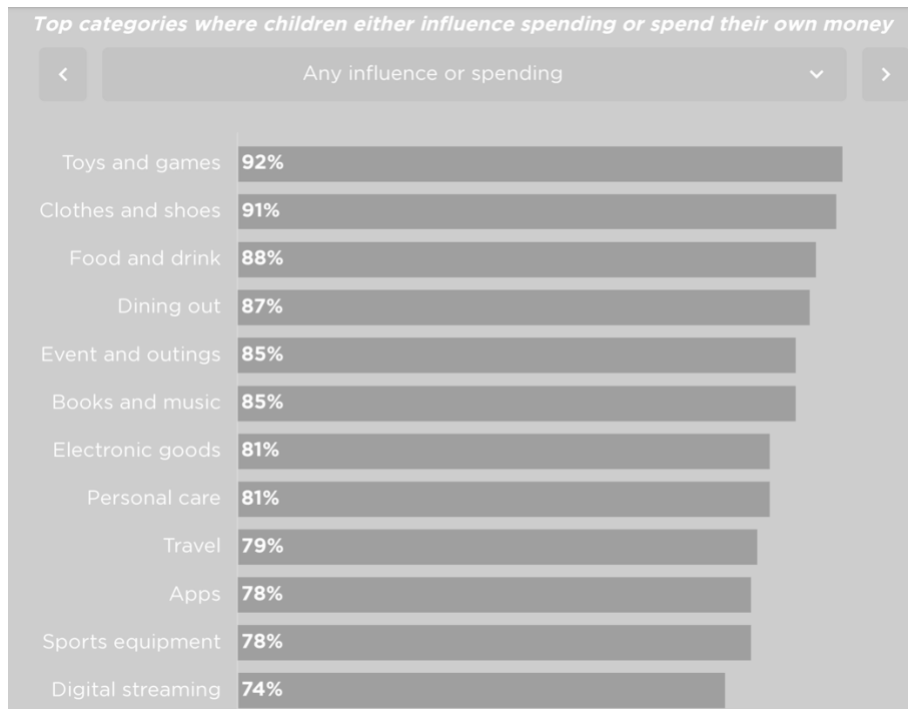
Source: National Retail Foundation, 2019.

From the above figure 3.9, we can derive the impact of Gen Z on a household's personal care choices as well, almost as high as 81%. Suppose such is the case with the shifts in consumerism and sectoral dynamics of service and retail. In that case, the influence of generation Z will be stronger in times to come, which we will see below as part of the post-COVID-19 buying scene, addressed in the sections below.

3.4.2.1 Retail-Oriented Behaviours

Since late 2015, the retail sector has transformed into a progressively online retail experience than an in-store retail experience (Rigby, 2011; Twitte, 2017; Whittington, Hease, Garmon-Jones & Garfield, 2018) owing to the millennial population's buying behaviour (Ali, 2020; Ross, 2019). According to a 2019 survey conducted by Digital Commerce Research, "millennials make 36% of their total purchases using mobile devices, up 20 percentage points from 2017. Plus, 64% of the millennial online shoppers make half or more of their online purchases from Amazon.com Inc" (Digital Commerce Research, 2019, para 1).

However, increasingly due to the era of cognitive information overload along with information breaches, GDPR and online purchase frauds (Murray, 2020) and having been

overwhelmed by content marketing on various devices (WGU, 2019), further research indicates that Generation Z believes in visiting stores (Morningconsult, 2020). Statistical data suggests from the Generation Z cohort, "80% look forward to shopping in stores when they have time, 75% prefer to do as much online shopping as possible, 67% use their phones in-store to research purchases they are buying, 65% don't like to buy new things unless they can touch them" (Criteo, 2018, p. 14). Furthermore, as a result of living in the age of constant information, 71% seem to enjoy shopping in-store to understand styles and trends (also viewed as a way by which they can experience an outing) whilst 80% prefer to try new retail stores for a similar reason (Antevenio, 2019; Criteo, 2018). Here below, figure 3.10 elucidates what factors affect retail store visits in generation Z.

Figure 3.10 represents the factors indicated by Generation Z in 2018 as affecting their in-store visits.
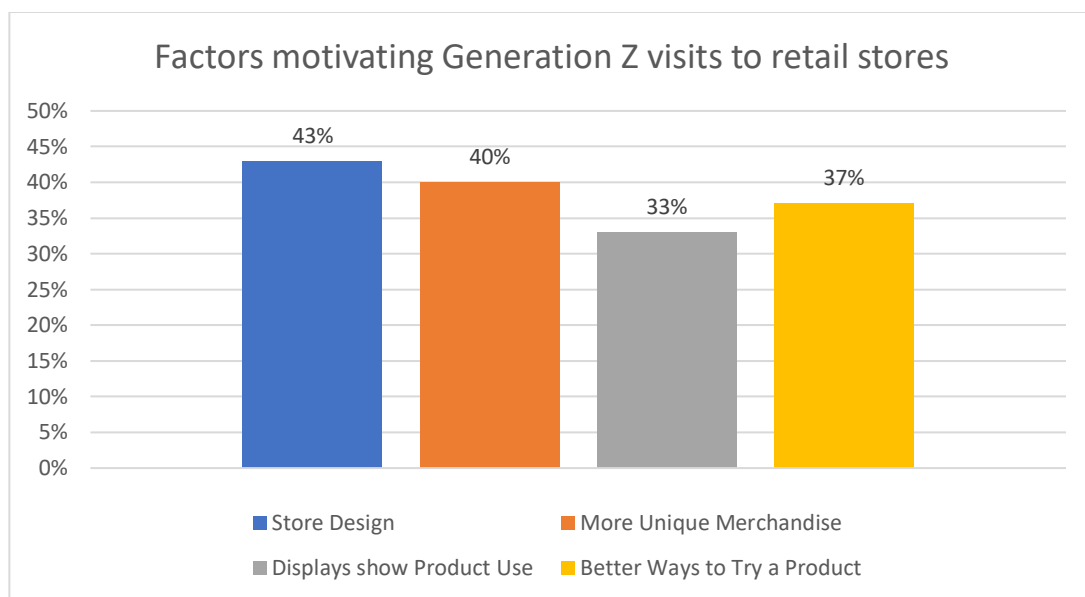
Source: Criteo, 2018; modified by the present author.

Retail was getting increasingly omnichannel in its functioning (Deloitte, 2017; Piotrowicz & Cuthbertson, 2014; Wallace, 2018) up until 2018 and early 2019. Withal, due to the rapidly growing technology age, retail companies are finding it difficult to maintain an omnichannel presence fostering a disparity between channels (Murray, 2020). Increasingly what is sought after especially by this cohort – the iGeneration is 'harmonised retail,' i.e., addressing customer touch points at the right time and with the right engagement strategy in terms of

information processing understanding, culminating in a brick-and-mortar customer experience (Antevenio, 2019; Dennis & Murray, 2020, 2019; Pollicott, 2019). To explicate this insight further, below figure 3.11 provides information.

Figure 3.11 demonstrates the shopping behaviour of generation Z consumers.
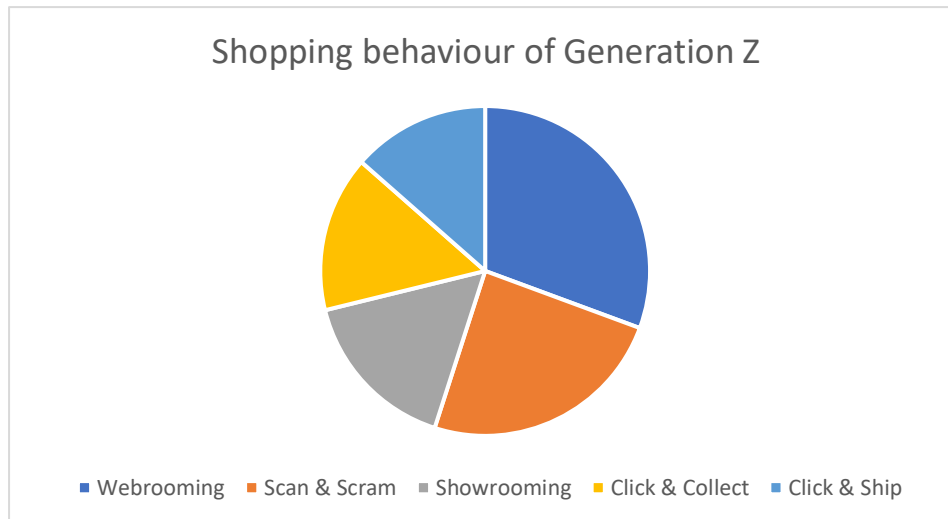
Source: Criteo, 2018; modified by the resent author.

In the above figure 3.11, Webrooming (34%) refers to the behaviour of researching online and buying in-store, Scan and Scram (27%) refers to seeing in-store and buying in-store from another retailer online, Showrooming (18%) refers to seeing it in-store and buying it online, Click and Collect (17%) refers to buy online but collect it in-store or at a kiosk and finally, Click and Ship (15%) refers to see in-store and buy in-store on retailers' app or website. These behaviours indicate a growing notion voiced by Generation Z in multiple recent surveys wherein 38% of Generation Z individuals feel they are unable to find what they need online – purpose-based purchasing (Antevenio, 2019; Criteo, 2018) and 35% of the individuals are uncomfortable with online purchases (Bayindir & Kavanagh, 2019; Criteo, 2018). Moreover, according to Murray, "40% of Gen Z adults have requested deletion of their data from retailer sites" (Murray, 2020, para 6). Figure 3.12 explicitly indicates the influence of specific incentives on data sharing by various generations.

Figure 3.12 below indicates the value ascribed by generations Z to Boomers to incentives of sharing personal data with retailers.

Would any of the following incentivize you to share your personal data with a retailer? [Select all that apply]
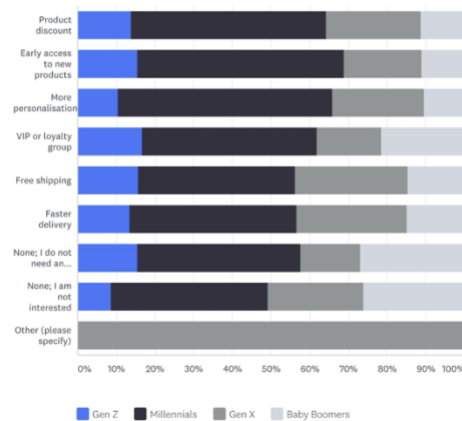
Source: Wallace, 2018.

From the above figure 3.12, we can say that there is consistently an apprehension that can be sensed among new generation Z on account of all the mentioned incentives. Moreover, "no, I do not need an incentive" can be seen to be very close to the other highest incentive among generation Z ", VIP/Loyalty group" and "early access to new products". This insight can highlight various considerations that generation Z partakes in, which affect their online retail behaviour. Foremost, incentives are not seen as much of a criterion; product and experience are before anything. Secondly, as can be seen, all of the incentives in comparison to other generations are low, re-affirms the understanding obtained previously as part of critically reviewed literature that the new generation Z, look for the following: -

1) Authenticity - Brands must be accurate, genuine, and humanised, even when tech-driven consumers stimulate a digital environment.

2) Reflexive Consumerism and Physical Stores – When shopping with a purpose, experiential retail experience is preferred.

3.4.2.2 Services-Oriented Behaviours

As retail is getting more service/convenience-oriented (Howland, 2020), the services sector is forced to focus more on becoming a good brand (in the retail sense of the word) with brands like Airbnb, Uber etc., developing their presence (Yacoby, 2020). This blurring of demarcations owing to new generation populations' overlapping expectations (O'Brien et al., 2020) has forced the services marketing sector to change more rapidly than retail due to its highly

customisable characteristics (Consultancy UK, 2018). Digitisation and increasing competition for customisation of services, although opportunities for service providers are disrupting specific industries heavily (CB Insights, 2019).

According to Yacoby, "Usually, services are purchased based on the perceived value they'll provide" (Yacoby, 2020, para 1). A recent study on Generation Z's perspective on services availed by the IBM Institute of Business Value and the National Retail Federation (NRF) of consumers aged 13 to 21 found that needs of this segment are explicit and particularly self-driven and pertinent to them completely (Commbox, 2020; National Retail Federation, 2019). In line with availing a service, in a recent survey by Khoros, "60% of Generation Z consumers report they are more likely than average consumers to hang up if their call isn't answered in under 45 seconds" (Netzer, 2019, para 4). This insight could be attributed to the shorter attention spans of this cohort (Arya, 2019). Furthermore, reports also indicate that 62% of Generation Z like everything personalised regarding services, including ads (Bisaria, 2019; Criteo, 2018).

Furthermore, according to Commbox, "Their perception of how they see service is unlike that of any other generation, and they expect their experience to be seamless and without friction or frustrations. This expectation extends right through from the buying cycle, all the way through to their overall customer experience" (Commbox, 2020, para 14). Furthermore, due to being adept both online and offline (McKinsey, 2018), this cohort is observed to be more demanding of the services sector than past generations and hopes to have the option to engage with providers whenever and via any medium (Commbox, 2020). This new generation further needs two main things: responsiveness and self-service (Commbox, 2020; Janefalkar, 2019; Netzer, 2019). Moreover, as a cohort with a multitude of options, failure to meet their demands could result in 'no further engagement' and 'poor online reviews' as they hold high expectations and lesser degrees of brand loyalty and value experience over everything (Commbox, 2020; Criteo, 2018; Schlossberg, 2016).

Additionally, a recent 2020 Deloitte report on Global Marketing Trends indicates the following as key to addressing the needs of consumers of the new generation Z. They are summarised in Table 3.1 below and supported by figures representing the indicators in the table.

Table 3.1 represents the trends of needs of generation Z from service providers.

Authenticity	Perennial Innovation	Cautious use of personal data
Purpose	Connected Technology	Transparency and Explainability
Consumer Participation	Connecting on a human level	Relevant personal services
Embodying human values	Fusion – diversifying offerings	Acting in Real-Time

Source: Deloitte Insights, 2020; designed and modified by the present author.

Although the needs stated above indicate what this generation is looking for from service providers, some of these afore-mentioned needs can be broken down into different elements as these are mainly conceptual values. Furthermore, other notions have been detailed as part of the 'retail-oriented behaviour' and 'online behaviours' of this cohort, given the blurring between sectors due to overlapping expectations and technological advancement (Howells, 2018) is understandable.

Figure 3.13 depicts the various considerations of purpose entailing authenticity Generation Z consumers look for.

Top issues consumers identify with while making decisions about brands
Percentage of respondents

28% — How the company treats its own people/employees

20% — How the company treats the environment

19% — How the company supports the communities in which it operates
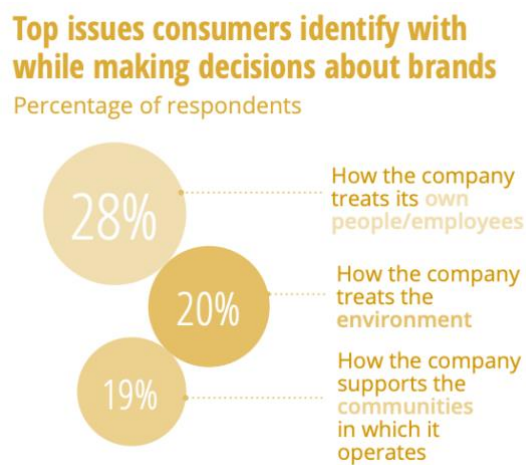
Source: Deloitte Insights, 2020.

Figure 3.14 presents the human values that consumers from Generation Z believe a service provider should entail.

Source: Deloitte Insights, 2020.

Figure 3.15 represents the need for cautious use of personal data as an exceptional value among Generation Z.

Source: Deloitte Insights, 2020.

All the above data and literature indicate that consumers from the Generation Z cohort require authenticity, purpose and innovation. These factors were also seen as important influencers in the retail-oriented behaviours cited above (Antevenio, 2019).

3.4.3 Healthcare-Oriented Behaviours

Healthcare as a sector has also seen a dynamic shift with increased participation of consumers towards supervising their well-being (Anderson, Rayburn & Sierra, 2019; Danaher & Gallan, 2016; Osei-Frimpong, Wilson & Lemke, 2017; Walters, 2019). Research indicates that buyers are also expanding their utilisation of computerised applications, wearables and other

innovations that empower them to play a more hands-on role in their treatment (Bantau & Rayburn, 2016; Phaneuf, 2020). According to a 2020 study by Alicia Phaneuf, "Piloted by the increasing demand of consumers to monitor their health, use of wearable technology has more than tripled in the last four years." (Phaneuf, 2020, para 1). Further reports indicate that Generation Z is less likely to have a primary care doctor. However, virtual care and walk-in clinics are on the rise in use by this cohort (Lovett, 2019). Furthermore, the literature indicates, as per a 2019 report by Les Mills, that Gen Z represented 38% of gym membership sign-ups in 2018. As the most dynamic participative cohort, 87% of Gen Z mentioned working out at least three times weekly (Les Mills, 2019). A study from UNiDAYS indicates that 43% of Gen Z respondents work out at home, 65% utilising wellness applications, and 28% rely upon wearable innovation to follow exercise regimes (Vennare, 2019).

Moreover, a 2019 report by Accenture on Digital Health adoption by Millennials and Generation Z indicates, "67% of millennials and 55% of Gen Zers reported having a PCP (Primary Care Physician) — that is compared to 84% of the Baby Boomers and 76% of Gen Xers. However, 47% of customers of Generation Z have used a walk-in or retail clinic, and nearly 30% of responders said they used some form of virtual care" (Safavi, 2019, para 10-11). Further reports suggest that increasingly consumers are looking for digitally savvy providers (Lovett, 2019; Wharton, 2020). Around 70% of patients in a 2019 survey reported preferring email reminders or text about preventative or follow-up care —an increase from 57% of the then population (generation) in 2016 (Lovett, 2019). Transparency above all else matters when it comes to healthcare providers, as the generation Z consumers read well and are highly informed due to online healthcare information availability before they even are at a healthcare institution (Allen, 2020; Lovett, 2019; McKinsey, 2018; Safavi, 2019; World Economic Forum, 2020).

3.4.3.1 Pre-COVID-19 Behaviours
Significant events affect behaviours (Piaget, 1936); these behaviours are then said to affect sectors and consumption patterns as they manifest. Whilst the above is an overall indication of the implications of the digital revolution within healthcare (Wharton, 2020), due to the increased scepticism among generation Z, before the recent pandemic, Generation Z consumers were sceptical of and dissatisfied with current healthcare institutions (Park, 2020),

which prompted a steady shift towards alternative medicine (McKenna, 2019; Safavi, 2019). McKenna (2019) suggests in a detailed report on this study's cohort that consumers' satisfaction depends on convenience and transparency. Below, figure 3.16 represents the value given to each factor in a healthcare survey by Accenture.

Figure 3.16 represents the essential values and percentages for Gen Z consumers regarding healthcare services.
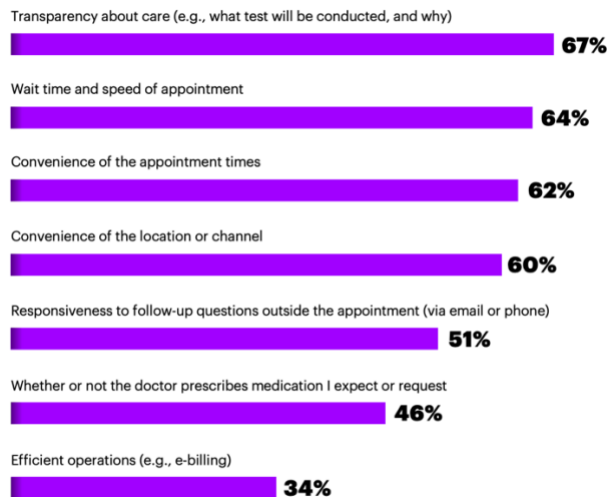
Source: McKenna, 2019.

From the above figure, we can infer the importance of transparency at 67% and time frame at 64% as vital factors affecting healthcare provider choice. These insights in the figure above, when tied in with the previous literature, about the generation Z consumers, enable us to understand the implications of 'being an informed consumer' (Antevenio, 2019; Robbins, 2019; Sinhasane, 2019) due to the high proliferation of information.

The behavioural implications of the dissatisfaction of current mainstream healthcare status quo by new generation Z can be further understood by understanding the consumer satisfaction levels across traditional and alternate treatments below.

Figure 3.17 represents the importance of the values across traditional and alternate/non-traditional care.

Source: McKenna, 2019.

In light of a comparison of non-traditional healthcare services with traditional services, about half of patients are "very satisfied" or "extremely satisfied" with the level of effectiveness, convenience and transparency of those services (McKenna, 2019). Further research also suggests that due to the DIY (Do-It-Yourself) attitude among generation Z consumers (Arnold, 2018), non-traditional care is making fast progress as a highly viable option (Safavi, 2019). Halton (2020) suggests that generation Z believes in focusing on prevention and holistic health along with a conscious move toward patient-centric care. According to Halton, "Gen Z attitudes toward doctor relationships are different from previous generations who likely encountered more healthcare issues, such as the baby boomers. That generation is accustomed to a different type of patient-doctor relationship—a long-standing one, where the doctor is the source of all knowledge and their diagnosis is definitive. Younger generations have more awareness of holistic wellness and not just their acute medical condition. They know how medicine and care interplay with nutrition, fitness, sleep and stress management" (Halton, 2020, para 8).

Recent studies by Vennare (2019) and Halton (2020) demonstrated that doctors are generally searched out for physical medical issues; however now there are additionally wellbeing mentors, coaches and self-monitoring solution providers—which can all be associated with the growth of mHealth (Healthcare and wellbeing apps) by this cohort. From Fitbit to various

tracking and real-time stats providers to genome administrations like 23andMe, which uncover potential hereditary vulnerabilities, Gen Z has the means to assume control over preventive consideration (Halton, 2020; Phaneuf, 2020; Vennare, 2019). These thought processes are aptly depicted in Figures 3.18 and 3.19 below.

Figure 3.18 represents the percentage of Gen Z consumers who have used or would consider using non-traditional treatments.
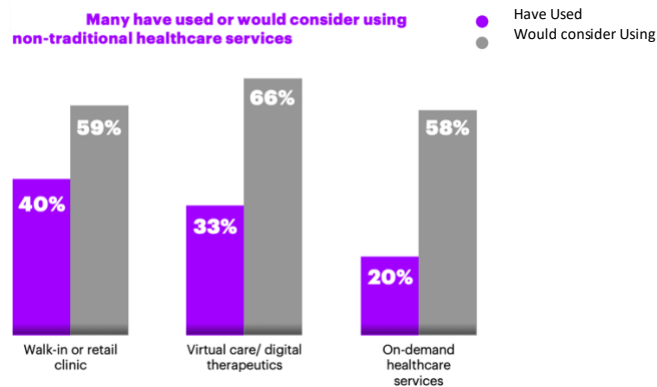
Source: McKenna, 2019.

Drawing on the above figure 3.18, 33% of respondents state they have utilised some type of virtual consideration and 66% state they would think about using virtual consideration/advanced therapeutics. Brick and mortar/retail facilities are well known, with 40% of customers using them and 59% saying they would think about using them. The more significant part (58%) would consider using on-request treatments. This sort of a trend is said to increase further with time and technological advancement (Claveria, 2019; Gaur, Sobhani & Saxon, 2019; Hogan, Laughlin, Reynolds & Trenkle, 2019; Safavi, 2019; Spitzer, 2018; Stanek, 2019; Trends Healthcare, 2019; Young, 2019; Walters, 2019). Further research also defines the areas within healthcare wherein generation Z consumers are currently opting for non-traditional modes of treatment (Abbott, 2020; Ripton, 2019; McKenna, 2019; Vennare, 2019).

Figure 3.19 depicts Gen Z consumers' choice of non-traditional and traditional treatment options depending on the illness.

For certain services or ailments, consumers are also seeking out non-traditional

● Non-traditional
● Traditional

60% / 47% — Cold/virus treatment

56% / 55% — Physical injury

53% / 59% — Minor surgery (e.g., tonsillectomy, biopsy)

48% / 62% — Routine therapy/ mental health

50% / 59% — Sexually transmitted disease (STD) screenings and treatment

47% / 61% — Major surgery (e.g., appendectomy)
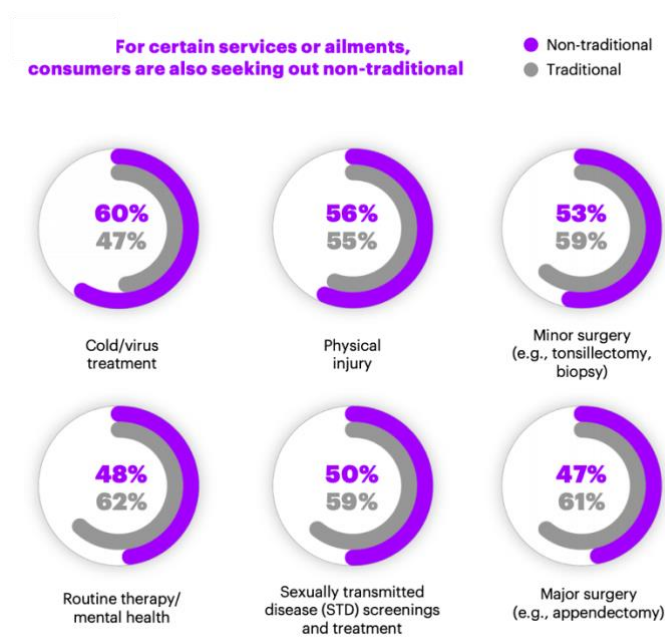
Source: McKenna, 2019.

From the above figure 3.19, buyers would choose non-traditional treatments for cold/infection treatment (60% versus 47% choosing traditional medicine) when there is a choice. Preference for non-traditional treatments stays high over a few different ailments, including physical injury (56%), STD screenings and treatment (50%), and even minor medical procedures (53%) and significant medical procedures to be undertaken (47%) (McKenna, 2019). The reasons for such a behavioural insight could be tied to previously critiqued and reviewed literature. That is to say, (i) need for authenticity – owing to prevalent scepticism toward traditional healthcare, (ii) DIY approach and wanting to be more hands-on and involved regarding their health and (iii) Access to personalised real-time information within various sectors via mobile and web-apps (Abbott, 2020; Business Insider Intelligence, 2020; Halton, 2020; Park,2020; Ripton, 2019; Vennare, 2019).

Regarding virtual care, Gen Z consumers are seen to decide based on the complexity of their health – more prefer virtual care if it's an everyday or chronic illness as opposed to a one-time occurrence. Figure 3.20 elucidates this further.

Figure 3.20 represents the notion of choice of virtual care among Generation Z consumers.

**Consumers with complex needs seek out virtual care more often than others**

● I have major health issues that affect my daily life
● All others (I have some health issues, few health issues or only minor, routine health issues)

21% 11%
Acute mental health treatment

21% 13%
Physical injury such as sprained ankle, backaches, etc.

22% 12%
Sexually transmitted disease (STD) screenings and treatment

25% 15%
Reproductive health (e.g., birth control exams)

20% 13%
Dermatology

20% 9%
Routine cancer screenings

Source: McKenna, 2019.

Given that this cohort of consumers is more self-reliant, independent and self-contained in their thinking and actions (Young, 2019), such a trend of wanting easy maintenance of their health statistics owing to chronic conditions is seen to be an understandable by-product (Ripton, 2019; Walters, 2019). Furthermore, the trends of quick and easy access to online healthcare information (Arnold, 2018; Cancer Research UK, 2018; Koeppel, 2014; Meyers, 2017; Patel, 2017) posits generation Z to be more informed about health and prevention (Ripton, 2019). Considering digital research as a task before arriving at any decision (Antevenio, 2019), healthcare marketing and its orientation toward consumers is in a higher evolutionary state (McKenna, 2019; Wharton, 2020) with the influx of various media for communication. Therefore, understanding influential factors affecting 'problem recognition' in the consumer decision-making process in the new generation of consumers is vital for healthcare marketing. In light of this, figure 3.21 below provides a clearer understanding of what factors would appeal to Generation Z as a motivation to visit retail clinics and stores.

Figure 3.21 represents certain criteria of generation Z consumers for retail stores/clinics.

If given the choice, consumers would consider retail/walk-in/urgent care clinics if they offered:

Shorter wait times — **42%**

More convenience — **41%**

Greater trust in the quality of the service — **36%**

Integration with my current healthcare providers — **35%**

A better understanding of the service offering — **34%**

Easier user interface — **26%**

Ability to form a relationship with a provider over an app or the phone — **25%**
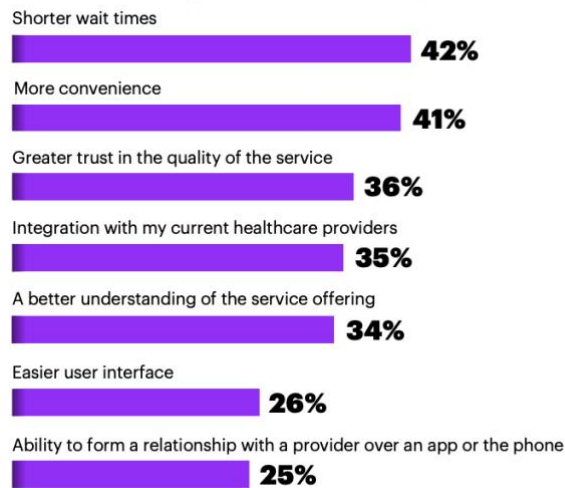
Source: McKenna, 2019.

From previously cited literature, we can extract that all these criteria stem from an underlining base of rapid technological advancement, cognitive information overload, fast-paced existence, self-reliance and meaning-making, and high levels of need for cognition.

3.4.3.2 Post COVID-19 Behaviours

Whilst it may be still too early to assess post-COVID-19 behaviours, the behaviours of every generation are being tested by the advent of COVID-19 across sectors, with boomers to Gen X and Y struggling to adapt and come to terms with the change in working styles and interactions. However, a recent report by Jones (2020) suggests that the new generation Z was born for times like this. According to the IPSOS report, "Ipsos polling shows that Canadian's sense of urgency towards coronavirus, as well as their willingness to change their behaviours to combat it, is high. However, within the Canadian populous, one generation emerges from our data that has not shared in all of the struggles the rest of us have: Generation Z" (Jones, 2020, para 1). Although this study focused on Canada as a geographical location, generational cohort theory, as demonstrated earlier, suggests that people born in a similar timeframe have common attributes, convictions, perspectives and qualities that foster similar behavioural development (Inglehart, 1977; Kupperschmidt, 2000; Laufer & Bengston, 1974; Mannheim, 1922/1928; Toth-Kaszas 2018). Thus, we can say that the findings of this study will have generalizability.

161

Additionally, because this cohort is digital natives, everything was always online for them, as seen in the literature above, further; further statistical data suggests that generation Z show the lowest levels of concern for COVID-19 as well as the most inferior sense of "feeling disrupted" in their day to day lives (Jones, 2020). According to Jones, "Their behaviours are the same as before coronavirus; we project that they will remain constant after the lift of lockdowns. They were already in a state of lockdown, utilising apps for retail, food and services with minimal movement for consumption – even before the term social distancing" (Jones, 2020, para 10). Furthermore, having grown up with various social occurrences, they are not easily moved by another; they believe the future is online with better technology, authenticity and innovation (Jones, 2020). The three main factors highlighted above as needs among sectoral requirements of this generation.

In light of this, Coughlin (2020) suggests that whilst life events of this generation are disrupted, they have come better to terms with than previous generations due to availing services such as zoom before its penetration owing to the pandemic (Jones, 2020), consumption behaviours maintain the same levels of scepticism and quest for answers during availing of services and products 'what am I getting?', 'is it real?', 'is it true?', 'would it address my need?', 'is this what I truly need?', 'is it within budget?' (Coughlin, 2020). Viola and Wainwright (2020) further indicate that if not for any other effects, scepticism is seen to be on the rise among this cohort regarding information confronted due to rising "fake news" about the pandemic. This is sure to hurt information processing by this cohort, furthering prior indications in light of such issues (WGU, 2019). However, as a cohort, they believe the pandemic has increased the possibility of 'sustainability initiatives' by brands characterised by a welcoming attitude (Voila & Wainwright, 2020).

Additionally, recent reports on 'new normal' purchasing behaviours indicate that much like the behaviours of Generation Z the world over, the population's purchasing behaviour also aligns with this cohort's purchasing behaviours. For example, according to Emmanuel Probst, "Ipsos data shows consumers plan to keep ordering groceries and meals online after the COVID-19 crisis" (Probst, 2020, para 1). Furthermore, as of early 2019, data suggests that 83% of consumers were aware they could technically purchase online and pick it up at a store. However, most shoppers preferred to go to stores to see and touch products simply because

"they enjoyed browsing and getting out of the house. Many also believed buying online was risky, error-prone" (Probst, 2020, para 2). As a result of the COVID-19 pandemic and subsequent lockdown measures, consumers have increased their reliance on online modes of purchase resulting in "half of the adults trying a new technology since the beginning of the crisis, including 33% of those over 55 years old. Also, 10% used delivery/pick up from restaurants, and 9% ordered groceries online for the first time." (Probst, 2020, para 4).

Furthermore, according to the Ipsos Coronavirus Consumer Tracker, "78% of those who bought something new will continue to use this same brand/product. Also, 40% of participants report they will keep their new grocery shopping routine. Consumers are also bringing new brands into their routine as many of their favourite products are out of stock. Interestingly, 38% of consumers who have switched brands report they are likely to stay after the crisis ends" (Ipsos Coronavirus Consumer Tracker, 2020, para 9). Tying the above insights on overall consumer behaviour with the added understanding of how Generation Z drive household consumption preferences (cited earlier), we can deduce the following: -
1) Consumerism, in general, is moving to one which is driven by the beliefs of generation Z. That is to say, attributes like authenticity, easy accessibility (across multiple platforms), real-time data and actions of sustainability (Page, 2020). For example, Dennehy, Van Beem and Zumsen (2020) illustrate that consumers have voiced, and data indicates that 'what a company does is more important than what is being conveyed as being done.' One example was seen in a US case study of the restaurant chain Chipotle. According to Dennehy, Van Beem and Zumsen, "Chipotle issued statements in mid-March about its commitment to health and safety. Soon after, it launched virtual lunchtime hangouts featuring celebrity guests and giveaways and announced a partnership with Uber Eats to expand its delivery footprint, temporarily waiving delivery fees for orders over $10. Positive social media posts remained steady after these messages, remaining at roughly the same level as before the pandemic. That changed on April 1, when Chipotle announced it was offering free food for medical workers to give away up to 100,000 burritos to employees at healthcare facilities during World Health Worker Week. Positive posts spiked on social media initiated by generation Z before returning to a higher-than-normal baseline level" (Dennehy, Van Beem & Zumsen, 2020, para 4). Figure 3.22 below illustrates this approach to consumers need for authenticity further.

Figure 3.22 represents the social media response to Chipotle's initiatives.

Social media chatter surrounding Chipotle's coronavirus-related messages
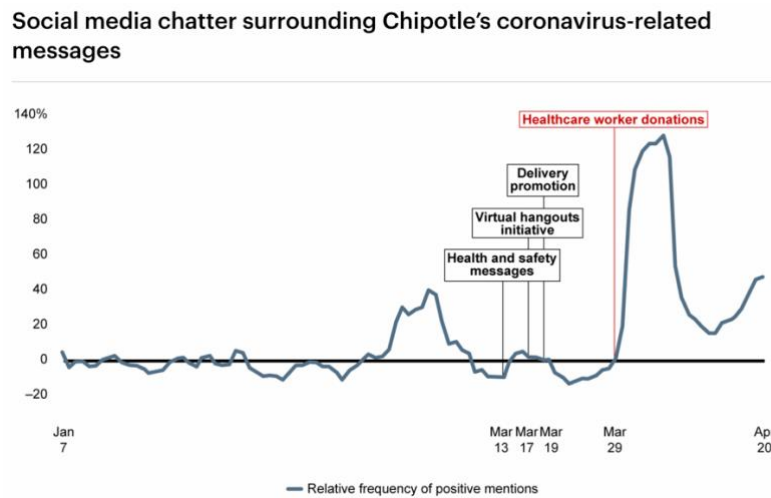
Source: Dennehy, Van Beem & Zumsen, 2020.

2) Additionally, brand loyalty, as fluid as it is among generation Z (reviewed earlier), even pre-COVID-19, has seen to increase and is being replicated by other generations currently (Mercurio, 2020; Page, 2020).

3) Finally, we can further understand why generation Z has reported having been less disrupted and concerned about their purchases during the pandemic. That is to say, due to lesser brand loyalty and more prudence (conducting their research before purchasing), their purchasing style hasn't changed but has enhanced decisions in times of uncertainty. Figure 3.23 below indicates trends in brand values among the global population. As inferred, they align with generation Z sentiments as indicators of the future consumer landscape.

Figure 3.23 depicts a global map of brand value clusters.
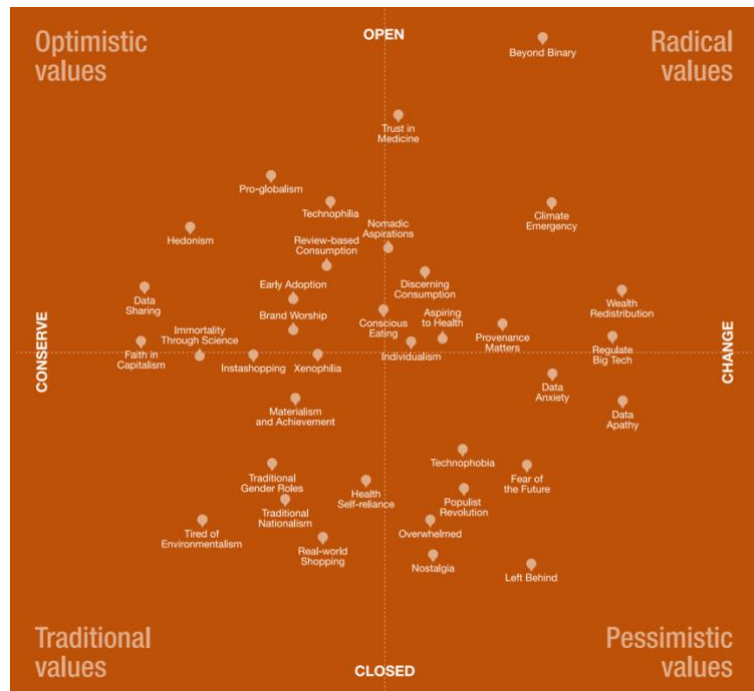
Source: Page, 2020.

From the quadrants, we can observe that the mapping uncovers significant clusters of worldwide qualities. For instance, negativity about the future, doubt about innovation and sentimentality are firmly lined up with the populist upheaval esteem. Interestingly, having a solid direction in materialism and career (realism and accomplishment) connects to more grounded affiliations with brands, enthusiasm for small items and shopping through cell phones (Page, 2020). Furthermore, it also shows the polarising worldwide qualities by separating the qualities mapped farthest from the focal point of the graph. For example, the two sides of the 'climate change' discussion remain solitary in inverse corners. We see a comparative gap between the individuals who need more self-supervision around their wellbeing and those who keep adhering to professional medical advice. Furthermore, 'beyond binary' (a worth which regards inclusivity for all) is featured as one of the critical territories of social discussion for the coming decade (Page, 2020; Wearesocial, 2020). These insights further elucidate how the values of the iGeneration are predominantly shaping global value trends even cross-generationally and will do so more in times to come.

3.5 Cognitive Abilities in Generation Z Due to Growing Up in the Digital Age

The above-reviewed behaviours of Generation Z have far-reaching cognitive underpinnings. Recent studies further indicate that behaviour is a manifestation of complex underpinnings highlighting the dynamics of the individuals - their perception, appraisal, and expression of emotion, their thinking and problem-solving intents, skills and creativity, the context and knowledge comprehended, and their abilities towards emotion regulation (Baumeister et al., 2007, 2010; Li, Baucom & Georgiou, 2020). Furthermore, behaviour is remarked to be the result of data and cues, including, however, not constrained to (i) overt and covert multimodal signals ("articulations"); and (ii) processed resources ("experience" and "judgment") (Baumeister et al., 2010; Narayanan & Georgiou, 2013).

In light of this, research by Asada et al. (2009) aimed to suggest a new understanding of how an individual's higher cognitive functions develop using a synthetic approach that develops cognitive functions. The literature indicates an innovative way to bridge the gap would be 'physical embodiment'. Kuniyoshi has defined physical embodiment in humans as a mechanism wherein "the agent's physical body specifies the constraints on the interaction between the agent and its environment that generate the rich contents of its process or consequences. It also gives the meaningful structure to the interaction with the environment. It is the physical infrastructure to form the cognition and action" (Kuniyoshi et al., 2007, p. 430). Literature demonstrates that the critical notion of "a physical embodiment" is rooted in the context of human development. At the time of birth and subsequent events (foetus, infant, newborn child, etc.), collaborations with different physical situations have a significant role in deciding 'information processing' inside the individual (Asada et al., 2009). For example, "bodily representations, motor imaging, and object permanency" (Asada et al., 2009, p. 12).

At the later stage, as the individual grows and communications turn to social practices and behaviours, for example, correspondences, joint consideration/shared notions, impersonation of different activities including vocalisation, sympathy, and verbal correspondence continuously rise and re-form cognitive understandings due to interactions with other individuals. Irrespective of the maturity level of the individual, the commonality of these mental procedures is a kind of "scaffolding" with the environment, including different

individuals that triggers the sensorimotor mapping and advances the individuals' self-belief, autonomy, flexibility, and social capacities, explicitly and implicitly (Asada et al., 2009). From the above literature insights, we are directed to explore how growing up in the digital age has moulded higher cognitive abilities and self-reliance among generation Z, guiding consumer behaviours. Given this, Mills (2015) noted that the effects of increased use of technology ought to be studied well into the twenties of a cohort as they highly affect the processing speed of information, as well as the fact that cognitive development is characterised as a period from infancy to late twenties (Luna, Marek, Larsen, Tervo-Clemmens, & Chahal, 2015; Mills, 2015).

Literature from studies indicates that technology fosters an often-overlooked component of the digital era's inherent multi-tasking approach (Mills, 2015). The 2015 Common Sense Census report recognises that computerised media use (incorporating Internet use) can happen simultaneously with different activities. For example, physical action, household chores, talking, watching TV or commuting (Common Sense Media, 2015). This insight further explains the above-cited literature on Generation Z consumers as a cohort adept in parallel processing of information (Mediakix, 2018). From a cognitive ability development perspective, we ought to understand what comprises cognitive ability. Cognitive abilities stem from individual cognitive skills in an individual. Cognitive skills are "the ways a human brain remembers, reasons, holds attention, thinks, reads and learns" (Indeed, 2019, para 1). Cognitive skills are subsequently broken down into nine categories, each determining a specific function of how the brain shall process information. The categories are: (i) sustained attention – which helps you focus on one task for a longer time, (ii) selective attention – which allows you to focus on a single task even where there are distractions; and (iii) divided attention – helps retain information whilst completing multiple tasks, (iv) long-term memory – allows recalling memories of the past, (v) working memory – helps to retain information currently being used to perform a task, (vi) logic and reasoning – problem-solving capacity and idea generation, (vii) auditory processing – information sense through ears are processed by analysing, blending and segmenting, (viii) visual processing – helps in interpreting images and (ix) processing speed – the speed at which assimilation and decisiveness take place (Indeed, 2019).

Albeit these functions comprise the cognitive functioning of individuals, the variance of and surge in the use of technology has altered the way individuals perform these tasks/skills (Stenger, 2019). Increasingly research suggests that individuals could also be referred to as "cognitive off loaders," i.e., "we no longer memorise important information. Instead, we tend to remember the location where we can retrieve the information when it is next required" (Mathews, 2016, para 2). As per the 2016 report on the then emerging population, "A closely related concern is that our brains are becoming accustomed to a constant overload of visual information, including text, graphics, videos and other digital stimuli. Our brains are learning to scan information and pick out what appears important whilst disregarding the rest. Rather than reading articles deeply, we narrow in on snippets of detail and form key takeaways" (Mathews, 2016, para 3). This insight has progressively taken shape among generation Z, as cited in previous literature (Khan Academy, 2020; Posner, 2020). In light of this, additional research conducted by Gary Small and colleagues illustrates that, in contrast to reading texts, internet searching "increased activation in several regions of the brain, but only amongst those participants with prior internet experience" (depicted in figure 3.24).

Figure 3.24 representing brain region activation whilst using the web.

Group with prior net experience – Net Savvy
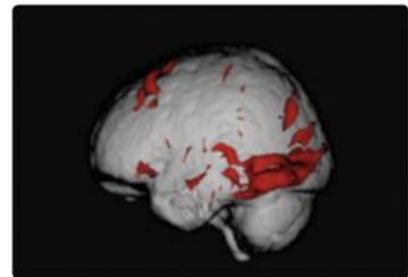
Group without prior net experience – Net Naive
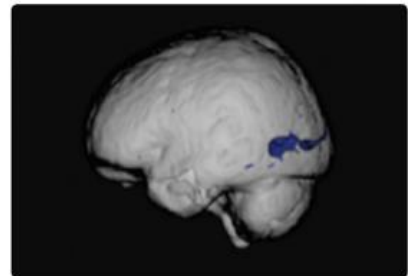
Regions of brain that were activated more by internet searching than reading for individuals a) without prior internet experience and b) with prior internet experience (with additional activity in regions associated with decision making and complex reasoning). These individuals may have learnt to use the internet, and so were more involved with mental processes involving, for example, search strategies.

Source: (Small, Moody, Siddharth & Bookheimer, 2009)

Based on the regions involved, the literature suggests that "internet searching alters the brain's responsiveness in neural circuits controlling decision making and complex reasoning (in frontal regions, anterior cingulate and hippocampus)" (Small et al., 2009, p. 120). The findings of this study highlight a critical decision-making defining factor as per previous literature reviewed (see chapter 2) of the anterior cingulate cortex. Furthermore, how that specific cortex affects and regulates the influx of information overrides tasks to focus on the pertinent action to be undertaken (Stevens et al., 2011). Thus, if excessive information searched whilst 'understanding internet experience,' i.e., being tech savvy, due to prior

experience, increases activation of the anterior cingulate cortex (as per the research study findings), then it further evidences how a cognitive element (in the study context – latent need) enforces a situation of guiding the consumer decision-making process from the beginning. To further elaborate on this critical scenario, we will analyse and extract concepts from figure 3.24 and the study's resulting literature.

Literature indicates that according to the research, the 'Net Savvy' cohort exhibited critical MR signal action during the internet search task, marked by significant "activation in the frontal pole, right anterior temporal cortex, the anterior and posterior cingulate, and the right and left hippocampus" (Small et al., 2009, p. 123). However, what is important to note is that in the immediate examination of the 'internet versus reading' perusing undertakings for the 'Net Naive' and 'Net Savvy' cohorts; Net Savvy participants exhibited more than a twofold more prominent spatial degree of enactment than did the Net Naive gathering (21,782 versus 8,646 all out actuated voxels – figure 3.25 below). That is to say, according to Gary Small and colleagues, "People with prior internet and computer experience demonstrated the much greater extent of MR signal activity, particularly in brain regions controlling complex reasoning and decision making" (Small et al., 2009, p. 120).

Figure 3.25 represents spatial degree enactment in 'Net Naïve' and 'Net Savvy' individuals.

Brain Activation During Internet Searching

Clusters of Activation[a]					
Book Task					
Savvy			Naïve		
Cluster Index	Cluster Size, Voxels	p	Cluster Index	Cluster Size, Voxels	p
5	5,282	<0.0001	7	2,750	<0.0001
4	2,734	<0.0001	6	1,660	<0.0001
3	421	<0.01	5	1,017	<0.0001
2	1,037	<0.0001	4	610	<0.001
1	528	<0.01	3	430	<0.01
			2	368	<0.01
			1	284	<0.05
Total activated voxels	10,002		Total activated voxels	7,119	
Internet Task					
5	19,845	0	5	2,750	<0.0001
4	636	<0.001	4	1,289	<0.0001
3	474	<0.01	3	985	<0.0001
2	427	<0.01	2	534	<0.01
1	400	<0.05	1	338	<0.05
Total activated voxels	21,782		Total activated voxels	8,646	

[a]Cluster Index refers to the numerical label assigned to each contiguous cluster of voxels exceeding a significance threshold $Z > 2.3$ and a (corrected) cluster significance threshold of $p = 0.05$.[25] p values are for the cluster sizes as a whole. All tests were t tests conducted within FSL ($df = 11$).

Source: Small, Moody, Siddharth & Bookheimer, 2009.

Thus, if the functioning of the 'anterior cingulate cortex' increases due to the increased understanding of technology among individuals, then we can say that 'affect regulation' owing to cognitive dissonance aroused as a result of latent needs – i.e. overriding information and stimuli to stick to a task at hand to complete (Stevens, 2011), is bound to come into existence as derived as part of the critically reviewed literature (see chapter 2). This can be true in the filtering of content behaviour by this cohort in context generation Z (Antevenio, 2019; EnGarde, 2020; Mathews, 2016; MediaKix, 2018; Stenger, 2019). With an innate understanding of advanced technology, GDPR and Big Data, the prospect of higher functioning of the 'anterior cingulate cortex' and its 'affect regulation' will only be higher and more prominent in this cohort's interaction with information search. In such a scenario and with insights and derivations above, how does the iGeneration's neuronal activity networks (including behavioural neural networks) within the cohort's cognitive functioning manifest as a process of complex reasoning and decision-making?

3.5.1 Behavioural Neural Network in Cognitive Functioning

In light of the above understanding, research indicates that neural networks/systems are closely related to cognitive processes and behaviour, further enhancing cognitive and behavioural modelling (Richardson & Saxe, 2018). To further understand this, we must understand the nuances of behaviour and cognitive processes within a neural network. Therefore, figure 3.26 below gives a comprehensive understanding of the specificity of cognition and examples of component cognitive processes underlying various neural mechanisms.

Figure 3.26 represents behavioural, and neural processes underlying cognitive processes and mechanisms.
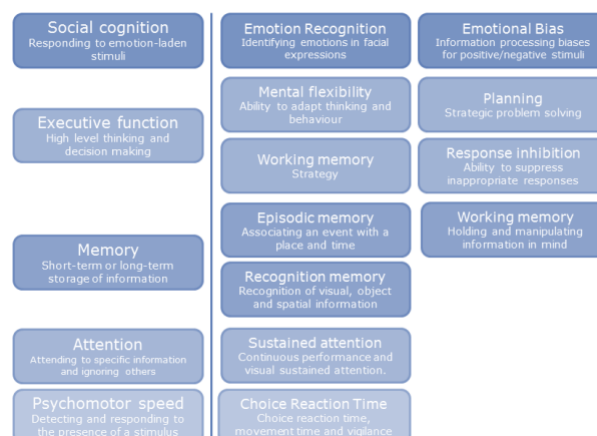
Source: Cambridge Cognition, 2015.

Whilst mapping each of these behavioural mechanisms to cortexes in the brain can be challenging due to the fluidity of neuroanatomy and workings of an individual's brain due to conditions of existence, cultural background and perception capabilities (Maddox & Nduka, 2018), individuals are known to develop their systems of cognitions underlining the procedures mentioned above that further characterise their actions and responses (Alloway & Elsworth, 2012; Salomone et al., 2018). In light of this, Franklin, Norman, Rangannath, Zacks and Gershman (2019) demonstrate that humans spontaneously organise continuous experiences confronted into discrete events and use the learned structure of these events to generalise and organise memory. Recent literature in the cognitive sciences field further indicates that emotions are the key factor affecting cognitive approaches (Dolcos et al., 2020), and their perception can lead to understanding progressive cognitive functioning. Therefore, to explicitly uncover cognitive functioning in the new generation Z, considering their increasing reliance on inner cues (emotions and making meaning), the emotional aspect within figure 3.25 above will be broken down further into the below sections emphasising the emotional implications on cognition.

3.5.1.1 Maturity and Risk-Aversive Tendencies

An individual's age and growth circumstances affect emotional cues and adherence to them. Research indicates that whilst growing up, impressions and emotional distractions may play a vital role in forming the basis of cognitive processes. However, the capacity to oppose obstruction from interfering with emotional information while continuing to follow through on a task is vital for adaptive behaviour (Dolcos et al., 2020). A linear decline in impedance from emotional distracters from youth into adulthood has been recorded by specific examinations (Somerville et al., 2011; Tottenham et al., 2011). For example, Tottenham et al. (2011) analysed the progressive conflict of emotional interference by cues of kids (5–12 years of age), young people (13–18 years of age), and grown-ups (19–28 years of age) utilising "block design structure", "Go/No-Go task", and indicated that task performance follows through on goal-directed behaviour increased with age (Dolcos et al., 2020; Tottenham et al., 2011).

Further research indicates that growing up/ageing is connected with significant levels of emotional quotient and understanding. Research suggests the possibility of an age-related inspirational impact on emotional attention, recognition, and memory, by which more younger adults and those having grown with uncertainty (a) give more prominent consideration to, process, and recall increasingly positive data, and (b) show decreased processing of negative information (Kanheman & Tversky, 1974, 2011; Mather, 2016; Reed & Carstensen, 2012). As per the Socioemotional Selectivity Theory (Reed & Carstensen, 2012), this inclination for positive over negative information is driven by an individual's prioritisation of focused goal-oriented objectives identified with emotional importance and satisfaction sought towards enhancing their well-being (Dolcos et al., 2020). Taking such insights into context, we can observe that goal-oriented tasks are not deterred by incoming emotional cues once decided. The follow-through is completed based on initial emotional lines and feelings (Dolcos et al., 2020).

That being said, if age as a factor affects the degree of influence of 'in-between an emotional task interference and attention to it', and the older a cohort, the more reserved and risk aversive they would be, then can we say that due to increasing reports indicating generation Z to be highly self-reliant/mature in understanding and with high EQs and a tendency towards risk aversiveness (Elmore, 2019; Lythcott-Haims, 2019; McKinsey, 2018) that such a goal-oriented approach based on initial inner cues and unperturbed by emotional interference will be undertaken by generation Z? Literature demonstrates so, yes, because the emotional underpinning explained above, in other words, is the cognitive mechanism of the anterior cingulate cortex' in effect as seen in previously reviewed literature above.

3.5.1.2 Neural Evolution in Humans and Heuristic Reliance Capacity

Further from a neuro-evolutionary perspective, the literature indicates that cognitive abilities and rationality have recently taken shape. They are presumably under 100 thousand years of age and may, in this way, be qualified as 'in its infancy' about the time period of advancement (Henshilwood & Marean, 2003; McBrearty & Brooks, 2000; Petraglia & Korisettar, 2003; Toet & Korteling, 2020). Moreover, advancement has not created new cognitive capacities, rather instead has built on previous capacities (Moravec, 1988). Hence, our intellectual abilities are

based on as well as from and with these intrinsic (neuro) natural guideline instruments of the past (Damasio, 1994). Accordingly, they are less in line with cognitive capacities that have gotten fundamental for 'enduring' and 'partaking' in our current present-day scenarios with their technological advancements (Toet & Korteling, 2020). From this point of view, according to Toet and Korteling (2020), "our cognitive apparatus and the many biases shown in modern cognitive tasks still reflect the very basic characteristics of our neuro- biological legacy" (Toet & Korteling, 2020, p. 34). For instance, further research indicates that to process this incoming information proficiently, the brain has various universal (innate) working components, for example, "associations and associative learning" (Bar, 2007; Shatz, 1992), "potentiation and facilitation" (Bao et al., 1997; Katz & Miledi, 1968), "saturation and lateral inhibition" (Isaacson & Scanziani, 2011; Korteling et al., 2018) constituting essential biological and neural capacities optimised during human evolution (Toet & Korteling, 2020).

Psychological frameworks of today, however, usually expect that predispositions result from the utilisation of improper psychological heuristics when managing time requirements, vulnerability, and decisions of multifaceted nature (Toet & Korteling, 2020). Research has been directed to understand the underlying rationale of heuristics and intuition. For instance, the self-affirmation bias might result from consistently searching proactively for contentions to protect our conclusions and convince others instead of searching for reality (Mercier & Sperber, 2011a, b). Be that as it may, these methods of reasoning frequently have a solid, specially appointed psyche. They are hard to accommodate with proof of their striking particularity and consistency over people and species (Toet & Korteling, 2020). In this way, much like neural procedures for perceptual capacities, associative neural circuits that coordinate the choice circumstance or decision setting may be built up after sufficient and broad processing and experiences within individuals (Marchant, 2015; Toet & Korteling, 2020). After such processing, these associations may legitimately bring the right decisions and choices into effect without the necessity for (effortful) consultation. Psychologists and neuroscientists often refer to this as 'intuition'. Intuition empowers an individual to tackle moderately complex psychological issues effectively and quickly, with no thought (Toet & Korteling, 2020). Furthermore, from a terminology perspective, heuristics (the process of meaning-making and learning) and intuition can be said to be interchangeable and have been

interchangeably used in research (Gigerenzer, 2000; Gigerenzer & Gaissmaier, 2010; Goldstein & Gigerenzer, 2002).

These insights highlighted above lead us to reconfirm certain critically reviewed notions within the literature. That is to say, if such is the case, then: -

1) As reports increasingly suggest that generation Z is known to mirror prudence attributes and follow their great grandparents' aversive tendencies (Ernest, 2017; Lynch, 2015), the cognitive capacity, albeit evolved, mirrors older generations' self-reliance and intuitive underpinnings. Therefore, following heuristics is but a natural behaviour to a situation among this cohort.

2) Latent needs, as derived explicitly in the previous chapter, is a form of 'pre-self-reflexive awareness' in individuals– intuition (a.k.a. cognitive element). Therefore, the concept of latent needs arousing cognitive dissonance, prompting the action-based model of cognitive dissonance that affects consumer decision-making in the problem recognition stage, is a definitive outcome in such a heuristic-oriented cohort.

3) The above insights also reaffirm how cognitive elements prompt behaviour and action, further accentuating the research ground.

3.5.2 Further Implications of the use of Digital Devices in Altering Brain Functioning

Research suggests that due to the digital age and the rapid advancements in technological use, although there may be drawbacks, there are increasingly positive aspects overweighing the flaws. For instance, Stenger (2019) illustrates that constantly being drawn into technology, decision-making and visual-spatial skills are improved. Literature indicates that one investigation from Iowa State University demonstrated that first-individual shooter computer games regularly urge players to take 'on the spot' judgment calls dependent on obvious signs, which can support dynamic abilities and improve visuospatial consideration aptitudes (Bailey, 2012). Clay Shirky (2011) details in his book 'Cognitive Surplus: Creativity and Generosity in the Digital Age' that the rampant advancements of the web have made it feasible for us to engage with content, pictures and recordings that were never conceivable with TV. Online life as a result of social media, the literature indicates, advances a culture of

sharing and along these lines, we currently feel progressively encouraged to make and offer our work, regardless of whether it's our photography, a blog entry, or a DIY venture (Shirky, 2011; Stenger, 2019). Further research also suggests these afore-mentioned trends in altering brain functioning.

For instance, Dye, Green and Bavelier (2009) examined visual consideration in gamers and non-gamers in four distinctive age gatherings (7-10,11-13,14-17,18-22 years of age). The study's outcomes recommended that computer game players of any age had higher attentional abilities, allowing them to make exact reactions more quickly, with different attentional assets to help process interruptions. Additionally, the literature demonstrates that studies were conducted with youngsters and grown-up members in a primary visual inquiry task (finding a straightforward objective shape among a field of distracters) and another following undertaking (requiring different moving articles to be followed all the while). They also tried their subjects' capacity to reallocate attentional assets once allotted, utilising an attentional flicker task. They inferred that youth video game players perform quicker in these assignments than non-gamers, accomplishing scores that non-gamers may accomplish only with more maturity (Dye et al., 2010).

Figure 3.27 depicting ACC activation in individuals due to gaming.
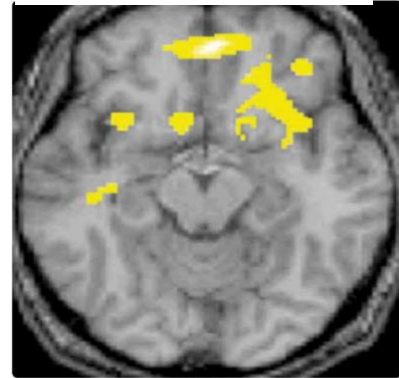
In a transverse (horizontal) slice of the brain, the image shows where brain activity was greater for excessive video game players (compared with non game players) when they viewed images from a video game(. The brain regions activated (including nucleus accumbens, anterior cingulate and dorsolateral prefrontal cortex)

Source: (Ko et al., 2009).

The above insights about the digital age are seen to reflect in the way generation Z as a cohort conduct itself. Furthermore, their buying behaviour cited above further indicates a choice-spending on video games. It correlates with multi-tasking and understanding of 'maturity in decision-making' and 'reliance on intuition' as seen in the section above. Moreover, Ko et al. (2009) elucidate that video-gaming and indulging in devices (multi-tasking) enhances the working of the ACC (anterior cingulate cortex). Figure 3.27 depicts the understanding further.

3.6 Conclusion

This chapter started with a thorough analysis of the cohort in context after emphasising the importance and understanding of the generational cohort theory and cognitive elements

prompting actions in individuals. Following that, by drawing on various contemporary literature from reports spanning 2017-2020, the cohort's conditions of existence and behavioural implications were studied with specific detailing of marketing and healthcare-oriented behaviours, including the recent COVID-19 pandemic and behavioural effects after that.

Further on, by critiquing literature on digital age effects on neural processing and behavioural networks in individuals, from a neuroscientific and psychological standpoint allowing the prevalence of higher levels of heuristic elements, we can observe the cognitive capacities to be higher in this cohort–generation Z. These insights give ground to assess the influential factor of pre-decisional cognitive dissonance states owing to cognitive element (latent needs). Furthermore, suppose the ACC (anterior cingulate cortex) is highly active due to their interests and lifestyle (Bayandir & Kavanagh, 2019) in such a cohort. In that case, the antecedence of cognitive elements arousing cognitive dissonance and shaping their behaviour is likely higher as derived earlier and as part of critiqued literature in chapter 2. Additionally, it is imperative to note that the identified structural elements of cognitive dissonance (see chapter 2) vital to perceiving the phenomenon have been logically derived as existing on the substantial ground within generation Z in this chapter. Thus, the updated proposed conceptual framework to put everything in context further is shown below in figure 3.28.

Figure 3.28: presents the conceptual framework in the context of exploration and exemplifies the proposed causal effect relationship owing to the literature reviewed and context explained.
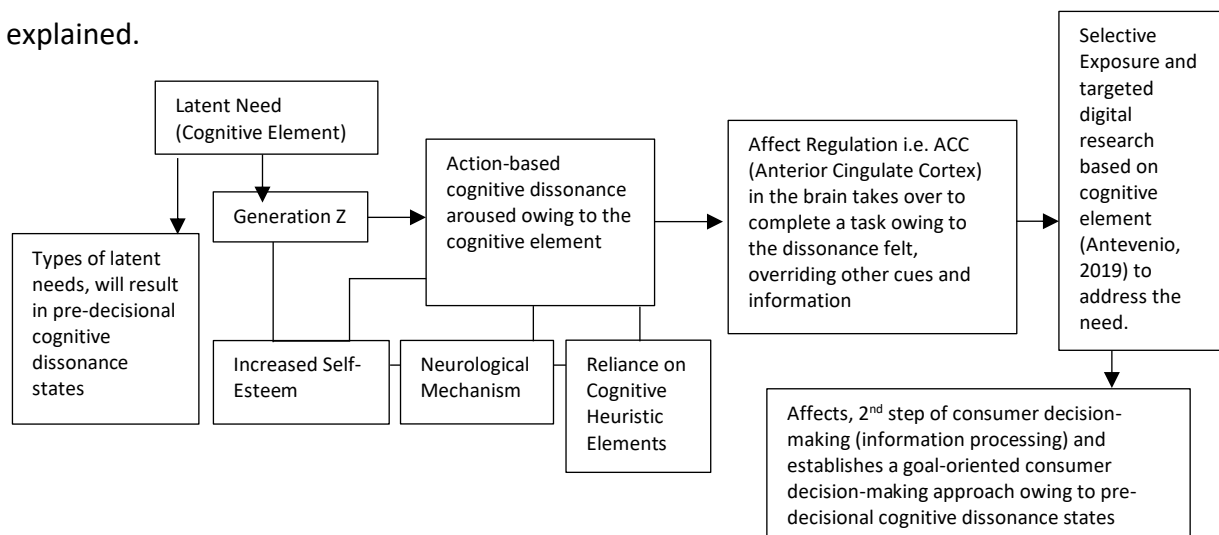
Source: The current author.

In the next chapter, we will see the rationale for the chosen methodology pertaining to qualitative research undertaken in the thesis.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

This chapter focuses on the research methodology adopted for the study. The chapter begins by addressing the research position and the rationale for using critical realism in the study. After that, the chosen approach, reasoning strategy and research design are explicated and logically addressed concerning the research's purpose.

Further on, the implications of the recent pandemic of COVID-19 on field research and the necessity for virtual interviews and their mechanisms are highlighted. This chapter follows the insight of Epps and Otnes (2020) in its structure and conceptual mapping of the study's research methodology. Moreover, the research methodology outlines what literature indicates as the "methodology wheel" (who, what, when, where, and why), making the research procedure transparent and available such that readers can re-trace or re-utilise the process for the future (Epps & Otnes, 2020). Further to the primary inclusions of questions in the methodology wheel, this chapter highlights "how" and the justification of "why" it is apt within the thesis' frame of reference. Further, the chapter delineates the pilot study and the findings and reflections.

4.2 Research Positioning

4.2.1 Research Paradigm

Guba and Lincoln (1994) characterise a paradigm as a basic allowance of self-belief-based expectations or perspectives that aides research activity or an examination. Likewise, Denzin and Lincoln (2000) describe research paradigms as human developments that manage the research standards or demonstrate where the researcher is coming from to build significance backed by data. Research paradigms are hence significant because they give convictions and guidance, which, for researchers in a specific context, impact what ought to be contemplated, how it ought to be examined, and how the consequences of the examination ought to be deciphered. Thus, a research paradigm reveals to us how importance will be built from the information we will accumulate, in light of our individual experiences, (i.e., where we are coming from) (Kivunja & Kuyini, 2017).

4.2.1.1 Critical Realism

This study employs a critical realist paradigm. The reason for choosing critical realism over others is due to the following reasons. First, if we take interpretivist paradigm, from a researcher perspective, there is a need within interpretivist paradigm for the researcher to be experienced in the subject of interest (Saunders et al., 2019). Considering, the researcher is a millennial and not from the cohort, it won't be apt subjectively. Further, that the insight of pre-decisional cognitive dissonance is an underexplored phenomena which needs to be underpinned to cognition and data in an exploratory manner given the research aims, objectives and questions. Thus, in comparison, critical realism matches the aims, objectives and questions of the thesis. Second, if we take social constructionist paradigm, the approach is such that knowledge is developed from social relationships within a context (Saunders et al., 2019). However, given the self-reliance of Zers, as well as the underexplored nature of the context (phenomena and cohort), a constructionist approach would hinder addressing reflexively and without bias the underlying pre-decisional dissonance perspective. Further, having a qualitative approach with aims and objectives and questions, as this study, the critical depth-realist approach is better from an explanatory perspective of observed behaviour in comparison. Third, grounded theory is concerned with providing a solution to a problem (Charmaz, 2006). However, we first need to understand where the problem (i.e., the shift in context) is happening from. That is to say, understanding what is being observed and thereafter providing a solution. Thus, critical realism helps in delineating observed behaviour from a critical explanation point of view which is essential for this thesis. Further reasons are provided in the following sections, as to why critical realism is a fit for this specific thesis.

The core realists' ontological assumption is that reality is external to human perceptions (Blaikie & Priest, 2017); however, there are variations in the literature. Blaikie (2007) and Blakie and Priest (2017) identified five variations to the initial understanding. They were "shallow realist, conceptual realist, cautious realist, depth realist and subtle realist" (Blaikie & Priest, 2017, p. 168-169). Critical realism falls under the 'depth realism' category.

Critical realism essentially adopts the stance that the observations were taken for granted or regularities can be explained in terms of underlying constructs or 'real' causal structures and mechanisms (Blaikie & Priest, 2017). According to Blaikie and Priest, "Critical realists claim

that, while we can observe regularities in the world around us and this is the start in any scientific investigation, we may not be able to observe directly the fundamental elements, the causal structures and mechanisms, that produce these regularities. Hence, the task of social science is to discover these underlying elements, describe their nature and show how they produce observed regularities" (Blaikie & Priest, 2017, p. 169). Critical realism has specific essential characteristics that warrant its adoption within a context. They are the following, according to Bhaskar (1979) and Outhwaite (1987) and backed by further literature:-

(i) The logic of retroduction is the logic used to create models/frameworks of mechanisms/processes. This involves working back from what is known to the unknown (Blaikie & Priest, 2017), starting with regularity and then trying to discover an explanation. This characteristic involves "creative imagination" (Hempel, 1966), "intuition" (Medawar, 1969) and an "open mind" (Popper, 1972).

(ii) Causality – this feature distinguishes why critical realism is essential for a phenomenon-based study. That is to say, in social science research from a generative perspective establishing regularities is the first step. However, critical realism presents a further dimension by identifying the underlying construct of regularities which have been taken for granted – as just existing (Blaikie & Priest, 2017).

(iii) Regularity – Regularity = Mechanism + Context. That is to say, social science and further behavioural science enquiry constitute explaining regularities (R). This regularity can be only explained by a mechanism underlying that regularity, i.e. (M) and consists of propositions about how the interplay between construct and individuals constitutes the regularity. Further, within the mechanism is the essential component of context (C) which highlights how the workings of mechanisms are "contingent and conditional, and thus found only in a particular context" (Pawson & Tilley, 1997, p. 71). To elucidate further, the interplay within the context assumes the explanatory role within critical realism.

Furthermore, the literature "indicates that these mechanisms are the cognitive activity of individuals – their goals, motives, and the principles they follow and the way these factors

influence their actions" (Blaikie & Priest, 2017, p. 176). To explain this further, figure 4.1 presents a critical realist's approach utilising contextual components.

Figure 4.1 presents the critical realist's explanation of reality.

Regularity's Specific Social Context

Regularity
Conjunction(s) between events or concepts in social space or time

Causal Mechanism

Cognitive Resources
available from
individuals & groups

Enablers ~ disablers
associated with
social structures & institutions
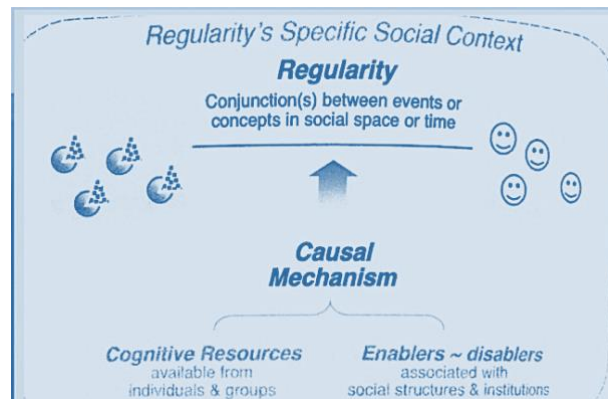
Source: Blaikie & Priest, 2017.

4.2.1.2 Need for Critical Realism and Its Application in Regard to the Study

This research is an exploratory study as it aims to: (i) gain a better understanding of behaviour and (ii) generate emerging theory by explicating insights into a particular behaviour (Pratap, 2018). Moreover, the exploratory research design is adopted to explain the causal mechanisms, as exemplified by the literature reviewed earlier (see chapters 2 and 3). Essentially, an exploratory study "requires a researcher to have some idea about what to look for but not a very clear idea of what to expect" (Blaikie & Priest, 2017). Bringing the understanding of critical realism into the study context, cognitive dissonance as a phenomenon cited from reviewed literature thus far (see chapter 2) has never been studied in a pre-decisional context. However, logically derived literature indicates its presence and effects within a specific context (i.e., generation Z) (see chapter 2 and chapter 3). Therefore, cognitive and psychological explanations for shifting healthcare behavioural consumption (a regularity) could be ascertained via the critical realism paradigm, which equips us with a depth realist perspective.

Furthermore, drawing from the figure 4.1 above, if we observe closely, we find the premise of the study indicated in chapter 2 as essential structural elements necessary to perceive

cognitive dissonance vis-à-vis increased self-esteem, neurological and action-oriented mindset and increased reliance on cognitive heuristic elements, and the critical realist's approach of utilising (i) cognitive resources – accessible within individuals/groups and (ii) enablers (in study context) – social structures and institutions to explain a causal mechanism relating to a regularity – which is the combination of events occurring due to concepts within a specific space and time (i.e. cognitive dissonance guiding healthcare consumption within Generation Z) to align. That is to say, the premise of the thesis and the paradigm of critical realism detail the necessity of utilising a critical realist's perspective for this study and its aptness to achieve the desired outcomes. In line with this, Archer reports, "Critical realists accept that the nature of social reality is such that its explanation requires the identification of the distinctive causal powers exercised at some given place or date. This is the case for those processes that account for its social contours at any particular time; those that maintain a particular social configuration in being for some time; and those that transform its particular kind over time" (Archer, 2019). Cognitive dissonance, as seen from an evolutionary perspective (see chapter 2), is heavily dependent on specific (time and space – generation Z) and the characteristics entailed.

Additionally, it is imperative to highlight that various researchers have utilised critical realism to give the premise to interdisciplinary studies (Danermark et al., 2002; Syed et al., 2009). This thesis, similarly, draws on different disciplines, for example, marketing, neuroscience and psychology within a very cognitive sector – healthcare, to give theoretical advancements and highlight emerging patterns for the upcoming cohort of savvy consumers (Priporas, 2020) – generation Z.

4.2.1.2.1 Extensive Integrative Literature Review Warranting a Critical Realism Stance

As part of this thesis, an extensive integrative literature review has been utilised (see chapter 2). According to Rodgers and Knafl, "Concept building requires a working knowledge of what previous work has been done in the area, what limitations in conceptualisation and methods have influenced the development of a concept, as well as what questions remain unanswered" (Rodgers & Knafl, 2000, p. 232). In this regard, an integrative literature review is defined as one representing a definite research problem and bringing in multidisciplinary concepts. Wherein definitions of variables are clear, and a description of how they relate to

each other is specified (Cooper, 1989; Rodgers & Knafl, 2000; Whittemore & Knafl, 2005). These essentials have been laid out in chapter 2 of the thesis.

As a result of the extensive integrative literature review (see chapter 2), we saw what was missed – methodologically and due to the cohort under study and perspectives of previous research for the theory of cognitive dissonance, further by understanding the action-based model of dissonance we understood how if we combine the cognitive heuristic element as a driver (Festinger, 1957) aspect of the initial theory and the action-based understanding of (Mills & Harmon-Jones, 1999) in a pre-decisional perspective, that they can be proposed theoretically to be identified in consumer decision-making by a highly cognitive cohort endowed with: higher self-esteem, neurological mechanisms and higher reliance to heuristics (see chapter 2 and 3). Such an insight derived from literature by combining those above and its presence in information processing and consumer decision-making can only be further approached from a critical realist's perspective. That is to say, the critical realist's approach is that the underlying constructs of a phenomenon can be explained by "identifying structural elements, the causal structures and mechanisms, that produce these regularities" (Blakie & Priest, 2017). Therefore, the research questions as part of the thesis are: -

RQ1) What are the latent needs (cognitive heuristic elements) arousing cognitive dissonance among generation Z?

RQ2) How does Generation Z perceive and evaluate cognitive dissonance discerned?

RQ3) How does the consumer decision-making process (including effects on information processing – as information processing is the second step) unfold in light of identified pre-decisional cognitive dissonance states within the new consumer cohort, generation Z?

The logically derived and critiqued literature has led us to decipher that pre-decisional cognitive dissonance (combining Festinger's cognitive element and Mills & Harmon-Jones, action-based model) in theory is a possibility and could be an underlying construct of healthcare choices of generation Z; critical realism as a research stance will enable the correct depth, frame of reference and orientation to identify first and then explain the consumer orientation to healthcare choice consumer decision-making in the next generation digital native population. It will enable to detail the presence, significance, and exact drivers of pre-decisional cognitive dissonance within the studied cohort.

4.3 Research Approach

A significant relationship exists between the paradigm chosen and the methodology adopted, as the methodological ramifications of paradigm decision saturate the exploration question/s, participants' choice, data analysis instruments and data gathering methodology, just as data gathering does (Bryman & Bell, 2015).

4.3.1 Choosing the Qualitative Approach – Aligning Research Approach with Research Purpose

According to Williams, a "Qualitative approach is conducted within a poststructuralist paradigm" (Williams, 2007, p. 67-68). Qualitative examination constructs its premises on inductive as opposed to deductive thinking. It is from the observational components that the researcher endeavours to clarify (Creswell, 2013; Williams, 2007).

Deriving from literature (Creswell, 2013; Saunders, Lewis & Thornhill, 2012; Saunders, 2019), a qualitative approach must be undertaken for this thesis. The following reasons further highlight the explanation of undertaking the qualitative approach in light of the chosen critical realism paradigm: -

(i) The phenomenon under investigation is highly contextual, warranting a critical realism paradigm to be deployed. Critical realism approaches research in real-world settings by utilising resources and enablers from the surroundings to explain a phenomenon's causal effect (explained above). Thus, a qualitative approach is necessary to understand individual processes and cognitive insights.

(ii) The research setting of the study. Generation Z as a cohort has been underexplored in terms of their cognitive abilities and cognitive elements that guide their behaviours. Thus far, literature searches all indicate behavioural affirmations (Bayindir & Kavanagh, 2019; Kamenidou, 2019; McKinsey, 2018; Priporas, 2017, 2020; Priporas et al., 2019). However, not the cause-and-effect understandings underlying the behaviours are overtly seen. Moreover, to understand and extend an underexplored phenomenon that is exemplified within an underexplored cohort, it is imperative to utilise observational components enabling the emergence of new theoretical paradigms and insights into social behaviour.

Therefore, if the aims and purpose of advancing cognitive dissonance theory from a pre-decisional perspective are to be achieved, which in itself is highly contextual owing to being bound within the specific cohort under examination as well (see chapters 1, 2 and 3), then an in-depth qualitative, observational approach backed by cogently derived interdisciplinary literature has to be employed.

4.4 Research Strategy

Within the broad framework of qualitative methodology as an approach, it is essential to highlight the strategy being undertaken. Various scholars call them approaches, and some call them strategies (Creswell, 2013). A research strategy is a step-by-step guide to the study approach (Jenny, 2014).

4.4.1 Necessity to Use an Abductive Research Strategy

Abductive reasoning/strategy is a type of logical thinking that does not fit with inductive or deductive thinking. Abductive thinking ordinarily begins with a plausible arrangement of a researcher's observations of perceptions and continues to the likeliest conceivable clarification for gathering perceptions (Bradford, 2017). It regularly involves developing an informed theory after observing a phenomenon for which no current explanation exists (Bryman & Bell, 2015). Furthermore, according to Dudovskiy, "In abductive strategy, the research process starts with 'surprising facts' or 'puzzles' and the research process is devoted to their explanation. 'Surprising facts' or 'puzzles may emerge when a researcher encounters an empirical phenomenon that the existing range of theories cannot explain. When following an abductive approach, the researcher seeks to choose the 'best' explanation among many alternatives to explain 'surprising facts' or 'puzzles' identified at the start of the research process. In explaining 'surprising facts' or 'puzzles', the researcher can combine numerical and cognitive reasoning" (Dudovskiy, 2020, para 5).

Literature suggests that abduction "is a theoretical interpretation of an empirical observation which leads to the development of new theories" (Ghauri, Gronhaug & Strange, 2020, p. 21). Furthermore, abduction is a deemed as a continuous process in research wherein, as the investigation progresses, the researcher has to change his stance and leading observations in

light of newer assumptions/consumer insights enabling him to generate a new dimension on the phenomenon being studied (Dubois & Gadde, 2002; Ghauri, Gronhaug & Strange, 2020; Van Mannen et al., 2007). Taking the understanding of the abductive research strategy into the study context, owing to the aim and purpose of the study, abduction will provide ample space to make changes whilst having an apparent rigour of steps to arrive at theoretical development as intended in the survey. Furthermore, this investigation's main research questions and the questions that form the interview guide are not created as precise, testable, open-close – yes or no speculations or suggestions. They are deliberately formulated as open-ended queries of an exploratory nature in line with the aims, purpose and qualitative methodology undertaken.

That is to say, this thesis will not test theories and get results through statistical processes but focuses on investigating the cognitive mechanisms and the logical and contextual determinants and issues constituting the phenomenon in context – cognitive dissonance. The highlight above and relate to human problems, convictions, rationale and decisions and require both rich and in-depth information to catch the generative systems and decipher the impacts on practices and mentalities of the new cohort of individuals by learning their viewpoints and rationale behind them (Chang, 2009; Bryman & Bell, 2015). Furthermore, extant literature suggests that one usually would develop a theoretical standpoint from where to observe reality in research. However, when looking at the academic advancement of a phenomenon, the paradigm, methodology and research strategy need to align in sync to allow all elements to take full form/shape (Blaikie & Priest, 2017; Creswell, 2013) and allow for novel findings with leeway to re-examine frameworks (Ghauri, Gronhaug & Strange, 2020).

Therefore, as Dubois and Gadde (2014) report, "deep probing that leads back and forth between frameworks, data, research questions and to context-specific explanations" is required when studying an emerging theory. Logically speaking, it would be more so when the context is pretty understudied as well, and abductive strategy is an apt research strategy which provides flexibility and allows us to "direct the research to new learnings and insights" (Ghauri, Gronhaug & Strange, 2020, p. 21). Furthermore, if we dissect the elements of the

thesis from the research methodology perspective highlighted thus far, we can observe the following: -

(i) The paradigm of critical realism exists to understand reality – "what is", "the mechanism explaining the phenomenon", and "the cause and effect" of a phenomenon. Essentially, the underlying constructs. Thus, this warrants a flexible approach to research strategy, which enables finding the cognitive elements and understanding the causal effect. This is provided by abductive reasoning (Fletcher, 2020).

(ii) The aim of identifying the elements first and then understanding causal mechanisms warrant a qualitative approach as it depends on the usefulness of an in-depth understanding of the studied context –conjunction based on cognitive and social resources and enablers (Blaikie & Priest, 2017; Fletcher, 2020; Hu, 2018; Lennox & Jurdi-Hage, 2017).

(iii) Critical realism relies on constantly updating literature as we progress on the research. Essentially, in the words of Fletcher, "The explicit acknowledgement of theory means that critical realists should and can engage critically with the existing explanations and examine the correspondence (or lack thereof) between data and theory to find the best explanation of the theory" (Fletcher, 2020, p. 181). Abductive reasoning aligns in approach with the role that the conceptual framework plays. In research employing abduction, the initially developed conceptual framework is progressively adjusted as an outcome of unexpected results, yet additionally due to theoretical insights from the process. This methodology gives productive cross-treatment where new combinations are developed through a blend of existing theories and new ideas ascertained within a real-world setting (Dubois & Gadde, 2002; Fletcher, 2020; Jarvensivu & Tornroos, 2010; Ryan et al., 2012). Therefore, we can further highlight from the above points that critical realism inherently constitutes an abductive strategy.

Additionally, it is imperative to note here that, when holistically viewing the thesis thus far, the conceptual framework development approach – of "identification" within the envisioning framework methodology (see chapter 2), the literature review methodology – "integrative literature review" focusing on the various theories due to the interdisciplinary nature of the study (see chapter 2), the paradigm of "critical realism", the qualitative methodology adopted

for this study and the narrowing down to the abductive research strategy thus far align in such a way that comprehensively enables the study aims, purpose and questions to be achieved and answered respectively.

4.5 Research Design

Before explaining the study's research design, it is imperative to note what is research design and the factors it can be affected by. De Vaus states, "Social research needs a design or structure before data collection. A research design is not just a work plan. The function of the research design is to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible. When designing the research, we need to ask, given the research question (theory), what type of evidence is needed to answer the question or convincingly test the theory" (De Vaus, 2001, p. 9). Sampling methods, data collection techniques and design of questions are deemed secondary to – "what evidence is needed" to effectively answer/ascertain the phenomenon in context (De Vaus, 2001). For this study and aligning with the phenomenon studied, the paradigm chosen and methodology and reasoning strategy, a qualitative cross-sectional method is adopted, detailed below.

Furthermore, the literature indicates that in medical research, social science, and biology, a cross-sectional study (also known as a cross-sectional analysis, transverse study, or prevalence study) is a type of observational study that analyses data from a population, or a representative subset, at a specific point in time—that is, cross-sectional data (Cherry, 2019). Given this thesis's purpose, aims, objectives and research questions, a cross-sectional study design will enable optimum outcomes. Such a design will also aid in explaining exploratorily the causal mechanisms delineated in the literature chapters of this thesis, after finding the prevalence of latent needs as a cognitive heuristic element.

4.5.1 The COVID-19 Pandemic and Its Implications on Research Design

Due to the enormous effects of the COVID-19 pandemic, fieldwork has been primarily affected. Several reports suggest that numerous researchers are stuck at home, examining the information they've just gathered or arranging information assortment for when they can go out into the field once more (Hussain, 2020; Yeager, 2020). According to Emeke, "Things are beginning to crystallise, and researchers are beginning to figure things out. While in-person data collection may still be on hold for a while, remote data collection methods are now being used more, and many researchers are keying into this now. That will be part of the new normal to data collection" (Emeke, 2020).

Furthermore, the world over, university students who are currently in their data collection process or are beginning to undertake the process are being forced to either stall or resort to more tech-based means (Kimborough, 2020) due to travel bans. Hussain states, "In certain cases, where the field itself is digitally available and present (such as archives), the lockdown doesn't change much, perhaps. But for those of us, for whom being in the field means meeting with communities, listening to their stories, walking in their environments and being with them, this remains crucially relevant" (Hussain, 2020, para 9). Deriving from all these incidents and insights above, and because, India the demography of this thesis is, as of 25th September 2020, the second highest country surpassing Brazil with COVID-19 cases (Ellis-Petersen, 2020), the research design will incorporate virtual face-to-face interviews utilising video-enabled modes such as Skype/Zoom/Microsoft Teams – enhancing body language study which is critical in face-to-face interviews in line with current pandemic times and to build a strong case.

Moreover, if we have to correlate research design elements (Miller & Salkind, 2002) essential for a study with the research design elements ascertained critical to the current time (which will be further explicitly detailed in the sections below of this chapter), for this thesis, it will be as the following Table 4.1

Table 4.1 represents the important factors determining the research design and its correlating element within this thesis.

Necessary Research Element	Corresponding Research Element within This Thesis
Type of Underlying Theory	Emergent Cognitive and Behavioural Theory
Access to Individuals and Group	Requires informed consent
Degree of Control over the social system being studied	Partial and No Control
Type of Data Available	Observational Studies backed by documentation and literature
Temporal Dimension	Cross-sectional Study. Therefore, time dimension not involved as all data is collected at or around a given point in time.
Sample or Universe to be studied	35 participants from Generation Z
Data Source	Original data to be collected by the author
Data Gathering Method	Virtual Face to Face Interviews

Source: (Miller & Salkind, 2002), created, designed, and modified by the present author.

From Table 4.1, it is important to detail that all essential elements of a study are covered and accounted for within this thesis. The pandemic, is not being utilised by the author as a mechanism for delaying, omitting or unresolving constructs of data gathering and analysis. The only additional element for enhancing the research design being utilised by the author of this study is the facet of "video calling" from a technology perspective. This is done as all field research for the time being, is indefinitely suspended due to travel bans (Kimborough, 2020; Yeager, 2020). However, utilising software like Skype, Zoom, Microsoft Teams, and Google Duo, to name a few, will replace the necessity to be face-to-face whilst giving the same feeling and experience as being face-to-face with a participant. Several reports have also demonstrated that the remote interviewing/video software approach is exemplary in its experiential capacity (Andrews, 2020; Blincoe & Hussain, 2016; Express Virtual Meetings, 2020; Ideocentric, 2015). Furthermore, video calls are known to "establish more personal and trusting relationships" (Ideocentric, 2015, para 6), which is essential in this context of the thesis.

4.5.2 Delineating Specific Research Design Elements of this Study

4.5.2.1 Emergent Cognitive and Behavioural Theory

According to Science Direct, "An emergent behaviour is a nonobvious side effect of bringing together a new combination of capabilities—whether related to goods or services. Emergent behaviours can be beneficial, benign, or potentially harmful, but in all cases, they are tough to foresee until they manifest themselves" (Science Direct, 2020). From a theoretical perspective, cognition stimulates behaviour (Cambridge Cognition, 2020). Thus, given the cohort and the study context, this research focuses on identifying the emergent cognitive behaviour within generation Z.

4.5.2.2 Sample Size

Furthermore, a sample is defined as "a finite part or subset taken for a study from the target population. In turn, the target population corresponds to the entire set of subjects whose characteristics are of interest to the research" (Martinez-Mesa et al., 2016, p. 326). The right sample size has many contradictions and variations, including clarifications within qualitative research studies. For example, de Ruyter and Scholl (1998) express that a qualitative methodology study infrequently arrives at 60 respondents and fewer samples around the range of 15 and 40 respondents, which is the most widely recognised. In doing so, Marshall et al. (2013) recommend that grounded theory qualitative investigations incorporate between 20 to 30 interviews. Concerning case study research, Creswell (2003, 2013) comparably prescribes close to 4 to 5 cases with 3 to 5 interviewees for each case (by and large, 12 - 25 respondents).

As opposed to these, Patton (2002) recommends that in qualitative studies, there are no standards of a sample size of participants to remember for a qualitative inquiry study (Marshall et al., 2013). Additionally, as per Creswell (2003), small sample size is adequate in qualitative exploration as the nature of the information is a higher priority than the size of the example (Cleary, Horfsall & Hayter, 2014). Adding to this, qualitative exploratory study principally deconstructs phenomena and ideas instead of estimating them (Bock & Sergeant, 2002; Gordon & Langmaid, 1988). Daymon and Holloway (2010) propose that, as a rule, a qualitative study does not combine enormous samples since this could hamper in-depth

understanding and extravagance/richness of information (Daymon & Holloway, 2010). These insights above corroborate with recent literature (Gill, 2020; Young & Casey, 2019).

In line with this, Sandelowski (1995) and Hennink et al. (2019) emphasise that a sample size must be sufficient to generate quality data that provides a rich understanding of the experience. Qualitative sampling aims to choose enough participants and observations that provide rich data to understand the phenomenon studied (Gill, 2020; Hennink et al., 2019).

4.5.2.2.1 Purposive Sampling and Main Study Sample Size Justification

Palinkas et al. (2015) suggest that purposive sampling is a strategy generally utilised in qualitative methodology for the distinguishing proof it provides. In addition, the choice of data-rich cases for the best utilisation of restricted assets (Patton, 2002). This includes recognising and choosing people or groups of people that are exceptionally experienced in the phenomenon being studied or its manifestations of which the phenomenon underlies (Creswell, Plano & Clark, 2011). Notwithstanding information and experience, Bernard (2002) and Spradley (1979) note the significance of accessibility and eagerness to take an interest, and the capacity to convey experiences and instances in an understandable, expressive, and reflective manner is ideal (Palinkas et al., 2015).

In the context of this thesis, we will be utilising a purposive sampling technique as it is: -
(i) essential for rich inside real-world experience findings aimed for as the participants encounter the phenomenon in their daily life (Dubois & Araujo, 2007).

(ii) necessary whilst embarking on a qualitative study utilising data-rich participants and is principally founded on the conceptual framework developed from literature (Creswell, 2013).

(iii) vital as it helps expand the discoveries' vigour and relevance (Miles & Huberman, 1994; Wagner, 2006).

Therefore, utilising this approach, 35 participants have been deemed suitable for the main study. Extant literature (Johnston et al., 2019) and afore-mentioned literature (Creswell, 2003, 2013; Morse, 2000; Vaseliou, Barnett, Thorpe & Young, 2018) indicate that 20-30

interviews are apt to receive data saturation during qualitative research entailing theme identification. Therefore, this thesis adopts the number of 35 for the sample size to increase credibility and reliability while following previous guidelines for conducting qualitative research. It is imperative to note that data saturation within this study (main) was arrived at around RP30. However, to ensure that saturation was actually achieved and not entirely intuitive all 35 participants were interviewed. The reason for saying so, is because whilst conducting the research post RP30, the themes that appeared for basic, organizing and global themes (three levels) were similar and repetitive.

4.5.2.3 Ethical Considerations

Ethical considerations are essential in any research. Thus, this thesis follows all prescribed qualitative ethical consideration protocols (Marshall & Rossman, 2014), i.e. (i) informed consent and voluntary participation – requests made for participation with no force and choice left to the member of the cohort, (ii) anonymity and confidentiality – all participants within the scope of the pilot and main study have been identified via a code number and remain anonymous throughout. Furthermore, ethical approval has been taken from the Middlesex REC (Research Ethics Committee) via the online MORE form application.

4.5.2.4 Validity and Reliability

Like any other research, it is vital to demonstrate the rigour (Morse, 2015) and trustworthiness (DeJonckheere & Vaughn, 2019) of qualitative research. The thick, rich description is one of the strategies for establishing credibility in qualitative research (Morse, 2015). Thick description is associated with the constructivism/interpretivism paradigm, which involves detailed and rich descriptions of the setting, the participants and the themes (Creswell, 2013). The research setting is described in detail in these specific sections – purposive sampling (4.5.2.2.1), data sources (4.5.2.5), in-depth semi-structured interview (4.5.2.5.1) and interview guide for pilot and main study (4.5.2.5.2). The demographic profiles of all participants are included in table 4.3. Detailed themes can be seen in figure 4.9 and within the extractions in the following sections – 4.9.1.2 and its sub-sections. Additionally, they can be seen in section 4.10. and sections 5.2 and 5.3 within chapter 5.

It is recommended that incorporating and maintaining the validity and reliability of qualitative research should be the responsibility of researchers instead of external reviewers (Bashir et al., 2008). The researcher can achieve validity and reliability through a consistent and well-documented process of data collection and analysis (Bolderston, 2012; Morse, 2015). Data collection is documented in detail in the 'Data collection' section (4.6 and 4.7), and the data analysis process is described in the sections 'Data analysis' and 'Thematic analysis' (4.8 and 4.8.1). In addition, the rigour of the thesis' validity can be seen detailed in the following sections – reasons for utilising thematic analysis (4.8.2), using NVivo (4.8.3, 4.9.1.2.1,

4.9.1.2.2, 4.9.1.2.3), pre-test to the pilot and its justification (4.9, 4.9.1 and 4.9.1.1) and the pilot and main studies conducted in this thesis (4.10 and 5.3 onward).

Reliability can also be achieved using a standard interview guide (Moustakas, 1994), which the researcher used to conduct all the interviews. Furthermore, Priporas et al. (2020a) indicate that the findings' reliability can be ensured when the researcher conducts all interviews in the same setting. In this thesis, the researcher is the only person who conducted the interviews, reducing the chance of changing the interview guide and enhancing the findings' reliability. Prompts and follow-up questions are not standardised because it is erroneous to assume that all participants will give the same responses. As a result, spontaneous follow-up questions were used to clarify the participants' initial responses. In contrast, planned follow-up questions were used to make interview questions more specific and help navigate the participants toward the main concerns of the research (Bolderston, 2012).

4.5.2.5 Data Sources

Data was gathered after an extensive literature review and an initial conceptual framework informed by synthesising multiple theories within context.

4.5.2.51 In-depth Semi-structured Interviews

A semi-structured in-depth interview is usually one in which the interviewer has a checklist of topic areas or questions. The intention is to get the informants to talk on their own terms. Hence questions tend not to be too specific, allowing for a range of possible responses. Given its aims, objectives and main questions, this research will adopt the inquiry process of in-depth semi-structured interviews to accomplish the purpose. According to DeJonckheere and Vaughn, "This method typically consists of a dialogue between researcher and participant, guided by a flexible interview protocol and supplemented by follow-up questions, probes and comments. The method allows the researcher to collect open-ended data, explore participant thoughts, feelings, and beliefs about a particular topic and delve deeply into personal and sometimes sensitive issues" (DeJonckheere & Vaughn, 2018, p. 137).

4.5.2.5.2 Interview Guide for Pilot and Main Study

For this thesis, the interview guide has been developed based on evidence that generation Z has a more sceptic frame of mind and how they approach life preferences is with independence, which is not seen before owing to being digital natives. Essentially, a generation of Smart Consumers – "a well-informed user of smart technologies in their everyday life activities to make their life easy and create novel consumer experiences, but without developing a dependency on smart technologies and losing his/ her human intellectual abilities" (Priporas, 2020, p. 158). More so, these technologies require higher intellectual abilities, which the cohort is seen to be inherently comprising (McKinsey, 2018; Priporas, 2020). Further, it is mainly based on respondent experiences and responses that the structure will unfold. However, the developed interview guide (see appendix B) will enable staying in context to understand the study's needs.

4.6 Participant Selection Process

Since adopting a purposive sampling approach, selecting participants as a process was more rigid than usual for qualitative research. Further, the literature suggests certain key participant selection principles. They are: -

(i) A small number of samples are intensively interviewed for in-depth necessity.

(ii) Participants are picked purposefully.

(iii) The conceptual framework reasonably determines the selection

(iv) A rationale for selection is necessary (Cleary, Horfsall & Hayter, 2014; Curtis et al. 2000; Tuckett 2004; Walsh & Downe, 2006).

The following criteria, as per Table 4.2, informed the pilot study's participant selection process.

Table 4.2: presents the inclusion and exclusion criteria for the participant selection process employed in the pilot study for this thesis.

Criteria	Inclusion	Exclusion
Ethnicity	Indian	Foreign

Residence	Living in India for past 3 years or more	Living outside India for last 3 years
Consumers of	Various modes of Healthcare	Sole allopathy consumers
Age Bracket	18-25 years of age (start and end years included)	Higher or below the age bracket
Educational Level	Minimum of high school graduation, first year university entrants	Below high school graduation, since, India is diverse, without this filtration it will be difficult to ascertain/distinguish between personal beliefs of an individual and beliefs owing to parental influence as those in rural areas/semi-urban areas have a higher parental influence if they have left school before graduation due to familial necessities.

Source: Created, designed by the current author

Furthermore, such an inclusion and exclusion criteria for selecting participants has to be undertaken as, according to Setia, "Unlike in case-control studies (participants selected based on the outcome status) or cohort studies (participants selected based on the exposure status), the participants in a cross-sectional study are just selected based on the inclusion and exclusion criteria set for the study. Once the participants have been selected for the study,

the investigator follows the study to assess the exposure and the outcomes" (Setia, 2016, p. 261).

Table 4.3: respondent profiles in the main study

Participant	Gender	Age	Area Living in, in India	Current Level of Education	Occupation	Healthcare Issue	Preferred Healthcare Choice
RP1	Male	22 years	Chennai	Bachelors	Social Worker	Appendicitis and post-op issues	Homeopathy
RP2	Female	23 years	Tuticorin	Masters	School Teacher	Acne and Sinus	Homeopathy
RP3	Male	21 years	Salem	Masters	Social Worker	Frequent Fevers	Ayurveda
RP4	Male	24 years	Salem	Masters	Psychiatrist	Back Pain	Home Remedies Self-Experimentation Via Google Searches
RP5	Female	22 years	Bengaluru	Masters	School Teacher	Sinusitis	Home Remedies Self-Experimentation Via Google Searches
RP6	Female	22 years	Bengaluru	Masters	Architect	Sinus and Tonsilitis	Ayurveda
RP7	Male	20 years	Bengaluru	Bachelors	Student	Muscle Spasm Issues	Ayurveda with self-experimentation
RP8	Female	20 years	Bengaluru	Bachelors	Student	Gynaecological Issues	Ayurveda and self-medication in home remedies
RP9	Female	23 years	Pune	Masters	MBA Student	PCOD	Ayurveda and Lifestyle Changes
RP10	Male	21 years	Udupi	Bachelors	Student	Gastric Issues	Ayurveda
RP11	Female	24 years	Bihar	Masters	Student	Muscular Issues	Home Remedies Self-Experimentation Via Google Searches
RP12	Female	23 years	Namakkal	Masters	Student	Wheezing	Homeopathy

RP13	Male	25 years	Udupi	Masters	Lawyer	Chronic Back Pain and Epilepsy	Ayurveda and Self-Experimentation Via Google Search
RP14	Female	23 years	Nagpur	Masters	Architect	PCOS and Granuloma	Ayurveda
RP15	Male	24 years	Bengaluru	Masters	Architect	Mental Health and Chronic Back Pain	Homeopathy and Yoga
RP16	Female	23 years	Kerala	Masters	Retail Sector Employee	Frequent Fevers, Cold and Covid-19	Home Remedies Self-Experimentation Via Google Searches
RP17	Female	18 years	Bengaluru	High School	Student	Motion sickness and hairfall	Ayurveda
RP18	Female	22 years	Kerala	Bachelors	Student	Covid-19 and Frequent Sinusitis	Ayurveda
RP19	Male	18 years	Chennai	High School	Student	Chronic Calf Strain	Ayurveda
RP20	Male	23 years	Bengaluru	Masters	Architect	Frequent Fevers, Cold and Covid-19	Homeopathy with self-experimentation Google researched info
RP21	Female	23 years	Chennai	Masters	Entrepreneur	Migraine Attacks	Ayurveda
RP22	Female	23 years	Bengaluru	Masters	Entrepreneur/Artist	PCOS	Ayurveda and Homeopathy
RP23	Female	25 years	Mumbai	Masters	Entrepreneur	PCOD	Homeopathy
RP24	Male	23 years	Mumbai	Masters	Sales and Marketing Employee	Deviated Nasal Septum	Ayurveda and self-medication in home remedies
RP25	Female	23 years	Pune	Masters	Entrepreneur	Sinus and Tonsilitis	Homeopathy

RP26	Male	21 years	Bengaluru	Bachelors	Sales and Marketing Employee	Chronic Back Pain	Ayurveda
RP27	Male	18 years	Ranchi	High School	Student	Knee and Ankle Issues	Ayurveda and Homeopathy
RP28	Female	22 years	Chennai	Masters	MBA Student	Cystic Acne	Ayurveda and self-medication in home remedies
RP29	Female	23 years	Salem	Masters	Artist	Chronic Back Pain	Homeopathy with self-experimentation Google researched info
RP30	Male	24 years	Coimbatore	Bachelors	PhD Student	Migraine Attacks	Ayurveda with self-experimentation
RP31	Female	21 years	Vellore	Bachelors	Retail Sector Employee	PCOD	Ayurveda and Lifestyle Changes
RP32	Male	23 years	New Delhi	Masters	Retail Sector Employee	Knee Injury	Homeopathy with self-experimentation Google researched info
RP33	Male	18 years	Goa	Masters	Student	Shoulder Injury	Ayurveda
RP34	Female	20 years	Bengaluru	Bachelors	Student	Eyesight Issue	Ayurveda
RP35	Male	24 years	Pune	MBA	MBA Student	Muscle Cramps Issues	Ayurveda and Siddha Medicine

Source: The current author.

4.7. Data Collection and Transcription Process

Data were collected regarding the pilot study and the main study via face-to-face virtual skype interviews based on a semi-structured interview guide. (see appendix B for the interview guide). All questions were open-ended to enforce understanding of elements that factor and trigger healthcare behaviour. The probes within the interview guide were followed; however, it was necessary to probe further on the answer, in some cases, to ascertain more impact of the investigated phenomenon. The complete interview guide consisted of 15 open-ended questions and took from 37 minutes to 1hr and 10 minutes.

Post the interviews, each of the recordings was listened to again and transcribed verbatim by the researcher personally. All discussions were only in the English language. Therefore, there was no need for any translation. Furthermore, the final transcripts were re-checked with the recordings before starting the data analysis.

4.8 Data Analysis Techniques

Qualitative data analysis is more different from quantitative data analysis primarily because qualitative data is made up of words, images, observations and even symbols at times (Bhatia, 2018). Therefore, a step-by-step approach has to be set at the outset to comprehend as the research progresses how and what measure has to be undertaken to enhance the richness and understand further the data received via interactions (Creswell, 2013).

Essentially, extant literature demonstrates that in qualitative research, the analysis and preparation that happen in parallel usually comprise the following steps collated in Table 4.4.

Table 4.4 presents the general data analysis preparation procedure within qualitative studies.

S. No	Step	Description
1.	Getting familiar with the data	Reading the data several times to get familiar with it and start looking and noting observations and patterns

2.	Revisiting research objectives	From time to time, it is necessary to revisit the objectives and identify questions and if needed further questions that can be answered through the gathered information
3.	Coding	Involves identifying broad ideas, concepts, behaviours and assigning codes to each one – labelling of data
4.	Identifying patterns and connections	After coding, identification of common themes and patterns that can answer RQs or areas that need further investigation can be seen.

Source: Bhatia, 2018; Braun & Clarke, 2006; Thorne, 2000; Wong, 2008; created, designed and modified by the present author.

Additionally, Wong (2008) demonstrates that data analysis in qualitative research predominantly involves coding, which is the most crucial step. According to Patton, "Basically it involves making sense of huge amounts of data by reducing the volume of raw information, followed by identifying significant patterns, and finally drawing meaning from data and subsequently building a logical chain of evidence" (Patton, 2002, p. 147).

Thorpe (2000) outlines that the most critical factor in qualitative research is the necessity of comparative analysis, which requires revisiting, re-checking study objectives to questions and findings and vice versa. From the extant literature on qualitative analysis, we can understand that the researcher's cognitive process is inherently sought after and is a vital component. From a researcher's perspective, if we have to map out the analysis process for qualitative research, it would be as the below Table 4.5

Table 4.5 presents a researcher's essential cognitive processing for qualitative data analysis.

Task	Researcher's Correlating Cognitive Processing
In-depth understanding of Data	Comprehending the phenomenon under study

Assimilating Themes	Synthesising a portrait mentally of the phenomenon that brings out the causal relations and linkages within various facets
Coding/Framework Development	Theorising about how and why these relations appear as they do
Bringing out emerging theory	Recontextualising or putting the new knowledge about phenomena and relations back into the context of how the cohort have articulated the evolving knowledge/theory.

Source: Morse, 1994; Thorpe, 2000.

4.8.1 Thematic Analysis

Braun and Clarke say, "Thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail. However, it also often goes further than this and interprets various aspects of the research topic" (Braun & Clarke, 2006, p. 6). Willig and Rogers (2017) state that three levels of codes are usually recognised in thematic analysis. Langridge (2004) suggests that these levels are 1st, 2nd and 3rd level order or codes, wherein most studies begin with a "very basic descriptive level of coding and upwards in a systematic manner towards a more interpretative level" (Langridge, 2004, p. 267). In line with this, Namey et al. (2008) inform us that "Thematic Moves beyond counting exact words or phrases and focuses on identifying and describing both implicit and explicit ideas. Codes developed for ideas or themes are then applied or linked to raw data as summary markers for later analysis, which may include comparing the relative frequencies of themes or topics within a data set, looking for code co-occurrence, or graphically displaying code relationships" (Namey et al., 2008, p. 138).

Additionally, Javadi and Zarea (2016) demonstrate that thematic analysis enables the extraction of meanings and concepts from raw data and "includes pinpointing, examining and recording patterns or themes" (Boyatzis, 1998; Javadi & Zarea, 2016; Tjandra et al., 2013). Furthermore, Boyatzis (1998) and Rubin and Rubin (1995), and Braun and Clarke (2006) suggest that good thematic analysis can be instrumental in both reflecting and clarifying

reality. In this regard, themes within the thematic analysis are analysed and reported in specific ways for which several decisions ought to be taken. They are the following: -

(i)   Rich and detailed description – highlighting specific trends alone in a report or detailed, rich data presented from the findings are either way possible depending on the need (Javadi & Zarea, 2016, p. 35)

(ii)   Inductive and theoretical thematic analysis – In terms of inductive study, recognised themes are strongly made about the data (Boyatzis, 1998; Corbin & Strauss, 2014). In terms of theoretical analysis, the analysis is based heavily on the theory. That is to say, themes are explicitly extracted in the form of that theory (Javadi & Zarea, 2016).

(iii)   Semantic or latent themes – In the semantic theme approach, extraction of articles is on the surface or semantic appearance and constitutes not much beyond what has been said by the participant (Morse, 1995; Speziale et al., 2011). Within the approach of the latent theme, relationships, patterns etc. are extracted, and further efforts are made to "create a theory based on the importance of the patterns and a wider framework of meanings and connotations" (Braun & Clarke, 2006)

(iv)   Epistemology: Realist or Constructionist Thematic Analysis – As the research epistemology guides what you can say as a researcher about the data and informs how we can theorise meaning, the position of the research guides the above essential aspects of thematic analysis further. It will determine the thematic analysis's what, why and how (Braun & Clarke, 2006, p. 85).

4.8.2 Reasons for Utilising Thematic Analysis

Furthermore, extant literature indicates that thematic analysis offers "rich and compelling insights into the real worlds, experiences and perspectives of individuals which is completely different to what quantitative data can offer" (Braun & Clarke, 2014). Moreover, from a health and well-being perspective, most recent research in healthcare marketing has utilised thematic analysis. Table 4.6 presents studies and their thematic analysis method within the healthcare marketing domain.

Table 4.6 presents contemporary studies in consumer healthcare and well-being research and the thematic methodology used.

Author(s), year	Purpose	Country	Thematic Analysis Methodology
Becker et al., 2019	To understand the factors that influence continuous use of fitness trackers	Germany	Iterative Thematic Analysis constructing themes and sub themes constantly
Buchanan et al., 2018	To explore the nature and extent of, and level of user-engagement with, appealing strategies used by the food industry to promote energy drinks on digital platforms.	Australia	Thematic content analysis was employed to code the textual and visual elements of the data that were extracted from the online media pages.
Fradrique et al., 2020	To understand the standards and policy guidelines that companies use in the creation of Active Assisted Living technologies and to highlight the gap between available technologies, standards, and policies and what should be available for use.	Canada	After a literature review, 15 interviews were conducted and results from interviews were coded using a thematic analysis
Lai et al., 2017	To briefly review the literature that has been published over the past few years and to provide a sense of where the field of	Not specified	Results of the search were screened for relevance and categorized into a set of common themes.

	consumer health informatics and patient-generated health data is moving toward		Semantic approach within literature.
Mahloko & Adebesin, 2020	To investigate the factors that influence accuracy of data collected by consumer wearables	Not specified	Iterative Thematic Analysis post a systematic literature review

Source: Created, designed and modified by the current author.

Drawing from all literature reviewed on thematic analysis and the utilisation of thematic analysis within consumer healthcare and well-being research, this thesis will adopt a critical realist-oriented latent theme analysis thematic analysis. Furthermore, due to the context of the study and the research aims and objectives, the thematic analysis will enable: -

(i)   A rich understanding of a lesser-known cohort's cognitive processing

(ii)   Compelling data to establish relationships among latent needs (as a cognitive heuristic element) and the aroused cognitive dissonance

(iii)   Knowledge of influential mindset orientations enabling the presence of cognitive dissonance within generation Z

(iv)   Finally, a new orientation to a new process of consumer healthcare decision-making

4.8.3 Using NVivo

NVivo has been chosen as the optimum computer software for aiding qualitative inquiry for this study. In particular, NVivo 12 was used. According to Zamawe, "Computer Assisted Qualitative Data Analysis Software (CAQDAS) are increasingly being developed. The main function of CAQDAS is not to analyse data but rather to aid the analysis process, which the researcher must always remain in control of. In other words, researchers must equally know that no software can analyse qualitative data. CAQDAS are data management packages that support the researcher during analysis" (Zamawe, 2015, p. 13).

Lafferty (2007) mentions that NVivo can work across various research designs and provides a simple work structure to create nodes and discover themes. Moreover, the literature suggests that NVivo is primarily used for the "analysis of unstructured text, audio, video and image data, including but not limited to interviews, focus groups, surveys, social media and journal articles" (Kent State University, 2020). Furthermore, Richards (1999) and Jackson and Bazeley (2019) report that the variance of data and literature sources for qualitative research means that researchers often require a tool to enable structured data analysis. In this regard, "NVivo has tools for recording and linking ideas in many ways and for searching and exploring the patterns of data and ideas. It is designed to remove rigid divisions between data and interpretation" (Jackson & Bazeley, 2019, p. 78).

4.9 Pre-test to the Pilot

Hurst et al. (2015) demonstrate that the practice of pretesting is highly regarded as an effective technique for improving validity in qualitative data collection procedures and the interpretation of findings (Bowden, Fox-Rushby, Nyandieka, & Wanjau, 2002; Brown, Lindenberger, & Bryant, 2008; Collins, 2003; Drennan, 2003; Foddy, 1998). Qualitative research's nature further complements this as an iterative rather than a linear process. The pre-test interaction between interview guide design and implementation ensures the best opportunity for attaining reliability and rigour in qualitative inquiry and analysis (Hurst et al., 2015; Morse et al., 2002).

Further studies indicate that, by definition, pretesting involves simulating the formal data collection process on a small scale to identify practical problems concerning data collection instruments, sessions, and methodology (Christina, Herwig & Arne, 2020). Hurst et al. inform us that "the value of pretesting can lead to detecting errors in cross-cultural language relevance and word ambiguity" (Hurst et al., 2015, p. 55), as well as discovering possible flaws in survey measurement variables (Esposito, 2001). Pretesting can also provide a warning about how or why the main research project can fail by indicating where research protocols are not followed or not feasible (Temple, 2004). Pretesting provides an opportunity to make revisions to study materials and data collection procedures to ensure that appropriate questions are being asked and that questions do not make respondents uncomfortable and

confused because they combine two or more critical issues in a single query (Collins, 2003; Drennan, 2003; Hurst et al., 2015).

4.9.1 Justification for the Pre-test and Approach Undertaken

Within qualitative research, a pre-test is utilised to correct language, provide an understanding of the sample respondents and further refine the research questions (Hilton, 2017). According to Christina, Herwig and Arne, "They are not just respondents providing information that is collected and later analysed. Pre-tests recognise their participation, presence, and readiness to clarify meaning and involve them as temporary research assistants in the co-construction of interpretations and comprehension." (Christina, Herwig & Arne, 2020, p. 8). Furthermore, pre-testing literature demonstrates that pre-tests enhance probe questions essential in cognitive research (Willis, 2015).

There are various forms of pre-tests within qualitative research. Some of them are as follows:

(i) Expert-driven Pre-tests: This utilises current researchers in the field to validate, authenticate and suggest changes based on experience and knowledge of the domain (Presser & Blair, 1994).

(ii) Respondent-Driven Pre-tests: This utilises a small subsample of respondents that fit the research profile whilst coming from various backgrounds. It enables the researcher to understand the participant selection criteria, make amends, and highlight potential issues (Ferketich, Philips & Verran, 1993).

The pre-test completed for this research followed both "expert-driven pre-tests" and "respondent-driven pre-tests". Two professors in accredited Universities in India (due to the demography of the study) within psychology and marketing and those who currently work on qualitative research were requested to go over the interview guide with the aim and objectives of the study and the participant selection criteria in view. Furthermore, via calling on four participants that were current generation Z healthcare consumers in India from backgrounds and states – a respondent-driven approach was also utilised. Additionally, the process was back and forth between experts and respondents for over one week.

4.9.1.1 Insights from the Pre-test and Changes to the Interview Guide Used in the Pilot and Main Study

The pre-test proved very important for this thesis. For instance, the interview guide underwent more changes to enable clarity and became a more robust version of the initial version. Furthermore, language was also corrected to enhance cultural significance and relatability. In other words, it increased face and content validity for the final interview guide utilised in the pilot and the main study. Below Table 4.7 is a brief overview of the collated insights of the two-part iterative pre-test process with experts and respondents.

Table 4.7 presents the pre-tests insights from experts and respondents

Expert-Driven Insight	Respondent-Driven Insight
Ask duration of the healthcare being undertaken by person before starting the interview and for what purpose – gives perspective insight to researcher in terms of time and experience of respondent. Thereafter, flow into discussion.	The sample questions are very interesting and thought out.
Ask location within India, as given the diversity healthcare choices are based on that too.	Language needs to be simpler to understand.
Elimination of vague questions and only stick to healthcare questions	Message of the study and its aims is clear and can be understood well.
Need to make the language much simpler, as India is varied in terms of linguistic expertise and sample may not comprehend which will lead to wrong answering or having to keep explaining. Basic language.	None of the questions prompted us to answer in any particular way. (Was asked to check and eliminate leading questions)
Remove redundant questions as the respondents will say, "I have already told	The second interview guide is easily understandable. Clearer.

you this before…or as explained before etc…"	
In order to delve deep into your topic of psychological dissonance more probing is required which is understandable and fine, as not everyone knows themselves well and further even if they do know, not all can articulate. It is not leading questions but probing to remove ambiguity and develop certainty of concept within your study sample.	

Source: Created, designed by the current author.

After these insights, Table 4.8 depicts the changes made to specific questions in the interview guide.

Table 4.8 presents the before and after of specific interview questions which were changed.

Interview Question/Probe before Pre-test	Interview Question/Probe after Pre-test
Why do you prefer this option?	Why do you prefer this option? What made you choose this particular option?
Do you surf the net before deciding to partake in a healthcare consumption choice to address your issue?	How did you make the choice?
What prompts you to surf the net when trying to address the healthcare issue?	What are the modalities or approaches or sources you use when choosing your healthcare option?
How do you react when you are faced with new information whilst you are researching about your health requirement?	How do you absorb and deal with new information whilst you are researching about your health requirement?

Is there a delayed reaction as well (over couple of hours/a day)?	Is there a delayed decision-making or do you postpone health seeking as well (over couple of hours/a day)?
If so, can you describe it and how different was it from your first reaction?	Was there a shift or change in your response/thoughts from the initial stage to later stages?
What takes over in that scenario? Please explain to the best of your ability. Please provide an example of an instance.	When you made this choice of taking this care, or decided not to: - I would like to go through some of your inner experiences… *Probes: - when you sensed it what were you doing?* - *What was your state of mind prior to your choice? Once you made the choice and at this moment?* - *Can you explain the feelings you had at the time?* - *Specify the feelings that you ignored? And specify the feelings you held on to?* - *What feeling overpowered the rest and why do you feel so?*
Is there any process you employ to understand yourself better on a general day-to-day basis?	Is there any process you employ to arrive at your own need for specific healthcare?
Is this the case every time you research about a healthcare requirement or does it vary based on the need felt? Please explain with examples to the best of your	Is this the case every time you research about a healthcare requirement or does it vary based on the need felt? Please explain with examples to the best of your ability. Preferably three examples

ability. Preferably three examples to understand types of latent needs.	to understand type and intensity of your need.
Why do you think you are sure of your own self?	How much are you aware that you are sure in most of your decisions? Please describe with some examples.
What indicators personally suggest this for you?	What indicators personally suggest this for you? Can you specify points/instances of surety…?
Explain the process by delineating what factors you consider when undertaking this procedure to be certain?	Explain the process of identifying factors you consider when you make a choice of your healthcare?
In your words, explain the instance when you perceived a healthcare requirement, proceeding through the whole process of finding the right choice and what you felt after you found the right fit?	In your words, explain an instance when you required healthcare. Narrate how you proceeded through the different stages.
Explain, the differences in mentality that you were able to sense within yourself. You can provide an example of an instance too.	Explain, the differences in your mental state that you were able to sense. You can provide an example of an instance too.
Highlight how does your perception of technology, mindset and social context influence the process? Explain in your own words, or an instance.	Highlight how does your understanding of technology, personality and your social context influence your choice. Example…

Source: Created, designed by current author.

Further to the above table, a couple of questions and probes were removed, citing redundancy: all this shaped, the final interview guide utilised in the pilot and main study. (See appendix B).

Table 4.9: the connection between research objectives (ROs), research questions (RQs) and questions in the interview guide along with literature derived from

RESEARCH OBJECTIVES (RO)S	RESEARCH QUESTION ADDRESSED (RQ)S	QN CODE	SECTION 1 – INTRODUCTION – NAME, AGE, CHOICE DESCRIPTIONS	SOURCE/INSIGHT INFORMING THE INTERVIEW QUESTION	KEYWORD
N/A	Description	1	What is your most preferred way of healthcare and why? (Allopathy, Alternative medicine, DIY (Do-It-Yourself) – thanks to google etc…)	N/A	Participant Details
Probe for 1			*provide examples for participation from participant*	N/A	N/A
Follow up to 1		1.1	Why do you prefer this option? What made you choose this option?	N/A	Preferred HC Option
N/A	Description	2	How did you make the choice?	Banerjee, 2017; McKenna, 2019; Safavi, 2019, Priporas, 2020	Activity prior to deciding
N/A	Description	3	What are the modalities or approaches or sources you use when choosing your healthcare option?	Antevenio, 2019; McKenna, 2019; Safavi, 2019, Priporas, 2020	Activity Inertia
RESEARCH OBJECTIVES (RO)S	RESEARCH QUESTION ADDRESSED (RQ)S	QN CODE	SECTION 2 – PARTICIPANTS HABITS AND HEALTHCARE BEHAVIOUR INSIGHTS	SOURCE/INSIGHT INFORMING THE INTERVIEW QUESTION	KEYWORD
RO1	RQ1	4	How do you absorb and deal with new information whilst you are researching about your health requirement?	Antevenio, 2019; Nageswari, 2019; Zoghby, 2019	Reaction

	Follow up to 4	4.1	Is there a delayed decision-making or do you postpone health seeking as well (over couple of hours/a day)?		First Reaction
	Follow up to 4	4.2	Was there a shift or change in your response/thoughts from the initial stage to later stages? *Probe: Time and change in consumer behaviour*		Delayed Reaction
RO1	RQ1 & RQ2	5	What is the most important/critical aspect that facilitated your process of making this choice? Please provide an example of an instance.	Seitz, Borde & Koster, 2012	Overpowering Feeling
RO1	RQ2 + RQ1	6	When you made this choice of taking this care, or decided not to: - I would like to go through some of your inner experiences…	Khachouf, Poletti & Pagnoni, 2013; Walter, 2008	Cognitive state
Probes which are not leading questions and due to the complexity of the cognitive orientation trying to be arrived at (latent need), the number of probes are more			- *when you sensed it, what were you doing?* - *What was your state of mind prior to your choice? Once you made the choice and at this moment?* - *Can you explain the feelings you had at the time?* - *Specify the feelings that you ignored? And specify the feelings you held on to?* - *What feeling overpowered the rest and why do you feel so?* - *Which of the feelings sustained? Please elaborate…*		*Cognitive states*
RO1	RQ3	7	How do you feel that need taking over your digital research? Explain how you sense it.	Antevenio, 2019	Digital Research
Probes for 7			*- Can you describe the experiences? More specifically: -* *- Your moods.* *- Feeling frustrated due to information overload* *- Faith in the data…*		Digital Research Lead by and experiences therein

RO2	RQ1	8	Is there any process you employ to arrive at your own need for specific healthcare?	Khachouf, Poletti & Pagnoni, 2013	Heuristic Reliance
	Follow up for 8	8.1	Do you utilise that when faced with dilemma and options in terms of healthcare consumption?		Healthcare Heuristic Reliance
RO1 + FRO1	Descriptive + RQ1	9	Is this the case every time you research about a healthcare requirement or does it vary based on the need felt? Please explain with examples to the best of your ability. Preferably three examples to understand type and intensity of your need.	Bayindir & Kavanagh, 2019; Khachouf, Poletti & Pagnoni, 2013; Safavi, 2019	Different mechanisms of heuristic reliance
	Follow up for 9	9.1	The last time you had a healthcare requirement, was it a similar approach from an earlier healthcare requirement and subsequent choice to be made?		Approach differentiation/validation
	Probe for 9		- *What differed in the scenario at that time, (magnitude of unpleasantness, type of need etc.)?* - *Why and how (please explain the emotions/feelings in the process)?* - *Also, kindly explain the process you undertook (if that differed too).*		Different Heuristic Approaches
RESEARCH OBJECTIVES (RO)S	**RESEARCH QUESTION ADDRESSED (RQ)S**	**QN CODE**	**SECTION 3 – PARTICIPANTS HEURISTIC RELIANCE BEHAVIOUR AND UNDERSTANDING**	**SOURCE/INSIGHT INFORMING THE INTERVIEW QUESTION**	**KEYWORD**
Aiding RO1 + RO2	RQ2 + descriptive	10	Why do you feel the necessity to be sure before fixing on a choice? What understanding, prompts this?	Banerjee, 2017; University of West Virgina, 2015	Risk-aversive tendency
	Probe for 10		- *life experiences* - *seeing your parents' lives etc...*		Risk-aversion stimuli

RESEARCH OBJECTIVES (RO)S	RESEARCH QUESTION ADDRESSED (RQ)S	QN CODE		SOURCE/INSIGHT INFORMING THE INTERVIEW QUESTION	KEYWORD
			- *or even that of your older or younger siblings.*		
RO2	RQ2	11	Can you describe your mechanism to be sure of a decision?	Antevenio, 2019; Gurski, 2019; Ozdemir, 2019	Process to reduce risk
	Follow up for 11	11.1	Explain the process of identifying factors you consider when you make a choice of your healthcare?		Factors to reduce risk
Aiding RO1 + RO2	RQ2	12	How much you are aware that you are sure in most of your decisions?	Carpenter, 2019; McKinsey, 2018; Vennare, 2019; Young, 2019	Self-esteem
	Follow up for 12	12.1	What indicators personally suggest this for you? *Can you specify points/instances of surety…?*		Understanding of self-esteem
	Follow up for 12	12.2	Kindly provide examples as how you recognise this in yourself?		Self-esteem indicators
RO2	RQ2	13	Would you call yourself action-oriented? If so, please explain your rationale by providing examples indicating the trait.	Small et al., 2009	Mindset insight
RESEARCH OBJECTIVES (RO)S	**RESEARCH QUESTION ADDRESSED (RQ)S**	**QN CODE**	**SECTION 4 – CONCLUSION**	**SOURCE/INSIGHT INFORMING THE INTERVIEW QUESTION**	**KEYWORD**
RO2	RQ2 + descriptive to expand procedural insight	14	In your words, explain an instance when you required healthcare. Narrate how you proceeded through the different stages.	University of Illinois at Urbana-Champaign, 2018	Healthcare Consumer decision-making
	Follow up for 14	14.1	Explain, the differences in your mental state that you were able to sense. You can provide an example of an instance too.		Cognitive Orientation during consumer decision-making

| RO2 + RO3 | RQ3 | 15 | In case that you feel frustrated with oncoming information due to content marketing, how do you deal with it? Please explain in terms of the technology used (apps, devices and essential elements from a consumer angle), your psychological mindset (feelings, emotions and orientation of the mind) and social context (if any). | Priporas, 2020; Stankevich, 2017 | Information Processing |
| | Follow up for 15 | 15.1 | Highlight how does your understanding of technology, personality and your social context influence your choice. Example… | | Cognitive-Orientation |

4.9.1.2 Themes Extraction Approach

For this thesis (main and pilot study), the below approach was utilised within NVivo and by the researcher, independent of NVivo, to extract themes and arrive at the findings. Each section below presents the process undertaken with a pictorial representation of the project in NVivo. Furthermore, initially, as the interviews were conducted, the researcher could see pretty clear themes and sub-themes outlined and connected with reviewed literature. For example:

"allopathic doctors prescribe the medicine, but they are not the ones taking it. I need more information and to be fully informed before taking medicines. Don't want to be a life-long patient." – RP7: 22 years, Wheezing Homeopathy Consumer

"I chose to make lifestyle changes and self-prescribe my own medicines by a process of self-experimentation. I have seen my parents' lives and they have become very frail due to side effects of allopathic medicines not the disease. I will never want that for me ever." – RP5: 22 years, Chronic Back Issue Self-Experimenting via Google Searches Consumer

"Health is something which is very critical. I have suffered more from the side effects and issues of allopathic than anything else. So, I only prefer a treatment option, with no side effects, which I know will work on my body and will treat the cause, rather than the symptoms. Ayurveda provides that for me, as the doctor works to my body, informs me and tells me what to expect. I hate uncertainty. Also, each person's body constitution differs, and medicines can't work for everyone." – RP3: 21 years, Acute Cystic Acne Ayurveda Consumer

The above data from the one-to-one, face-to-face virtual interviews with participants inform us of the inherent risk aversion within generation Z healthcare consumers. Furthermore, the scepticism within generation Z can also be seen to stem from the notion of risk aversion. That is to say, due to their own bad experiences and also seeing that of previous generations' healthcare consumers who have suffered due to the side effects of medicines; generation Z consumers seem to automatically be operating with an aversive tendency toward healthcare and more so allopathy within India. A recent study about risk aversion by Stefansson (2020) suggests that risk aversion is a rational tendency to stimulate scepticism within individuals.

However, to detail the findings of the theme further, NVivo 12 was utilised as the below approach to bring rigour to this study's data analysis and the findings in each section.

4.9.1.2.1 Cases

First, each of the interview transcripts was transcribed. After that, they were saved as word docs in a Q and A format, as is the interview. Thereafter, all transcripts were imported into NVivo as files. Each of the RPs (Respondents) was saved as a case. See the below screenshot.

Figure 4.2 presents a screenshot of transcripts imported as files.
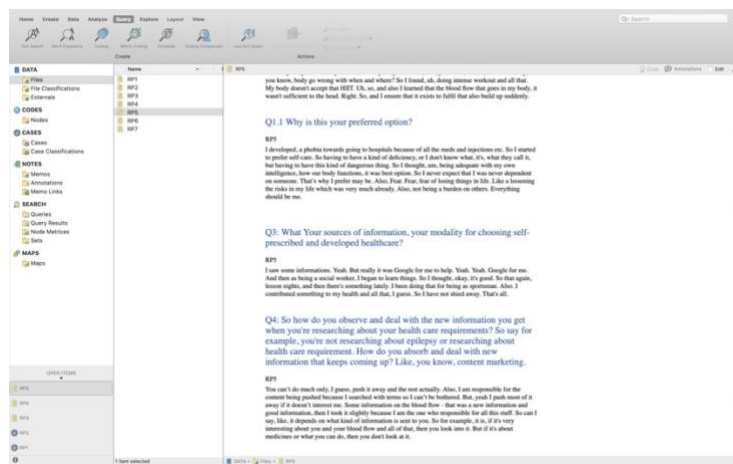
Source: The current author.

Figure 4.3 presents a screenshot of interviews made into cases – each respondent is one case.
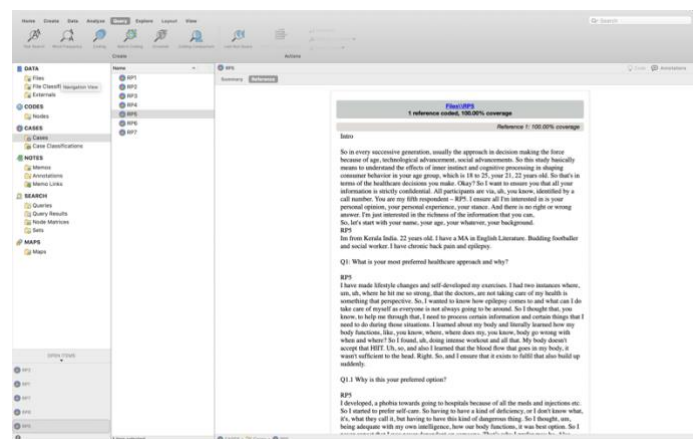
Source: The current author.

4.9.1.2.2 Nodes

For this study, nodes were created, which are buckets/containers to enable inserting chunks or specific interview data into the areas they refer to. Due to the psychological nature of this topic, the nodes were initially highly descriptive. After that, each transcript was revisited and further checked for the omission of themes or information that could have been overlooked. This enabled further refining the nodes into broader and more one-word/two-word specific nodes. The refining process also involved revisiting the research questions, aims and objectives to understand the purpose of the interview questions and re-iterate what the researcher is trying to extract and what the interviewee is conveying about the concept. Below are screenshots – Figures 4.4 and 4.5, and they show the refinement process the study went through.

Figure 4.4 presents the initial descriptive nature of the nodes.
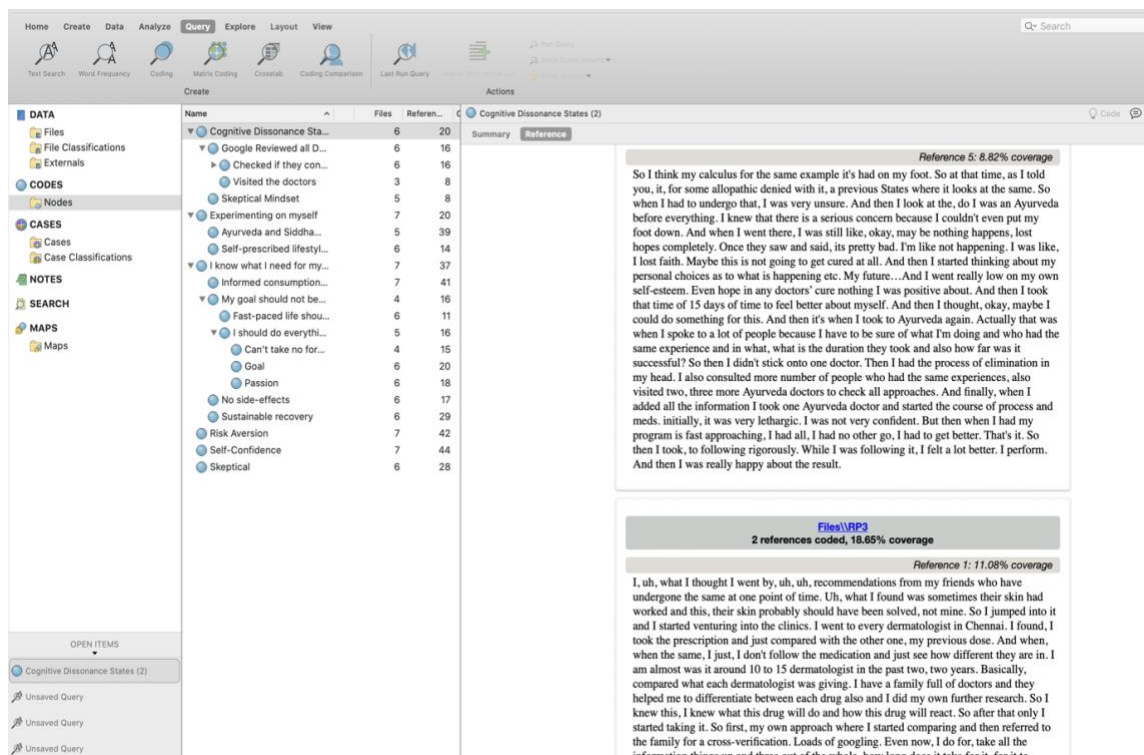
Source: The current author.

Figure 4.5 presents the refining of the nodes.
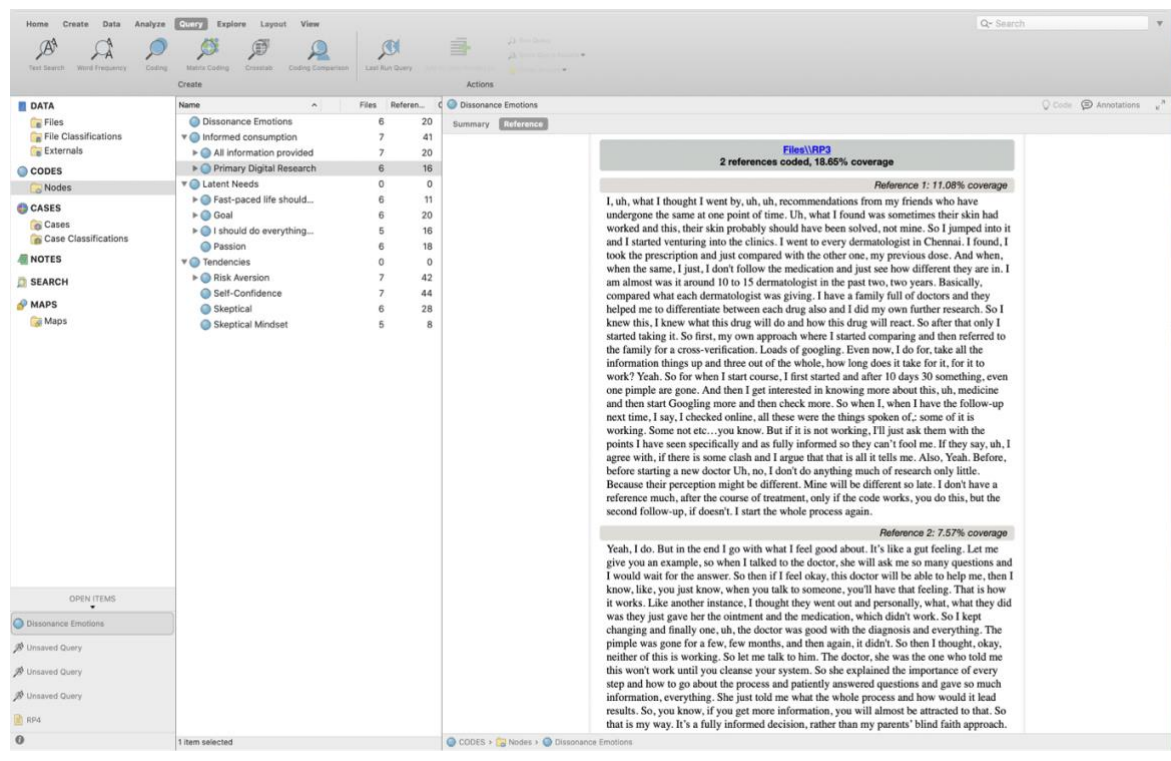
Source: The current author.

Furthermore, the researcher being more visual in nature, utilised the process of creating specific mind maps to understand the interrelation of concepts. Time and again, the mind maps were made into nodes throughout the refining process to understand further the intricacies of the data being conveyed in the interviews and their relation to the more significant concepts. See screenshots below 4.6, and 4.7 of refining which the mind maps went through. Further, as NVivo provides the options of making the mind maps into nodes, this was also undertaken in the refining process to get into the depth of the data generated in the interviews.

Figure 4.6 presents the initial mind map constructed with the data read.
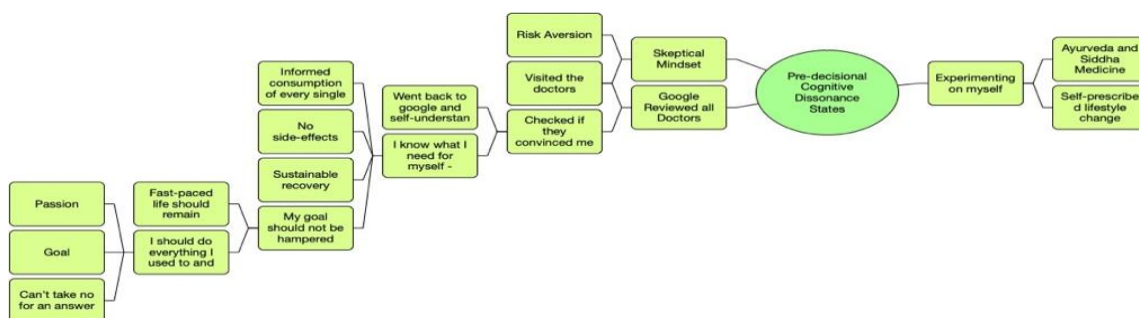
Source: The current author.

Figure 4.7 presents a further refined mind map. However, this, too, went through further iterations later.
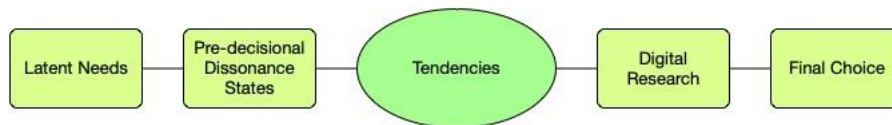
Source: The current author.

4.9.1.2.3 Coding Process within NVivo: Data Reduction

Jackson and Bazeley (2019) demonstrate the advanced coding process within NVivo. Coding as a process is highly iterative. The researcher, therefore, utilised the process of moving to the transcripts, re-reading them and right-clicking to drop into specific nodes. Thus, the coding process was constantly changing over many days. Finally, the output from a viral to a vista code was generated, as is the below node hierarchy. See below figure 4.8.

Figure 4.8 presents the cleaned node hierarchy.
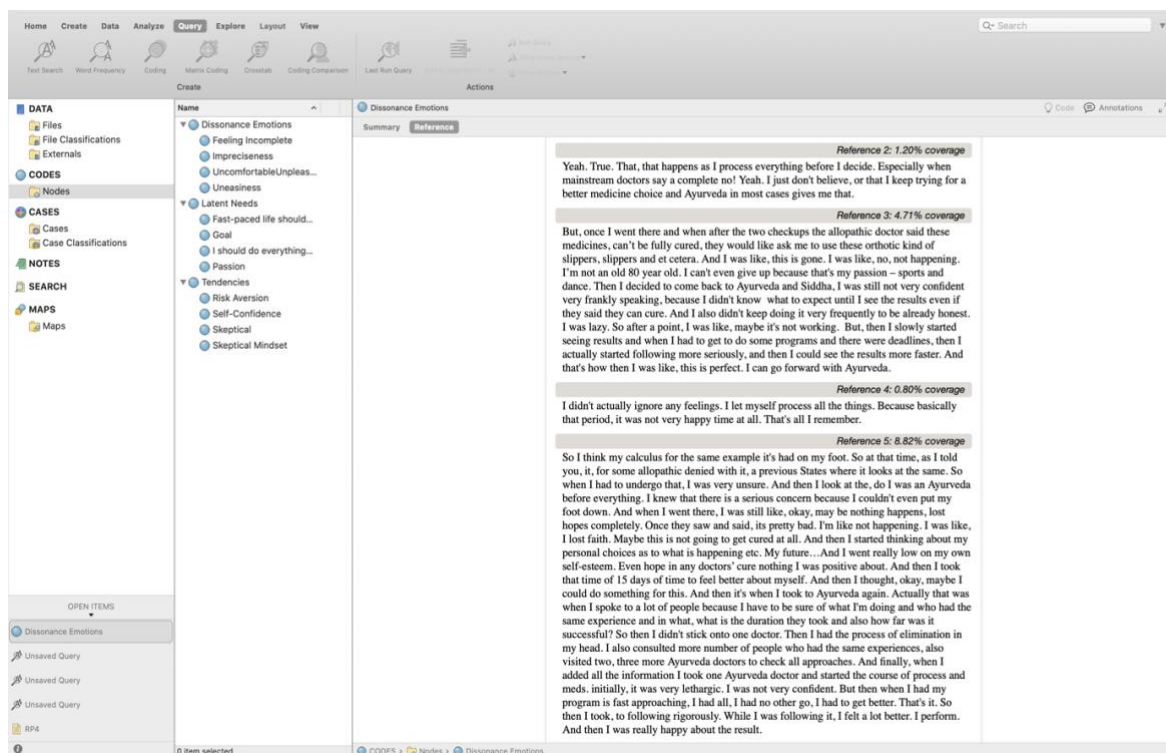
Source: The current author.

Furthermore, due to the latent need aspect as a cognitive heuristic element within the psychological phenomenon of cognitive dissonance, the researcher specifically undertook the

approach of re-reading, sifting and clustering the transcript words by coding them into nodes. Auto coding as a mechanism was not opted for as clearing up the auto code was seen to be more cumbersome than actually coding by the back-and-forth approach. Further, this was deemed necessary for the conceptual grounding of the codes, which would after that aid in ascertaining a "set of nodes for a meta concept or theory" (Jackson & Bazeley, 2019, p. 124). To explain this further, there were instances where respondents mentioned the following: -

"You know it's difficult to say what it is; it is a gut feeling. A feeling that this is right for me. Confidence comes in, the uncertainty leaves me" – RP3, 21 years, Acute Cystic Acne Ayurveda Consumer

"How to explain it. Let me jot down what happens…ok. Fear leaves me, there is a calmness, and there is immense confidence, that it will work for me" – RP4, 25 years, Chronic Back pain Ayurveda and Siddha Medicine Consumer

"Due to the approach and all the information I get….I am filled with hope. I know what to expect; I know it is right. There is an alignment inside of me…that I am safe, you know. Alignment of inner gut feeling, with my aspirations and my recovery choice" – RP2, 25 years Knee and foot injury Ayurveda and Siddha Medicine Consumer

The above are three examples wherein the constant process of seeing the answer to the interview question, mentally relating it to the literature reviewed and then interpreting it into nodes was of utmost necessity. However, the researcher would like to say that there was careful steering away maintained from any sort of bias and reflexivity as a process was followed.

In addition since the thesis utilises thematic analysis as an analysis approach Braun and Clarke's (2006) the data reduction process also followed the approach suggested by Braun and Clarke as well as the below table.

Steps in Data Reduction
Transcribing

Taking notes of interest
Coding across the data set
Searching for themes
Reviewing the themes
Defining and naming the themes
Report writing

Source: Braun and Clarke, 2006

4.10 Pilot Study

A pilot study is considered essential for an exploratory study (Saunders, 2019) to test for readability and content relevancy about the specific study objectives (Priporas et al., 2020a, b; Priporas & Vangelions, 2008; Priporas & Poimenidis, 2008) Thus, within this study context, the pilot study had seven participants. The reason for choosing a size of seven participants is because according to Connelly (2008) and Hertzog (2008), pilot study sample sizes are usually 10% of the sample size of the main study. As the main study constitutes a sample size of 35, owing to extant literature indicating 35 to be a good sample size (Creswell, 2013; de Ruyter & Scholl, 1998; Saunders, 2019), 10% of 35 would be 3.5, and so to round off and increase insights gained, seven is the chosen number of participants.

The pilot study took place from November 25th to December 9th 2020, as virtual face-to-face online skype interviews with seven participants from different locales in India between 18-25 years of age who are current healthcare consumers. All participants were provided with the participant information sheet comprising details of the study and the informed consent form about the study. All participants read through and signed each of the forms and consented to be recorded on video (see appendix D). After receiving each form for each participant, the interviews were conducted at a mutually convenient and agreed-upon time (owing to time differences between India and UK).

4.10.1 Organization of the Themes Extracted from the Data

As the coding process indicated, the themes extraction is three-fold. Post the coding process and the refining of all the data analysis elements. The researcher believed that to enhance further understanding, the themes need to be organised into different categories about the

cohort and the phenomenon under study. Therefore, using Attride-Stirling's (2001) approach to thematic network analysis, the researcher has organised the themes into basic, organising and global themes in a thematic network.

In other words, the approach enabled insight and understanding of texts concerning emerging patterns by categorising the themes further. For instance, "Basic themes are the lowest-order theme derived from the textual data. It is like backing in that it is a statement of belief anchored around a central notion (the warrant) and contributes toward the signification of a super-ordinate theme" (Attride-Stirling, 2001, p. 388). Once the basic themes were formed, they were further built into organising themes. Organizing themes, Attride-Stirling suggests are, "middle-order themes and are clusters of signification that summarise the principal assumptions of a group of basic themes, so they are more abstract and more revealing of what is going on in the texts. However, their role is also to enhance the meaning and significance of a broader theme that unites several organising themes" (Attride-Stirling, 2001, p. 389).

Leading with the basic themes to an organising theme led to further understanding of the concept, i.e., the global theme, which in the case of the study is "latent needs", arousing "cognitive dissonance", leading to a particular healthcare choice. Attride-Stirling (2001) mentions that "Global Themes are super-ordinate themes that encompass the principal metaphors in the data as a whole. A global theme is like a claim in that it is a concluding or final tenet. As such, global themes group sets of organising themes that together present an argument, or a position or an assertion about a given issue or reality" (Attride-Stirling, 2001, p. 389). Therefore, below is the thematic network that was arrived at from the organisation of the themes.

Further, the network before illustration refined by rechecking the transcripts to verify its structure as arriving clearly from the coded data.

Figure 4.9: thematic network organisation of themes.
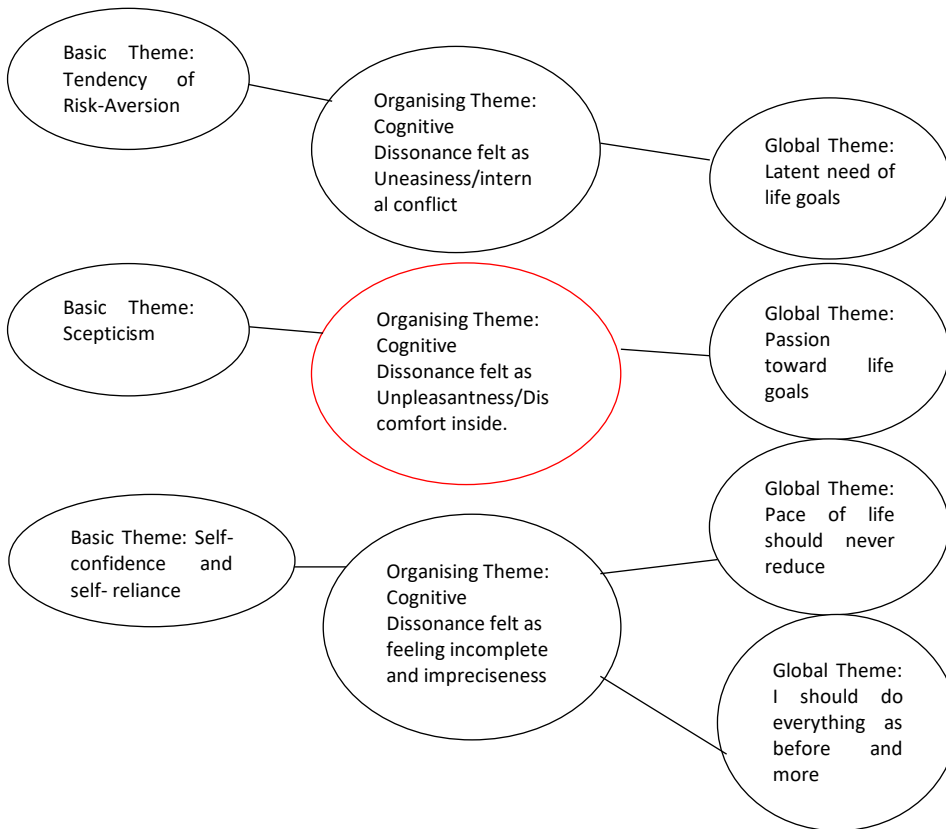
Source: The current author.

In the above, figure 4.9 of theme extraction. The basic theme depicts the tendencies developed by generation Z concerning latent needs and dissonance toward healthcare consumption which leads to the organising theme i.e., the aroused pre-decisional dissonance phase within Zers. Following this, the organising theme leads to the basic theme which is latent needs in a Zers.

To delineate the thematic network further, we will take each theme/network developed and describe them with supporting text segments from the interview transcripts. As prescribed by Attride-Stirling, the networks will be described as moving from the tendencies (outside) to inward (the central concept – reality).

4.10.1.1 Generation Z's Tendencies – Basic Themes

All seven participants in the pilot study highlighted three main common tendencies. They were – scepticism, risk aversion and self-confidence and self-reliance. The questions in the

interview guide about extracting these themes were: Q1.1, Q6 and the probes therein, Q8, Q10 and Q11. (See appendix B for the interview guide).

4.10.1.1.1 Scepticism

Scepticism seems to be the default mindset of generation Z. That is to say, concerning healthcare, the participants reported: -

*"I am by **default sceptical**. For anything I consume, more specifically to medicines, I always ask, how can everything work for everyone in allopathy? It may not work for me." – RP7: 22 years, Wheezing Homeopathy Consumer.*

*"My approach is because of horrible experiences. I **don't trust nowadays**. So, I started venturing into the clinics. I went to every dermatologist in Chennai, I found**. I took the prescription and just compared with the other one, my previous dose. I don't follow the medication; I first see how different they are. I have physically gone to around 10 to 15 dermatologists in the past two, two years. Basically, compared what each dermatologist was giving to differentiate between each drug also and I did my own further research after reading components**. So, I knew this, I knew what this drug will do and how this drug will react." – RP3: 22 years, Acute Cystic Acne Ayurveda Consumer.*

*"I started looking for alternate options for my CS problems, like when I had Jaundice et cetera, and also my knee problem. I **was sceptical of every** healthcare option thrown to me." – RP2: 25 years, Knee and Foot injury Ayurveda and Siddha Medicine Consumer.*

*"I **am very sceptical of allopathy** medicines, because I have seen my parents' lives and how they have suffered. I don't want that to be me in 30-40 years' time. I just shouldn't be a burden to anyone" RP5: 22 years, Chronic Back Issue Self-Experimenting via Google Searches Consumer.*

*"So, fear was there, uncertainty, and I wanted assurance until **then I was sceptical of every tablet** and medicine." – RP4: Chronic Back Issue Ayurveda and Siddha Medicine Consumer.*

*"Before experimenting with treatments, I will check validity for me. **Nothing can be taken at face value**." – RP6: 21 years Wheezing Ayurveda Consumer.*

*"In terms of researching, even if google reviews indicate. They **also can't always be trusted**." – RP1: 20 years, Acne Home Remedy Consumer.*

4.10.1.1.2 Risk-Aversion

Following this is the **risk aversion** tendency – basic theme. That is to say, with respect to healthcare the generation Z participants reported: -

*"I have seen my parents and grandparents take allopathy and suffer**. I do not want that for myself**. I prefer home remedies." – RP1: 20 years, Acne Home Remedy Consumer.*

*"I haven't seen anyone go bad or anything. It is my own experience and my own self-oriented well-being that makes me **to make sure no side effects and I have nothing to lose when undergoing the treatment**." – RP2: 25 years, Knee and Foot injury Ayurveda and Siddha Medicine Consumer.*

*"My experiences have taught me to never jump into anything. I have had too much pain. So, never take anything without researching. Main is there should be **no side effects, and I thought I have nothing to lose**, so let me try Ayurveda." – RP3: 22 years, Acute Cystic Acne Ayurveda Consumer.*

*"I think main criteria is **no side effects** and usually plant-based and herb-based treatments and medicines are natural and good in that sense." – RP6: 21 years Wheezing Ayurveda Consumer.*

*"My dad is a life-long patient for back pain and with medication, he still walks as if he is super old with shoulders drooped. Where did medicine take him? My mom too is hooked on medication. Each medicine has its worse effects too. I **definitely don't want to be like them at any age**." – RP5: 22 years, Chronic Back Issue Self-Experimenting via Google Searches Consumer.*

*"I believe **in preventive care** and being safe than sorry. Life is already complicated, let's simplify by controlling one thing at least." – RP4: Chronic Back Issue Ayurveda and Siddha Medicine Consumer.*

*"I **take time before acting**, just if it becomes fine by itself, then at least no medicine**, no side effects** – nothing." – RP7: 22 years, Wheezing Homeopathy Consumer.*

4.10.1.1.3 Self-Confidence and Self-Reliance

Further in relation to their risk-aversive and sceptical tendencies, generation Z heavily relies on themselves and believes in **self-confidence and self-reliance – basic theme**. It is their complementing tendency as a positive tendency, in relation to the above two negatively oriented tendency. It is like a safety mechanism/surety mechanism for many.

*"Until **the option I chose resulted in me with a feeling of comfort and confidence**, I kept experimenting everything." – RP2: 25 years, Knee and Foot injury Ayurveda and Siddha Medicine Consumer.*

*"Ayurveda cures the actual cure. It detoxes and prevents too. That **I was confident with and it added up as** I read a lot on medicines and all provide medical backing to this option as sustainable. It felt right inside – gut feeling." – RP3: 22 years, Acute Cystic Acne Ayurveda Consumer.*

*"I needed to prevent more than bear. Preventive care as a lifestyle **provided me confidence and felt right**. It was something sustainable." – RP4: Chronic Back Issue Ayurveda and Siddha Medicine Consumer.*

*"I did my own research thanks to Google and further sites like WebMD etc, and understood blood flow, blood circulation and then I decided my exercises for myself and lifestyle changes. **I just knew it was right, as I saw my own research and changes' results.** I could get up from the bed at night faster even when in pain." – RP5: 22 years, Chronic Back Issue Self-Experimenting via Google Searches Consumer.*

*"I was **confident because, I saw others' results** due to the home remedies. Like my friends' acne cure etc. Better than a doctor is to see results and take a decision." – RP1: 21 years Acne Home remedy consumer.*

*"**I believed in it, and I think that's why it worked**. I think belief in the treatment is important. If you know it will work, it will work." – RP6: 21 years, Wheezing Ayurveda Consumer.*

*"I **believed** in homeopathy as I researched on it. It matched my issues and so, I **was confident on the treatment and my research**." – RP7: 22 years, Wheezing Homeopathy Consumer.*

4.10.1.2 Generation Z's Pre- Decisional Cognitive Dissonance Phase – Organizing Themes

The seven participants were posed intricate queries on their cognitive heuristic reliance and healthcare consumption choice. All the participants highlighted four common themes – unpleasantness, impreciseness, uneasiness/internal conflict, and feeling incomplete. The themes taken up are immersed in the transcripts relating to the interview guide questions. Therefore, the researcher produces texts below that explicate the feeling of the participants and has not taken a singular theme highlighting approach as previously done for the tendencies. Furthermore, all these themes or terms are related to one concept – cognitive dissonance. Therefore, it was decided to show best how it manifests as a feeling in generation Z; it is best not to dissect them into separate themes. But highlight them within a broad scope. Further, these themes answer RQ2 in the thesis. The questions in the interview guide about extracting these themes were: Q6 and the probes therein. (See appendix B for the interview guide). The participants' report about this is as below: -

*"They used to give it for two weeks and then come back to me after two weeks. And then I was not confident. Like I was in such so much pain. How will it go in two weeks? **And so I had a lot of confusion, uneasiness, internal conflicts, and frustration inside of me.** I don't know where to go. What is the right thing? And then, I researched out then that was the time I actually saw on Google and decided to stick to what I can keep changing and shifting like this – Ayurveda. It felt right" – RP2: 25 years, Knee and Foot injury Ayurveda and Siddha Medicine Consumer.*

*"I was a **bit hesitant even for it to work on me properly. How will this work? Those kind of thoughts. So, it was just too much of doubts, and unpleasant and unclear feeling you know.** So, I started and researched more, and my Ayurveda doctor gave me full information, sat and told me what to expect, what not to, how they will proceed. Most important though for me, no side effects, nothing to lose. So, let's try." – RP3: Acute Cystic Acne Ayurveda Consumer.*

*"I would take the tablet and then look at the pamphlet. Did they give you an added to the side effects? And I was **scared out of my mind. Also, more than fear, it was a feeling incomplete as I didn't have all the information**. So I wanted to go see what home remedy is possible in place of this. I was like I have to stop taking these meds. Because, um, you know, I'm not really feeling good and I don't like the side effects doesn't really sit with me." – RP1: 20 years, Acne Home Remedy Consumer.*

*"See, first when I, uh, when I contacted her the other doc, I thought she'd be like, just do this small changes something I read online, but then she gave me some three, four tests, then I thought, are you crazy? I should do all these tests. I knew it's not a big problem. I'm not having these big kind of problem. Let me see. So I thought, yeah. Then of course, when I saw all that, **then I felt, let me not go further in this, this lane its not the right approach. Something doesn't feel right.** And then I changed the doctor only. I never went after that." – RP4: Chronic Back Issue Ayurveda and Siddha Medicine Consumer.*

*"How to put it…it was more of a **conflict between brain and heart! Like the more my brain said that Come on, you're not supposed to betray us like this – allopathy is good. But my internal feeling is it's not helping, so what use? I should get fine. I have to take things into my hands for my self-care**. Plus, due to bad experiences, I have a phobia toward hospitals. So, **all the conflicts made me** to self-experiment more." – RP5: 22 years, Chronic Back Issue Self-Experimenting via Google Searches Consumer.*

*"**It didn't feel right, and I wasn't comfortable**. Also, I didn't reduce rotohaler reliance, I continued, and it increased other issues, so I said…no more. Let me try Ayurveda and Siddha Medicine and see, at least no side effects." – RP6: 21 years, Wheezing Ayurveda Consumer.*

*"Medicines can cause more allergies from my experience. So, everything prescribed **didn't feel right, when I googled. I wasn't confident and so, I kept searching** till Homeopathy."* – RP7: 22 years, Wheezing Homeopathy Consumer.

Each of the highlights in the interview transcripts provided here indicate manifestations of pre-decisional cognitive dissonance within generation Z. That is to say, as Festinger (1957) stated, cognitive dissonance is an unpleasantness that manifests. A person is not in equilibrium if an action has not been taken to resolve the unpleasantness – a conflict in the person. The organising themes clustered above – uneasiness, feeling incomplete, impreciseness and unpleasant are all indicative of the explanations provided from the data of the seven interviews. Furthermore, these organising themes enable three further insights. First, they aid in understanding the base of risk-aversion, scepticism and the importance of self-reliance and self-confidence by linking it to inner conflicts and feelings owing to pre-decisional cognitive dissonance. Second, it enables to understand the impact of pre-decisional cognitive dissonance in this specific cohort and their understanding of the psychological dissonance. Third, it enables to understand the influence not only of pre-decisional dissonance but the influence of the dissonance arousing cognitive heuristic element within generation Z (Festinger, 1957). In the case of this study, the below data presents the latent needs as cognitive heuristic elements.

4.10.1.3 Generation Z's Latent Needs – Global Themes

When asked what was the feeling that overpowered the rest of the feelings of scepticism, anxiety, doubts etc. And what they held on to during their choice and search phase; all seven participants listed specific needs that they felt overpowered any negativity they saw. They were – life goals, passion towards the life goals, I should be as before and need to maintain their fast-paced life. Further, these themes answer RQ1 in the thesis. The questions in the interview guide pertaining to the extraction of these themes were: Q2, Q6 and the probes therein, Q7, Q8, Q8.1, Q11, and Q11.1 (See appendix B for the interview guide).

4.10.1.3.1 Life Goals and Passion towards the Life Goals

*"I cannot take no for an answer. I don't like to sit even for a second. So, I disregarded all and held on to **hope and passion to do what I used to do – travel, dance, play etc and to do more in life**. My **goal and passion** overpowered all. **I wanted to everything as before and more.**"* - RP2: 25 years, Knee and Foot injury Ayurveda and Siddha Medicine Consumer.

*"I am always on the move, a football player, social worker. So, my **goal** was the one that made me not settle until I found the best for me. **I have to do everything as usual…**"* - RP5: 22 years, Chronic Back Issue Self-Experimenting via Google Searches Consumer.

*"I decided I can't let acne and its side effects determine my life. I have **a future I want**, and I **had to find something to make sure it goes away**"* – RP3 and RP1: Acute Cystic Acne Ayurveda Consumer and Acne Home Remedy Consumer Respectively.

4.10.1.3.2 Maintaining the Fast-Paced Life

*"I am only 21 and **can't slow down** just because I have wheezing, I have to sing and play and do **everything I have planned** for myself."* – RP6: 21 years, Wheezing Ayurveda Consumer.

*"I'm a footballer and I'm very good. I can't keep coming out of matches due to this need for rotohalers. I had to find something which will help me to not have issues when playing. Rotohaler dependency **will slow me down and I have a lot to do**"* – RP7: 22 years, Wheezing Homeopathy Consumer.

*"Being 25 **you want to do a lot and always be busy**…not have to lie down for long because of your back. So, yeah that I guess was the main feeling overpowering."* – RP4: Chronic Back Issue Ayurveda and Siddha Medicine Consumer.

Furthermore, one very interesting insight derived in RP2's interview was that: -

"I had lost all self-esteem and was depressed. Then one day, I thought what my goal is, what do I want to do…once my self-esteem came back, I took matters into my hands and started my search, with my goal in mind." – RP2: 25 years, Knee and Foot injury Ayurveda and Siddha Medicine Consumer.

This quote provides three significant insights about the study, generation Z and the concept of cognitive dissonance. One, generation Z is highly cognitively understanding – to perceive the self-esteem aspect. Second, as indicated by literature, that increased self-esteem was necessary to enable perceiving cognitive dissonance in a pre-decisional context (Carpenter, 2019, see chapter 2 derived literature), this insight provides a first-hand account of pre-decisional cognitive dissonance's existence and consumption behaviour shaping mechanism (Mills & Harmon-Jones, 1999). Third, it shows how latent need (goal) plays the role of a cognitive heuristic element aptly (Festinger, 1957) and enforces an action-based pre-decisional cognitive dissonance (Mills & Harmon-Jones, 1999) within generation Z.

4.10.1.4 Consumption Patterns Emerging from the Thematic Analysis

Further to the theme extraction, the patterns emerging from the data can be mapped to the below mind map.

Figure 4.10 presents a consumption mind map derived from transcripts in NVivo.
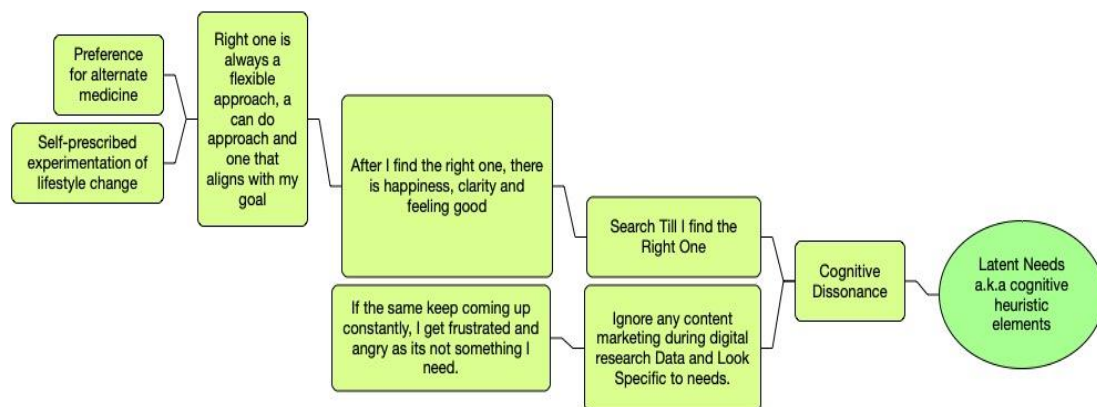
Source: The current author.

The above mind map has been constructed with all the transcript information processed in NVivo and also sifted manually by going through every transcript.

4.10.1.5 Discussion of the Findings and Correlating Data with Literature

Now that we have found all the themes concerning the consumption choice of generation Z, we will discuss each theme and set of themes concerning reviewed literature for correlation.

4.10.1.5.1 Cognitive Heuristic Elements Arousing Pre-Decisional Cognitive Dissonance and their Presence in Generation Z

As previously presented and logically derived in chapter 2, latent needs fall under the umbrella of cognitive heuristic elements due to their area of existence being one of self-reflexive awareness. From the data, we understand that there are four different latent needs guiding healthcare consumption in Indian generation Z current healthcare consumers. When we correlate the findings with the literature reviewed, it ties in with table 1.1 of the study, which highlights the difference between generations X, Y and Z. Most specifically, generation Z individuals believe in not "meeting mid-way and compromising". In their own words, "we don't believe in meeting halfway. We want to get what we want, and we know what we want" (Verma, 2020).

To delineate further, as indicated by Scholz & Vyugina (2019), since generation Z is highly self-actualised based on Maslow's hierarchy, their identified latent needs do not change. For example, life goals do not operate the same way for generation X or Y – wherein the cohort settled for the next best option (see table 1.1). Furthermore, in this sense, the "goal" transforms into the "need" and initiates a drive to act. In essence, it proves to be a motivational cycle in the minds of generation Z. According to Shreshta, "Motivational cycle is a transition of states within an organism that propels the organism toward the satisfaction of a particular need" (Shreshta, 2017). In this cycle, the motivational state is comprised of "need", "drive", "incentive", and "goal". When faced with a health complication that is felt to be a threat to their aspirations, a goal transforms into a necessity – a need. Because the individual feels low, depressed and uncertain about their plans, in the words of RP2, "*once I went there, and when after the two check-ups the allopathic doctor said take these medicines, but you can't be fully cured, they would ask me to use this orthotic kind of slippers, slippers and et cetera. And I was like, this is gone. I was like, no, not happening. I'm not an old 80-year-old. I can't and won't give up because that's my passion – sports and dance." – RP2: Knee and Foot Injury Ayurveda and Siddha Medicine Consumer.*

The shift in the mindset of generation Z, where their passion and goal are threatened as above, which makes them feel it's not happening and not right, proves to be a motivation to

constantly drive their action to keep searching for more and look till, there is an alignment between their need that is, *"had to stay with my goal, passion and doing everything as before and more" – RP2: Knee and Foot Injury Ayurveda and Siddha Medicine Consumer.*

In this regard, therefore, as described by Festinger (1957) that cognitive heuristic elements drive action; thus, "life goals", "passion for life", "maintaining a fast-paced life", and "doing everything as before and more" transform into latent needs (cognitive heuristic elements – derived earlier see chapter 2) that then become drivers arousing action-based cognitive dissonance (Mills & Harmon-Jones, 1999) which is only back in equilibrium once "what they need, what they find are in sync" as per the derived proposed framework and critiqued literature previously (see chapter 2). This understanding further highlights how the latent needs come to the forefront and become explicit needs in a consumer (Ahola, 2006), guiding their consumption.

4.10.1.5.2 Generation Z's Reliance on Cognitive Heuristic Elements Guiding Consumer Decision-Making

The data from the seven respondents proved highly insightful in understanding the approach to consumer decision-making as active digital researchers before choice fixation. From the interview transcripts, we could know that there is significant self-reliance and self-confidence. This factor affects their acceptance or not in terms of the healthcare choice they are presented with. To illustrate further, combining Q11.1, Q14 and Q14.1 – which dealt with this specifically in the interview guide (see appendix B). Taking a case (RP5) as an example from the data,

BOX 1: Healthcare consumer decision-making approach undertaken by RP5

HEALTHCARE APPROACH BY RP5

"Firstly, if I get anything weird happening in my body, I, firstly, I become aware of it. I need to be, you can't be not aware. So, I'm aware of it. Firstly, you need to be aware first that whats happening. Then, whether it is dangerous and non-dangerous, and the whole family is going to be affected or not. Then you need to work on it and you see options – again Google and see best modes for the

requirement. So, I understand that you need to first be aware of yourself and then work on it, work totally on it. I give time, mostly. I give it time. Then time, you know, if time isn't going to make things good. Then we learn it's bad. That's how I, I don't know if this method is going to be effective on anyone, but I believe, yeah, there was the most effective way for me. I'll give it time or sleep. And during all this, I analyze myself even like a specimen if I can say – study myself you know. You have your own understanding on what things arise, when does it arise and all that. So, I first know about myself and then I approach, I don't immediately apply anything. I make sure my body I understand. Then what options? How they are and how was it for others? And then I go on for further input. Also, I do this because, so I might go see a doctor and then I'll explain what things are like. And he might ever get a bit of a better picture to treat me. And also explaining that to a doctor might help him even more. Then if he's got, you know probable ideas. If that works with the information I have, then yes. If not, Yeah. I give that time first and then I give time and then wait for, you know, if that doesn't work, I don't jump into anything and give it time. So, I need to understand all that before choosing one. Or I move on to another approach. I'm not fixated to one approach or style."

- RP5: 22 years, Chronic Back Issue Self-Experimenting via Google Searches Consumer.

Legend:

Need Recognition Stage of Consumer Decision-Making	
No immediate action until evaluation of alternatives and information search	
Information Search entailing evaluation of alternatives based on the awareness of the problem being backed by need to get to back to the goal	

Source: The current author.

In relation to the above approach, there were corresponding cognitive states within the respondent. To delineate them,

BOX 2: Corresponding mental states in relation to the consumer decision-making approach

MENTAL STATES DURING THE HEALTHCARE CONSUMPTION SEARCH FOR

RP5

"So, the state of mine was probably, it might get healed someday. Yeah. There was one thing they are going to give. And first thing you obviously get a doctor or something, some homeopathic doctor. And then I thought, okay, How can they know? What if it isn't right for me? Because there was always a determination I want, I don't want to be a burden. All of this was the first priority again, but still you cannot sit down during this long in one place and then play football again was important. Anything will take time to heal was my thought. So, it doesn't happen instantly. That was my thought process. Also, I was angry on myself for damaging the back. Because I play football which means I have to miss matches and you get annoyed. I know at one point of the night you get; you get up in the night and you find your back responsible for you not being able to get up. You're not to go out of the bed. What are you doing? And all that. That was a worst situation for me. So, I thought that if you need to get out somehow my thought process and my understanding more of my body is needed. That's how…I took things in my own hands and started Google searches and self-prescribing changes of lifestyle for my own body only…"

– RP5: 22 years, Chronic Back Issue Self-Experimenting via Google Searches Consumer.

Legend:

Awareness of the problem tied to not being able to play football and having to get back to it. That is to say, - "need-driven". i.e., cognitive	

heuristic element driven as derived previously.	
No immediate action	
Processing bodily information and healthcare information in relation to need and fixing on a healthcare consumption choice	

Source: The current author.

The above transcription of the interview for the three questions in the interview guide of:

Q11.1 Explain the process of identifying factors you consider when you make a choice for your healthcare?

Q14   *Explain a healthcare instance and how you proceeded through the different stages of decision-making*

Q14.1 Explain, the differences in your mental state that you were able to sense during your healthcare requirement. You can provide an example of an instance too.

provide us ample evidence of how in RP5's case, the individual's cognitive heuristic element of getting back to football (in his case) and doing everything warranted a hands-on approach to searching on google and becoming attuned to his body. Further exemplifies how his latent need (cognitive heuristic element) generated the various emotions of dissonance and backed his digital research to make way for his self-experimentation and prescription of a lifestyle change for his healthcare issue. To elucidate further, in the case of RP5, he was affected by a severe back issue. This resulted in him not being able to play football and missing matches. As derived previously, the goal transformed into a need – a necessity. This need then guided all his mental states (aroused pre-decisional cognitive dissonance concerning the latent need). The mental states and the equilibrium sought after that, guided his process of evaluation of alternatives and information processing. Finally, after finding the one that "just felt right to me, I did the research and experimented on myself. *I saw my own research affecting my health positively and changes..."- RP5: 22 years, Chronic Back Issue Self-Experimenting via Google Searches Consumer.*

Similar to RP5, the other respondents (e.g., RP2, RP3, RP4, RP6) have a similar approach to choosing a healthcare option, all guided on the premise of their respective cognitive heuristic elements causing dissonance and selecting an option that is in line with their cognitive heuristic element. Thus, restoring equilibrium. (See appendix C for interview transcripts). The above example from the data and the insights further answer RQ3 of the thesis.

4.10.1.6 Summarizing the Findings and Adding Further Elements to the Proposed Conceptual Framework

Via the pilot study, it has become evident how latent needs arouse sensed cognitive dissonance and guide healthcare consumer decision-making in a highly cognitive cohort as generation Z. As derived in chapter 2 and, further, in the pilot study and discussions above, the latent needs perform the role of cognitive heuristic elements arousing pre-decisional cognitive dissonance (Festinger, 1957) as per Mills and Harmon-Jones (1999) action-based model of cognitive dissonance due to higher self-esteem, higher heuristic reliance and neurological advances in the generation Z cohort (see chapter 2 and 3).

Thus, the latent needs extracted from the pilot data become the pre-decisional cognitive dissonance states. Due to the understanding of what needs to be attended to, i.e., generation Z individuals deploy the action-based model of cognitive dissonance (in a pre-decisional context) triggered by a cognitive element (driver) (Chacko & McElroy, 1983; Festinger, 1957; Flavell, 1999; Harmon-Joes, 1999; Harmon-Jones & Amodio, 2009). Therefore, the proposed framework, post the pilot, would have additional latent need components as pre-decisional dissonance states, as shown in figure 4.11.

Figure 4.11 presents the proposed conceptual framework post the pilot study including pre-decisional cognitive dissonance states.

Latent Need (Cognitive Element)

Generation Z

Action-based cognitive dissonance aroused owing to the cognitive element

Affect Regulation i.e. ACC (Anterior Cingulate Cortex) in the brain takes over to complete a task owing to the dissonance felt, overriding other cues and information

Selective Exposure and targeted digital research based on cognitive element (Antevenio, 2019) to address the need.

Types of latent needs, will result in pre-decisional cognitive dissonance states

Increased Self-Esteem

Neurological Mechanism

Reliance on Cognitive Heuristic Elements

Affects, 2nd step of consumer decision-making (information processing) and establishes a goal-oriented consumer decision-making approach owing to pre-decisional cognitive dissonance states

Life Goal

Passion

Maintaining the Pace of Life

Should be as before and more

Source: The current author.

4.11 Reflections from the Pilot Study

The study, in a nutshell, seems to be viable. It also shows that the aims set out in the thesis is a valid concept in the minds of generation Z and are very evidently being implemented. Furthermore, in terms of limitations of research, the researcher felt that even though COVID-19 proved to disrupt the work a little. The connectivity via zoom/skype and other mechanisms made up for it. Additionally, the insights from the pilot have boosted the understanding and impact of the thesis's main study.

4.12 Conclusion

This chapter began with an analysis of ontology and epistemology and explained why the researcher falls into the philosophy of critical realism. The chapter continued with an illustration of the research methodology of the thesis and explained the choice of adopting qualitative research approaches. Next, a thorough analysis of the research design was provided, followed by a presentation and the rationale for applying the thematic analysis. Adding to this, the chapter provided a detailed illustration of the participant selection process, sample size, and procedures applied.

The chapter continued by rationalising on the choice to adopt semi-structured interviews as the data gathering technique and explaining the analytical methods applied in the different phases of data analysis, including NVivo illustrations. The chapter depicted the theme extraction process and further organisation of the themes. Then each network was described with interview transcript illustrations to aid the case. Lastly, the proposed framework has been further developed owing to the findings from the pilot of the latent needs as pre-decisional cognitive dissonance states (combining Festinger, 1957 and Mills-Harmon-Jones, 1999). Furthermore, based on the data of the pilot study, the chapter also presents the validity and existence of the concept of pre-decisional cognitive dissonance guiding generation Z's healthcare consumption. Therefore, showcasing the main study to be possible on a larger scale whilst having optimum outcomes. The reason for saying this is that from the perspective of the pilot study, RO1, RQ1, RO2, and RQ2 have been successfully delineated, as evidenced by data.

Further RQ3 has also been evidenced above from the data. The RO3 of this thesis is literature-based one which will be built on RO1 and RO2 (both proved to be viable in the pilot) and further upon from literature post the main study. Hence, it shall be dealt with in chapter 5 specifically.

CHAPTER 5: DATA ANALYSIS AND INTERPRETATIONS

5.1. Introduction

The previous chapter explained the research methodology and methods adopted for the empirical investigation of the study's research questions. This chapter presents and explains the findings from the empirical data of the main study. In addition, the researcher interprets and analyses the results by enfolding them with existing literature and various theories from several disciplines. The findings from the main study indicate that RO1, RQ1; RO2, RQ2 and RQ3 are positively ascertained. Furthermore, RO3 is literature-based of depicting how the developed framework can also be used to pre-empt the effects of latent needs on the intensity of cognitive dissonance aroused as part of consumer decision-making; according to the literature (see chapter 2), cognition's magnitude of dissonance can be ascertained (Sakai, 1999; Shultz & Lepper, 1999). This has also been derived and presented.

5.2. Procedure

The main study was conducted over six months spaced out in time due to covid-19 disruptions (May 2021 to October/November 2021). The main study followed the procedure entirely as per the pilot study due to the successful results achieved as part of the pilot study. The difference was in sample size alone. The main study was conducted with 35 participants per the study's delineation of the requirements of people. The participants were chosen based on the exclusion and inclusion criteria set as part of the research methodology (see chapter 4). All consent, anonymity and ethical considerations were also adhered to, as was done in the pilot study. In this regard, all participants were sent the consent form and the participant information sheet, and once they read through and agreed by way of signed consent, the interview was held (see appendix D). The interview style was semi-structured as per the pilot study, and the interview guide, too, did not change.

5.3. Findings and Interpretation Methods

Specifically, the themes are identified via data analysis of the main study. As in the pilot study, the researcher utilised thematic analysis integrated with Attride-Stirling's (2001) thematic network ordering of the basic, organising, and global themes. However, in this chapter, the focus is not only on delineation but on interpreting in relation to literature. In this regard, the

researcher details what themes were found, how they came about in terms of extracting them from transcripts and elucidating the underlying constructs that give birth to this phenomenon and typology. The themes are therefore arranged and will be discussed, as the below table: -

Table 5.1: Thematic Network Analysis Position, Theme Extracted and Corresponding Literature

Thematic Network Position	Theme	Corresponding Literature
Basic Theme	Scepticism	Tendency
Basic Theme	Risk-aversion	Tendency
Basic Theme	Self-confidence and Self-reliant	Tendency
Organizing Theme	Uneasiness	Pre-decisional Cognitive Dissonance
Organizing Theme	Feeling incomplete	Pre-decisional Cognitive Dissonance
Organizing Theme	Impreciseness	Pre-decisional Cognitive Dissonance
Organizing Theme	Internal Conflicts	Pre-decisional Cognitive Dissonance
Global Theme	Life Goal	Latent Need
Global Theme	Passion toward life goals	Latent Need
Global Theme	Maintaining the Pace of Life	Latent Need
Global Theme	Should be as before and more	Latent Need

Source: Current Author

5.4. Zers Tendencies and the Mechanism

Out of the main study, three main common tendencies were identified that overlap the pilot study's findings. They were – scepticism, risk aversion and self-confidence and self-reliance. This aligns with the pilot study as well. The questions in the interview guide about extracting these themes were: Q1.1, Q6 and the probes therein, Q8, Q10 and Q11. (See appendix B for the interview guide).

5.4.1 High Levels of Scepticism

Across the board, all 35 participants mentioned high levels of scepticism. Some were open to saying,

"I am a sceptic. Why should I believe everything" – RP2, 23 years, Sinus Homeopathy Consumer.

Whilst for some, it was extracted out of their answers such as the following: -

*"I **do not trust these** allopathy doctors. Bodies are different, so how can medicines be the same?" – RP3, 21 years, Sinusitis and Acne Ayurveda Medicine Consumer.*

*"I always look at everything with a **doubting mindset** due to prior experiences..." – RP4, 24 years, Home Remedy Consumer.*

*"It isn't what is said; it **is what is not said that I become aware of**, which makes me feel, **I can't trust**..." – RP5, 22 years, Covid-19 and following issues Home Remedy Consumer.*

*"It is by default that **I do not believe doctors and their medicines** at the first instance.... I take time, based on approach" – RP6, 22 years, Tonsilitis Ayurveda Consumer.*

*"I have had bad experiences with allopathy **and so I am sceptical of any doctor that comes my way** so I don't trust, I take everything with...how do we say it?!...pinch of salt. No blind trust!" – RP14, PCOS & Glaucoma Ayurveda Consumer.*

*"I have some kind **of distrust towards doctors that makes me doubt everything** they say due to my prior experiences with allopathy"* – RP22, PCOS Ayurveda & Homeopathy Consumer.

The mentions above all indicate a sceptic bent of mind. This even more so extends to google reviews and answers to search results.

*"Google is the worst place to type in your health conditions; it **can't be trusted** as it gives extreme results to symptoms search...."* – RP23, Homeopathy PCOD & Acne Consumer.

*"Due to being **doubtful of everything**, I search until I am fully informed and feel peace"* – RP35, Muscle Cramps Issues Ayurveda and Siddha Medicine Consumer.

5.4.2 Risk Aversion

The interviewed participants all presented high levels of risk aversion as well. When asked, why they prefer alternative medicine to allopathic medicine as their preferred healthcare choice, "no side effects was the major answer" by 33 out of 35 participants. Two participants suggested "ease of access" and "affordability". Risk aversion is essential in perceiving cognitive dissonance owing to the delineated understanding of Scher and Cooper (1989). Along with a sceptic mindset, risk aversion, the by-product of scepticism, is a crucial identification from data. Below are some examples of what risk-aversive tendencies presented within Zers.

*"**I do not want side effects**" – RP 2 to RP 34 (Varied medical needs – opting mainly for Ayurveda, Homeopathy, Home Remedies and Self Experimentation).*

5.4.3 Self-Confidence and Self-Reliance

From the data, we could find that Zers believe in themselves more and disregard that which does not conform to their ideologies or principles. This is another way of describing dissonance, which will be discussed later.

*"**I only do what I feel is right within me. I don't believe everything everyone says**." – RP20, Self-Experimentation Consumer for Covid-19 and Frequent Flu.*

*"I am highly **self-reliant** as I know myself well" – RP19, Ayurveda Chronic Calf Strain Consumer.*

*"I feel **I know what my body needs, why rely on someone else** to guide what I need" – RP17, Ayurveda Hair fall and motion sickness Consumer.*

Not only these three afore-mentioned instances above, which have been reproduced, but all 35 Zers interviewed re-iterated a similar ideology indicating a cohort understanding of increased self-esteem, belief, and reliance. This is in higher contrast to previous generations (see table 1.1); hence, delineation of the pre-dissonance states is possible (Carpenter, 2019; Scher & Cooper, 1989; Stone & Cooper, 2001).

5.4.4 The Mechanism of Utilising Tendencies

It is imperative to note that these above-extracted themes are crucial in two regards, first in perception and second in acting on them due to their high importance from a pre-decisional cognitive dissonance perception perspective (see chapter 2 literature delineation). In this regard, due to the semi-structured nature of the interviews, the mechanism of this first layer of constructs that delineate the second layer – the organising theme of pre-decisional dissonance can be described very specifically. This is because these tendencies indicate the necessity to be in equilibrium with oneself before final decision-making. The researcher explains it below after detailing a common ideology from one of the transcripts, which resonates with the interviewed cohort.

"I am sceptical.... I do not believe, and I do not want side effects. If there is a treatment that eases my mind and provides full informed decision-making possibility and feels right, I will opt for it. In my case, it's my own self-experimentation, as I have entire control of trial and error in the process." – RP20, Self-Experimentation Consumer for Covid-19 and Frequent Flu.

As a cohort with a sceptical mindset, self-esteem and self-reliance are always higher (Carpenter, 2019; Stone & Cooper, 2001). This orients one to believe that what they

experience as feeling suitable or appropriate for them, in their gut, is only fitting. Guidance/information/knowledge and awareness from doctors that affirms their beliefs are welcome and more information is needed for one that does not. If sufficient information is not provided, the requirement of searching continues, as scepticism still prevails, and so does the feeling of risk aversion (provided from data herein and Festinger, 1957). Moreover, self-reliance is directly proportional to the former two and higher. This brings a mechanism of 'do not act until consonance prevails'.

This is in line with the understanding provided in multiple studies on consumer behaviour that consonance/self-congruity is a prerequisite for motivating consumer purchase behaviour (Hung & Petrick, 2012; Kang et al., 2015; Kressmann et al., 2006; Sirgy, 1986). In the case of Zers, from data and literature to back it, it can be understood that these tendencies manifest the incongruence felt within (Carpenter, 2019; Ronis & Greenwald, Scher & Cooper, 1989). Furthermore, it is an indication that pre-decisional dissonance exists (Carpenter, 2019; Ronis & Greenwald, 1978) by way of the fact that if scepticism does not slowly reduce and finally subside; risk aversion does not recede, and self-reliance is not subdued based on information provided – pre-decisional dissonance is still in effect (Stone & Cooper, 2001). It further confirms that the action-based dissonance in a pre-decisional angle manifests in these tendencies (Carpenter, 2019; Ronis & Greenwald; Scher & Cooper, 1989). The higher their dependency, the lesser the consonance and vice-versa.

5.5. Pre-Decisional Cognitive Dissonance Appearance Perception

Pre-decisional dissonance in its entirety seems to be the guiding force in Zers' consumption practices. Based on the data of specific detailed questions identified as Q6 in the interview guide (see appendix B) and the probes therein, all 35 participants utilised certain particular words such as *"impreciseness", "uneasiness", indicating internal conflicts, "did not feel right to me", "feeling incomplete"*. More expressions utilised were *"that gut feeling did not come about", "doubt didn't leave me", "I was still not sure, and I had to continue to search",* to name a few, which have been taken and gathered into four specific words for ease of description from NVivo. Furthermore, it is imperative to note that these internal conflicts lead to more searching for appropriate treatment mechanisms. Essentially, all these mentions pertain to pre-decisional cognitive dissonance: uneasiness and unpleasantness enforcing an orientation

wanting equilibrium is exactly how Festinger (1957) explained cognitive dissonance. Furthermore, according to Mills and Harmon-Jones (1999), cognitive dissonance when the ACC is higher and more active (as delineated within Generation Z – see chapter 3), effectuates dissonance, which is action-based to bring about consonance and peace in the individual.

To elucidate, data of the 35 participants few of which are produced herein below, indicate the above delineation and insight.

*"Initially, I first became aware of the problem. After, I felt bad, but then I thought to myself I have to fix my life...so, I decided until I'm sure, I will not fix a choice**...so I searched and searched until all my doubts or feeling of worry, unpleasant weirdness I don't know exactly what to call it, left me**...that's when I knew, this treatment is right for me" – RP17, 18 years, Hair fall & Motion Sickness Ayurveda Consumer.*

*"I delayed immediate action until I felt that the treatment is something I know will work...I did my google search to understand body types and myself, and **then when there was a gut feeling that this is right within me like matchmaking, you know then**...I undertook the Ayurvedic treatment" – RP18, 22 years, Covid-19 and Frequent Sinusitis Ayurveda Consumer.*

*"As a self-reliant and self-believer, I had to make sure there was **no doubt in me, and these incomplete feelings left me...so until that feeling left** and I felt complete again inside, I searched and experimented with doctors, not treatment...within Ayurveda, I experimented the doctor to test if she/he knew..." RP19, 18 years, Ayurveda Chronic Calf Strain Consumer.*

*"I have DNS (Deviated Nasal Septum), so I must be cautious of treatment. So, I take control and I have this understanding that I am very aware of my body. So, knowing my body, **I know when I feel uncertain like something is not right...and so I used that to make sure that when I decided/fix a choice, my not right feeling became, yes! This is right for me! I should do it**" – RP24, 23 years, Deviated Nasal Septum Ayurveda Combined with Self-Experimentation Consumer.*

*"I know when something is not right...so when the doctors said, all these tests and treatments**, it didn't feel right. Like I felt not only physically uneasy due to my illness, but mentally uneasy too...like just overall unpleasant.** So, I kept searching without acting on anything they told me, then eventually through much asking for more and more information...**I finally decided on a choice, when all my unpleasantness emotionally, to be precise, left me and I felt confident"** – RP25, 23 years, Sinusitis and Tonsilitis Homeopathy Consumer.*

Figure 5.1: the appearance of dissonance in Zers from the data.

Source: The current author.

From the above few instances in quotes and the word cloud produced from the data, and all the other participants also having the same self-understanding approach, it is clear how pre-decisional dissonance appears within Zers. Moreover, it also depicts how they are aware and conscious enough to perceive the pre-decisional appearance. This can be attributed to the essential structural elements delineated within them (see chapters 2 and 3) for a person to perceive pre-decisional dissonance. That is to say, higher self-esteem, risk aversive tendency

and higher neurological competence are necessary to act with a goal in mind (Carpenter, 2019; Harmon-Jones & Mills, 1999; Ronis & Greenwald, 1978).

Figure 5.2: Mind map from transcripts that explicates pre-decisional dissonance in relation to the structural elements' levels from data of 35 participants in the study.
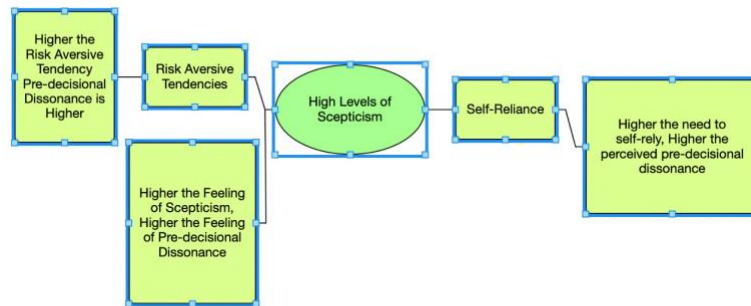
Source: The Current Author

5.5.1 The Mechanism of Adherence to Pre-decisional Cognitive Dissonance

To explicate the insights above, it is imperative to detail the adherence mechanism and follow through on pre-decisional dissonance from a Zers' perspective, drawing on data from the main study. Since it is better to figuratively explain the mechanism first and then detail later, figure 5.3 presents the mechanism of pre-decisional dissonance adherence concerning cognition and Zers' tendencies as developed in NVivo in the form of a mind map from the data.

Figure 5.3: Mind map obtained from transcripts in NVivo detailing perception and adherence to pre-decisional cognitive dissonance.
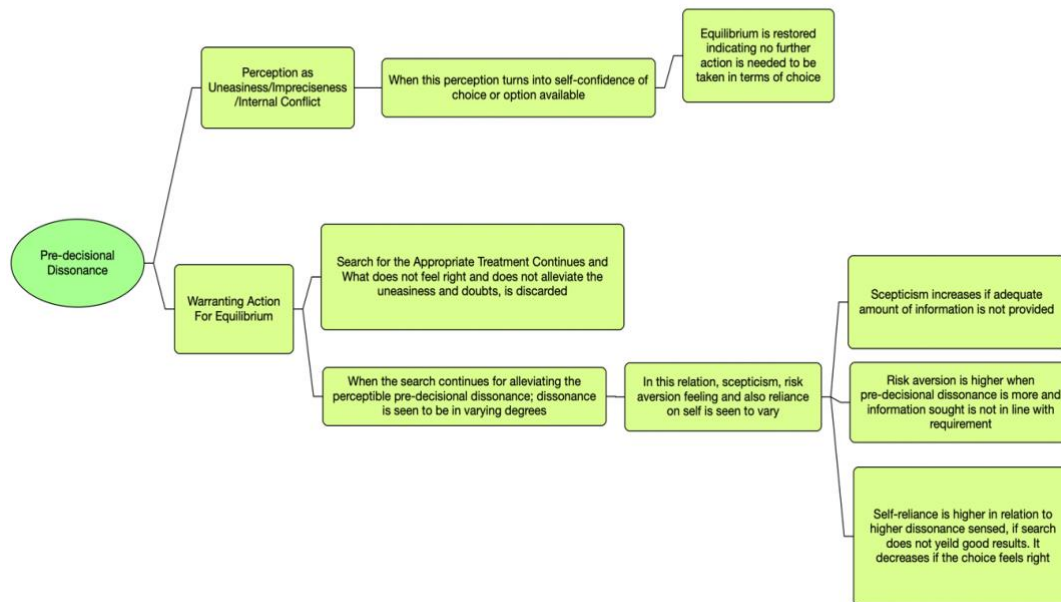
Source: The Current Author

To detail this mind map in figure 5.3, further, from the semi-structured interviews undertaken, as described above, when there is a perception of pre-decisional cognitive dissonance in Zers, action is taken in line with the need. The need facet we will come to in the next section. However, pre-decisional cognitive dissonance, having been seen as a guiding force in the search for healthcare, needs to be understood in that frame of reference.

As demonstrated by the data and the above understanding of the appearance of pre-decisional dissonance in multiple quotes, Zers can understand the feeling of pre-decisional dissonance as a motivating factor and utilise it as a force to fix a choice. For instance, in the words of RP20, 23 years, Covid-19 and Frequent Flu Self-Experimentation Consumer, below:-

*"You know when something is not right...you know. **It's a strong feeling that something is imprecise. I mean, how can I get a treatment I do not understand and doesn't feel right for me...so I believe awareness is most important. Awareness of the problem, awareness when***

*the option in front is right or not...and that guides...as in it guides to know...like do the doubts increase or do I feel more confident? It depends on the options...so, also, is it having the most important factor of no side effects, is that box ticked? So **I think, when all this goes away in some form...and I become confident, peace comes in me, and then that option is always right**. This is the process; the inside conflict aids me to search, and guides me to experiment on myself only, of course. It also helps me to delay the force with which doctors provide treatment, so, I don't mess up my health as in the end, it has to be right for me...which is why I experiment on myself before its right...through this experimentation too, my conflict increases and reduces depending on what I feel, and that fuels my search and choice fixing further".*

This sort of an approach is not only that of RP20, but also from the transcripts, it can be seen as similar to RP6-19 and RP22-34 with mentions such as the ones below: -

*"**Until the uneasiness goes, I keep searching... and until all my doubts go, as I have seen if my doubts increase so does my unpleasant feeling**, so I need to be calm when I fix the right choice...its health after all" – RP7, 20 years, Muscle Spasm Issues Ayurveda Consumer.*

*"How can you keep an **unpleasant feeling inside you, like a conflict** and be ok with a choice...no! I need to make sure; I feel satisfied before fixing on the choice, and there are no side effects, and it answers my requirement such that, I then feel a sense of peace and a feeling of...this is right" – RP26, 21 years, Chronic Back Pain Ayurveda Medicine Consumer.*

Therefore, it is safe to say that this generation – Zers, have pre-decisional dissonance to guide their consumption options. Furthermore, according to the data delineated from the transcripts and linking it to reviewed literature, the structural elements required to perceive pre-decisional dissonance is present in Zers (Carpenter, 2019; Ronis & Greenwald, 1978). Furthermore, we can conclude with factual data that, due to mentions of *"I am aware of myself and the internal conflicts, so I utilise that to guide..." – RP2-34,* the neurological mechanism as proposed in the action-based model of cognitive dissonance which is imperative to perceive pre-decisional cognitive dissonance (Harmon-Jones & Mills, 1999) is in effect a default formulation within Zers enabling them to perceive and utilise the cognitive

dissonance which appears in the pre-decisional stage to their advantage in terms of fixing their consumption choices.

Figure 5.4: depicts dissonance perception and decision-making process within Zers via words from the data transcripts.

Source: The current author.

5.5.1.1 The Changes in the Facets Providing Further Pre-Decisional Cognitive Dissonance Understanding to Zers

Additionally, the facets of scepticism being prevalent to perceive pre-decisional cognitive dissonance are also seen to change. That is to say, the more the feeling of scepticism, the more the pre-decisional dissonance and vice-versa. This is true even for the facet of self-reliance and self-confidence. That is to say, when perceived pre-decisional cognitive dissonance is higher, self-reliance is higher, and self-confidence is higher. When the Zer finds they are closer to the appropriate solution, self-reliance reduces, and so does self-confidence. Self-confidence is the confidence of the self, whilst generic confidence is evidence-based

concerning own thoughts/feelings (Creswell, 2022) on the choice/option increases restoring equilibrium. This is in line with literature by Festinger (1957), indicating that only the magnitude of dissonance will change in correspondence with the approach to alleviating the dissonance based on the cognitive element that requires resolving (Festinger, 1957; Gotz-Marchand, Gotz & Irle, 1974; Gotz-Marchand & Kumpf, 1973; Metin & Camgoz, 2011; McGrath, 2017). Therefore, the cognitive heuristic element and the value of importance on it determines how pre-decisional dissonance from an action-based angle is presented in the Zer, thereafter guiding consumption.

5.6. Latent Needs Identification and Its Guiding Force

Now, having known above how pre-decisional cognitive dissonance appears, is perceived, and acted upon by a Zer, we need further to explicate the facet of the cognitive heuristic element. It is this element that arouses the dissonance felt (see chapter 2 and Festinger, 1957) and also matching with that specific element's awareness, is what alleviates aroused action-based pre-decisional dissonance (Festinger, 1957; Harmon-Jones & Mills, 1999). Additionally, due to the delineation that a cognitive heuristic element, when known, will guide the pre-decisional dissonance (motivator) from a driver perspective, as the requirement is from a goal-directed place in a Zer (Chacko & McElroy, 1983; Flavell, 1999) due to brain and mind developments among this generation (Piaget, 1936).

From the data, we can say that requirements have been grouped into four specific themes – denoting Zers' *"life goal", "passion for life", "maintaining the pace of life", and "should be as before and more",* have been identified by the generation interviewed as latent needs, that made them: -

- Take control of things more firmly;
- Understand that they must align their treatment choice with the specific need that throttles their search (i.e., arousing pre-decisional dissonance within the cohort's specific individual needs).

Quotes such as the ones below give us ample evidence of how firstly, latent needs are identified by Zers in themselves. Secondly, how it arouses and drives pre-decisional dissonance indicates variations in the magnitude of the pre-decisional dissonance.

*"When there **is awareness of a problem**, I do not act immediately; I need to first figure out the issue, in a sense, **what is it that is getting affected, my goal? My passion? My quality of life? What is affected?** That helps me **understand why there is disharmony within me**...and **I use that to come to a solution** that works for me...even if I take time. I search, research, and then decide when doubts leave and confidence is restored"* – RP35, 24 years, Muscle Cramps Issues Ayurveda and Siddha Medicine.

*"I mean, when the doctors said, we will give you so many medications, I asked how the medicines will help me? They said it would control your symptoms...I mean, I laughed; how will that help. All I wanted to do, was **to be back to myself, to do whatever I did and more**...for that, only Yoga and Homeopathy helped...It was a slow, controlled process that assured me of success because it aligned with my need which is very important"* – RP15, 24 years, Mental Health and Chronic Back Pain Homeopathy and Yoga Consumer.

*"It's difficult to explain clearly, but you know **when you have a lifelong goal, in my case to be an ace tennis player, and I'm good**...but you have a back problem, and all these doctors say you have to stop playing... it's tough. I can't settle without reaching my goal, so...I decided that one injury, one problem, won't stop me because the solution was not available in front of me...So, I went from ayurvedic doctor to doctor one by one to find who is who and what they can offer. Who will tell me...go and play, and we will sort this fully, and you will play in the nationals...After 26 doctors, I'm serious...after googling about their success, reviews and testimonials, not on their website but in other places, including social media, I found the one who said, I will solve it; this is how we will get you back on track, and you will play all tournaments and train every day, and this will leave you. **You can say since this doctor matched treatment to my need, so I went ahead, and there was confidence too that came over that this is right all my doubts and impreciseness left**"* – RP13, 25 years, Chronic Back Pain and Epilepsy Ayurveda and Self-Experimentation Via Google Search.

From these quotes, we can understand how earlier derived latent needs, as cognitive heuristic elements (as per Festinger's 1957 ideation and see delineation further in ch2), plays the role of determining the approach to a Zer's healthcare treatment by arousing pre-decisional dissonance in them. In this regard, we can derive from the data that Zers have firstly the

cognition, delineated in the thesis, to act. That is to say, take control and act to decide that they are in control of their health. This comes from their neurological backing, which is a default mechanism due to their ACC activations and affect-regulation (Stevens et al., 2011). Additionally, they are perceptive enough to understand unpleasantness etc., as a pre-decisional dissonance that needs to be alleviated via their action alone. Moreover, this action they undertake should be corroborating/in correspondence with their requirement (latent need), which arouses this mismatch evidential pre-decisional dissonance. This further proves the literature delineated within chapters 2 and 3.

5.6.1 The Mechanism of Listening and Adhering to the Latent Need

The data further delineated how Zers even listen and adhere to the need. Figure 5.5 below presents a mind map built in NVivo from the transcripts of 35 participants.

Figure 5.5: Latent need evidenced as a driver arousing pre-decisional cognitive dissonance and guiding Zers' approach to healthcare consumption from all 35 participants in the study.
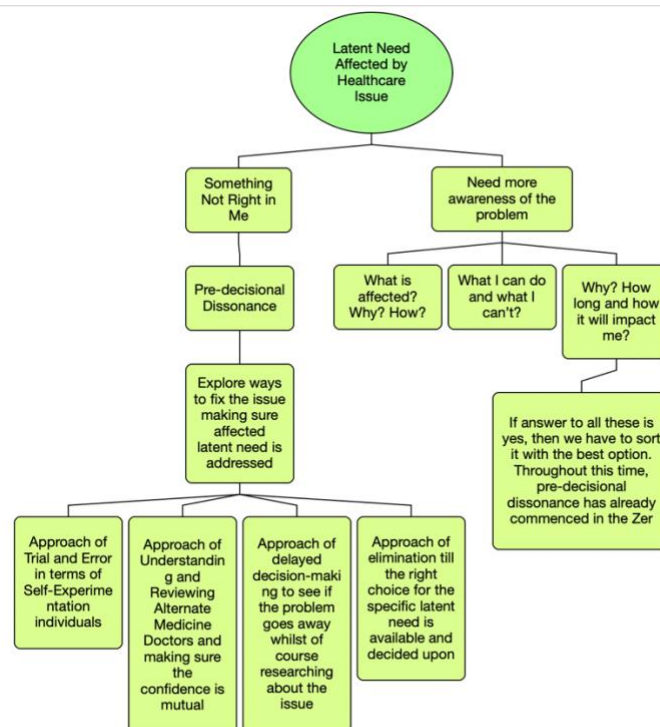
Source: The Current Author

To detail figure 5.5, whenever a healthcare issue for a Zer threatens their latent need, they utilise specific approaches. These approaches are guided by the fact that the latent need (cognitive heuristic element) is threatened in its existence in the whole gamut of life of the Zer. Given such a scenario, it arouses a pre-decisional dissonance that is primarily informed first by specific questions for the Zers, namely, *"what can I do?", "what can I not do?", "why", "how is it impacting my life?". After that*, and during the questioning phase, there is pre-decisional dissonance within the Zer (Festinger, 1957), and they are in an action-based pre-decisional dissonance state (Harmon-Jones & Mills, 1999). This is because what is affected and what is needed, is the latent need – goal, and they already know that (Chacko & McElroy, 1983; Flavell, 1999). Therefore, addressing that cognitive heuristic element becomes their utmost criterion. This, thereafter, affects their information search and their decision-making process from the beginning. Hence, this indicates that Zers are guided by their latent needs (cognitive heuristic elements) and their effects in arousing action-based pre-decisional dissonance to foster a variety of specific consumption practices regarding their healthcare.

5.6.1.1 Differences in the Facets Indicating Further Understanding of Proportionality Between Cognitive Heuristic Elements (Latent Needs) and Pre-decisional Cognitive Dissonance

Overall, from the data, we can understand that as per the reviewed literature in chapter 2 and chapter 3, and similar to the results of the pilot study (see chapter 4), the levels of structural elements pertinent to perceiving pre-decisional cognitive dissonance varies as well, depending on the closeness to addressing the latent need (cognitive heuristic element).

5.6.1.1.1 Differences in Self-Esteem and Pre-decisional Cognitive Dissonance

Literature indicates that self-esteem is crucial to perceive pre-decisional cognitive dissonance. In this regard, we find that every Zer interviewed and according to literature (Antevenio, 2019; Verma, 2020), have high levels of self-esteem such that its presence affects their levels of other structural elements stemming from higher self-esteem (Carpenter, 2019). For instance, participants mentioned: -

*"I think **I have a good self-esteem to know that I and myself can only guide my life**...due to this, I decided to not settle for a treatment option I have no control over, but take action to get to the bottom of the options, and decide what's best for me with more control in hand..."* – RP24, 23 years, Deviated Nasal Septum, Ayurveda and Self-Medicine Experimentation Consumer.

This indicates how much, firstly, Zers can understand self-esteem within themselves as a concept and, further, that they utilise it to guide their lives. Specifically, pre-decisional cognitive dissonance perception is impossible without understanding self-esteem (Carpenter, 2019; Ronis & Greenwald, 1978). Thus, being able to perceive this enables them to perceive cognitive dissonance. How? This is by way of the fact that Zers, according to data from the study, we can see that every Zer operates by their own will, in a direction they choose. If they did not, in prior instances, it is due to their self-esteem not blossoming enough due to their age being younger or in acute parental guidance. Quotes such as, ***"I'm 25 years old, I know myself and will do anything that is required according to me***...not like when I was younger and 12 years old, and had bad experiences with allopathy medicines and its side effects"* – RP13, 25 years, Chronic Back Pain and Epilepsy Ayurveda and Self-Experimentation Via Google Search.*

*"I am 18 now**, I know myself, I know what to stay away from...how, and why?** Unlike probably the previous time I required healthcare when I was around 11 years old, and my parents took the decision to address another dermatological issue with allopathy doctors that turned worse because it created another bodily issue...."* - RP17, 18 years, Hair fall & Motion Sickness Ayurveda Consumer.

"I remember when I got the issue, I felt it was too scary, **so I was uneasy, and I also didn't feel I had any self-esteem, to be honest. Then, I remember thinking, why change my goal due to the issue, issues will come, and I have to face them.... I change my path [approach]... to become well, and won't compromise on my goal**..." - *RP35, 24 years, Muscle Cramps Ayurveda, and Siddha Medicine.*

Figure 5.6: collective understanding of Zoomers about themselves depicted from the data transcripts.

Source: The current author.

From the above quotes, like the other quotes by the cohort interviewed, it becomes evident that Zers are perceptive enough to understand themselves in such a way that self-esteem perception is high. Furthermore, the attitude of their approach due to differential understanding of their self-esteem is such that control is instilled within them. Carpenter (2019) detailed this when he demonstrated how higher self-esteem leads to a higher perception of cognitive dissonance in an individual. Thereafter, in the delineation of literature in chapter 2 and in a pre-decisional context (see chapter 2). Moreover, Stone and Cooper (2001) delineated via their self-standards model that when a self-descriptive element is revealed within an individual, there is a lesser need for self-justification and more need for alignment that produces self-affirmation with which to operate. Particularly, self-affirmation is nothing but a positive response or alignment with one's belief. This is exactly, what Festinger said when he mentioned that aligning with beliefs is a motivator to act (Festinger, 1957).

In this respect, we can highlight two things – the self-descriptive element to understand pre-decisional dissonance can be taken in, as self-esteem, due to the fact that it is an understanding that develops within them, when there is a feeling of threat and since within Zers there is no compromising ability (Verma, 2020 and supported by data in the study). Additionally, in this regard, literature indicates that "Dissonance arousal in this case is "idiographic" and will be moderated by individual differences in the content of self-knowledge (e.g., self-esteem)" (Stone & Cooper, 2001, p. 231). Data too, indicates this same understanding that differences in self-knowledge such as self-esteem determines self-developing pre-decisional cognitive dissonance (i.e., idiographic) – which means from the self. Additionally, self-knowledge can also be delineated as the cognitive heuristic element (latent need in our case), due to the frame of reference from where a latent need arises i.e., the pre-reflexive self-awareness (Khachouf, Poletti & Pagnoni, 2013).

5.6.1.1.2 Differences in Scepticism and Risk-Aversion and Pre-decisional Cognitive Dissonance

Pre-decisional cognitive dissonance varies the way in which risk aversion resides in an individual. Data from the study indicates that, risk aversive tendencies and scepticism is inversely proportional to pre-decisional cognitive dissonance. Specifically, the below quotes throw light on the matter: -

*"My **doubts kept being there...so I knew it wasn't the right choice**. When I fixed on this style of Ayurveda, the doubts were there, but **lesser and I felt more confident, so I knew it is a better option**..." - RP18, 22 years, Covid-19, and Frequent Sinusitis Ayurveda Consumer.*

*"Well, **if there are side effects, then no!** It's just that, anything I do should solve the problem, not add more problems. **When I feel the solution solves and does not add more...then I just go for it"** - RP7, 20 years, Muscle Spasm Issues Ayurveda Consumer.*

*"Every time I chose a solution **if there were side effects, I felt uneasy** and I felt I had to look for another one..." RP13, 25 years, Chronic Back Pain and Epilepsy Ayurveda and Self-Experimentation Via Google Search.*

Zers believe that their doubts are outer manifestations of the uneasiness they can perceive within (see data of main study). This is also delineated in the pilot study in chapter 4 and literature of chapter 2. These two tendencies are utilised to perceive inner dissonance which they term as uneasiness in many quotes. Specifically, we can understand that pre-decisional dissonance takes a whilst to manifest and understand by a Zer. Thus, the tendency manifestation of risk-aversion and scepticism is firstly understood and utilised as a measure of detailing the unpleasantness within a Zer. These tendencies also indicate the degree of unpleasantness detailed within a Zer, by indicating that the more the doubts present and risk-aversive necessity, the more the unpleasantness. This later delineates into the understanding of being farther away from addressing the cognitive heuristic element in the Zer that arouses pre-decisional cognitive dissonance.

Additionally, this understanding is also in line with literature indicating that a sceptic mind leads to unstructured decision-making due to risk aversive tendencies, this is what we see currently within Zers from the data in this study. Their decision-making process has changed to accommodate the unstructured nature of their cognitions and heuristics i.e., cognitive dissonance and their latent needs (cognitive heuristic elements) to guide their process of decision-making. In this respect, risk aversion is seen to change in varying degrees depending on the closeness or distance seen in addressing the latent need. Furthermore, risk aversion was seen to be the factor that made Zers evade specific instances. For instance, "not wanting umpteen side effects", "wanting only solutions and not many issues" etc. This risk aversion as a tendency is utilised firstly to make a boundary to safeguard them from prior bad experiences. Secondly, to instil a need for rightful decision-making. This need for rightful decision-making, thereafter, is guided by the unpleasantness perceived of the options confronted.

In this respect, risk aversion is a tendency that is contrasted with previous generations (Wearesocial, 2020; see table 1.1). Zers, by default, want to make sure everything is safe and as per their requirement. Thus, the differences of intensity perceived in risk aversion makes for a measure of their understanding of a rightful option. As risk aversion is directly proportional to cognitive dissonance observed, the insight of risk aversive tendency's degree of intensity and the confidence produced when the right option is taken in, is clearly detailed

herein in the study. Further denoting that Zers can perceive pre-decisional cognitive dissonance which is guided by a cognitive heuristic element (the latent need) which based on nearness to appropriate solution generates further uneasiness or produces confidence.

5.6.1.1.3 Differences in Self-Confidence and Self-Reliance and Pre-decisional Cognitive Dissonance

From the data, it can be seen that self-confidence is very high in this cohort of individuals.

"*I know myself and I know what I need...*" has been clear statement starters in the responses of all the respondents.

This indicates high self-esteem and self-confidence. Both are important for perceiving and operating on dissonance (Carpenter, 2019; Ronis & Greenwald, 1978). This also indicates higher levels of self-reliance, denoting that this insight of self, warrants acting by oneself, for oneself. In this regard, given that self-reliance is a pre-requisite structural element in initiating pre-decisional cognitive dissonance, this amounts to why, Zers interviewed, have a clear understanding of the fact that, when their self-reliance reduces and is replaced by confidence in self and the option, the dissonance is at a sublimated state and vice-versa. Literature denotes higher self-esteem – higher perception (Carpenter, 2019). Literature also demonstrates higher self-reliance and lesser justification but more affirmation, i.e., aligning with requirement due to input of a new descriptive element (Stone & Cooper, 2001) latent need in our case.

Further, dissonance aroused via individual gauges stems from an understanding of a self-descriptive element which is brought to light due to an understanding of a need to act to attain equilibrium (Festinger, 1957; Harmon-Jones & Mills, 1999; Spencer, 2011; Stone & Cooper, 2001). Thus, data demonstrating higher self-reliance to restore equilibrium and higher self-confidence in proportion to lesser cognitive dissonance, scepticism and risk-aversion rightfully indicates that cognitive element enables arousing and perceiving a pre-decisional cognitive dissonance state. This state is then utilised to act in such a way that, closer to addressing the element, self-reliance reduces and becomes confidence in the option being entertained. Subsequently, when confidence arises, the dissonance is sublimated along

with lesser effects of the other tendencies in correspondence with the cognitive heuristic element.

5.6.1.1.4 Understanding of Neurological Mechanism and Pre-decisional Cognitive Dissonance

From the data, we understand that the necessity to act on emotions and understand and address pre-decisional dissonance is a default mechanism within Zers. For instance, the below quotes explicate the understanding,

"I by default process everything...all my emotions and use it to understand the situation and possibilities..." – *RP3, 21 years, Sinusitis and Acne Ayurveda Medicine Consumer*

"I use all my emotions to enable my decisions, good, bad and ugly..." – *RP20, 24 years, Covid-19, and Flus Self-Experimenting via Google Searches Consumer*

All respondents had a similar mechanism of operation. Thus, it can be concluded that it is a default mechanism within the Zers. This can be correlated with derived literature, and further indicative literature within the facet of action-based pre-decisional cognitive dissonance (Harmon-Jones & Mills, 1999) integrated with Festinger's (1957) insight of a cognitive heuristic element (the theoretical underpinning of which is detailed in chapter 2 and 3 for Zers). To reiterate, the default mechanism of action-based pre-decisional cognitive dissonance, which operates via a hyperactive ACC, is seen to take effect as per the affect-regulation process in individuals, which forces one to finish a task based on a cue before moving to the next one (Stevens et al., 2011). This happens behind the scenes. The behavioural manifestation is the cognitive heuristic element guided by an action-based cognitive dissonance as delineated as part of the literature reviewed (see chapters 2 and 3).

5.7. Discussion

Below, the researcher further delineates the implications of the data analysis drafted into context. Specifically, Zers can know what they want. They also do not change their needs based on circumstances. They utilise it to guide their consumption, so how does this affect the other processes and models in the study context? For this, below is a delineation with corresponding literature.

5.7.1 Cognitive Heuristic Elements Arousing Pre-Decisional Cognitive Dissonance and their Presence in Generation Z

As previously presented and logically derived in chapter 2, latent needs fall under the umbrella of cognitive heuristic elements due to being one of self-reflexive awareness. From the data, we can understand that there are four different latent needs guiding healthcare consumption in Indian Zers' current healthcare consumption. When we correlate the findings with the literature reviewed, it ties in with table 1.1 of the study, which highlights the difference between generations X, Y and Z. Most specifically, generation Z individuals believe in not "meeting mid-way and compromising". In their own words, "we don't believe in meeting halfway. We want to get what we want, and we know what we want" (Verma, 2020).

To delineate further, as indicated by Scholz & Vyugina (2019), since generation Z is highly self-actualised based on Maslow's hierarchy, their identified latent needs do not change. For example, life goals don't operate the same for generation X or Y – wherein the cohort settled for the next best option (see Table 1.1). Furthermore, in this sense, the "goal" transforms into the "need" and initiates a drive to act. In essence, it proves to be a motivational cycle in the minds of generation Z. According to Shreshta, "Motivational cycle is a transition of states within an organism that propels the organism toward the satisfaction of a particular need" (Shreshta, 2017). In this cycle, the motivational state is comprised of "need", "drive", "incentive", and "goal". When faced with a health complication that is felt to be a threat to their aspirations, a goal transforms into a necessity – a need as the individual feels threatened and uncertain about their plans. In the words of RP13, "*when I was told, this issue may not be solvable, I was in emotional pain more than physical, and I said this can't be my life, I need to be able to decide what I do and how?!...so, let's look for more options*" – RP13, 25 years, *Chronic Back Pain and Epilepsy Ayurveda and Self-Experimentation Via Google Search*

This initial feeling of sacrificing or compromising need shifts the mindset of generation Z, where their passion and goal are threatened as above, proves to be a motivation to constantly drive their action to keep searching for more and look till there is an alignment between their need that is, *"felt had to stay with my goal, and do everything in my power to find a solution that answers my need"* – RP13, 25 years, *Chronic Back Pain and Epilepsy Ayurveda and Self-*

Experimentation Via Google Search. In this regard, therefore, as described by Festinger (1957) that cognitive heuristic elements drive action; thus, "life goals", "passion for life", "maintaining a fast-paced life", and "doing everything as before and more" transform into latent needs (cognitive heuristic elements – derived earlier see chapter 2, 4) that then become drivers arousing action-based cognitive dissonance (Mills & Harmon-Jones, 1999) which is only back in equilibrium once "what they need, what they find are in sync" as per the derived proposed framework and critiqued literature previously (see chapter 2 and the pilot study). This understanding further highlights how the latent needs come into the forefront and become explicit needs in a consumer (Ahola, 2006), guiding Zers' consumption via a pre-decisional dissonance states approach.

5.7.2 Selective Exposure and Information Avoidance by Generation Z Due to Cognitive Heuristic Elements and Pre-Decisional Cognitive Dissonance

The interview data depicts the understanding derived in the literature, as almost all participants mentioned that they kept searching until their idea of what they wanted, i.e., in relation to their goal, and what they found to be aptly aligned. Furthermore, the respondents also mentioned ignoring all the marketed content if it is not what aligns with what they are looking for. This led to a further probe by the researcher, asking, "do you get frustrated? Or What's your reaction?". The answer in all cases was (RP2-34) – "No, there is no anger or frustration, just ignoring it". This non-frustration the first time can be linked to the interview data suggesting that "I process all my feelings and don't disregard any. I will process and then choose to hold on to some" – (RP2-34). However, if the messages repeat past ignoring and "selecting the X mark on closing the ads etc. Or even choosing the not interested in channel or ad option", then "there is anger felt" – RP1-35.

5.7.2.1 How the Various Facets Operate to Perform Selective Exposure and Information Avoidance

Each of these themes extracted starting with the tendencies and then to the pre-decisional cognitive dissonance, and the factor of the latent need (cognitive heuristic element) is seen from the data to enforce in what literature indicated as 'selective exposure' and 'information avoidance' (Tsang, 2019). This can be seen to be in effect because scepticism and risk-aversive

tendencies foster an understanding of exposure to information based on necessity (Fischer et al., 2005). Furthermore, due to the knowledge of what needs to be attended to, i.e., generation Z individuals deploy the action-based model of cognitive dissonance (in a pre-decisional context) triggered by a cognitive element (driver) (Chacko & McElroy, 1983; Festinger, 1957; Flavell, 1999; Harmon-Jones, 1999; Harmon-Jones & Amodio, 2009). Below is a description of the filtration process with every element in focus.

5.7.2.1.1 Filtration Process Characteristic – Scepticism

Firstly, to elucidate the filtration process further, having a sceptical tendency orients Zers to a naturally doubtful mindset (Giarlo, 2006). This is further characterised by mistrust and disbelief regarding persuasive influence (Forehand & Grier, 2003; Tan, 2002). Moreover, 'reliability on others' is a factor that does not exist when scepticism exists; unless there is participation and alignment with self-beliefs (Tsfati & Cappella, 2003). Persuasive influences in the marketer-consumer relationship are often seen as "too good to be true" (Tan, 2002, p. 47). Furthermore, the literature indicates that "rational consumer scepticism serves to shield one from hyperbolic and misleading information sometimes manifested in claims of marketers" (Giarlo, 2006). Koslow (2000) aligns in understanding that "scepticism is the main protection consumers have in detecting fraud" (Koslow, 2000, p. 245). However, not until recently, has it taken effect in consumer behaviour. Boush et al., (1994) demonstrated that within the youth, scepticism presents a sense of self-confidence and independence to distinguish between persuasion and genuineness. This insight, informs us that, having a sceptical ideology – autonomy (independence in choice), and belief in oneself (confidence) are consequences; fostering in the sense of availing services and treatments which provide the leeway to self-determine. To elucidate further, scepticism results in an investigative mindset of reliability obtained via participation (Popkin, 2017).

In this respect, mapping this with data and extant literature reviewed in chapters 2 and 3, we can say that due to the times living in, scepticism is used as a shield by Zers to have an appropriate orientation to informed decision-making as opposed to previous generations (Francis & Hoefel, 2018; Verma, 2020; Wearesocial, 2020). From the data, we find that almost all participants have stated – 'they are by default sceptical'. This statement indicates that they also know the value of their scepticism. It also shows that they understand its role and utilise

it as an outer manifestation to safeguard themselves. A common notion among all interviewees is – "I don't trust immediately, I take time to understand the pros and cons and then decide as it's not right to trust without knowing everything…" – RP2-34 (various instances and needs, but default instinct).

5.7.2.1.2 Filtration Process Characteristic – Risk Aversion

Research suggests the possibility of an age-related emotional impact in emotional attention, recognition, and memory, by which more younger adults and those having grown with uncertainty (a) give more prominent consideration to, process, and recall increasingly positive information, and (b) show decreased processing of negative information (Kanheman & Tversky, 1974, 2011; Mather, 2016; Reed & Carstensen, 2012). As per the Socioemotional Selectivity Theory (Reed & Carstensen, 2012), this inclination for positive over negative information is driven by an individual's prioritisation of focused goal-oriented objectives identified with emotional importance and satisfaction sought towards enhancing their well-being (Dolcos et al., 2020). Taking such insights into context, we can observe that goal-oriented tasks are not deterred by incoming emotional cues once decided. The follow-through is completed based on initial emotional cues and feelings (Dolcos et al., 2020).

If such is the case, then the understanding of Zers to say how they are risk aversive denoted in transcripts by "tried and tested and ancient…approach to care" – RP7, RP12, RP13, RP15, RP16, RP30, RP32, "no side effects" – RP2-RP34

This risk aversive tendency, which is the outer manifestation of goal-oriented pre-decisional cognitive dissonance guided by the latent need (cognitive heuristic element), enables keeping in check the filtration process within the informed decision-making approach.

5.7.2.1.3 Filtration Process Characteristic – Self Reliance

Tying scepticism and risk-aversion together, the positive attribute within Zers seen is self-reliance from the data and literature reviewed. Self-reliance guides the process rather uniquely. From the data, we can see that due to the two tendencies above, another default mechanism is self-reliance. This is initiated by scepticism and risk aversion due to the need

for more control over their choices and life (de Araujo, 2003). De Araujo (2003) suggests that autonomy is sought when there is scepticism and risk aversion. Self-reliance is the autonomy mechanism within Zers. In their words,

"I know myself and do not trust others, so I choose according to what I feel is right...a gut feeling you can say..." – RP2-RP14.

"I only make my decisions; why give the remote control to someone else..." – RP20, Covid-19 and Frequent Flu, Google Self-Experimentation Consumer

"I decide for myself what is right based on what I need for myself..." – RP15-34

This self-reliance mechanism is seen to demonstrate what reviewed literature indicated of neural procedures for perceptual capacities, associative neural circuits that coordinate the choice circumstance or decision setting may just be built up after sufficient and broad processing and/or experiences within individuals (Marchant, 2015; Toet & Korteling, 2020). After such processing, these associations bring the right decisions and choices into effect, without the necessity for (effortful) consultation – referred to as 'intuition'. This whole mechanism involves self-reliance and self-oriented meaning-making which results in understanding the cognitive heuristic element and thereafter aroused pre-decisional cognitive dissonance with scepticism and risk aversion in the background. Thus, this guides in positive enforcement of a positive facet that further informs consumer decision-making with pre-decisional cognitive dissonance.

5.7.2.1.4 Filtration Process Characteristic – Pre-Decisional Cognitive Dissonance

Given that the tendencies are guiding the decision-making process, the inner feeling of unpleasantness also guides the decision-making. This is why it can even be said that scepticism, risk aversion and self-reliance are structural elements of pre-decisional cognitive dissonance (see derived literature in chapter 2). This unpleasantness and uneasiness perform the role of inducing selective exposure (Botvinick et al., 2001; Carter & Van Veen, 2007; Harmon-Jones & Amodio, 2009; Harmon-Jones, 2004; Tsang, 2019) due to the neurological backing described within the action-based model of cognitive dissonance. The orientation

seen within Zers from the data can be referred to as a goal-oriented approach stemming from quotes that foster the below notions such as:

"I know what I need, so I keep searching till what I need and the option in front match…" – *RP4-RP24*

"It's a matter of right fit for need. That's what I look for, as I know what I need. All I do is search what is out there that matches my need…" – *RP25-35*

In this regard, the cognitive element guided action-based pre-decisional cognitive dissonance inertly instils in the affect regulation process of neurology within Zers. Affect regulation essentially means attending to one task before moving on to the next (Stevens et al., 2011). Specifically, when there is a goal-oriented approach, the 'what to address' is known, 'the guidance of how close to addressing or how far' is provided by the intensity of pre-decisional cognitive dissonance felt concerning the cognitive heuristic element (Festinger, 1957). Therefore, selective exposure as described by Tsang (2019) happens due to the overpowering of the ACC into affect-regulation to address the latent need based on guidance from the pre-decisional action-based model of dissonance in relation to the cognitive heuristic element that requires the alignment (Botvinick et al., 2001; Carter & Van Veen, 2007; Festinger, 1957; Harmon-Jones & Amodio, 2009; Harmon-Jones, 2004; Tsang, 2019).

5.7.2.1.5 Filtration Process Characteristic – Latent Needs

Instead of delineating and discussing every single, latent need, as the underlying properties of the latent needs, all seem to be one – i.e., that of motivation, we will take them altogether. However, to list them. They are the following: -

The first theme extracted from the data was the latent of the 'goal of life' as a requirement that guides the arousal of pre-decisional cognitive dissonance. In this respect, when Zers, according to data, have a particular goal in life, they do not settle for the next best alternative in the case of a healthcare issue threatening that element (goal of life).

The second theme extracted from the data was the latent need of 'passion for life' as a requirement that guides the arousal of pre-decisional cognitive dissonance. In this respect, when Zers, according to data, are faced with a situation that threatens their passion for life,

and living of experiences, they search for an option that addresses positively coming out of the issue and not one of sacrifice and moving to a next best option.

The third theme extracted from the data, was the latent need of 'maintaining the pace of life' as a requirement that generates pre-decisional dissonance and addressing that becomes an explicit need, which has to be addressed via understanding the dissonance aroused about this cognitive element requirement.

The fourth theme extracted from the data was the latent need of 'should be as before and more' as a requirement that, without being fulfilled, keeps the pre-decisional cognitive dissonance alive. Thus, Zers are seen to partake in long-term healthcare practices that make them as good as before and more.

They ensure they utilise the threat to fuel their need and search for the right healthcare approach that suits them. In essence, this becomes a motivational force. This is in line with the literature and data of the study, which details that Festinger saw cognitive elements as arousing cognitive dissonance and dissonance generated as a motivator stimulating action to re-produce equilibrium by addressing the dissonance produced (Festinger, 1957).

"Why should I stop living a life with my main aim. No! I decided no. I need what I have in mind" *– RP2-18 (Varied inferences and mentions in these participants' circumstances).*

"My passion for life is to do everything and anything...what I can and what I can't so just because of some issues, why should I put an umbrella cap on the passion for life's umpteen experiences..." – RP19-RP23 (Varied inferences and mentions in the circumstances these participants faced).

"I can't have a slow-paced life when I have so much to do...you know, my career, my life etc...so never stop, keep going even for instance. When there is an issue with my health, I want to address it in such a way that this requirement needs to be addressed." – RP23-27 (Varied inferences and mentions in the circumstances these participants faced).

"I know who I was; I have to be the same and before...why not? One thing shouldn't determine my life" – RP28-RP35 *(Varied inferences and mentions in the circumstances these participants faced).*

However, the action is instigated not to settle to remove equilibrium but to address the need (cognitive heuristic element), which brings in the integration seen as part of this thesis, which is a combination of Festinger's (1957) understanding of cognitive element and Harmon-Jones & Mills (1999) delineation of the neurological mindset instigating action-based model of cognitive dissonance (Harmon-Jones, Harmon-Jones, Fearn, Sigelman, & Johnson, 2008; Jarcho, Berkman, & Lieberman, 2011; Kitayama, Chua, Tompson & Han, 2013; Kitayama & Tompson, 2015; Van Veen, Krug, Schooler & Carter, 2009). Harmon-Jones & Mills (1999) and Amodio & Harmon-Jones (2008) an 'action-oriented' state (Beckmann & Irle, 1985; Gollwitzer, 1990; Kuhl, 1984) is where the individual is in an increased momentum of 'completing the task at hand'. Once a choice is made, an individual is motivationally tuned toward implementing their choice and carrying on adequately concerning it (Harmon-Jones & Amodio, 2009; James, 1890; Kastenmueller, Peus, Frey & Fischer, 2008; McArthur & Baron, 1983; Mills & Harmon-Jones, 2019). When an individual is goal-oriented, the follow-through on decisions is enhanced (Gollwitzer & Sheeran, 2006). In this regard, affect regulation effecting in ACC controlled action-based model of pre-decisional cognitive dissonance stemming from a goal-oriented place will result in selective exposure and information avoidance (Tsang, 2019). Thus, consuming only goal-oriented (cognitive element) pre-decisional dissonance guided information from the need recognition stage due to brain developments of this generation delineated and seen from data (Chacko & McElroy, 1983; Festinger, 1957; Flavell, 1999; Harmon-Jones & Mills, 1999; Stone & Cooper, 2001).

5.7.2.1.6 Summarizing Filtration as a Process

Extant literature also suggests that brain functions affect cognition and emotions equally, thereby also indulging in bypassing cues to focus on the action to be completed, which in neuroscientific terms is referred to as 'affect regulation' (Lovstad et al., 2012; Stevens et al., 2011; University of Nevada, 2017). According to Stevens et al., "The anterior cingulate cortex (ACC) lies in a unique position in the brain, with connections to both the "emotional" limbic

system and the "cognitive" prefrontal cortex. Thus, the ACC likely has an important role in the integration of neuronal circuitry for affect regulation" (Stevens et al., 2011, p. 121).

Furthermore, various studies indicate, that participants with stronger 'anterior cingulate cortex' action perceive dissonance reactions and are bound to participate in controlled conduct (slower, progressively cautious reactions) (Amodio et al., 2008; Harmon-Jones & Amodio, 2009). The resulting literature from these studies gave a foundation for the understanding of the 'anterior cingulate cortex, and its conflict monitoring capacity (Amodio et al., 2008; Stevens et al., 2011; University of Nevada, 2017), as the brain's neural procedure underlining cognitive dissonance. Now, if we take the above understanding and insert into the pre-decisional research context of the thesis, then once a driver is felt (latent need in our case) it would be followed by dissonance and a goal-oriented follow up action (undertaken by the individual). Upon the feeling of a latent need (cognitive element/driver), the 'affect regulation' mode of the brain would take over which would impact the flow and follow up on further content which can be processed by individuals which is referred to as 'selective exposure' and 'information avoidance' (Carter, Pyszka & Guerrero, 1969; Kastenmuller, Peus, Frey & Fischer, 2008; Tsang, 2019). Figure 5.7 below presents the delineation.

Figure 5.7 – depicts the filtration process and characteristics in Zers
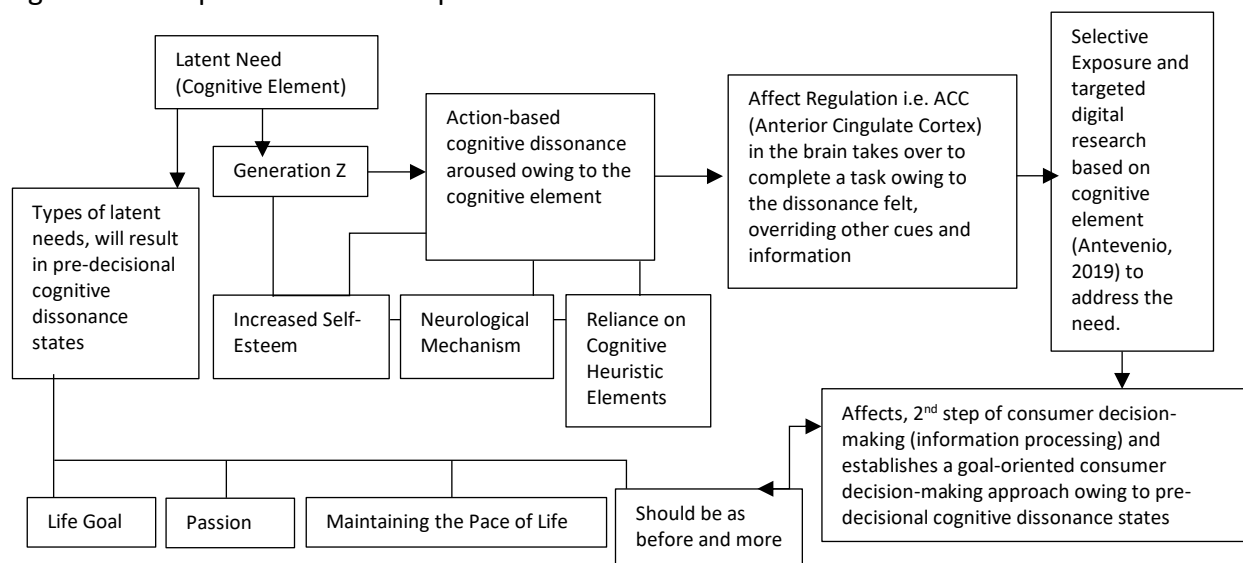
Source: The current author.

5.7.3 Generation Z's Reliance on Cognitive Heuristic Elements Guiding Consumer Decision-Making

The data from the seven respondents proved highly insightful in understanding the approach to consumer decision-making as active digital researchers prior to choice fixation. From the interview transcripts, we could know that there is significant self-reliance and self-confidence. This factor affects their acceptance or not in terms of the healthcare choice they are presented with. To illustrate further, combining Q11.1, Q14 and Q14.1 – which dealt with this specifically in the interview guide (see appendix B). Taking a collation of all the cases from the data,

BOX 3: Healthcare consumer decision-making approach undertaken by all participants collated

HEALTHCARE APPROACH BY PARTICIPANTS COLLATED

"Firstly, if Zers get anything weird happening in their body/health. Zoomers become aware of it – i.e., of the issue. Awareness makes Zoomers understand intensity...So, Zoomers aware of it. Firstly, we need to be aware first with what is happening. Then, whether it is dangerous and non-dangerous, what all it affects in their life and how? Their goals, interests, pace of life etc... Then there is a need to work on it and see options – Google, already used alternative medicine and see best modes for the requirement, talk to friends and family, review the doctors via visitations etc. So, Zoomers understand being aware of themselves and then work on it, work totally on it. Give time, mostly...give it time. Then if time isn't going to make things good. Then we learn it's bad. That's how this was the most effective way seen. Give it time or sleep. And during all this, analyse the self, study it. Use own understanding on what things arise, when does it arise and all that. So, first know about oneself and then approach, don't immediately apply anything. Make sure there is bodily understanding. Then what options? How they are and how was it for others? And then go on for further input. Also, this helps because, when seeing an alternative medicine doctor and Zers can explain what things are like

aiding the doctor's understanding of enhancing the treatment – which they are very particular about. Then evaluate the doctor's ideas. If that works with the information Zoomers have, then yes. If not, Wait! Don't act... give that time first and then give time and then wait whilst further need-based research. Don't jump into anything and give it time. So, understanding all that before choosing one. And constant exploration and movement until there is a right fit based on need..."

- RP2-34 (Collated from excerpts in the process of every participant interviewed)

Legend:

Need Recognition Stage of Consumer Decision-Making	
No immediate action until evaluation of alternatives and information search	
Information Search entailing evaluation of alternatives based on the awareness of the problem being backed by need to get to back to the goal	

Source: The current author.

In relation to the above approach, the respondents had corresponding cognitive states. To delineate them,

BOX 4: Corresponding mental states in relation to the consumer decision-making approach detailed by all participants

MENTAL STATES DURING THE HEALTHCARE CONSUMPTION SEARCH FOR PARTICIPANTS

"So, the state of delayed action, optimism that it might get healed someday. Yeah. There was one thing they are going to give. And first thing you obviously get a doctor or something, some alternative medicine doctor. And then there is a scepticism of how can they know? What if it isn't right for me? Because there was always a determination of getting back to the same pace of life, be as before, not sacrifice my goal and passion...All of this was the main priority again, but still Zoomers cannot sit down during this long process in one place

and getting to my need within was important. Anything will take time to heal was my thought. So, it doesn't happen instantly. That was my thought process. Also, I was feeling responsible for my state. Because when you have goals and you can't be on them all the time, then you feel bad...responsibility you know. So, I thought that if you need to get out and be where you were always, somehow my thought process and my understanding more of my body is needed. That's how...Zoomers take things into their own hands and start self-experimentation based on google searches and self-prescribing changes of lifestyle for their needs or meeting alternative medicine doctors who are observed to understand their requirement etc...and worked according to Zers' needs and what they want – no compromise..."

RP2-34 (Collated from excerpts in the process of every participant interviewed)

Awareness of the problem tied to not being able to follow their latent need. That is to say, - "need-driven". i.e., cognitive heuristic element driven as derived previously.	
No immediate action	
Processing bodily information and healthcare information in relation to need and fixing on a healthcare consumption choice	

Source: The current author.

The above transcription of the interview for the three questions in the interview guide of:

> *Q11.1 Explain the process of identifying factors you consider when you make a choice of your healthcare?*
>
> *Q14   Explain a healthcare instance and how you proceeded through the different stages of decision-making*

Q14.1 Explain, the differences in your mental state that you were able to sense during your healthcare requirement. You can provide an example of an instance too.

provide us evidence of how in the cases of RP2-34, every individual's cognitive heuristic element of getting back to their latent need (cognitive heuristic element) and doing everything warranted a hands-on approach to searching on google and becoming more adept of their body. Additionally, approach and review alternative medicine doctors as well in some cases. Further exemplifies how each one's latent need (cognitive heuristic element) generated the various emotions of dissonance and backed their digital research to make way for their self-experimentation and prescription of a lifestyle change and choice via informed decision-making for their healthcare issues. To elucidate further, each participant was affected by a severe health issue. This resulted in their inability to perform as they were, threatening their goal of life and their pace of life for a few others. The goal then, as derived previously transformed into a need – a necessity. This need then guided all their mental states (aroused pre-decisional cognitive dissonance concerning the latent need). The mental states and the equilibrium sought thereafter guided their process of evaluation of alternatives and information processing. Finally, after finding the one that "just felt right to me, I did the research and experimented on myself. *I saw my own research affecting my health positively and the changes..."- RP20, 24 years, Covid-19, and Flus Self-Experimenting via Google Searches Consumer; "I saw the process was what felt right to me, it fit hand in glove, and I had confidence, and all doubts and fear left me..." – RP2-30 (Various circumstances).*

Zers, interviewed in this study, all had a similar approach to how to choose a healthcare option, all guided on the premise of their respective cognitive heuristic elements, causing pre-decisional cognitive dissonance and selecting an option that is in line with their cognitive heuristic element. Thus, restoring equilibrium. (See appendix C for interview transcripts). The above example from the data and the insights further derived, answer RQ3 of the thesis.

5.7.4 Changed Consumer Decision-Making Process for Zers

Data from the study provides ample insight into the ways cognitive heuristic elements in this specific context of latent needs (Cass & Sunstein, 2005; Gigerenzer, 2008) affects a consumer's decision-making process for a Zer in such a way that it orients direction and

approach. Thus, if we have to take all these matters into context from the evidenced data and answer the RQ3 of the study having answered RQ1 and RQ2 in the delineations mentioned above, it can be done as the below mind map in figure 5.8, which shall be explained after that.

Figure 5.8: presents the new consumer decision-making process adopted by Zers evidenced by Data.
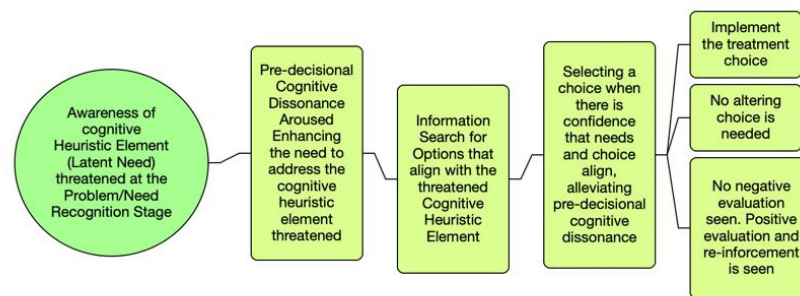
Source: The Current Author

To elucidate figure 5.8, from the data, we can find a new consumer decision-making process being employed by Zers, which is solely driven by cognitive heuristic elements (latent needs in the case of this study) and the action-based pre-decisional dissonance aroused thereof. The need/problem recognition stage in the context of Zers can be understood as a state wherein the cognitive heuristic element (latent need in this context) is threatened, and that's where the need is known already as an awareness that something is not correct. This awareness stems from the fact that *"what I have been doing, I'm unable to do",* which later brings out a latent need at that moment of *"I should be as before and more" – RP2-34.* This can also be characterised within the other themes of latent needs extracted herein. This awareness of the cognitive heuristic element in threat acts as a driver which stimulates an action-based pre-decisional dissonance within the Zer. This action-based pre-decisional dissonance is characterised as an *"unpleasantness" or "feeling incomplete" – RP2-34*, among other themes which enforce an action to alleviate the unpleasantness. Zers also understand herein that the pre-decisional dissonance can only be alleviated by affirmatively addressing the cognitive

heuristic element (latent need), i.e., addressing it to affect life positively and not negatively. Not justification, but an affirmation of managing it, which is not compromising. This is further in line with delineated literature and that of Stone and Cooper's (2001) self-standards model of dissonance, which depicts how due to a self-resource effect (which can be taken as the cognitive heuristic element, i.e., latent need in this case) effects in action (if we combine Harmon-Jones & Mills, 1999) and lesser justification due to higher self-esteem (Stone & Cooper, 2001 and see chapter 2 delineation). Until this time, they seem to utilise the pre-decisional dissonance and its variations of magnitude/intensity to guide their information search.

This information search in the new consumer decision-making process is different from previous generations. There is no *"let's see what we can find"; there* is *"let's see what can be found that will positively address my need"*. This is because as many Zers in the study resonate with this quote by RP20 and have a similar ideology: -

"I know what I want, and I know why I am feeling unpleasant mentally...so, why waste time, in googling and finding anything and everything under the sun? All I need is a solution that fits my need...and I scan to that effect. This means, I only see online and listen offline from doctors/advisors based on my need and not everything..." – RP20, Self-Experimentation Consumer for Covid-19 and Frequent Flu

Figure 5.9: presents how the information stage is guided by cognitive heuristic elements (latent needs) in Zers.
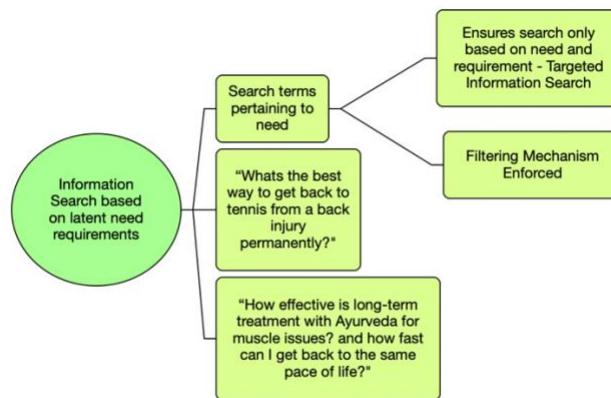
Source: The Current Author

To further elucidate this mechanism extracted from data in figure 5.9, the information search stage is the second step in the consumer decision-making process. Given the new consumer decision-making process adopted by Zers, the information search is undertaken through selective exposure and information avoidance (Carter, Pyszka & Guerrero, 1969; Kastenmuller, Peus, Frey & Fischer, 2008; Tsang, 2019). This selective exposure is enforced via awareness of addressing the cognitive heuristic element (driver) arousing pre-decisional cognitive dissonance (motivator) to alleviate the dissonance. In this regard, the search terms, and how the questions to doctors are addressed, are such that it answers the cognitive heuristic element (latent need) in question. Furthermore, this gives ample evidence as well of the delineated understanding of affect regulation (Stevens et al., 2011) effect in addressing a need that is required before moving to another task – which in other words again, is selective exposure and information avoidance (Carter, Pyszka & Guerrero, 1969; Kastenmuller, Peus, Frey & Fischer, 2008; Tsang, 2019) which is seen as filtering information online and offline by Zers. Further that the dissonance aroused is an action-based one in the pre-decisional phase as per the conceptualisation. Additionally, establishing a new consumer decision-making process deployed by Zers which is guided by cognitive heuristic elements (latent needs) (Festinger, 1957) and aroused action-based pre-decisional dissonance (Harmon-Jones & Amodio, 2009; Harmon-Jones & Mills, 1999) as the need is known and is a goal-oriented place (Chacko & McElroy, 1983; Flavell, 1999; Stone & Cooper, 2001).

5.7.4.1 Pre-Decisional Cognitive Dissonance and its Utilisation in Complementary and Alternative medicine

From the data generated in the interviews in the pilot study, we can further understand how alternative medicine and the cognitive dissonance felt within generation Z align. For instance, for the question: -

> *Q8.1: Do you utilise this process [of arriving at a decision...] when faced with options for all healthcare requirements?*

RP3's account provides much insight. The respondent reported,

*"Yeah, I do. But in the end, I go with what I feel good about. It's like a gut feeling – this is right for what I need. Let me give you an example, so when I talked to the doctor, she will ask me so many questions and I would wait for the answer. So then if I feel okay, this doctor will be able to help me, then I know, like, you just know, when you talk to someone, you'll have that feeling. That is how it works. Like another instance, I went out and personally met an allopathic doctor, what he did was gave an ointment and the medication, which didn't work. So, I kept changing and finally one, I met **The Ayurvedic doctor she was the one who told me this won't work until you cleanse your system. So, she explained the importance of every step and how to go about the process and patiently answered questions and gave so much information, about everything. She just told me what the whole process is and how would it lead to results. So, you know, if you get more information, you will almost be attracted to that as everything is explained and how it is in line with what I want…you know.** So that is my way. It's a fully informed decision, rather than my parents' blind faith approach. Because, I have tried and felt unsatisfied. **So, I thought, okay, let me, let, let me ask the doctor and let her explain. She did. She explained me the whole process. And that's how I decided**." – RP3, 21 years, Sinusitis and Acne Ayurveda Medicine Consumer*

During this time, RP3 experienced severe uncertainty, disbelief and distrust, making her anxious due to her bad prior experiences. Upon having an alternative medicine doctor take the initiative to answer her queries, her uncertainties and her uneasiness…she felt more empowered and relaxed. This enabled her to make the choice well-informed with her goal

guiding the process. In this regard, Mukerji and Sagner (2019) demonstrate that Ayurveda works for the patient and with the patient rather than just a treatment. Further reports also re-iterate the same (Chauhan et al., 2018; Lemonnier et al., 2016; Mukerji et al., 2016; Rotti et al., 2015) and demonstrate how in alternative medicine, consumers experiment and are part of the process with full knowledge of their body and the treatment being undertaken. Additionally, according to recent reports, WebMD, "An Ayurvedic practitioner will create a treatment plan specifically designed for you by taking into account your unique physical and emotional makeup as you describe it, your primary life force, aims, and the balance aimed for between elements of your specific body constitution" (WebMD, 2020). Other alternative medicines also follow a similar approach, "An initial consultation with a Naturopath usually takes a minimum of one hour. During the period, the practitioner will try to understand your needs and prescribe lifestyle changes for long-term effects aligning with your specific goals and bodily needs" (CNM, 2020).

To illustrate this in a first-hand account, in the words of RP3, *"For me, it was such that, the main goal that has been provided as my need to the doctor and the exchange process with the doctor should work – **should put my uneasiness to rest by clearly addressing my need**. So that is how I started venturing into Ayurveda. **And the lady [Ayurvedic doctor] was working for me instead of instructing me. Her and I made a program to check in constantly and she monitored my progress very closely, and I would also give her my inputs."** – RP3, 21 years, Sinusitis and Acne Ayurveda Medicine Consumer*

This account by RP3 further affirms how complementary and alternative medicine approaches healthcare in a manner of addressing: -
  (i)   Zers' individual cognitive heuristic elements – latent needs
  (ii)   Generation Z's pre-decisional cognitive dissonance produced by the cognitive heuristic element
  (iii)   Generation Z's demand for full information due to constant reading and basic tendencies of risk-aversion, scepticism, and self-reliance.
Therefore, by addressing the need, and providing all information, the aroused pre-decisional cognitive dissonance is put at ease. That is to say; an equilibrium is brought out within the individual. This equilibrium then enforces the "gut feeling" or "feeling it is right" – that the

alternative medicine approach is right for one's need. Thus, the choice to opt for whatever alternative medicine takes shape. Such similar experiences have been accounted for and reported by most of the study participants– Ayurveda and Siddha medicine consumers. (See appendix C). That is, complementary and alternative medicine consumers.

5.7.4.2 Generalizability of the Changed Consumer Decision-Making Process to All Sectors – Result of a New Cognitive Orientation and Know How

As discussed in chapter 3 of this thesis, the findings of this generation's informed decision-making approach have far-reaching implications for that unit cross-culturally (Mannheim, 1927/1928). Pinder (1926) suggested that "each generation builds up an 'entelechy' of its own by which means alone it can become a qualitative unity" (Pinder, 1926, p. 23). Entelechy comes from the Greek word, 'entelechia' and refers to "the supposed vital principle that guides the development and functioning of an organism or other system or organisation" (Brittanica, 2020, para 1). From this, we can infer that each generation develops its own principle. If such is the case, then this informed decision-making approach undertaken based on pre-decisional cognitive dissonance guidance will also be the process in every sectoral context. While one can argue that the latent needs (cognitive heuristic elements) may change based on sector, the researcher feels drawing on generational cohort theory and extant literature in the main study that it will not. Essentially, the pre-decisional dissonance states and the new Zers' consumer decision-making process will not.

To elucidate, if we take tourism as a sector, needs can still be based on the situation and the circumstances of covid, information overload and requirements of Zers having to be independent and self-reliant – "maintaining the pace of life", "should be as before and more", "passion for life" and "goal of life". Additionally, if we take going out and eating at restaurants – the pre-decisional states can still be the same. Similarly, for other sectors like retail, other service-oriented arenas too. These are therefore cross-sectoral in application and can also be seen as uniform pre-decisional states of Zers and a standard unstructured new consumer decision-making process.

5.8 Pre-Decisional Dissonance States Typology

The derivable typology of pre-decisional dissonance states within Zers can be identified as per the below figure 5.10 from the NVivo transcripts and thereafter interpreted data.

Figure 5.10: presents the pre-decisional cognitive dissonance typology within Zers.
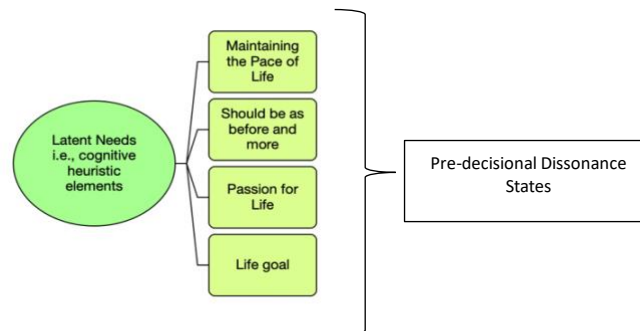
Source: The current author.

To elucidate the figure 5.10 further, pre-decisional cognitive states emerge when the cognitive heuristic elements (latent needs) drivers are threatened and enforced in a pre-decisional action-based dissonance. This results in a constant internal conflict within the Zer, termed pre-decisional cognitive dissonance states - aroused by the latent needs (cognitive heuristic elements). In essence, the pre-decisional cognitive dissonance states are governed by the latent conditions, going into the driver state when in question, arousing dissonance within a Zer. This then becomes a state of motivation (pre-decisional dissonance states) that inspires action to address the cognitive driver. This is precisely what Festinger (1957) meant when he said cognitive drivers arouse dissonance and that dissonance is a motivator requiring alleviating that which is unpleasant. Additionally, it is also in line with the study's conceptualisation integrating Festinger's understanding with what Harmon-Jones and Mills (1999) meant when they said, "individuals are already in an action-oriented state to address the dissonance". Further, we have proved that a combination of the two interpretations is possible in the pre-decisional stage and how it guides Zers.

The types of latent needs considering their impact as drivers in Zers, transform into non-negotiable necessities (Verma, 2020) so that any mismatch in approach with the elements forms a sense of increased cognitive dissonance. In this regard, therefore, every single cognitive heuristic element (latent need) comprises the essence of a pre-decisional dissonance state, as it arouses the dissonance, and consonance/equilibrium is restored only when there is a match with the latent need (cognitive heuristic element) according to data and literature (Festinger, 1957; Harmon-Jones & Mills, 1999; Stone & Cooper, 2001).

5.9. Final Conceptual Framework with Mechanism and New Elements

Having this understanding from the data and evidenced by appropriate literature, we can further establish new conceptual elements within the pre-decisional cognitive dissonance conceptual framework that highlights this consumption trend within Zers. As derived in chapter 2 and further in the pilot and main study, the latent needs perform the role of cognitive heuristic elements arousing pre-decisional cognitive dissonance (Festinger, 1957) as per Mills and Harmon-Jones (1999) action-based model of cognitive dissonance due to higher self-esteem, higher heuristic reliance and neurological advances in the generation Z cohort (see chapter 2, 3 and 4).

Thus, the latent needs extracted from the main study data become the pre-decisional cognitive dissonance states. This, as established earlier, is due to the understanding of what needs to be attended to, i.e., generation Z individuals deploy the action-based model of cognitive dissonance (in a pre-decisional context) triggered by a cognitive element (driver) (Chacko & McElroy, 1983; Festinger, 1957; Flavell, 1999; Harmon-Jones, 1999; Harmon-Jones & Amodio, 2009). This is Zers' consumption behaviour and pattern.

Figure 5.11: Final Conceptual Framework Presenting Zers' Consumption Behaviour and Patterns

Latent Need (Cognitive Element)

Generation Z

Action-based cognitive dissonance aroused owing to the cognitive element

Affect Regulation i.e., ACC (Anterior Cingulate Cortex) in the brain takes over to complete a task owing to the dissonance felt, overriding other cues and information

Selective Exposure and targeted digital research based on cognitive element (Antevenio, 2019) to address the need.

Search terms guided by the latent need resulting in filtering of content further. This is selective exposure and information avoidance guided by the intensity of pre-decisional dissonance states (Tsang, 2019).

Types of latent needs result in pre-decisional cognitive dissonance states

Increased Self-Esteem

Neurological Mechanism

Reliance on Cognitive Heuristic Elements

Affects, 2nd step of consumer decision-making (information processing) and establishes a goal-oriented consumer decision-making approach owing to pre-decisional cognitive dissonance states

Life Goal

Passion

Maintaining the Pace of Life

Should be as before and more

Intensity of Pre-decisional cognitive dissonance state determines effect of information search and approach

Closer to addressing the latent needs, i.e., pre-decisional cognitive dissonance state, lesser the dissonance, and scepticism, and doubts and risk-aversive tendencies stemming from higher self-esteem which are the structural elements of pre-decisional cognitive dissonance.

Farther away from addressing the appropriate latent need i.e., pre-decisional cognitive dissonance state more the action-based pre-decisional dissonance starting off more selective exposure affecting information search due to awareness of need recognition (first step of consumer decision-making process)

Approach of Trial and Error in terms of self-experimentation individuals

Approach of reviewing alternative medicine doctors and making sure confidence in addressing the latent need is mutual

Approach of delayed decision-making to see if the issue goes away whilst researching about the topic to understand the action-based pre-decisional dissonance

Approach of elimination till the right choice for the specific latent need is available and decided upon

Generational Cohort Theory (Mannheim, 1952) indicates a cohort will act as a unit globally based on the same principles. Therefore, first this approach will be applicable not only to Indian Zers, but across the globe. Second, if this approach is used for every requirement by them, then even cross-sectoral applicability is possible, given the answer to the question – "do you utilise the approach every time you have a health requirement or any requirement?" – RP2-34, "yes!"

Source: The current author.

5.9.1 Pre-empting the Effects of Cognitive Heuristic Elements (Latent Needs) on The Intensity of Pre-Decisional Cognitive Dissonance Aroused

RO3, in this study, involves delineating how the conceptual framework can enable pre-empting the effects of cognitive heuristic elements (latent needs) on the intensity of pre-decisional cognitive dissonance aroused. In this regard, since the magnitude of pre-decisional dissonance states via the cognitive heuristic elements is the only one that changes (Festinger, 1957; Gotz-Marchand, Gotz & Irle, 1974; Gotz-Marchand & Kumpf, 1973; Metin & Camgoz, 2011; McGrath, 2017) and not the state of dissonance, as indicated in the conceptual framework by way of empirical data, pre-empting the effects should be possible. This is because pre-empting means "to appropriate something in advance" (Oxford Dictionary, 2022).

Therefore, delineating from quotes in the study in multiple moments: -

*"When there is **an awareness** of the problem..." – RP35, 24 years, Muscle Cramps Ayurveda, and Siddha Medicine Consumer*

*"When **you know something is not right**...you can understand..." – RP20, Self-Experimentation Consumer for Covid-19 and Frequent Flu*

An awareness of the issue is imperative for pre-empting the effects of cognitive heuristic elements on the intensity of pre-decisional cognitive dissonance. Further, the awareness of a problem in the making (early stages of understanding within a Zer) is a possibility and the awareness of which enables pre-empting. Specifically, empirical data in the study indicates that 'there is awareness for when something is amiss'. If this is the case, when the issue erupts as a possibility, heuristical tendencies will start to factor in the sense of wariness (being sceptical that something is happening or may happen) (Sales, Fivush & Merill, 2013). This is utilised in a meaning-making manner to understand the situation building in (Scherer-Rath et al., 2012) by the Zer – i.e., a threat to the cognitive element and emergence of a possible pre-decisional dissonance. This is the pre-emptive state that can be established as an understanding from the conceptual framework for Zers. To delineate, in terms of the final

conceptual framework and evidenced by empirical data because closer to the cognitive heuristic element - lesser the scepticism, lesser the risk-aversive tendency and lesser self-reliance but more mutual confidence and vice versa; when these attributes are disproportionate, they will pre-empt the aspect of pre-decisional cognitive dissonance concerning the cognitive heuristic element by the fact that the pre-decisional cognitive dissonance's intensity will be varying concerning the threat value perceived.

5.10. Conclusion

This chapter set out to delineate the interpretations from the main study and provide conclusive evidence in answering RO1, RQ1; RO2, RQ2 and RO3, RQ3. Suffice to say that this has been done satisfactorily via the main study. Furthermore, the mechanisms of operation and new consumer decision-making process of Zers have been highlighted as well. First, the themes about necessary structural elements to perceive pre-decisional cognitive dissonance as seen within Zers were delineated from data and backed by literature. Second, the pre-decisional dissonance as a guiding force in forming consumption behaviour was delineated. This included specifying the effect of action-based pre-decisional cognitive dissonance, which is driven by a threat to cognitive heuristic element to information search, leading to an understanding of how selective exposure and information avoidance are formed within a Zer. Further, how searches are filtered corresponds to the latent need (cognitive heuristic element). Third, we understood the mechanism of how approaches and research that are closer or farther away from addressing the mental heuristic element detail the difference in intensity of pre-decisional cognitive dissonance aroused within a Zer, guiding their approach further. Thus, we have conclusive evidence and delineation backed with literature about how cognitive dissonance guides consumer behaviour and patterns in Zers in their healthcare choices in terms of the study context.

6.1 Introduction

This research aims at advancing the understanding and knowledge of cognitive dissonance as a precursor to Zoomers' purchase behaviour. In other words, to detail pre-decisional cognitive dissonance as a phenomenon guiding consumer behaviour of a very high cognitive cohort. In this respect, the study aimed to detail the drivers arousing dissonance. In this regard, the thesis delineates the latent needs, which are the cognitive heuristic elements arousing pre-decisional-action-based cognitive dissonance within Zers. Furthermore, the study details how pre-decisional dissonance is perceived by Zers and how consumer decision-making has changed in the digital age with pre-decisional dissonance states guiding the process. The insights gained from the study will enable marketing practitioners to understand how Zoomers operate in the healthcare marketplace first. Second, via the properties of the generational cohort theory, how the new decision-making process will be deployed in other sectoral consumptions as well by Zers. Further, this chapter contains five sections – a summary of the findings of each RO; the study's contribution to literature, theory, and practice; the study's limitations; suggestions for further research.

6.2 Summary of the Findings in Relation to Each RO

6.2.1 Research Objective 1 – RO1

Establish pre-decisional dissonance states by identifying latent needs among generation Z in healthcare in the problem recognition stage of consumer decision-making.

This research first explored and developed a typology of pre-decisional dissonance states, which aroused pre-decisional cognitive dissonance within Zers, guiding their healthcare consumption patterns and behaviours (answers RO1 and RQ1). Towards this direction, it is evident that Zers have an innate ability to understand themselves immensely, such that they process all their feelings without neglecting them. Furthermore, the answers to specific questions within the interview guide detailed further analysis of the understanding of Zers about themselves as guided by their inherent latent needs. This led to the categorisation of the Zers' responses into four main categories: -

1) Life Goal Guided

2) Guided by their Passion for Life

3) Guided by Maintaining the Pace of Life

4) Guided by the fact that they Should Be as Before and More

These categories form the pre-decisional states within Zers, as delineated in chapter 5 of the thesis (see chapter 5 and figure 6.1 below). These specific categories derived from the transcripts and data warrant a match of healthcare treatment choice with their needs (pre-decisional dissonance states). Otherwise, these pre-decisional dissonance states continue to be in effect. The dissonance aroused via these states guides a constant search for appropriate equilibrium by addressing the mismatch and internal conflicts felt within. This, thus, is seen to be in line with the premise of this thesis and understanding of its presence of – cognitive heuristic elements (drivers – in our case, latent needs), enforcing an action-based arousal of cognitive dissonance in the pre-decisional stage. This then, via data, is seen to be prominent as an awareness in the need recognition stage of consumer decision-making, guiding information search. Thus, cognitive heuristic elements and cognitive dissonance for Zoomers is seen as an awareness in the need recognition stage of consumer decision-making guiding information search and all the subsequent steps in the process. This is evident from figure 6.1 below.

Figure 6.1: Final framework for RQ1.
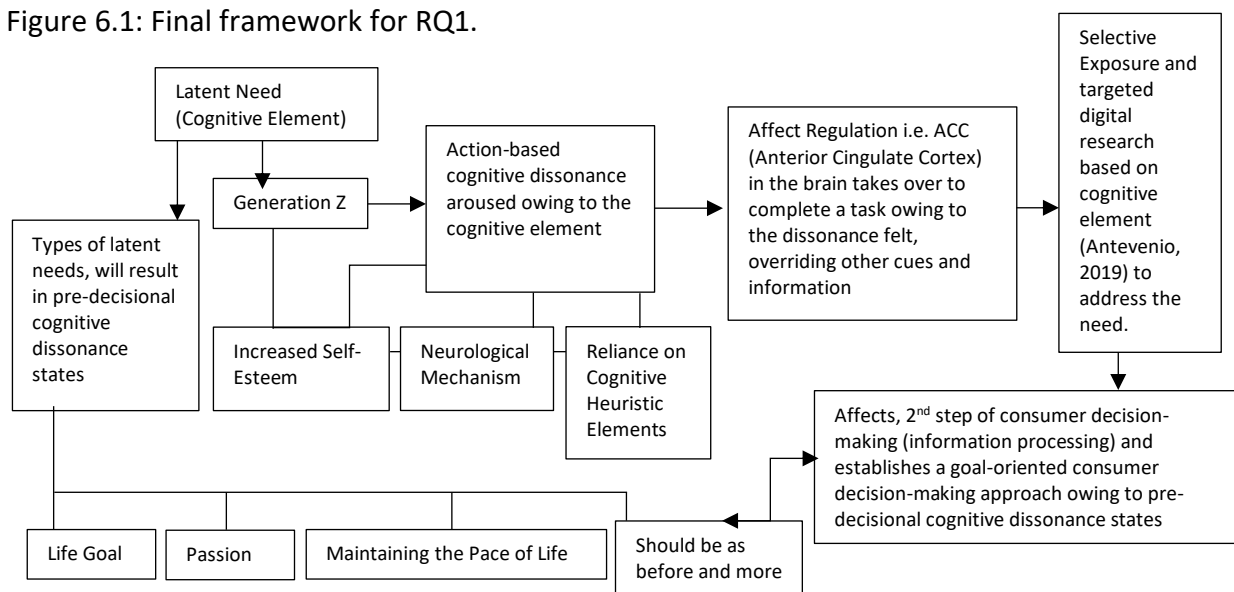
Source: The current author.

6.2.2 Research Objective 2 – RO2

Deduce how cognitive dissonance is recognised by generation Z as a cohort.

In this light, according to the findings, Zoomers are highly perceptual to pre-decisional cognitive dissonance. Further, also the usage of words like – "uneasiness", "feeling incomplete", "impreciseness", and "internal conflicts" was used to denote the mismatch such that the feeling of wanting to have "completeness" guided their decision-making. This, in definition is what Festinger meant when he said drivers (cognitive heuristic elements) arouse cognitive dissonance (Festinger, 1957), which motivates action. However, he speculated that it could be reconciled. This is where we bring in what Mills and Harmon-Jones (1999) meant when they derived that dissonance within individuals has a neurological backing. Specifically, people are neurologically already in a state to act and have to act to restore equilibrium. The action specified herein is to act not to reconcile but to address the cognitive driver arousing cognitive dissonance (Festinger, 1957). The combination of the two is this thesis' exploration. Specifically, the research discovered the following: -

1) Zoomers who have higher self-esteem do not wait for other options before taking control of their needs and healthcare search.

2) Zoomers who feel they have lost all self-esteem analyse themselves for their requirements and why they find an internal conflict with everything they do.

3) Zoomers utilise their risk-aversion tendency to start the process of initiating their need to start controlling their decision-making journey. This is furthered via their higher sense of self.

4) Zoomers also find and demonstrate they are neurologically attuned to act to answer their latent requirements, which they perceive via an understanding of the pre-decisional cognitive dissonance mismatch – internal conflict in their words. This demonstrates that the mismatch indicates the latent need which has been hidden all along, without an understanding for them or anybody. In this way, the latent need becomes an explicit need that guides their awareness by becoming prominent in the need recognition stage of consumer decision-making.

5) Zoomers' overpowering ACC effects in the affect regulation process are due to their need to address the pre-decisional cognitive heuristic element (latent need) and its

aroused pre-decisional dissonance, thereby enforcing selective exposure within information search, which is the second step of the consumer decision-making process.

Thus, this explicates the following: -

1) The mechanism of the various structural elements within Zoomers required to perceive pre-decisional cognitive dissonance plays out. That is to say, risk-aversion, self-reliance owing to higher self-esteem, and neurological action-oriented approach orient bringing in an understanding of control and nurturing the approach concerning their heuristic elements.

2) The mechanism enables perceiving pre-decisional cognitive heuristic elements and the resulting aroused pre-decisional dissonance by Zoomers. This presents itself to such a degree that it starts to guide their awareness from the need recognition stage of consumer decision-making.

Specifically, their perception is about understanding a mismatch – an incompleteness within themselves. Furthermore, findings also demonstrate an unwavering need to address the cognitive heuristic element bringing out this incompleteness. This exemplifies Zoomers' ability to understand and utilise their pre-decisional cognitive dissonance to guide their consumption. Furthermore, it also evidences that pre-decisional dissonance, as per the delineation in the literature review, is perceivable only by this cohort due to their innate attitude toward the structural elements and having those structural elements. This is evident from figure 6.2 below.

6.2.3 Research Objective 3 – RO3

<u>To detail how the new consumer decision-making process of Zers takes place due to the identification of pre-decisional dissonance states.</u>

From the derived literature and also demonstration from the findings, we can understand that, as described by Festinger (1957) and furthered by Sakai (1999) and Shultz and Lepper (1999), the magnitude of dissonance differs concerning the cognition. Findings determine that Zoomers are able to be aware of the fact that when something is amiss within them (from the data of this study) and via the understanding of meaning-making in a heuristical cohort (Sales, Fivush & Merill, 2013; Scherer-Rath et al., 2012). Moreover, this via derived literature is seen to bring about a sense of wariness (scepticism) within them which is utilised to

understand the happenings further and thereafter guide their decision-making. As evidenced from the framework concerning answers within the data to probes, the pre-empting within a Zer happens when there is a disproportion. This disproportion is from the angle of imbalance amidst the structural elements that enable perceiving pre-decisional cognitive dissonance. That is to say, within Zoomers, the ability to pre-empt is characterised via the following: -

1) Higher intensity of pre-decisional cognitive dissonance is seen to be present when addressing the cognitive heuristic element is farther away.

2) Higher intensity of pre-decisional cognitive dissonance is present along with higher scepticism, higher self-reliance, and higher risk aversive tendencies.

3) In contrast, lesser intensity of pre-decisional cognitive dissonance is felt when the consumer choice is closer to addressing the cognitive heuristic element (latent need in our case), and there is a match between need and choice.

4) Similarly, less scepticism, less risk aversive tendency, less self-reliance, and more confidence (not a facet of self-confidence) in the choice is fostered within their psyche and when the choice is correct. The feeling that ensues is that of completeness negating the internal conflict.

Notably, the pre-empting capability within a Zoomer is demonstrated by utilising their awareness to further the meaning-making process. This process is undertaken to understand – what is not correct, how it affects the Zoomer, and what it entails concerning their cognitive heuristic element (latent need). The magnitude of pre-decisional dissonance fostered by the meaning-making process undertaken owing to the threat felt to the cognitive element guides the consumer decision-making process. This is further driven by understanding the various structural elements of cognitive dissonance. This understanding is by way of changes in the intensity felt in relation to every element as indicated above within every Zoomer. See chapter 5 and figure 6.2 below.

Figure 6.2: final Conceptual Framework for RQ2 and RQ3.

Latent Need (Cognitive Element)

Generation Z

Action-based cognitive dissonance aroused owing to the cognitive element

Affect Regulation i.e., ACC (Anterior Cingulate Cortex) in the brain takes over to complete a task owing to the dissonance felt, overriding other cues and information

Selective Exposure and targeted digital research based on cognitive element (Antevenio, 2019) to address the need.

Types of latent needs result in pre-decisional cognitive dissonance states

Increased Self-Esteem

Neurological Mechanism

Reliance on Cognitive Heuristic Elements

Search terms guided by the latent need resulting in filtering of content further. This is selective exposure and information avoidance guided by the intensity of pre-decisional dissonance states.

Affects, 2nd step of consumer decision-making (information processing) and establishes a goal-oriented consumer decision-making approach owing to pre-decisional cognitive dissonance states

Life Goal

Passion

Maintaining the Pace of Life

Should be as before and more

Intensity of Pre-decisional cognitive dissonance state determines effect of information search and approach

Closer to addressing the latent needs, i.e., pre-decisional cognitive dissonance state, lesser the dissonance, and scepticism, and doubts and risk-aversive tendencies stemming from higher self-esteem which are the structural elements of pre-decisional cognitive dissonance.

Farther away from addressing the appropriate latent need i.e., pre-decisional cognitive dissonance state more the action-based pre-decisional dissonance starting off more selective exposure affecting information search due to awareness of need recognition (first step of consumer decision-making process)

Approach of Trial and Error in terms of self-experimentation individuals

Approach of reviewing alternative medicine doctors and making sure confidence in addressing the latent need is mutual

Approach of delayed decision-making to see if the issue goes away whilst researching about the topic to understand the action-based pre-decisional dissonance

Approach of elimination till the right choice for the specific latent need is available and decided upon

To elaborate how the initial conceptualisation of pre-decisional cognitive dissonance has evolved from figure 2.11 into the final framework as presented in figures 5.11 and 6.2 above, essentially the figure 2.11, proposed the conceptualisation to indicate how the phenomenon of pre-decisional cognitive dissonance will take place in a Zer. The mechanism and elements were lesser in number demonstrating only proposed the affect regulation and the effect of cognitive drivers arousing pre-decisional dissonance and effecting in selective exposure from the need recognition stage of consumer decision-making. However, if we see post data collection and analysis, the final framework of 5.11 and 6.2 first details what the latent needs are – depicting pre-decisional dissonance state mechanism. Further, the final framework comprises the mechanism of how as indicated by literature, the initial framework whilst being in practice, has further added elements of how the mechanism of the Zers' tendencies function during the pre-decisional dissonance state. Thus, indicating the filtration mechanism within the new consumer decision-making process perceived by Zer and adopted due to the discerned pre-decisional cognitive dissonance's magnitude. Also, the mechanism of pre-decisional perception by way of varying intensities of the tendencies, pre- decisional dissonance and latent needs perceived. Further, the final conceptual framework also demonstrates what propositions to consumer decision-making in healthcare is observed and how it is decided upon.

6.3 Contributions

In this section, the study's contributions to theory and practice are detailed.

6.3.1 Theoretical Contributions

First, this study is the first to investigate Zers' perception of pre-decisional cognitive dissonance as a guide to this cohort's consumer behaviour, as very little is known about this generation of consumers in the marketplace (Priporas et al., 2017, 2020). Generation Z is an emerging topic (Kamenidou et al., 2021; Nagarajan et al., 2021a, b; Priporas, 2020; Priporas et al., 2022, 2020, 2017). However, particularly in the health care setting (Priporas et al., 2022; Nagarajan et al., 2021b), their cognitive abilities have been underexplored, and cognitive elements that guide their behaviours. Second, it is the first study to place cognitive dissonance in a pre-decisional context. In this regard, this study extends past studies and theoretical application of cognitive dissonance by proving empirically the existence of cognitive

dissonance as a theory in the pre-decisional context. This thus proves the theory's applicability in the pre-decisional frame of reference, which has been questioned and negated by many scholars over the years. Given that is so, the theory, albeit proved in derived literature as applicable in a pre-decisional context, the number of studies was scare with only two – Koller and Salzberger (2007) and Costanzo (2013). Therefore, this research adds a vital contribution to the scarcity of literature.

Third, this study is the first to develop such integration of specific literature from Festinger (1957) and Harmon-Jones and Mills (1999). This integration of Festinger's insight of cognitive elements and Harmon-Jones and Mill's derivation and placing of neurological process at the heart of understanding cognitive dissonance enables formulating the appropriate conceptual knowledge of pre-decisional cognitive dissonance's applicability and existence. Specifically, the research extends conceptual clarity and integration of theories instead of looking at cognitive dissonance only from one lens alone.

Fourth, whilst it has been understood that cognitive elements are drivers for arousing dissonance, no literature points to what that can be in individuals. This study thus has found the drivers arousing dissonance and exemplifies them as pre-decisional dissonance states. With the knowledge that "understanding of what is wanted" comes from a place of already knowing, the manifestation of explicit cognitive dissonance is derived from a mismatch state with the drivers. Thus, delineating the pre-decisional dissonance states. Fifth, this study also extends the information processing model by demonstrating how dissonance enforces selective exposure which guides the "search for alternatives and options" from the beginning. This, thus, extends the information processing model by placing the cognitive heuristic elements and pre-decisional dissonance at the top of the framework.

Sixth, extending the new age consumer decision-making process of the digital age in light of identified pre-decisional dissonance states. This research has empowered my understanding of new-age consumer decision-making. Whilst it was evident a lot has changed, the conceptual and cognitive background of this change was not explored. Thus, this research is the first to fully understand how the consumer decision-making process in terms of generation Z has changed; what has brought about the change; how they operate and finally,

why they operate in this way. Via the demonstration of how cognitive elements guide consumer decision-making, based on the pre-decisional dissonance aroused, this research elucidates the new consumer decision-making process as seen in Zoomers' accounts and backed by relevant literature as guided by cognitive heuristic elements.

6.3.2   Practical Contributions

From a practical perspective, the six significant contributions are as detailed below.

First, the studied cohort based on consumption and behaviour patterns is said to upend almost every sector (Devrix, 2019; Fuse, 2019; Jenkins, 2019). This study's findings answer the unknown factor about Zoomers by providing ample insight into how Zers operate in the marketplace. Additionally, how they will operate. Further, via the generalizability provided by the generational cohort theory (Mannheim, 1927, 1952), these insights of new consumer decision-making guided by pre-decisional dissonance state enforcing selective exposure will be the principle of this cohort in terms of their consumer behaviour.

Second, a significant issue facing businesses today is target audiences' increasingly shorter attention spans. Statistical data (Banfi et al., 2018; Rommelse et al., 2017; Rosenberg, 2015) indicates that as IQ (intelligence quotient) increases from generation to generation, attention span decreases, giving rise to a population comprising ADHD, ADD and other attention deficient people. Such an inverse relation impacts a marketer's timeframe to capture a cohort's attention. The findings from this study provide the understanding of underpinnings related to this notion of a short attention span. This enables us to understand, what kind of target messaging should be undertaken and how.

Further, it also makes us question if target promotional activities are necessary. If necessary, for such a cohort, then how should it be tweaked, based on not previous searches, but this time's searches. That is to say, real-time data via feeling Ai (Rust, 2021) is to be implemented. Therefore, this study establishes latent needs arousing cognitive dissonance sensed and their importance at the start of the information processing model. It equips businesses to understand how to deal with the rise in shorter attention spans, a.k.a filtering of content by the iGeneration.

Third, arising out of the study, businesses will be in a position to adequately account for the 'Flynn Effect'. This phenomenon describes that the IQ of successive generations increases every decade. Given cognitive dissonance and IQ being constant components within an individual, findings from this appraise businesses about the informed consumer's mental processes during the need recognition stage of the process of consumer decision-making. This empowers businesses to understand the how-to regarding tailoring generation-compatible marketing content and adopting generation-relevant marketing activities.

Fourth, allopathic healthcare providers can now understand the shortcomings seen in their processes. For instance, the rigidity in allopathic treatment to the evaluative process of alternative medicine. This facilitates understanding – of why there is a shift by the new generation of consumers in the marketplace toward complementary and alternative medicine in terms of: -

1) What is wanted by the cohort as a treatment of diagnosis by way of value co-creation as a mechanism,

2) Monitoring (that includes constant involvement and engagement in the form of value co-creation, and being in sync based on a pre-discussed action plan)

3) Option to explore and experiment with alternatives before decision – an active consumer not passive, and

4) Amount of information provided by the doctor to them.

Further, they can also understand the changes in the dynamism within the sector concerning Zoomers allowing them to approach, and target with the right kind of messaging content.

Fifth, allopathic healthcare providers can understand via the new consumer decision-making process how much of the rigidity of diagnosis has to change. In this regard, whilst some functions will have to remain the same due to the orientation of the mainstream healthcare sector, other processes like treating the consumers as a value co-creator of their treatment options must be undertaken. Thus far, since healthcare (mainstream) has seen patients/consumers as passive, this change will bring about a level of dynamism that is offered to patients/consumers by alternative medicine – thus causing the shift. This understanding will allow for a re-shift to mainstream healthcare.

Sixth, major conglomerates focus on patient count instead of patient care delivery. Healthcare has been called on to refocus with the growing shift and preference. The elements of what should be refocused on can be seen within the study's findings. Specifically, from the data we can find, there is a refocus needed on: -

1) The malleability of the process by bringing in value co-creation for a cohort adept in online and offline searches

2) Bringing about ease of accessibility. Many Zers also prefer alternative medicine because it is closer to home and accessible with just a few ingredients required to make the tonic/supplement to cure themselves of their illness.

3) Reducing the facet of side effects. The most common answer from the findings was related to "no side effects". Allopathy is generally seen through the lens as harmful and having side effects by Zoomers. Therefore, this needs to be cut down immensely. Testing individuals can further do this for allergies and side effects before prescription of medicines.

Seventh, healthcare conglomerates can now understand how to segment, target and thereafter position themselves for Zers and the next generation as organizations that provide that provide care in the active way that the new cohort needs. Providing interaction in a two-way mode of communication as value co-creators.

6.3.3   Societal Contributions

From a societal perspective, below are the following contributions.

1) Provides an understanding and customer insights of what is need within the healthcare ecosystem from future generations' perspectives.

2) Emphasises the understanding of how important value co-creation is within the healthcare system from a societal perspective and how it needs to be implemented by drawing on alternative medicine approaches.

3) Details how society will benefit from a healthcare perspective pre-, post and during a crisis as well if value co-creation is implemented within the allopathic model of healthcare. Thus, integrating ideologies of alternative and allopathic models of healthcare.

4) Policy makers can understand what sort of social marketing of healthcare needs to be undertaken by government and public authorities to strengthen healthcare initiative uptake.

6.4 Limitations of the Research and Suggestions for Future Research

The findings contribute to both theory and practice on cognitive dissonance, information processing, and new age consumer decision-making and extend the research in this area. Still, there are some limitations inherent in this study that need to be mentioned.

First, the scope of the study is contextually dependent on India. However, even though we have considered the generational cohort theory and increased the generalizability of the cohort's approach to consumer decision-making, it must be understood that not all countries have alternative medicine as prevalent as India. This, therefore, fosters a need to study how the generation behaves in a country where alternative medicine is not part of the mainstream and understood care approaches.

Second, albeit the drivers arousing dissonance and establishing pre-dissonance states have been accomplished in this study, it is imperative to explore if there are any more pre-decisional dissonance states owing to reflexive awareness stimuli other than latent needs. This is because pre-conceived stimuli, which are from a heuristic level, can be understood in various ways via meaning-making (Sales, Fivush & Merill, 2013). Latent needs are thus one kind of pre-reflexive awareness – albeit, via the research, it does seem to be the right and highest type in individuals guiding pre-decisional dissonance. Withal, it would be interesting to see what other reflexive awareness components from the cognitive side within an individual can attempt to manifest in an action-based pre-decisional dissonance state.

Lastly, as this research is exploratory, a strong emphasis has been placed on gaining insights and understanding pre-decisional cognitive dissonance and its cognitive heuristic elements within Zers in India. However, this approach limits the generalisation of the result to an extent. Future research could use a bigger sample and a quantitative method to test this study's results in drivers of pre-decisional dissonance, pre-decisional dissonance states and changes in the consumer decision-making process cross-sectorally.

6.5 Conclusions

In conclusion, this research offers an in-depth understanding of generation Z's cognitive process in light of cognitive dissonance, affecting their consumer decision-making process concerning healthcare in India. In doing so, it offers insights into how the individuals process their feelings to allow for pre-decisional cognitive dissonance perception and adherence. Specifically, how this pre-decisional cognitive dissonance enforces in selective exposure to effect particular information search. Therefore, instating an understanding and insight of awareness of cognitive elements and pre-decisional cognitive dissonance orienting goal-driven consumer decision-making from the need recognition stage in the process.

It explains and addresses the challenges healthcare companies face to maintain their clientele owing to the shift toward alternative medicine. In this, it empowers the understanding of why; what and how. The study also offers a sense of Gen Z's perceptions and evaluations of allopathic and alternative medicine with specific emphasis on why it is such, what brought out this understanding to shift and how it has empowered all concerning their pre-decisional cognitive dissonance manifestation and guidance. More importantly, by discovering pre-decisional dissonance states that orients consumer behaviour among Gen Z in India toward alternative medicine practices, the study makes a significant contribution to cognitive dissonance literature as well as generation Z literature.

Notably, it addresses the dearth of research about this young consumer group and reveals the drivers of consumer behaviour practices towards an overlooked shift within healthcare. Potential directions are offered for further research, which aims to aid healthcare companies in further understanding the new age consumer decision-making. In addition to understanding how there is a need to shift practices to a more co-creating environment.

References

Abbott. (2020). *How Gen Z is affecting the healthcare industry*. Retrieved from: https://www.lifetothefullest.abbott/en/articles/how-gen-z-is-affecting-healthcare.html [accessed 14-05-2020]

Abrahmovich, G. (2019). *15 mind-blowing stats about generation z.* Retrieved from: https://cmo.adobe.com/articles/2019/6/15-mind-blowing-stats-about-generation-z.html#gs.yfkfzw [accessed 05-03-2020]

Achar, C., So, J., Agarwal, N. & Duhachek, A. (2016). What we feel and why we buy: the influence of emotions on consumer decision-making. *Current Opinion in Psychology, 10*, 166-170.

Ad Age. (2003). *History: 1950s*. Retrieved from: https://adage.com/article/adage-encyclopedia/history-1950s/98701 [accessed 04-04-2020]

Addison, D.P., Lingham, T., Uslay, C. & Lee, O.F. (2017). An entrepreneurial relationship marketing approach to B2B selling. *Journal of Research in Marketing and Entrepreneurship, 19*(1), 2-25.

Adolphus, M. (2020). *How to undertake case study research*. Retrieved from: https://www.emeraldgrouppublishing.com/archived/research/guides/methods/case_study.htm#5 [accessed 25th September 2020]

Aebli, H. (1978). A dual model of cognitive development: Structure in cultural stimulation, construction by the child. *International Journal of Behavioural Development, 1978*(1), 221-228.

Aggarwal, R., & Ranganathan, P. (2019). Study designs: Part 2 - Descriptive studies. *Perspectives in clinical research*, *10*(1), 34–36.

Ahola, T. (2006). *How to deliver value to customers with latent needs in a business- to-business project delivery context: empirical illustration from the construction industry*. Retrieved from: https://www.impgroup.org/uploads/papers/5602.pdf [accessed 07-03-2020]

Alalwalan, A. (2018). Investigating the impact of social media advertising features on customer purchase intention. *International Journal of Information Management, 42*, 65-77.

Albarracin, D. & Johnson, B. T. (2018). *Handbook of Attitudes, Volume 2: Applications*. Routledge: New York

Al-Damat, A. & Al-Damat, O. (2019). Impact of Social Support Resources on Post- Purchase Dissonance: Evidence from Jordan. *International Journal of Business and Social Science, 10*(1), 53-62.

Allen, S. (2020). *2020 Global healthcare outlook.* Retrieved from: https://www2.deloitte.com/global/en/pages/life-sciences-and-healthcare/articles/global-health-care-sector-outlook.html [accessed 25-03-2020]

Allen, S. (2019). 2019 *Global health care outlook*. Retrieved from: https://www2.deloitte.com/global/en/pages/life-sciences-and-healthcare/articles/global-health-care-sector-outlook.html [accessed 13-11-2019]

Alloway, T. P. & Elsworth, M. (2012). An investigation of cognitive skills and behaviour in high ability students. *Learning and Individual Differences, 22*, 891-895.

Allwood, C. (2012). The distinction between qualitative and quantitative research methods is problematic. *Qualitative Quantitative, 46,* 1417-1429.

Aleksandra. (2018). 63 Fascinating Google Search Statistics. https://seotribunal.com/blog/google-stats-and-facts/ [accessed 17-05-2020]

Alfawaz, S. (2011). *Information security management: A case study of an information security culture* (Doctor of Philosophy). Queensland University of Technology. Retrieved from: https://eprints.qut.edu.au/41777/1/Salahuddin_Alfawaz_Thesis.pdf [accessed 26-09-2020]

Ali, F. (2020). *A decade in review: Ecommerce sales vs. retail sales 2007-2019*. Retrieved from: https://www.digitalcommerce360.com/article/e-commerce-sales-retail-sales-ten-year-review/ [accessed 16-05-2020]

Altran. (2020). *Digital health.* Retrieved from: https://www.altran.com/as-content/uploads/sites/23/2019/07/digital-health_position-paper_web-2.pdf [accessed 30-03-2020]

Amaral, A., Stice, E. & Ferreira, M. (2019). A controlled trial of a dissonance-based eating disorders prevention program with Brazilian girls. *Psicologia Reflexao e Critica*, *32*(13) https://doi.org/10.1186/s41155-019-0126-3

Amodio, D. M., Devine, P. G. & Harmon-Jones, E. (2008). Individual differences in the regulation of intergroup bias: the role of conflict monitoring and neural signals for control. *Journal of Personality and Social Psychology, 94*(1), 60–74. https://doi.org/10.1037/0022-3514.94.1.60

Anaf, S., Drummond, C. & Sheppard, A. (2007). Combining case study research and systems theory as a heuristic model. *Qualitative Health Research*, *17*(10), 1309-1315.

Anderson, S., Rayburn, S. W. & Sierra, J. J. (2019). Future thinking: the role of marketing in healthcare. *European Journal of Marketing, 53(8*), 1521-1545.

Anderson, P. (2002). Assessment and development of executive function (EF) during childhood. *Child Neuropsychology, 8,* 71-82.

Anderson, J.R. (1980). *Cognitive psychology and its implications*. San Francisco, CA: W.H. Freeman

Anderson, J.R. & G.H. Bower. (1980). *Human associative memory: a brief edition*. Hillsdale, NJ: Erlbaum

Andrews, T. M. (2020). *We're all video chatting now. But some of us hate it*. Retrieved from: https://www.washingtonpost.com/technology/2020/03/30/video-chat-zoom-skype-hangouts-hate-bad/ [accessed 26-09-2020]

Angiating, G. & Potlouri, R. M. (2018). A study on service quality and customer satisfaction in Nigerian healthcare sector. *International Journal of Industrial Distribution and Business*, *9*(12), 7-14.

Antevenio. (2019). *The digital consumer in 2019: gets to understand their needs better*. Retrieved from: https://www.antevenio.com/usa/the-digital-consumer-in-2019-gets-to-understand-their-needs-better/ [accessed 19-02-2020]

AQA. (2020). *Organisms respond to changes in their internal and external environments*. Retrieved from: https://www.aqa.org.uk/subjects/science/as-and-a-level/biology-7401-7402/subject-content/organisms-respond-to-changes-in-their-internal-and-external-environments-a-level-only [accessed 19-04-2020]

Archer M.S. (2020). The Morphogenetic Approach; Critical Realism's Explanatory Framework Approach. In: Róna P., Zsolnai L. (eds) *Agency and Causal Explanation in Economics. Virtues and Economics*, Volume 5. Springer, Cham. https://doi.org/10.1007/978-3-030-26114-6_9

Armano, D. (2007). *The Marketing Spiral, Logic Emotion*. Retrieved from: https://darmano.typepad.com/logic_emotion/2010/04/socialbusiness_planning.html [accessed 05-05-2020]

Arnold, A. (2018). *Millennials and healthy living: It's about online content, not doctors' visits*. Retrieved from: https://www.forbes.com/sites/andrewarnold/2018/02/25/millennials-and-healthy-living-its-about-online-content-not-doctors-visits/#6cd1ab6232f2 [accessed 28-03-2020]

Aronson, E., & Mills, J. (1959). The effect of severity of initiation on liking for a group. *Journal of Abnormal and Social Psychology, 59*, 177-181.

Aronson, E. (1992). The Return of the Repressed: Dissonance Theory Makes a Comeback. *Psychological Inquiry, 3*(4), 303-311, DOI: 10.1207/s15327965pli0304_1

Aronson, E., Devine, A. & Patricia, G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of Personality and Social Psychology, 67*(3), 382-394.

Arya, V. (2019). *How not to lose attention of gen Z in the 8 seconds that you have?.* Retrieved from: https://www.entrepreneur.com/article/334791 [accessed 22-11-2019]

Asada, M., Kuniyoshi, Y., Ishiguro, H., Inuia, T., Yoshikawa, Y., Ogino, M., Yoshida, C. & Hosoda, K. (2009). Cognitive Developmental Robotics: A Survey. *IEEE transactions on autonomous mental development, 1*(1), 12-34.

Asadi-Lari, M., Tamburini, M. & Gray, D. (2004), Patients' needs, satisfaction, and health related quality of life: Towards a comprehensive model. *Health and Quality of Life Outcomes*, *2(*32) DOI:10.1186/1477-7525-2-32

Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. Qualitative Research, 1(3), 385-405.

Axelrod, R. (1973). Schema Theory: An Information Processing Model of Perception and Cognition. *The American Political Science Review, 67*(4), 1248-1266.

Ayan, S. (2018). *The Brain's Autopilot Mechanism Steers Consciousness*. Retrieved from: https://www.scientificamerican.com/article/the-brains-autopilot-mechanism-steers-consciousness/ [accessed 24-04-2020]

Azzalini, D., Rebollo, I. & Tallon-Baudry, C. (2019). Visceral Signals Shape Brain Dynamics and Cognition. *Trends in Cognitive Sciences, 23*(6), 488-509

Baars, B. & Franklin, S. (2007). An architectural model of conscious and unconscious brain functions: Global Workspace Theory and IDA. *Neural Networks, 20*(9), 955-961.

Bach, T., Da Silva, W., Souza, A., Kudlawicz-Franco, C. & Da Veiga, C. (2020). Online customer behaviour: perceptions regarding the types of risks incurred through online purchases. *Palgrave Communications, 6*(13), https://doi.org/10.1057/s41599-020-0389-4

Baer, J. (2017). *6 Rules for Meeting Millennial Customer Service Expectations*. Retrieved from: https://www.entrepreneur.com/article/300634 [accessed 15-05-2020]

Bailey, K. (2012). *What would my avatar do? Video games and risky decision-making. Graduate Theses and Dissertations*. Retrieved from: https://lib.dr.iastate.edu/etd/12595 [accessed 25-05-2020]

Bajaj, A. (2020). *Working towards building a healthier India.* Retrieved from: https://www.investindia.gov.in/sector/healthcare [accessed 25-03-2020]

Bajpai, N. (2011). *Business research methods*. Delhi: Pearson.

Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin, 112*, 461– 484.

Banerjee, S. (2017). Consumer post purchase cognitive dissonance. *International Journal of Advance Research in Computer Science and Management Studies, 5*(10), 86-89.

Banfi, C., Kemeney, F., Gangl, M., Schulte-Korne, G., Moll, K. & Landerl, K. (2018). Visual attention span performance in German-speaking children with differential reading and spelling profiles: No evidence of group differences. *PLOS ONE 13*(6): e0198903. https://doi.org/10.1371/journal. pone.0198903

Bantau, G. & Rayburn, S.W. (2016). Advanced information technology: transforming service innovation and design. *The Service Industries Journal, 36*(13/14), 699-720.

Banyte, J. & Radzevice, J. (2020). Driving Factors of Consumer Irrationality in Omnichannel Consumer Behaviour. In: A. Rocha, J. Reis, M. Peter, Z. Bogdanovic (eds) *Marketing and Smart Technologies. Smart Innovation, Systems and Technologies*, vol 167. Springer, Singapore

Barclays. (2018). *Gen Z: Step aside millennials*. Retrieved from: https://www.investmentbank.barclays.com/our-insights/generation-z.html/ [accessed 20-10-2019]

Bardin, B., Vidal, P., Facca, L., Dumas, R. & Perrissol, S. (2018). The effect of information quality evaluation on selective exposure in informational cognitive dissonance: The role of information novelty. *International Review of Social Psychology, 31*(1), 21-37.

Barr, A. & Feigenbaum, E. A. (1981). *The handbook of artificial intelligence.* Los Altos, CA: William Kaufmann Inc.,

Barreiras, R. M. P. (2020). *Consumer behaviour changes in the cosmetic industry*. Retrieved from: http://hdl.handle.net/10400.14/29745 [accessed 04-04-2020]

Barnett, D. (2017). *In the war between millennials and baby boomers we have forgotten about generation X.* Retrieved from: https://www.independent.co.uk/life-style/health-and-families/millenials-generation-x-baby-boomers-a7570326.html [accessed 29-02-2020]

Basu, R., Panda, R. & Kondasani, R. K. (2019). Better healthcare setting for better healthcare service quality: An empirical analysis of Indian consumers' perspective. *International Journal of Quality & Reliability Management 36*(10), 1665-1682.

Bauman, Z. (2013). *The Individualized Society*. New York: John Wiley and Sons

Baumeister R. F., DeWall C. N., Vohs K. D. & Alquist J. L. (2010). Does emotion cause behaviour (apart from making people do stupid, destructive things) In C. R. Agnew, D. E. Carlston, W. G. Graziano, & J. R. Kelly (Eds.), *Then a miracle occurs: focusing on behaviour in social psychological theory and research*. New York: Oxford University Press. 12-27.

Baumeister R.F., Vohs K.D., Nathan DeWall C. & Zhang L. (2007). How emotion shapes behaviour: feedback, anticipation, and reflection, rather than direct causation. *Personality and Social Psychology Review 11*(2), 167-203.

Bayindir, N. & Kavanagh, D. (2019). *Gen z: Examining the attitudes and digital behaviours of internet users aged 16-21*. Retrieved from: https://www.globalwebindex.com/hubfs/Downloads/Generation_Z_report_2019.pdf?utm_campaign=Gen%20Z%20report%202019&utm_source=hs_automation&utm_medium=email&utm_content=71833136&_hsenc=p2ANqtz-9PL6IA4ki1EMYpZ7S9kAOR20piNr2cN8ltGNpnuvgWtwLiMsaWP4G6I013zpYoBpXYQ1KyMrkzqPAYYaFReYywvRKH6A&_hsmi=71833136 [accessed 10-03-2020]

Bayne, T. (2010). *The unity of consciousness*. Oxford University Press,

BBC. (2020). *How does the nervous system help us respond? - OCR 21C*. Retrieved from: https://www.bbc.co.uk/bitesize/guides/zq8bqhv/revision/1 [accessed 23-04-2020]

Beck, U. (1994). The Reinvention of Politics: Towards a Theory of Reflexive Modernization. In: U. Beck, A. Giddens and S. Lash (eds) *Reflexive Modernization: Politics, Tradition and Aesthetics in the Modern Social Order*, pp. 1–24. Cambridge: Polity.

Beck, U. (1992). *Risk Society: Towards a New Modernity*. London: Sage.

Bearden, W. O., Hardesty, D. M., & Rose, R. L. (2001). Consumer Self-Confidence: Refinements in Conceptualization and Measurement. *Journal of Consumer Research, 28*(June), 121 – 134.

Beauvois, J.-L., & Dubois, N. (1988). The norm of internality in the explanation of psychological events. *European Journal of Social Psychology, 18*(4), 299–316.

Beauvois, J. L. & Joule, R. V. (1996). *A radical dissonance theory*. London: Taylor & Francis.

Beauvois, J-L. & Joule, R-V. (2019). A radical point of view on dissonance theory. In E. Harmon-Jones (Ed.), *Cognitive dissonance: Reexamining a pivotal theory in psychology (p. 41–61)*. American Psychological Association. https://doi.org/10.1037/0000135-003

Becker, M., Christian, M. Kolbeck, A., & Hess, T. (2019). Continuously Healthy, Continuously Used? – A Thematic Analysis of User Perceptions on Consumer Health Wearables. *Pacific Asia Journal of the Association for Information Systems, 11*(1), DOI: 10.17705/1pais.11105. Available at: https://aisel.aisnet.org/pajais/vol11/iss1/5

Behera, H. K. & Yadav, I. S. (2019). Explaining India's current account deficit: A time series perspective. *Journal of Asian Business and Economic Studies, 26*(1), 117-138.

Beckett, A. & Nayak, A. (2008). The reflexive consumer. *Marketing Theory, 8*(3), 299-317.

Beckmann, J. & Irle, M. (1985) Dissonance and Action Control. In: J. Kuhl, J. Beckmann (eds) *Action Control*. SSSP Springer Series in Social Psychology. Springer, Berlin, Heidelberg

Belch G. & Belch M. (2009). *Advertising and Promotion: An Integrated Marketing Communications Perspective*, 8th ed. Homewood, IL: Irwin.

Berkowitz, L. (1984). Some effects of thoughts on anti- and prosocial influences of media events: A cognitive-neo-association analysis. *Psychological Bulletin, 95*, 410–427.

Bhatia, M. (2018). *Your Guide to Qualitative and Quantitative Data Analysis Methods.* Retrieved from: https://humansofdata.atlan.com/2018/09/qualitative-quantitative-data-analysis-methods/ [accessed 24-09-2020]

Bhaskar, R. (1978). *A Realist Theory of Science*, 2nd Ed. Hassocks: Harvester Press.

Bilgihan, A. Peng, C. & Kandampully, J. (2013). Generation Y's dining information seeking and sharing behaviour on social networking sites. *International Journal of Contemporary Hospitality Management, 26*(3), 349-366.

Blaikie, N. & Priest, J. (2017). *Social Research Paradigms in Action*, Cambridge: Polity.

Blaikie, N. (2007). *Approaches to Social Enquiry*, 2nd Edn. Cambridge: Polity.

Blazquez, M. (2014). Fashion Shopping in Multichannel Retail: The Role of Technology in Enhancing the Customer Experience. *International Journal of Electronic Commerce, 18*(4), 97-116

Blincoe, K. & Hussain, W. (2016). Establishing Trust and Relationships through Video Conferencing in Virtual Collaborations: An Experience Report on a Global Software Engineering Course, *2016 IEEE 11th International Conference on Global Software Engineering Workshops (ICGSEW)*, Irvine, CA, 2016, pp. 49-54.

Bloch, P., Sherrell, D. & Ridgway, N. (1986). Consumer Search: An Extended Framework. *Journal of Consumer Research, 13*(1), 119-126.

Bluth, R. (2018). *Attention deficit diagnoses nearly double in two decades.* Retrieved from: https://www.spectrumnews.org/news/attention-deficit-diagnoses-nearly-double-two-decades/ [accessed 05-05-2020]

Boden, M. A. (1977). *Artificial Intelligence and Natural Man*. New York: Basic Books, Inc.

Bolia, B., Jha, M. & Jha, S. (2020). Understanding Cognitive Dissonance of Indian Customers for Financial Products: A Multi-Dimensional Scale Development Approach. *Indian Journal of Finance and Banking*, *4*(1), 20-32.

Bolia, B., Jha, D., & Jha, D. (2016). Cognitive Dissonance: A Study of Post Purchase Behavior of Consumers in the Context of Financial Products. *International Journal of Innovative Research and Development, 5*(3), 148-153.

Bolton, R. N., Parasuraman, A., Hoefnagels, A., Migchels, N., Kabadayi, S. & Gruber, T. (2013). Understanding Generation Y and their use of social media: A review and research agenda. *Journal of Service Management, 24*(3), 245–267.

Bonoma, T. (1985). Case Research in Marketing: Opportunities, Problems, and a Process. *Journal of Marketing Research*, *22*(2), 199-210.

Boodman, S. (2018). *For millennials, a regular visit to the doctor's office is not a primary concern*. Retrieved from: https://www.washingtonpost.com/national/health-science/for-millennials-a-regular-visit-to-the-doctors-office-is-not-a-primary-concern/2018/10/05/6b17c71a-aef3-11e8-9a6a-565d92a3585d_story.html [accessed 5-11-2019]

Book, L. A., Tanford, S. & Chang, W. (2018). Customer reviews are not always informative: the impact of effortful versus heuristic processing. *Journal of Retailing and Consumer Services, 41*, 272-280.

Borland, H., & Lindgreen, A. (2013). Sustainability, Epistemology, Ecocentric Business, and Marketing Strategy: Ideology, Reality, and Vision. *Journal of Business Ethics*, *117*(1), 173-187.

Botvinick, M. M., Braver, T. S., Barch, D. M., Carter, C. S., & Cohen, J. D. (2001). Conflict monitoring and cognitive control. *Psychological Review, 108*, 624–652.

Bower, G. H., Black, J. B., & Turner, T. J. (1979). Scripts in memory for text. *Cognitive Psychology, 11*, 177-220.

Braithwaite, R. B. (1953). *Scientific Explanation*. Cambridge: Cambridge University Press

Bran, A. & Viadis, D. C. (2019). Respectable challenges to respectable theory: Cognitive dissonance theory requires conceptualization clarification and operational tools. *Frontiers in Psychology*, *10*, 1-18.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Brinkmann, S., & Kvale, S. (2015). *Interviews: Learning the craft of qualitative research interviewing (3rd ed.).* Thousand Oaks, CA: Sage

Britannica. (2020). *Entelechy*. Retrieved from: https://www.britannica.com/topic/entelechy [accessed 16-06-2020]

Brown, M.E., & Duenas, A.N. A. (2020). Medical Science Educator's Guide to Selecting a Research Paradigm: Building a Basis for Better Research. *Medical Science Education, 30*, 545–553.

Bock, T. & Sergeant J. (2002). Small Sample Market Research. *International Journal of Market Research, 44*(2), 1-7.

Bolderston, A. (2012). Conducting a research interview. *Journal of Medical Imaging and Radiation Sciences*, *43*, 66–76.

Boyatzis, R.E. (1998). *Transforming qualitative information: Thematic analysis and code development*. London: Sage

Boyd, H. W., Walker, O. C., Mullins, J. & Larreché, J-C. (2002). *Marketing Management, A Strategic Decision-Making Approach.* Columbus: McGraw-Hill/Irwin.

Bradford, A. (2017). *Deductive Reasoning vs. Inductive Reasoning*. Retrieved from: https://www.livescience.com/21569-deduction-vs-induction.html [accessed 24th September 2020]

Brannon, S. & Gawronski, B. (2019). What is cognitive consistency? And why does it matter?. Cognitive dissonance, In E. Harmon-Jones (Ed.), *Cognitive dissonance: Re-examining a pivotal theory in psychology* (pp. 91–116). American Psychological Association. https://doi.org/10.1037/0000135-005

Braun V. & Clarke V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*, 77–101.

Braun V, Clarke V, Terry G. (2015). Thematic analysis. Qualitative research in clinical and health psychology. In Cooper, H. (ed.), *APA Handbook of Research Methods in Psychology: Vol. 2. Research Designs*, 95-113.

Braun, V., & Clarke, V. (2014). What can "thematic analysis" offer health and wellbeing researchers?. *International journal of qualitative studies on health and well-being*, *9*, 26152. https://doi.org/10.3402/qhw.v9.26152

Brehm, J. W. (1999). The Intensity of Emotion. *Personality and Social Psychology Review, 3*(1), 2–22.

Breitmeyer, B., Ogmen, H. & Kafaligonul, H. (2015). Feedforward and feedback in Vision. *Frontiers in Psychology, 6*, 1-3.

Brodie, R., Fehrer, J., Jakkola, E. & Conduit, J. (2019). Actor Engagement in Networks: Defining the Conceptual Domain. *Journal of Service Research, 22*(2), 173-188.

Bronwyn, V. D. (2017). *Consumer marketing research and why does it matter?.* Retrieved from: http://pranabusinessconsulting.com/consumer-marketing-research-and-why-does-it-matter/ [accessed 13-11-2019]

Brooks J. (2014). *Young people with diabetes and their peers - an exploratory study of peer attitudes, beliefs, responses and influences*. Project report to Diabetes UK, University of Huddersfield

Brooksbank, R. & Fullerton, S. (2020). Cognitive dissonance revisited: A typology of B2B buyers' post-decision 'cognitive states' and its implications for sales professionals. *Asia Pacific Journal of Marketing and Logistics*. DOI 10.1108/APJML-01-2019-0068

Brooks, J., McCluskey, S., Turley, E., & King, N. (2015). The Utility of Template Analysis in Qualitative Psychology Research. *Qualitative research in psychology*, *12*(2), 202–222.

Brownsell, A. (2017). *Gen Z consumers favour advertising co-creation, claims study*. Retrieved from: http://mandmglobal.com/gen-z-consumers-favour-advertising-co-creation-claims-study/ [accessed 15-05-2020]

Bruner II, G. & Pomazal, R. (1988). Problem Recognition: The crucial first stage of the consumer decision-making process. *Journal of Consumer Marketing, 5*(1), 53-63.

Bruner II, G. (1986). Problem recognition styles and search patterns: An empirical investigation. *Journal of Retailing, 62(*3), 281-297.

Bryman A. & Bell, E. (2015). *Business Research Methods 4th edition*. London: Oxford University Press

Bryman, A. (2008). *Social research methods*. Oxford: Oxford University Press.

Buchanan, L., Yeatman, H., Kelly, B. & Kariippanon, K. (2018), A thematic content analysis of how marketers promote energy drinks on digital platforms to young Australians. *Australian and New Zealand Journal of Public Health, 42*, 530-531.

Burcham, C. (2019). *Generations can learn from each other*. Retrieved from: https://extension.illinois.edu/blogs/family-files/2019-04-19-generations-can-learn-each-other [accessed 04-03-2020]

Burns, A., & Bush, R. (2000). *Marketing research*. New Jersey: Prentice Hall.

Bush, G., Luu, P. & Posner, M. (2000). Cognitive and Emotional Influences in Anterior Cingulate Cortex. *Trends in Cognitive Science, 4*(6), 215-222.

Businesswire. (2019). *Insights into the digital healthcare market in India (2019 to 2024) - CAGR of 27.41% expected*. Retrieved from: https://www.businesswire.com/news/home/20200221005363/en/Insights-Digital-Healthcare-Market-India-2019-2024 [accessed 27-03-2020]

Butte College. (2020). *Tip sheet: deductive, inductive, and abductive reasoning*. Retrieved from: http://www.butte.edu/departments/cas/tipsheets/thinking/reasoning.html [accessed 26-09-2020]

Callard, F., Smallwood, J. & Marguiles, D. S. (2012). Default positions: how neuroscience's historical legacy has hampered investigation of the resting mind. *Frontiers in Psychology, 3*(321), 45-56.

Calvert, M., Kyte, D., Keeley, T., Rivera, Rivera, S. & Aiyegbusi, O. (2017). Assessing the impact of healthcare research: A systematic review of methodological frameworks. *PLOS Medicine*, 14(8): e1002370 https://doi.org/10.1371/journal.pmed.1002370

Cambridge Dictionary. (2020). *Need*. Retrieved from: https://dictionary.cambridge.org/dictionary/english/need [accessed 03-04-2020]

Cambridge Cognition. (2015). *What is cognition?*. Retrieved from: https://www.cambridgecognition.com/blog/entry/what-is-cognition [accessed 20-05-2020]

Cancer Research UK. (2018). *Why people use complementary or alternative therapies.* Retrieved from: https://www.cancerresearchuk.org/about-cancer/cancer-in-general/treatment/complementary-alternative-therapies/about/why-used [accessed 28-03-2020]

Cantor, N. & Mischel, W. (1977). Traits as prototypes: Effects of recognition memory. *Journal of Personality and Social Psychology, 35*, 38-48.

Cappelli, S. & Racat, M. (2020) When Interfaces Make It Real. In: *Haptic Sensation and Consumer Behaviour. Palgrave Pivot*, Cham

Carrall-Green, S., Sorensen, D. & Hayllar, W. (2019). *A generation without borders*. Retrieved from: https://www.occstrategy.com/media/1806/a-generation-without-borders.pdf [accessed 5-11-2019]

Carfora, V., Caso, D. & Conner, M. (2016). The role of self-identity in predicting fruit and vegetable intake. *Appetite, 106*(1), 23-29.

Carrier, L. M., Cheever, N., Rosen, L., Benitez, S. & Chang, J. (2009). Multitasking across generations: Multitasking choices and difficulty ratings in three generations of Americans. *Computers in Human Behaviour, 25*(2009), 483-489.

Carpenter, C. (2019). Cognitive dissonance, ego-involvement and motivated reasoning. *Annals of the International Communication Association, 43*(1), 1-23.

Carpenter, P. A. & Daneman, M. (1980). Individual differences in working memory and reading. *Journal of Verbal Learning and Verbal Behaviour, 19*(4), 450-466.

Carter, R. F., Pyszka, R. H., & Guerrero, J. (1969). Dissonance and exposure to aversive information. *Journalism Quarterly, 46*(1), 37-42.

Carter, C. S. & Van Veen, V. (2007). Anterior cingulate cortex and conflict detection: An update of theory and data. *Cognitive, Affective and Behavioural Neuroscience, 7*, 367-379.

Carvalho, G. B. & Damasio, A. (2013). The nature of feelings: evolutionary and neurobiological origins. *National Review of Neuroscience, 14*, 143-152.

Case, D., Andrews, J., Johnson, D. & Allard, S. (2005). Avoiding versus seeking: The relationship of information seeking to avoidance, blunting, coping, dissonance, and related concepts. *Journal of the Medical Library Association, 93*(3), 353–362.

CB Insights. (2019). *12 Industries Experts Say Millennials Are Killing — And Why They're Wrong*. Retrieved from: https://www.cbinsights.com/research/millennials-killing-industries/ [accessed 16-05-2020]

CDC. (2019). *ADHD/Hyperactivity Disorder – Data and Statistics.* Retrieved from: https://www.cdc.gov/ncbddd/adhd/data.html [accessed 05-05-2020]

Center for Medicare and Medicaid Services. (2017). *National health expenditure 2017 highlights*. Retrieved from: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/highlights.pdf [accessed 1-04-2020]

Cepeda, G. & Martin, D. (2005). A review of case studies publishing in Management Decision: guides and criteria for achieving quality in qualitative research. *Management Decision, 43*(6), 851-876.

Chacko, T. I. & McElroy, J. C. (1983). The Cognitive Component in Locke's Theory of Goal Setting: Suggestive Evidence for a Causal Attribution Interpretation. *The Academy of Management Journal, 26*(1), 104-118.

Chakravarthy, P. (2019). *Viewpoint: How serious is India's economic slowdown?.* Retrieved from: https://www.bbc.co.uk/news/world-asia-india-49470466 [accessed 16-11-2019]

Chappelow, J. (2019). *What Is Consumerism?*. Retrieved from: https://www.investopedia.com/terms/c/consumerism.asp [accessed 06-03-2020]

Charman, H. & Ross, M. (2004). *Contemporary Art and the Role of Interpretation.* Retrieved from: https://www.tate.org.uk/research/publications/tate-papers/02/contemporary-art-and-the-role-of-interpretation [accessed 16-05-2020]

Charmaz, K. (2008). *Constructing grounded theory.* California: Sage

Chen, J. (2019). *Heuristics*. Retrieved from: https://www.investopedia.com/terms/h/heuristics.asp [accessed 06-04-2020]

Cherry, K. (2020). *Heuristics and Cognitive Biases.* Retrieved from: https://www.verywellmind.com/what-is-a-heuristic-2795235 [accessed 08-03-2020]

Cherry, K. (2019). *Cognitive dissonance – when behaviours and beliefs disagree*. Retrieved from: https://www.verywellmind.com/what-is-cognitive-dissonance-2795012 [accessed 15-11-2019]

Cherry, K. (2020). *Heuristics and Cognitive Biases.* Retrieved from: https://www.verywellmind.com/what-is-a-heuristic-2795235 [accessed 15-04-2020]

Christoff, K., Gordon, A., Smallwood, J., Smith, R. & Schooler, J. (2009). Experience sampling during fMRI reveals default network and executive system contributions to mind wandering. *Proceedings of the National Academy of the Sciences of the United States of America, 106*(21), 8719-8724.

Christoff, K. (2004). Neural Basis of Spontaneous thought Processes. *Cortex, 40*(4-5), 623-630.

Christina, B., Herwig, R. & Arne, B. (2020). *Introducing the Qualitative Pre-test Interview (QPI) for questionnaire development.* Retrieved from: file:///Users/durgavellore/Downloads/introducing_qpi_buschle_reiter_bethmann2020%20(2).pdf [accessed 6th November 2020]

Clark, A. (2016). *Surfing uncertainty: Prediction, action and the embodied mind*. Oxford: Oxford University Press

Cleary, M., Horfsall, J. & Hayter, M. (2014). *Data collection and sampling in qualitative research: does size matter?.* Retrieved from: https://onlinelibrary.wiley.com/doi/pdf/10.1111/jan.12163 [accessed 26th September 2020]

Claveria, K. (2019). *Generation Z statistics: New report on the values, attitudes, and behaviours of the post-millennials.* Retrieved from: https://www.visioncritical.com/blog/generation-z-statistics [accessed 28-10-2019]

CNS. (2014). *What Triggers Spontaneous Memories of Emotional Events?.* Retrieved from: https://www.cogneurosociety.org/spontaneous_memories_weymar/ [accessed 14-04-2020]

Collins, B., & Hoyt, M. (1972). Personal responsibility-for-consequences: An integration and extension of the 'forced compliance' literature. *Journal of Experimental Social Psychology, 8*, 558–593.

Consultancy UK. (2018). *Three major trends disrupting the professional services industry*. Retrieved from: https://www.consultancy.uk/news/16209/three-major-trends-disrupting-the-professional-services-industry [accessed 14-05-2020]

Coombes, B. (2009). Generation Y: Are they really digital natives or more like digital refugees. *Synergy, 7*(1), 31-40.

Cooper, J., & Fazio, R. H. (1984). A new look at dissonance theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 17, pp.229-266). Florida: Academic Press.

Cooper, J. & Stone, J. (2000). Cognitive dissonance and the social group. In D. J. Terry & M. A. Hogg (Eds.), *Applied social research. Attitudes, behaviour, and social context: The role of norms and group membership (p. 227–244).* Lawrence Erlbaum Associates Publishers.

Cooper, J. & Stone, J. (2001). *A self-standards model of cognitive dissonance. Journal of experimental social psychology*. *Journal of Experimental Psychology, 37*, 228-243.

Cooper, J. (1971). Personal responsibility and dissonance: The role of foreseen consequences. *Journal of Personality and Social Psychology, 18*(3), 354–363.

Cooper, J. (2019). Cognitive dissonance: Where we've been and where we're going. *International Review of Social Psychology*, *32*(1), 7-23.

Cooper, J. (1999). Unwanted consequences and the self: In search of the motivation for dissonance reduction. In E. Harmon-Jones & J. Mills (Eds.), Science conference series. Cognitive dissonance: *Progress on a pivotal theory in social psychology (p. 149–173)*. American Psychological Association. https://doi.org/10.1037/10318-007

Cooper, J. & Worchel, S. (1970). The role of undesired consequences in arousing cognitive dissonance. *Journal of Personality and Social Psychology, 16*(2), 199-206.

Commbox. (2020). *The Customer Service Experience for Millennials and Gen Z*. Retrieved from: https://www.commbox.io/the-customer-service-experience-for-millennials-and-gen-z/ [accessed 15-05-2020]

Common Sense Media. (2015). *The Common Sense census: Media use by tweens and teens.* Retrieved from
https://www.commonsensemedia.org/research/thecommon-sense-census-media-use-by-tweens-andteens [accessed 23-05-2020]

Costanzo, P. J. (2013). Revisiting cognitive dissonance theory: Pre-decisional influences and the relationship to the consumer decision-making model. *Atlantic Marketing Journal, 2*(1), 1-23.

Coughlin, J. (2020). *They Will Be The Unsung Legacy Of COVID-19*. Retrieved from: https://www.forbes.com/sites/josephcoughlin/2020/05/13/they-will-be-the-unsung-legacy-of-covid-19/#60280efcb2f5 [accessed 17-05-2020]

Course Researchers. (2019). *History of Healthcare Marketing.* Retrieved from: https://courseresearchers.com/history-of-healthcare-marketing/ [accessed 30-03-2020]

Court, D., Elzinga, D., Mulder, S. & Vetvik, O. J. (2009). *The consumer decision journey*. Retrieved from: https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/the-consumer-decision-journey [accessed 02-05-2020]

Craig, A. D. (2009). How do you feel—now? The anterior insula and human awareness. *Nature Reviews Neuroscience, 10*, 59-70.

Craig, A. D. (2002). How do you feel? Interoception: The sense of the physiological condition of the body. *Nature Reviews Neuroscience, 3*, 656-666.

Creswell, J. W. (1994). *Research design: Qualitative and quantitative approaches.* California: SAGE Publications.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches (2nd ed.)*. California: Sage.

Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches (3rd ed.).* California: Sage.

Creswell, J. W. (2015). *A concise introduction to mixed methods research*. California: SAGE Publications.

Cribbet, S. (2016). *Latent Needs can deliver the products and services of tomorrow using qualitative research*. Retrieved from: https://info.go-further.co/furthermore/latent-needs-can-deliver-the-products-and-services-of-tomorrow-using-qualitative-research [accessed 03-04-2020]

Critchley, H. D. & Harrison, N. A. (2013). Visceral influences on brain and behaviour. *Neuron, 77*, 624-638.

Critchley, H. D. (2005). Neural mechanisms of autonomic, affective, and cognitive integration. *Journal of Comparative Neurology, 493*(1), 154-166.

Criteo. (2018). *Gen Z Report.* Retrieved from: https://www.criteo.com/wp-content/uploads/2018/05/GenZ-Report.pdf [accessed 14-05-2020]

Crotty, M. (1998). *The Foundations of Social Research: Meaning and Perspective in the Research Process*. London: Sage.

Crockford, D. (2020). *Uncovering Latent Needs Through Consumer Diaries*. Retrieved from: https://blog.flexmr.net/latent-needs-diaries [accessed 03-04-2020]

Crosby, J. (2014). *Baby boomers and the rising wave of millennials are hogging the spotlight, while Gen X is struggling.* Retrieved from: http://www.startribune.com/gen-x-struggles-as-baby-boomers-millennials-hog-spotlight/283229861/ [accessed 10-03-2020]

Crouth, G. (2019). *Gen Z: living by the power of self-belief.* Retrieved from: https://www.iol.co.za/personal-finance/gen-z-living-by-the-power-of-self-belief-21156823 [accessed 14-05-2020]

Croyle, R. T. & Cooper, J. (1983). Dissonance arousal: Physiological evidence. *Journal of Personality and Social Psychology, 45*(4), 782-791.

Culatta, R. (2019). *Information processing theory (G. Miller).* Retrieved from: https://www.instructionaldesign.org/theories/information-processing/ [accessed 22-11-2019]

Cummings, W. H., & Venkatesan, M. (1976). Cognitive dissonance and Consumer Behaviour: A Review of the Evidence. *Journal of Marketing Research, 13*(3), 303-308.

Dale, S. (2015). Heuristics and biases: The science of decision-making. *Business Information Review, 32*(2), 93-99

Damasio, A. R. (1999). *The Feeling of What Happens: Body and Emotion in the Making of Consciousness.* Florida: Houghton Mifflin Harcourt.

Damasio, A. R. (1994). *Descartes' error: Emotion, reason and the human brain*, New York: G.P. Putnam's Sons.

Danaher, T.S. & Gallan, A.S. (2016). Service research in healthcare: positively impacting lives. *Journal of Service Research, 19(*4), 433-437.

Danermark, B. (2002). Interdisciplinary research and critical realism: The example of disability research. *Alethia, 5*(1), 56-64.

Da Silva, S., Matsushita, R. & Ramos, M. (2019). Incomplete information choice on incumbents, cognitive ability and personality. *Open Access Library Journal, 6: e5476*. DOI: 10.4236/oalib.1105476

Davey, N. (2019). *Infographic: The seven stages of decision-making for B2B buyers.* Retrieved from: https://www.mycustomer.com/marketing/strategy/infographic-the-seven-stages-of-decision-making-for-b2b-buyers [accessed 28-03-2020]

David, L. (2015). *Information processing theory*. Retrieved from: https://www.learning-theories.com/information-processing-theory.html [accessed 22-11-2019]

Davis, K. E., & Jones, E. E. (1960). Changes in interpersonal perception as a means of reducing cognitive dissonance. *The Journal of Abnormal and Social Psychology, 61*(3), 402–410.

Davis, S., Betts, D. & Batra, N. (2019). *Forces of change: The future of health.* Retrieved from: https://www2.deloitte.com/us/en/insights/industry/health-care/forces-of-change-health-care.html [accessed 13-11-2019]

de Ruyter, K., & Scholl, N. (1998). Positioning qualitative market research: reflections from theory and practice. *Qualitative Market Research: An International Journal*, *1*(1), 7-14.

DeJonckheere M & Vaughn L.M. (2018). Semi-structured interviewing in primary care research: A balance of relationship and rigour. *Family Medicine and Community Health*, *7*, 1-8.

Deary, I. Johnson, W. & Houlihan, L. (2009). Genetic foundations of human intelligence. *Human Genetics, 126*, 215-232.

Deen, B., Pitskel, N. B. & Pelphrey, K. (2011). Three Systems of Insular Functional Connectivity Identified with Cluster Analysis. *Cerebral Cortex, 21*(7), 1498–1506.

Deloitte Insights. (2020). *2020 Global Marketing Trends: Bringing authenticity to our digital age*. Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/consultancy/deloitte-uk-consulting-global-marketing-trends.pdf [accessed 16-05-2020]

Deloitte. (2018). *2018 Global health care outlook*. Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/gx-lshc-hc-outlook-2018.pdf [accessed 13-11-2019]

Deloitte Millennial Survey. (2019). *Deloitte research reveals a "generation disrupted": Growing up in a world of accelerated transformation leaves millennials and gen Zs feeling unsettled about the future.* Retrieved from : https://www2.deloitte.com/global/en/pages/about-deloitte/press-releases/deloitte-millennial-survey-research-reveals-gen-z-unsettled.html [accessed 17-10-2019]

Deloitte. (2019). *Unravelling the Indian consumer.* Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/in/Documents/consumer-business/in-consumer-RLS-2019-noexp.pdf [accessed 18-11-2019]

Deloitte. (2017). *Disruptions in Retail through: Digital Transformation - Reimagining the Store of the Future.* Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/in/Documents/CIP/in-cip-disruptions-in-retail-noexp.pdf [accessed 15-05-2020]

Del Campo, C., Pauser, S., Steiner, E. & Vetschera, R. (2016). Decision making styles and the use of heuristics in decision making. *Journal of Business Economics, 86*, 389-412.

De-Lanauze, G. S. & Siadou-Martin, B. (2019). Dissonant cognitions: From psychological discomfort to motivation to change. *Journal of Consumer Marketing, 36*(5), 565–581.

Demeritt, L. (2018). *Enter gen Z: The new disruptors of food culture*. Retrieved from: https://www.smartbrief.com/original/2018/09/enter-gen-z-new-disruptors-food-culture [accessed 13-11-2019]

Demetriou, A. & Spanoudis, G. (2017). From Cognitive Development to Intelligence: Translating Developmental Mental Milestones into Intellect. *Journal of Intelligence, 5*(3), 1-20.

Dennehy, B., Van Beem, F. & Zumsen, E. (2020). *Attention, Marketers: Actions Speak Loudest*. Retrieved from: https://www.bain.com/insights/attention-marketers-actions-speak-loudest/?utm_source=linkedin_company&utm_medium=social_organic&utm_content=3363850940&linkId=89235210 [accessed 26-05-2020]

Dennis, S. (2019). *Omnichannel is dead: The Future Is Harmonized Retail*. Retrieved from: https://www.forbes.com/sites/stevendennis/2019/06/03/omnichannel-is-dead-the-future-is-harmonized-retail/#3f56420665e8 [accessed 15-05-2020]

Denzin, N.K. & Lincoln, Y.S. (2000). *Handbook of qualitative research,* London: Sage

Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research (4th ed.).* Thousand Oaks: Sage.

Denzin N. K. & Lincoln Y. S. (1998). Entering the field of qualitative research. In: Denzin NK, Lincoln YS (eds). *The Landscape of Qualitative Research: Theories and Issues*. California: Sage, pp. 1–34.

De Sand, F. V., Friscon, A-K., Zotz, P., Reiner, A. & Holl, K. (2020). The Role of Information Processing for Product Perception. In: *User Experience Is Brand Experience. Management for Professionals*. Springer, Cham

De Souza, M. T., Da Silva, M. D. & De Carvalho, R. (2010). Integrative review: what is it? How to do it?. *Einstein (São Paulo), 8*(1), 102-106.

Desjardins, J. (2018). *Why generation Z has a totally different approach to money*. Retrieved from: https://www.weforum.org/agenda/2018/11/why-gen-z-is-approaching-money-differently-than-other-generations-95032cb6-6046-4269-a38a-0763bd7909ff/ [accessed 30-10-2019]

De Vaus, D. (2001). *Research Design in Social Research.* London: Sage

Devasagayam, P. R. & Hanspal, S. (2017). Impact of consumers' self-image and demographics on preference for healthy labelled foods. *SAGE Open*, *7*(1). https://doi.org/10.1177/2158244016677325

Dietrich, C. (2010). *Decision Making: Factors that Influence Decision Making, Heuristics Used, and Decision Outcomes*. Retrieved from: http://www.inquiriesjournal.com/articles/180/2/decision-making-factors-that-influence-decision-making-heuristics-used-and-decision-outcomes [accessed 29-03-2020]

Digital Commerce. (2019). *Millennials now do their shopping 60% online.* Retrieved from: https://www.digitalcommerce360.com/2019/03/26/millennials-online-shopping/ [accessed 14-05-2020]

Dimock, M. (2019). *Defining generations: Where millennials end and generation Z begins*. Retrieved from http://tony-silva.com/eslefl/miscstudent/downloadpagearticles/defgenerations-pew.pdf [accessed 09-11-2019]

Diotaiuiti, P., Valente, G., Mancone, S. & Grambone, A. (2020). Resist or Give in to an Alternative: Post-Decisional Evaluations of Cost, Value and Regret in the Choice. *Scientific Research: Psychology, 11*(2), 1-23.

Dijksterhuis, A., & Bargh, J. A. (2001). The perception-behavior expressway: Automatic effects of social perception on social behaviour. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, (Vol. 33, pp. 1–40). San Diego: Academic Press

Dincer, C. (2010). The influence of affect and cognition on impulse buying behaviour. *Oneri, 33*(9), 153-158.

Dobson, P. (2002). Critical realism and information systems research: why bother with philosophy?. *Information Research*, *7*(2). Retrieved from http://InformationR.net/ir/7-2/paper124.html [accessed 22nd September 2020]

Dolchai, L-O. & Walanchale, W. (2019). A systematic review of cognitive biases in tourist decisions. *Tourism Management, 75*, 353-369.

Donsbach, W. (1991). Exposure to political content in newspapers: The impact of cognitive dissonance on readers' selectivity. *European Journal of Communication, 6*(1991), 155-186.

Dooley, J. (2019). *Gen Z consumers: Nearly 100% own a smartphone and spend over 4 hours per day online.* Retrieved from: https://www.clickz.com/gen-z-consumers-nearly-100-percent-own-a-smartphone-and-spend-over-4-hours-per-day-online/246757/ [accessed 31-10-2019]

Dolcos, F., Katsumi, Y., Moore, M., Berggren, N., Derakshan, N., Hamm, A. O., Koster, E. H. W., Ladouceur, C. D., Okon-Singer, H., Pegna, A. J., Richter, T., Schweizer, S., Den Stock J. V., Ventura-Bort, C., Weymar, M., Dolcos, S. & De Gelder, B. (2019). Neural Correlates of Emotion-Attention Interactions: From Perception, Learning and Memory to

Individual Differences and Training Interventions. *Neuroscience and Behavioural Reviews, 108*, 559-601.

Donthu, N. & Unal, B. (2014). Identifying escalation of commitment in B2B new product development projects using data envelopment analysis. *The Journal of Business & Industrial Marketing, 29*(3), 209-214.

Dore, M. (2020). *Why we struggle with consistency, and how to rethink it*. Retrieved from: https://extraordinaryroutines.com/musings/consistency [accessed 24-04-2020]

Dorman, S.M. (2000). Implications of Growing up Digital. Review of Tapscott's Growing Up Digital. *The Journal of School Health, 70*(10), 420-422.

Dornan T., Carroll, C. & Parboosingh J. (2002). An electronic learning portfolio for reflective continuing professional development. *Medical Education*, *36*, 767–769.

Dotson, K. (2020). *Cue gen z: What the first 'majority minority' generation means for CPGs*. Retrieved from: https://medium.com/@kelly.dotson.nr/cue-gen-z-what-the-first-majority-minority-generation-means-for-cpgs-3335f9fb6062 [accessed 06-03-2020]

D'souza, C., Taghian, M. & Brouwer, A. R. (2019). Ecolabels information and consumer self-confidence in decision making: a strategic imperative. *Journal of Strategic Marketing*, *29*(2), 141-157.

DTE. (2017). *Lifestyle diseases are the biggest killers in India*. Retrieved from: https://www.downtoearth.org.in/news/health/lifestyle-diseases-are-the-biggest-killer-in-india-59235 [accessed 7-11-2019]

Dubois, A., & Gadde, L. E. (2002). Systematic combining: An abductive approach to case research. *Journal of Business Research, 55*, 553–560.

Dubois, A., & Gadde, L. E. (2014). Systematic combining—A decade later. *Journal of Business Research, 67*, 1277–1284.

Dudovskiy, J. (2020). *Abductive Reasoning (abductive approach).* Retrieved from: https://research-methodology.net/research-methodology/research-approach/abductive-reasoning-abductive-approach/ [accessed 23rd September 2020]

Dudovskiy, J. (2020). *Inductive Approach (Inductive Reasoning).* Retrieved from: https://research-methodology.net/research-methodology/research-approach/inductive-approach-2/ [accessed 26th Septmber 2020]

Duffet, R. G. (2015). *The influence of Facebook advertising on cognitive attitudes amid Generation Y.* Retrieved from: https://link.springer.com/content/pdf/10.1007/s10660-015-9177-4.pdf [accessed 04-03-2020]

Duffy, B., Thomas, F., Shrimpton, H., Whyte-Smith, H., Clemence, M. & Abboud, T. (2019). *Beyond binary: the lives and choices of generation Z*. Retrieved from: https://www.ipsos.com/sites/default/files/2018-08/ipsos_-_beyond_binary_-_the_lives_and_choices_of_gen_z.pdf [accessed 7-11-2019]

Duffy, B., Shrimpton, H. & Clemence, M. (2017). *Millennial – Myths and realities*. Retrieved from: https://www.ipsos.com/sites/default/files/2017-07/Ipsos%20-%20Millennial%20Myths%20and%20Realities.pdf [accessed 05-04-2020]

Duggal, R. (2018). *The Key To A Marketer's Success: Understanding Consumer Motivations*. Retrieved from: https://www.forbes.com/sites/forbescommunicationscouncil/2018/04/19/the-key-to-a-marketers-success-understanding-consumer-motivations/#2ff8fcfe71ee [accessed 03-04-2020]

Durfy, L. (2019). *Millennials vs Generation Z on Social Media*. Retrieved from: https://www.postbeyond.com/blog/millennials-genz-social-media/ [accessed 04-03-2020]

Durmaz, Y., Demirag, B. & Cavusoglu, S. (2020). *Influence of Regret and Regret Reversing Effort on Dissatisfaction and Repurchase Intention after Purchasing Fashion Products*. *Preprints*, 2020, DOI: 10.20944/preprints202003.0280.v1).

Dwivedi, Y. K., Kapoor, K. K. & Chen, H. (2015). Social media marketing and advertising. *Marketing Review, 15*(3), 289-309.

Dye, M. W. G. & Bavelier, D. (2010). Differential development of visual attention skills in school-age children. *Vision Research, 50*, 452-459.

Dye, M. W. G., Green, C. S. & Bavelier, D. (2009). The development of attention skills in action video game players. *Neuropsychologia, 47,* 1780-1789.

Eisenberg, B. & Eisenberg, J. (2006). *Call to Action: Secret Formulas to Improve Online Results*. New York: Harper Collins.

Eisenhardt, K. (1989). Building theories from case study research. *Academy of Management Review, 14*(4), 532-550.

Eisenhardt, K., & Graebner, M. (2007). Theory Building From Cases: Opportunities and Challenges. *Academy of Management Journal*, *50*(1), 25-32.

Egan, L. C., Santos, L. R., and Bloom, P. (2007). The origins of cognitive dissonance: evidence from children and monkeys. *Psychological Science, 18*, 978–983.

Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of Personality and Social Psychology, 67*(3), 382–394.

Ellis-Petersen, H. (2020). *India becomes country with second highest number of Covid cases*. Retrieved from: https://www.theguardian.com/world/2020/sep/07/india-becomes-country-with-second-highest-number-of-covid-cases#:~:text=India%20has%20surpassed%20Brazil%20to,of%20anywhere%20in%20the%20world. [accessed 27-09-2020]

Elkin, R. A. & Leippe, M. R. (1986). Physiological Arousal, Dissonance, and Attitude Change. Evidence for a Dissonance-Arousal Link and a "Don't Remind Me" Effect. *Journal of Personality and Social Psychology, 51*(1), 55-65.

Elmore, T. (2019). *Three Facts You Need to Know to Connect With Generation Z*. Retrieved from: https://www.psychologytoday.com/gb/blog/artificial-maturity/201903/three-facts-you-need-know-connect-generation-z [accessed 24-05-2020]

Emeke, A. E. (2020). *How is Covid-19 affecting field research?.* Retrieved from: https://www.researchgate.net/post/How_is_Covid-19_affecting_field_research [accessed 26-09-2020]

Endler, N. S., & Magnuson, D. (1976). Toward an inter- actional theory of personality. *Psychological Bulletin, 55*, 956-974.

EnGarde. (2019). *Introducing gen x*. Retrieved from: https://www.engarde.net/introducing-generation-x/#.Xlz77S2cbzJ [accessed 03-03-2020]

EnGarde. (2019). *Introducing gen z*. Retrieved from: https://www.engarde.net/introducing-generation-z/#.XmEdqS2cZZI [accessed 05-03-2020]

Engel, J. F., Kollat, D. T. & Blackwell, R. D. (1968). *Consumer behaviour*, New York: Holt

Epps, A. & Otnes, C. (2020). High-Quality Qualitative Research: Getting Into Gear. *Journal of Service Research*, 24(2), 163-175.

Ercsey, I. (2017). The Role of Customers' Involvement in Value Co-creation Behaviour is Value Co-creation the Source of Competitive Advantage?. *Journal of Competitiveness, 9*(3), 51-66.

Erickson, T. (2009). *What's next, gen X?: Keeping up, moving ahead, and getting the career you want*. Boston: Harvard Business Review Press.

Erlacher, J. (2019). *3 Strengths of Gen Z*. Retrieved from: https://www.leadingtomorrow.org/blog/3-strengths-of-gen-z# [accessed 06-03-2020]

Ernest, Z. J. (2017). *Helping Parents Understand the Minds and Hearts of Generation Z*. Maryland: Rayman & Littlefield.

Eschooltoday. (2020). *Living things respond to their environment*. Retrieved from: http://eschooltoday.com/science/characteristics-of-living-organisms/living-organisms-adapt-and-respond-to-their-environment.html [accessed 23-04-2020]

Estes, W.K. (1977). 'On the interaction of perception and memory in reading'. In: D. LaBerge and S.J. Samuels (eds.), *Basic processes in reading: perception and comprehension*. New Jersey: Erlbaum, l-25.

Euronews. (2011). *Learning from another generation*. Retrieved from: https://www.euronews.com/2011/12/02/learning-from-another-generation [accessed 04-03-2020]

Evans, JStBT. & Over, D. E. (2010). Heuristic thinking and human intelligence: a commentary on Marewski, Gaissmaier and Gigerenzer. *Cognitive Processing, 11*, 171-175.

Evans, JStBT. (2009). How many dual-process theories do we need? One, two, or many?. In K. Frankish (ed.), *In two minds: dual processes and beyond*, Oxford: Oxford University Press.

Evans, JStBT. (2008). Dual-processing accounts of reasoning, judgment, and social cognition. *Annual Review of Psychology, 59*, 255–278.

Express Virtual Meetings. (2020). *12 key benefits of video conferencing.* Retrieved from: https://www.expressvirtualmeetings.com/en-au/blog/12-key-benefits-of-video-conferencing [accessed 26th September 2020]

Fahle, M. (2019). Information Processing and Storage in the Brain. In C. Große, R. Drechsler (eds) *Information Storage.* Springer, Cham

Family Health International. (2020). *Qualitative Research Methods Overview*. Retrieved from: https://course.ccs.neu.edu/is4800sp12/resources/qualmethods.pdf [accessed 25-09-2020]

Farah, M. J. & Fellows, L. K. (2005). Is Anterior Cingulate Cortex Necessary for Cognitive Control?. *Brain, 128*(4), 788-96.

Farris, R. Chong, F. & Danning, D. (2002). Generation Y: Purchasing Power and Implications for Marketing. *Academy of Marketing Studies Journal, 6,* 1-89.

Fazelpour, S. & Thompson, E. (2015). The Kantian brain: brain dynamics from a neurophenomenological perspective. *Current Opinion in Neurobiology, 31*, 223-229

Fazio, R., Zanna, M. & Cooper, J. (1977). Dissonance and Self-perception: An integrative View of Each Theory's Proper Domain of Application. *Journal of Experimental Social Psychology, 13*(5), 464-479.

Ferketich, S., Phillips, L., & Verran, J. (1993). Development and administration of a survey instrument for cross-cultural research. *Research in Nursing & Health, 16*(3), 227–230.

Fentiman-Hall, S. (2018). *How learning from different generations can help you fulfil your potential.* Retrieved from: https://www.virgin.com/entrepreneur/how-learning-different-generations-can-help-you-fulfil-your-potential [accessed 16-06-2020]

Fern, A. (2013). *Why consistency is vital to your life.* Retrieved from: https://www.elitedaily.com/life/motivation/why-consistency-is-vital-in-life [accessed 13-04-4040]

Festinger, L. (1957). *A theory of cognitive dissonance*, Stanford: Row Peterson & Company

Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology, 58*, 203-211.

Finch, J. (2015). *What is generation z, and what does it want?.* Retrieved from: https://www.fastcompany.com/3045317/what-is-generation-z-and-what-does-it-want [accessed 08-03-2020]

Fischer, K. W. (1980). A theory of cognitive development: The control and construction of hierarchies of skills. *Psychological Review, 86*(6), 477-531.

Fiske, S. T. (1992). Thinking is for doing: Portraits of social cognition from daguerreotype to laser photo*. Journal of Personality and Social Psychology, 63*, 877–889.

Fiske, S. T. & Taylor, S. E. (1984). *Social cognition*. Reading: Addison-Wesley Publishing Co.

Flavell, J. H. (1999). Cognitive development: Children's Knowledge About the Mind. *Annual Review of Psychology, 50*, 21-45.

Fletcher, A. (2020). Critical Realism: Philosophical and methodological considerations, In M. Jarvinen & N. Milk-Meyer, (eds.) *Qualitative Analysis: Eight Approaches for the Social Sciences*, pp. 173-185.

Foucault, M. (1982). The Subject and Power. *Critical Inquiry, 8*(4), 777-795. Retrieved from http://www.jstor.org/stable/1343197 [accessed 30-09-2020]

Foucault M 1987 [1984]. The Ethic of Care for the Self as a Practice of Freedom — An Interview with Michel Foucault. *Philosophy and Social Criticism, 12*, 112-131.

Forrester, R. (2016). *The history of medicine*. Retrieved from: https://www.academia.edu/29765267/The_History_of_Medicine [accessed 04-11-2019]

Forstmann, D. (2019). *Information Overload in Our Digital Age.* Retrieved from: https://medium.com/@goboldfish/information-overload-in-our-digital-age-90cbe93bb530 [accessed 08-03-2020]

Fox, M. D., Snyder, A., Vincent, J., Corbetta, M., Van Essen, D. & Raichle, M. (2005). The human brain is intrinsically organized into dynamic, anticorrelated functional networks. In *Proceedings of the National Academy of Sciences, 102*(27), 9673-9678.

Fadrique, L.X., Rahman, D., Vaillancourt, H., Boissonneault, P., Donovska, T. & Morita, P.P. (2020). Overview of Policies, Guidelines, and Standards for Active Assisted Living Data Exchange: Thematic Analysis. *JMIR Mhealth Uhealth, 8*(6). DOI: 10.2196/15923

Francis, T. & Hoefel, F. (2018). '*True Gen': Generation Z and its implications for companies.* Retrieved from https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/true-gen-generation-z-and-its-implications-for-companies# [accessed 04-11-2019]

Franklin, N. T., Norman, K. A., Rangannath, C., Zacks, J. & Gershman, S. J. (2019). *Structured Event Memory*. Retrieved from: https://doi.org/10.1101/541607

Fried, N. (2020). *Shifts in pharma's 2020 digital health landscape*. Retrieved from: https://www.mobihealthnews.com/news/shifts-pharma-s-2020-digital-health-landscape [accessed 24-03-2020]

Frijda, N. H. (1986). *Studies in emotion and social interaction. The emotions*. Cambridge: Cambridge University Press.

Friston, K. (2010). The free-energy principle: a unified brain theory?. *National Review of Neuroscience, 11*, 127-138.

Gabbay D. & Woods J. (2005). The Practical Turn in Logic. In: G. D. Guenthner F. (ed.) *Handbook of Philosophical Logic, 2nd Edition.* Springer, Dordrecht

Galea, S., Ettman, C. K. & Vlahov, D. (2019). *Urban health*. New York: Oxford University Press.

Gansca, A. (2018). *The Moment of Truth Has Come for Digital Advertising's Transparency Problem*. Retrieved from: https://www.adweek.com/digital/the-moment-of-truth-has-come-for-digital-advertisings-transparency-problem/ [accessed 17-05-2020]

Gardner, N. (2004). *Successful development of new products requires anticipating customers' needs.* Retrieved from: https://www.washington.edu/news/2004/10/11/successful-development-of-new-products-requires-anticipating-customers-needs/ [accessed 8-11-2019]

Garrett, D. (2020). *The dynamic human brain*. Retrieved from: https://www.humanbrainmapping.org/files/The%20Dynamic%20Human%20Brain.pdf [accessed 20-04-2020]

Garth-McCullough, R. (2008). Untapped cultural support: The influence of culturally bound prior knowledge on comprehension performance. *Reading Horizons, 49*(1), 1-30.

Gassam, J. (2019). *Dear businesses: Generation Z does not want to hear "please hold".* Retrieved from: https://www.forbes.com/sites/janicegassam/2019/11/11/dear-businesses-generation-z-does-not-want-to-hear-please-hold/#59651f1a6b46 [accessed 13-11-2019]

Gaur, K. C., Sobhani, M. & Saxon, L. A. (2019). *Retail healthcare update: Disrupting traditional care by focusing on patient needs*. Retrieved from: https://thejournalofmhealth.com/retail-healthcare-update-disrupting-traditional-care-by-focusing-on-patient-needs/ [accessed 18-02-2020]

Gaynor, M., Mostashari, F. & Ginsburg, P. B. (2017). *Making healthcare markets work: Competition policy for healthcare*. Retrieved from: https://www.brookings.edu/research/making-health-care-markets-work-competition-policy-for-health-care/ [accessed 30-03-2020]

Geldsetzer, P. (2018). *Assessing, addressing chronic diseases in India*. Retrieved from: https://www.hsph.harvard.edu/news/hsph-in-the-news/chronic-diseases-india/ [accessed 14-06-2019]

Geothals, G., Cooper, J. & Naficy, A. (1979). Role of foreseen, foreseeable, and unforeseeable behavioural consequences in the arousal of cognitive dissonance. *Journal of Personality and Social Psychology, 37*(7), 1179–1185.

Gera, B. & Jain, R. (2020). Post Purchase Behaviour of the Consumers towards Digital Food Ordering and Delivery Service. *International Journal for Research in Applied Science & Engineering Technology (IJRASET), 8(*3), 150-156.

Gerber, S. & Scott, L. (2011). Gamers and gaming context: Relationships to critical thinking. *British Journal of Educational Technology, 42*(5), 842-849.

German, A. (2017). *1950's Consumerism for Women*. Retrieved from: https://www.theodysseyonline.com/1950s-consumerism-for-women [accessed 04-04-2020]

Gerring, J. & McDermott, R. (2007). An experimental template for case study research. *American Journal of Political Science, 51*(3), 688-701.

Ghauri, P. Gronhaug, K. & Strange, R. (2020). *Research Methods in Business Studies*. Cambridge: Cambridge University Press.

Ghauri, P., & Gronhaug, K. (2002). *Research Methods in Business Studies: A Practical Guide*. London: Pearson Education Limited.

Ghosh, P., Mehra, S., Reddy, S. & Rao, A. (2019). *India Life Sciences Report 2019*. Retrieved from: https://www.bain.com/insights/india-life-sciences-report-2019/ [accessed 27-03-2020]

Gibson, J. J. (1979). *The ecological approach to visual perception*. Boston: Houghton Mifflin.

Giddens, A. (1990). *The Consequences of Modernity.* Stanford: Stanford University Press.

Giddens, A. (1991). *Modernity and Self-Identity*. Cambridge: Polity Press.

Gigerenzer, G. & Gaissmaier, W. (2011). Heuristic Decision Making. *Annual Review of Psychology, 62*, 451-482.

Gigerenzer, G. (2000). *Adaptive thinking: Rationality in the real world*. New York: Oxford University Press.

Gigerenzer, G. & Gaissmaier, W. (2010). Heuristic decision making. *Annual Review of Psychology, 62*, 451-482.

Gilbert, S. J., Dumontheil, I., Simons, J. S., Frith, C. D. & Burgess, P. W. (2007). Comment on wandering minds: the default network and stimulus-independent thought. *Science, 317*(5834), 1-43.

Gill, S. L. (2020). Qualitative Sampling Methods. *Journal of Human Lactation, 36*(4), 579-581.

Gilovich, T., Griffin, D. & Kahneman, D. (2002). *Heuristics and biases: the psychology of intuitive judgement*. Cambridge: Cambridge University Press.

Giovanni, D., Napoletano, M., Roventini, A., Stiglitz, J. E. & Treibich, T. (2017). *Rational heuristics? Expectations and behaviours in evolving economies with heterogeneous interacting agents*. Retrieved from: https://www.econstor.eu/bitstream/10419/174581/1/2017-31.pdf [accessed 11-04-2020]

Girandola, F. (1997). Double-forced compliance and cognitive dissonance theory. *The Journal of Social Psychology, 137*, 594-605.

Glass, S. & Cheung, J. (2018). *What do Gen Z shoppers want?.* Retrieved from: https://www.ibm.com/thought-leadership/institute-business-value/blog/brands-win-gen-z-consumers [accessed 14-05-2020]

Goldstein, D. G. & Gigerenzer, G. 2002. Models of ecological rationality: the recognition heuristic. *Psychological Review, 109*, 75-90.

Goddard, W. & Melville, S. (2004). *Research Methodology: An Introduction 2nd edition*, California: Blackwell Publishing

Goldschmidt, D., Schmidt, L., Krasnik, A., Christensen, U. & Groenvold, M. (2006). Expectations to and evaluation of a palliative home-care team as seen by patients and carers. *Supportive Care in Cancer*, *14*, 1232–1240.

Gollo, L. L., Roberts, J. A., Cropley, V. L., Di Biase, M. A., Pantelis, C., Zalesky, A. & Breakspear, M. (2018). Fragility and volatility of structural hubs in the human connectome. *Nature of Neuroscience, 21*(8), 1107-1116.

Gollwitzer, P. M., & Sheeran, P. (2006). Implementation intentions and goal achievement: A meta-analysis of effects and processes. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology*, (Vol. 38, pp. 69–119). San Diego: Elsevier Academic Press.

Gollwitzer, P. M., & Bayer, U. (1999). Deliberative versus implemental mindsets in the control of action. In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 403–422). New York: Guilford.

Gollwitzer, P. M. (1990). Action phases and mind-sets. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of Social Behavior* (Vol. 2, pp. 53–92). New York: Guilford Press.

Gomez, K., Mawhinney, T. & Betts, K. (2018). *Welcome to Generation Z.* Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/us/Documents/consumer-business/welcome-to-gen-z.pdf [accessed 06-03-2020]

Gordon, W. & Langmaid, R. (1998). *Qualitative Market Research: A practical and buyers' guide*. London: Routledge.

Gosling, P., Denizeau, M. & Oberle, D. (2006). Denial of Responsibility: A New Mode of Dissonance Reduction. *Journal of Personality and Social Psychology, 90*(5), 722–733.

Gotz-Marchand, B. & Kumpf, M. (1973). Reduction of cognitive dissonance as a function of magnitude of dissonance, differentiation, and self-esteem. *European Journal of Social Psychology, 3*(3), 21-37.

Gotz-Marchand, B., Gotz, J., & Irle, M. (1974). Preference of dissonance reduction modes as a function of their order, familiarity and reversibility. *European Journal of Social Psychology, 4,* 201–228.

Goulding, C. (2005). Grounded Theory, Ethnography and Phenomenology: A Comparative Analysis of Three Qualitative Strategies for Market Research. *European Journal of Marketing, 39* (3/4), 294-308.

Goyal, P. & Gupta, P. (2018). Gen Y Attributes—Antecedents to Teaching Pedagogy. *The Journal of Business Perspective, 22*(1), 78-87.

Grand View Research. (2019). *Complementary and alternative medicine market size, share & trends analysis report by intervention (botanical, acupuncture, mind, body, yoga), by*

distribution (direct contact, e-training), and segment forecasts, 2019 – 2026. Retrieved from: https://www.grandviewresearch.com/industry-analysis/complementary-alternative-medicine-market [accessed 13-11-2019]

Gray, D. (2004). *Doing research in the real world*. London: Sage Publications

Greenfield, P. M. (1976). Cross-cultural research and Piagetian theory: Paradox and progress. In K. F. Riegel & J. A. Meacham (Eds.), *The developing individual in a changing world* (Vol. 1), The Hague: Mouton

Griffiths, J.R. & Brophy, P. (2002). Student Searching Behaviour. *JISC Information Environment in Ariadne*. Retrieved from: http://www.ariadne.ac.uk/issue33/edner/ [accessed 04-03-2020]

Grossberg, S. (2013). Adaptive resonance theory: how a brain learns to consciously attend, learn and recognize a changing world. *Neural Network, 2*, 79-87.

Grossberg, S. (1980). How does the brain build a cognitive code?. *Psychological Review, 87*, 1-51.

Gu, F. (2013). *A Comparative Study of Performance Appraisal System in Three Banks in Contemporary China: The Role of Guanxi in Appraisals* (Doctor of Philosophy). London School of Economics and Political Science.

Guba, E.G., Lincoln, Y.S. (1998). Competing paradigms in qualitative research. In: Denzin, N., Lincoln, Y.S. (eds.) *The landscape of qualitative research*, pp. 195–220. California: Sage

Guest, G. Namey, E. & Chen, M. (2020). A simple method to assess and report thematic saturation in qualitative research. *PLoS ONE 15*(5): e0232076. https://doi.org/10.1371/journal.pone.0232076

Guest, G.M. & Namey, K. M. (2012). Applied Thematic Analysis. California: Sage

Guha, A. & Ghosh, M. (2018). Factors affecting customer satisfaction in hospital sector: A study of private hospitals in Kolkata, India. *International Journal of Research in Management & Social Science, 29*(1), 3-7.

Gummesson, E. (2007). Case study research and network theory: birds of a feather. *Qualitative Research in Organizations and Management: An International Journal, 2*(3), 226-248.

Gummesson, E. (2005). Qualitative research in marketing. *European Journal of Marketing, 39*(3/4), 309-327.

Guo, C., Gorno-Tempini, M. L., Gesierich, B., Henry, M., Trujillo, A., Shany-Ur, T., Jovicich, J., Robinson, S., Kramer, J., Rankin, K., Miller, B. & Seeley, W. (2013). Anterior temporal

lobe degeneration produces widespread network-driven dysfunction. *Brain, 136*(10), 2979–2991.

Gurbin, T. (2015). Enlivening the Machinist Perspective: Humanising The Information Processing Theory With Social And Cultural Influences. *Procedia – Social and Behavioural Sciences, 197*, 2331-2338

Gurney, P. (2005). The Battle of the Consumer in Postwar Britain. *The Journal of Modern History, 77*(4), 956-987.

Gurski, J. (2019). *How marketers will need to adapt to consumer needs*. Retrieved from: https://www.thedrum.com/opinion/2019/08/07/how-marketers-will-need-adapt-consumer-needs [accessed 19-02-2020]

Hair, J., Celsi, M., Money, A., Samouel, P., & Page, M. (2011). *Essentials of business research methods*. New York: M.E. Sharpe Inc.

Halligan, P. (2007). Belief and illness. *The British Psychological Society*, *20*, 358-361.

Halinen, A., & Tornroos, J. (2005). Using case methods in the study of contemporary business networks. *Journal of Business Research*, *58*(9), 1285-1297.

Halton, R. (2020). *Industry Voices—Generation Z is a game changer for healthcare.* Retrieved from: https://www.fiercehealthcare.com/practices/industry-voices-generation-z-a-game-changer-for-healthcare [accessed 14-05-2020]

Hajat, C. & Stein, E. (2018). The global burden of multiple chronic conditions: A narrative review. *Preventive Medicine Reports, 12*(2018), 284-293.

Hammarberg, K., Kirkman, M. & de Lacey, S. Qualitative research methods: when to use them and how to judge them. *Human Reproduction, 31*(3), 498–501.

Hammersley, M. (2008). *Questioning qualitative inquiry: Critical essays*. London: Sage

Hamza, V. K., & Zakkariya, K. A. (2012). Determinants of cognitive dissonance and its relative importance to a consumer product purchase. *International Journal of Multidisciplinary Management Studies, 2*(1), 157-168.

Harling, K. (2020). *An overview of case study*. Retrieved from: https://pdfs.semanticscholar.org/eca9/8ac47e79d19331cd569566e4cf3218fb953e.pdf [accessed 26th September 2020]

Harmon-Jones, E., & Mills, J. (1999). *An introduction to cognitive dissonance theory and an overview of current perspectives on the theory.* In E. Harmon-Jones & J. Mills (Eds.), *Science conference series. Cognitive dissonance: Progress on a pivotal theory in social psychology* (p. 3–21). American Psychological Association. https://doi.org/10.1037/10318-001

Harmon-Jones, C., Schmeichel, B. J., Inzlicht, M. & Harmon-Jones, E. (2011). Trait Approach Motivation Relates to Dissonance Reduction. *Social Psychological and Personality Science, 2*(1), 21-28.

Harmon-Jones, E., & Amodio, D. M. (2009). Action-Based Model of Dissonance: A review, integration and expansion of conceptions of cognitive conflict. *Advances in Experimental Social Psychology, 41*, 120-165.

Harmon-Jones, E., Harmon-Jones, C., Fearn, M., Sigelman, J. D., & Johnson, P. (2008). Left frontal cortical activation and spreading of alternatives: Tests of the action-based model of dissonance. *Journal of Personality and Social Psychology, 94*(1), 1–15.

Harmon-Jones, E. & Harmon-Jones, C. (2008). Action-Based Model of Dissonance: A Review of Behavioural, Anterior Cingulate, and Prefrontal Cortical Mechanisms. *Social and Personality Psychology Compass, 2*(3), 1518-1538.

Harpaz, J. (2019). *6 expectations millennials have for their healthcare*. Retrieved from: https://www.forbes.com/sites/joeharpaz/2019/08/26/6-expectations-millennials-healthcare/#234986df30ec [accessed 7-11-2019]

Hasan, U. & Nasreen, R. (2014). The Empirical Study of Relationship between Post Purchase Dissonance and Consumer Behaviour. *Journal of Marketing Management, 2*(2), 65-77.

Hassan. (2019). *Behavioral Science & AI: The Good, The Bad & The Ugly*. Retrieved from: https://medium.com/datadriveninvestor/behavioral-science-ai-the-good-the-bad-the-ugly-656d2312ce71 [accessed 16-05-2020]

Hatague, A. & Nabua, E. (2019). *Information-processing theory: implication to mathematics education.* Retrieved from: https://www.researchgate.net/publication/338132660_INFORMATION-PROCESSING_THEORY_IMPLICATION_TO_MATHEMATICS_EDUCATION [accessed 14-04-2020]

Häubl, G. & Trifts, V. (2000). Consumer Decision-Making in Online Shopping Environments: The Effects of Interactive Decision Aids, Marketing Science. *INFORMS, 19*(1), 4–21.

Haziri, F., Chovanocova, Aliu, F. (2018). The consumer decision-making process which form domestic brand loyalty: A literature review. Presented at DOKBAT (2018), *14th Annual International Bata Conference for Ph.D. Students and Young Researchers*, Czech Republic, 320-337.

Health NSW. (2022). Retrieved from: *https://www.hcnsw.org.au/consumers-toolkit/who-is-a-health-consumer-and-other-definitions/* [accessed 10-11-2022]

Heimer, L. & Hoesen, G. W. V. (2006). The limbic lobe and its output channels: implications for emotional functions and adaptive behaviour. *Neuroscience and Biobehavioural Reviews, 30*, 126-147.

Hemp, P. (2009). *Death by Information Overload*. Retrieved from: https://hbr.org/2009/09/death-by-information-overload [accessed 05-03-2020]

Hempel, C. G. (1966). *Philosophy of Natural Science.* California: Prentice-Hall

Hennink, M. M., Kaiser, B. N., & Weber, M. B. (2019). What influences saturation? Estimating sample sizes in focus group research. *Qualitative Health Research, 29*(10), 1483–1496.

Henshilwood, C. S., Marean, C. W. 2003. The origin of modern human behaviour: Critique of the models and their test implications. *Current Anthropology, 44*, 627-651.

Herbig, P. A. & Kramer, H. (1994). The Effect of Information Overload on the Innovation Choice Process. *Journal of Consumer Marketing, 11*(2),45–54.

Hertwig, R., Frey, R. & Mata, R. (2015). The role of cognitive abilities in decisions from experience: Age differences emerge as a function of choice set size. *Cognition, 142*, 60-80.

Hill, D. J. & King, M. F. (1997). The effects of alternative information availability on consumer decision strategies for professional services: A cross-cultural perspective. *Journal of Retailing and Consumer Services, 4*(1), 1-11.

Hilton, C. E. (2017). The importance of pretesting questionnaires: a field research example of cognitive pretesting the Exercise referral Quality of Life Scale (ER-QLS). *International Journal of Social Research Methodology, 20*(1), 21-34.

Hinojosa, A., Gardner, W., Walker, J., Cogliser, C. & Gullifor, D. (2017). A Review of Cognitive Dissonance Theory in Management Research: Opportunities for Further Development. *Journal of Management, 43*(1), 170-199.

Hoberman, L. (2017). *Different generations: can we learn from each other?.* Retrieved from: https://www.plaidforwomen.com/read-post/different-generations-can-we-learn-from-each-other/ [accessed 04-03-2020]

Hobson, M. (2019). *#Neurominute – Neuro-Education and Gen Z*. Retrieved from: https://www.snhu.edu/about-us/newsroom/2019/10/neurominute-forming-a-memory-meet-gen-z [accessed 05-03-2020]

Hogan, S., Laughlin, S., Reynolds, H. & Trenkle, T. (2019). *Consumers at the heart of healthcare: Retailers are creating a new industry perspective*. Retrieved from: https://www.ibm.com/downloads/cas/5MWZ9BWQ [accessed 17-02-2020]

Howells, R. (2018). *How The Digital Economy Is Blurring Industry Boundaries.* Retrieved from: https://www.digitalistmag.com/digital-supply-networks/2018/04/02/how-digital-economy-is-blurring-industry-boundaries-06034431 [accessed 14-05-2020]

Howland, D. (2020). *The future of retail: What 2020 and beyond will bring to the industry*. Retrieved from: https://www.retaildive.com/news/the-future-of-retail-what-2020-and-beyond-will-bring-to-the-industry/569615/ [accessed 15-05-2020]

Huff, A. S. (2009)*. Designing for publication*. California: Sage

Hung, K., & Petrick, J. F. (2012). Testing the effects of congruity, travel constraints, and self-efficacy on travel intentions: An alternative decision-making model. *Tourism Management, 33*(4), 855-867.

Hurst, S., Arulogun, O. S., Owolabi, A. O., Akinyemi, R., Uvere, E., Warth, S., & Ovbiagele, B. (2015). Pretesting Qualitative Data Collection Procedures to Facilitate Methodological Adherence and Team Building in Nigeria. *International journal of qualitative methods, 14*, 53–64.

Hussain, Z. (2020). *Field research in lockdown: revisiting slow science in the time of COVID-19.* Retrieved from: https://blogs.lse.ac.uk/wps/2020/04/29/field-research-in-lockdown-revisiting-slow-science-in-the-time-of-covid-19/ [accessed 26th September 2020]

Hwang, M. I. & Lin, J. W. (1999). Information Dimension, Information Overload and Decision Quality. *Journal of Information Science, 25*(3), 213-218.

Ibrahim, M. A. (2012). Thematic Analysis: A critical review of its process and evaluation. *West East Journal of Social Sciences, 1*(1), 39-47.

IBEF. (2019). *Healthcare industry in India*. Retrieved from: https://www.ibef.org/industry/healthcare-india.aspx [accessed 18-02-2020]

IBEF. (2019). *Indian healthcare industry analysis*. Retrieved from: https://www.ibef.org/industry/healthcare-presentation [accessed 20-02-2020]

Ibis World. (2019). *Alternative healthcare providers industry in the US – market research report.* Retrieved from: https://www.ibisworld.com/united-states/market-research-reports/alternative-healthcare-providers-industry/ [accessed 13-11-2019]

Ideocentric. (2020). *Phone Call vs Video Call? It's your call*. Retrieved from: http://www.videocentric.co.uk/benefits-video-calls-phone-calls/ [accessed 26th September 2020]

IGI Global. (2020). *What is generational location*. Retrieved from: https://www.igi-global.com/dictionary/digital-generationweb/12031#:~:text=What%20is%20Generational%20Location,inclusion%20in%20any%20given%20generation [accessed 16-06-2020]

IMF. (2019). *World economic outlook, July 2019.* Retrieved from: https://www.imf.org/en/Publications/WEO/Issues/2019/07/18/WEOupdateJuly2019 [accessed 18-11-2019]

Indeed. (2019). *Cognitive Skills: Definitions, Examples and How to Improve Them.* Retrieved from: https://www.indeed.com/career-advice/career-development/cognitive-skills-how-to-improve-them?from=careeradvice-US&subfrom=article#1 [accessed 23-05-2020]

India Health. (2019). *2019 Healthcare Market Insights: India*. Retrieved from: https://www.indiahealth-exhibition.com/en/overview/industry-insights.html [accessed 27-03-2020]

Inglehart, Ronald. (1977). *The Silent Revolution: Changing Values and Political Styles among Western Publics.* Princeton: Princeton University Press.

Interaction Design Foundation. (2020). *Information Overload, Why it Matters and How to Combat It*. Retrieved from: https://www.interaction-design.org/literature/article/information-overload-why-it-matters-and-how-to-combat-it [accessed 05-03-2020]

Ipsos Consumer Tracker. (2020). *Game Changers.* Retrieved from: https://www.ipsos.com/sites/default/files/ipsos-topline-ipsos-commercial-tracker-wave-4-050620.pdf [accessed 26-05-2020]

Isaacson, J. S., Scanziani, M. (2011). How inhibition shapes cortical activity. *Neuron, 72*, 231-243.

Ismail, N. (2019). *Technology: converting what's scarce into abundance — Peter Diamandis*. Retrieved from: https://www.information-age.com/technology-converting-scarce-abundance-peter-diamandis-123483251/ [accessed 05-03-2020]

Ismagilova, E., Slade, E., Rana, N. & Dwivedi, Y. K. (2020). The effect of characteristics of source credibility on consumer behaviour: A meta-analysis. *Journal of Retailing and Consumer Services, 53*, 1-9.

Ismagilova, E., Dwivedi, Y. K., Slade, E. & Williams, M. D. (2017). E*lectronic word of mouth (ewom) in the marketing context: A state of the art analysis and future directions*. Springer: https://link.springer.com/book/10.1007/978-3-319-52459-7

Jack, I. (2018). *India has 600 million young people – and they're set to change our world*. Retrieved from: https://www.theguardian.com/commentisfree/2018/jan/13/india-600-million-young-people-world-cities-internet [accessed 7-11-2019]

Jackson, P. C. Jr. (1974). *Introduction to Artificial Intelligence*. New York: Petrocelli Books.

Jacoby, J., Donald, E., Speller, C. & Berning, K. (1974). Brand Choice Behaviour as a Function of Information Load *Journal of Marketing Research, 11* (February), 74-75.

Jacobson, T. (2020). *The Privacy Pendulum: How Millennial and Gen Z Perceptions of Search and Privacy are Changing.* Retrieved from: https://www.aithority.com/guest-authors/the-privacy-pendulum-how-millennial-and-gen-z-perceptions-of-search-and-privacy-are-changing/ [accessed 16-05-2020]

Jacquin, Y., Gallouj, F., Gallouj, F., Francoz, D. & Djellal, F. (2003). Revising the definition of research and development in the light of the specificities of services. *Peace Economics, Peace Science and Public Policy, Walter de Gruyter, 30*(6), 415-429.

Jain, R. (2019). Inclusive pedagogy: Tapping cognitive dissonance experienced by international students. *Writing & Pedagogy, 11*(1), 127-150.

Jain, V. & Viswanathan, V. (2013). A dual-system approach to understanding "generation Y" decision making. *Journal of Consumer Marketing, 30,* 484-492.

James, W. (1890). *The principles of psychology*. New York: Dover Publications.

James, E. (2020). *8 Examples of How Latent Needs Can Deliver Practical Innovation*. Retrieved from: https://blog.flexmr.net/latent-needs-deliver-practical-innovation [accessed 01-04-2020]

Jamison, M. (2019). *Selective attention: How cognitive psychology can help reduce information overload.* Retrieved from: https://www.fathom.pro/blog/2019/05/selective-attention-how-cognitive-psychology-can-help-reduce-information-overload/ [accessed 05-03-2020]

Janefalkar, A. (2019). *6 Tips to Deliver Efficient, Personalized Customer Support.* Retrieved from: https://www.martechadvisor.com/articles/customer-experience-2/the-growing-influence-of-millennials-and-gen-z-and-their-impact-on-customer-support/ [accessed 17-05-2020]

Jaramillo, J., Mejias, J. F. & Wang, X-J. Engagement of Pulvino-Cortical Feedforward and Feedback Pathways in Cognitive Computations. *Neuron, 101*(2), 321-336.

Jarcho, J., Berkman, E. & Lieberman, M. (2011). The neural basis of rationalization: cognitive dissonance reduction during decision-making. *Social Cognitive and Affective Neuroscience, 6*(4), 460–467.

Jarvensivu, T., & Toornroos, J. A . (2010). Case study research with moderate constructionism: Conceptualization and practical illustration. *Industrial Marketing Management, 39*, 100–108.

Javadi, M. & Zarea, K. (2016). Understanding thematic analysis and its pitfall. *Journal of client care, 1*(1), 34-40.

Jha, M. K. & Jha, S. K. (2016). Cognitive dissonance: A review of causes and implications. *Researchers World Journal of Arts, Science & Commerce, 7*(2), 63-76.

Jellison, J. M., & Green, J. (1981). A self-presentation approach to the fundamental attribution error: The norm of internality. *Journal of Personality and Social Psychology, 40*(4), 643–649.

Jenkins, R. (2019). *Industries most vulnerable to be disrupted by generation Z.* Retrieved from: https://www.inc.com/ryan-jenkins/industries-most-vulnerable-to-be-disrupted-by-generation-z.html [accessed 7-11-2019]

Jenny, D. (2014). *Phase #2: Clearly Define Your Research Strategy.* Retrieved from: https://www.mackenziecorp.com/phase-2-clearly-define-research-strategy/#:~:text=A%20Research%20Strategy%20is%20a,quality%20results%20and%20detailed%20reporting. [accessed 24-09-2020]

Jeong, M., Zo, H., Lee, C. & Ceran, Y. (2019). Feeling displeasure from online social media postings: A study using cognitive dissonance theory. *Computers in Human Behaviour, 97,* 231-240.

Joffe H, Yardley L. (2004). *Content and thematic analysis. Research methods for clinical and health psychology,* California: Sage.

Johnson, B. K., Neo, R. L. Heijnen, M., Smits, L. & Veen, C.V. (2020). Issues, involvement, and influence: Effects of selective exposure and sharing on polarization and participation. *Computers in Human Behaviour, 104*, 1-12.

Johnson, R. W., Kelly, R. J. & LeBlanc, B. A. (1995). Motivational Basis of Dissonance: Aversive Consequences or Inconsistency. *Personality and Psychological Bulletin, 21*(8), 850-855.

Johnson, R. B.& Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher, 33*(7), 14-26.

Jonas, E., McGregor, I., Klackl, J., Agroskin, D., Fritsche, I. & Holbrook, C. (2014). Threat and defense: from anxiety to approach. *Advanced Experimental Social Psychology, 49*, 219–286.

Jones, H. (2020). *Born for this? Gen Z and the Covid-19 pandemic*. Retrieved from: https://www.ipsos.com/en-ca/knowledge/society/Born-for-this [accessed 15-05-2020]

Jones, E. E., & Gerard, H. B. (1967). *Foundations of social psychology*. New York: Wiley.

Jordan. (2018). *A History of Counterculture: Generation Z*. Retrieved from: https://www.collegefashion.net/inspiration/history-of-counterculture-gen-z/ [accessed 14-05-2020]

Joule, R. V. (1986). Twenty-five on: Yet another version of cognitive dissonance theory?. *European Journal of Social Psychology, 16*(1), 65–78.

Jover, A. J. V., Montes, F. J. L., & Fuentes, M. d. M. F. (2004). Measuring perceptions of quality in food products: the case of red wine. *Food and Quality Preference, 15*, 453 – 469.

Jupp, V. (2006). *The SAGE Dictionary of Social Research Methods*. London: Sage

Kaaronen, R. O. (2018). A Theory of predictive dissonance: predictive processing presents a new take on cognitive dissonance. *Frontiers in Psychology, 9*, 1-16.

Kahawandala, N. & Peter, S. (2020). *Factors affecting Purchasing Behaviour of Generation Z. Proceedings of the International Conference on Industrial Engineering and Operations Management*. Retrieved from: http://www.ieomsociety.org/ieom2020/papers/179.pdf [accessed 04-04-2020]

Kahneman, D. & Tversky, A. (2011). *Thinking, fast and slow*, New York: Farrar, Straus and Giroux.

Kahneman, D., Slovic, P. & Tversky, A. (1982). *Judgment under uncertainty: heuristics and biases*. Cambridge: Cambridge University Press.

Kahneman, D. & Tversky, A. (1974). Judgment under Uncertainty: Heuristics and Biases. *Science, 185*(4157), 1124-1131.

Kaish, S. (1967). Cognitive dissonance and the classification of consumer goods. *The Journal of Marketing, 31*(4), 28-31.

Kala, C. P. (2017). Traditional health care systems and herbal medicines. *European Journal of Environment and Public Health*, *1*(1), 3-7.

Kalaja, R., Myshketa, R. & Scalera, F. (2016). Service quality assessment in health care sector: The case of Durres public hospital: 12th International Strategic Management Conference ISMC. *Procedia – Social and Behavioral Sciences, 235*, 557 – 565.

Kalavathy, K. S. & Ramachander, A. (2019). *Impact of facebook on purchase decision: Process of generation Y.* Retrieved from: http://www.spjmr.com/gallery/53-spjmr-917.f.pdf [accessed 15-11-2019]

Kamber, T. (2017). *Gen X: The Cro-Magnon of Digital Natives.* Retrieved from: https://oats.org/wp-content/uploads/2017/12/Gen-X-the-CroMagnon-of-Digital-Natives.pdf [accessed 03-03-2020]

Kamboj, S., Sarmah, B., Gupta, S. Dwivedi, Y. (2018). Examining branding co-creation in brand communities on social media: applying the paradigm of Stimulus-Organism-Response. *International Journal of Information Management, 39*, 169-185.

Kamenidou, I., Vassilikopoulou, A., & Priporas, C. V. (2021). New sheriff in town? Discovering Generation Z as tourists: A perspective. In N. Stylos, R. Rahimi, B. Okumus, & S. Williams (Eds.), Generation Z Marketing and Management in Tourism and Hospitality (pp. 121-140). Palgrave Macmillan.

Kamenidou, I. C., Mamalis, S. A., Pavlidis, S., & Bara, E. Z. G. (2019a). Segmenting the generation Z cohort university students based on sustainable food consumption behavior: A preliminary study. *Sustainability, 11*(3), 837.

Kamenidou, I. C., Mamalis, S. A., Pavlidis, S., & Bara, E. Z. G. (2019b). Developing Attracting Destinations for Generation Z Based on Desired Destination Components. *Proceedings of the 12th Annual Conference of the EuroMed Academy of Business*, Thessaloniki, 457-467.

Kane, S. (2019). *Common Characteristics of Generation X Professionals*. Retrieved from: https://www.thebalancecareers.com/common-characteristics-of-generation-x-professionals-2164682 [accessed 03-03-2020]

Kang, J., Tang, L., & Lee, J. Y. (2015). Self-congruity and functional congruity in brand loyalty. *Journal of Hospitality & Tourism Research, 39*(1), 105-131.

Kapoor, K. K., Tamilmani, K. Rana, N. P., Dwivedi, Y. K., Patil, P. & Nerur, S. (2018). Advances in social media research: past, present and future. *Information Systems Frontiers, 20*(3), 531-558.

Kasasa. (2019). *Boomers, Gen X, Gen Y and Gen Z explained*. Retrieved from: https://www.kasasa.com/articles/generations/gen-x-gen-y-gen-z [accessed 29-02-2020]

Kastenmuller, A., Peus, C., Frey, D. & Fischer, P. (2008). The theory of cognitive dissonance: State of the science and directions for future research In: Meusburger P., Welker M., Wunder E. (Eds.) *Clashes of Knowledge. Knowledge and Space, 1,* 189-198.

Keelan, P. (2016). *Getting 'stuck' in low self-esteem*. Retrieved from: https://drpatrickkeelan.com/psychology/behave-your-way-to-higher-self-esteem/ [accessed 11-04-2020]

Keeney R. L. (1982). Decision Analysis: An Overview. *Operations research, 20*(5), 803-838.

Kelland, K. (2011). *Chronic disease to cost $47 trillion by 2030: WEF*. Retrieved from: https://www.reuters.com/article/us-disease-chronic-costs/chronic-disease-to-cost-47-trillion-by-2030-wef-idUSTRE78H2IY20110918 [accessed 4-11-2019]

Keng, C., & Liao, T. (2009). Consequences of postpurchase dissonance: The mediating role of an external information search. *Social Behavior and Personality: An International Journal, 37*(10), 1327-1340.

Kent, G. (2000). Understanding the experiences of people with disfigurements: an integration of four models of social and psychological functioning. *Psychology, Health and Medicine*, *5*, 117–1129.

Khachouf, O., Poletti, S. & Pagnoni, G. (2013). The embodied transcendental: a Kantian perspective on neurophenomenology. *Frontiers in Human Neuroscience, 7*, 611-653.

Khorsand, P., Moore, T. & Soltani, A. (2015). Combined contributions of feedforward and feedback inputs to bottom-up attention. *Frontiers in Psychology, 6*(155), 1-37.

Kimborough, L. (2020). *Field research, interrupted: How the COVID-19 crisis is stalling science.* Retrieved from: https://news.mongabay.com/2020/04/field-research-interrupted-how-the-covid-19-crisis-is-stalling-science/ [accessed 26-09-2020]

King, N, Bravington A, Brooks J, Hardy B, Melvin J. Wilde D. (2013). The Pictor technique: a method for exploring the experience of collaborative working. *Qualitative Health Research*, *23*, 1138–1152.

King, N. (2012). Doing template analysis. In: G. Symon (eds.), *Qualitative organizational research*. London: Sage, 426–50.

Kirkby-Geddes E, King N. Bravington A. (2013). Social capital and community group participation: examining 'bridging' and 'bonding' in the context of a healthy living centre in the UK. *Journal of Community and Applied Social Psychology*, *23,* 271–285.

Kirschner, A., Kam, J. W., Handy, T. C., & Ward, L. M. (2012). Differential synchronization in default and task-specific networks of the human brain. *Frontiers in human neuroscience, 6,* 139-159.

Kitayama, S. & Tompson, S. (2015). A Biosocial Model of Affective Decision Making: Implications for Dissonance, Motivation and Culture. *Advances in Experimental Social Psychology, 52,* 71-137.

Kitayama, S., Chua, H., Tompson, S. & Han, S. (2013). Neural mechanisms of dissonance: An fMRI investigation of choice justification. *NeuroImage, 69*(1), 206-212.

Kivunja, C. & Kuyini, A. B. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education, 6*(5), 26-41.

Kleinschmit, M. (2019). *Generation Z Characteristics: 5 Infographics on the Gen Z Lifestyle*. Retrieved from: https://www.visioncritical.com/blog/generation-z-infographics [accessed 08-03-2020]

Koch, L. (2019). *The three Ps of gen X tech use: Plugged in, (social) platforms and privacy*. Retrieved from: https://www.emarketer.com/content/the-three-p-s-of-gen-x-penetration-social-platforms-and-privacy [accessed 03-03-2020]

Ko, C. H., Liu, C., Hsaio, S., Yen, Y., Yang, M-J., Lin, W-C., Yen, C-F. & Chen, C-S. (2008). Brain activities associated with gaming urge of online gaming addiction. *Journal of Psychiatric Research, 43*, 739-747.

Ko, Y. J., Claussen, C. J. & Park, H. (2008). Action sports participation: consumer motivation. *International Journal of Sports Marketing and Sponsorship 9*(2), 111-124.

Koeppel, D. (2014). *Millennials embrace alternative medicine*. Retrieved from: https://www.cnbc.com/2014/07/15/millennials-embrace-alternative-medicine.html [accessed 28-03-2020]

Kohler, A. (2010). To think human out of the machine paradigm: Homo ex machine. Integrative Psychological & *Behavioural Science, 44*(1), 39-57.

Kol, O. & Lissitsa, S. (2016). Generation X vs. Generation Y–A decade of online shopping. *Journal of Retailing and Consumer Services, 31*, 304-312.

Korteling, J. E., Brouwer, A.-M. & Toet, A. (2018). A neural network framework for cognitive bias. *Frontiers in Psychology, 9*, article 1561.

Kosslyn, S. M. (1981). The medium and the message in mental imagery: a theory. *Psychological Review, 88*, 46-66.

Kotler P. & Keller K.L. (2012). *Marketing Management*, 14th ed. London: Sage.

Kragulj, F. (2016). Conceptualising Needs to Enhance Organisational Learning and Enable Knowledge-Based Innovation. *Procedia Computer Science, 99*, 225-242.

Krajina, A. & Karalic, V. (2017). Drivers of Consumer Decision Making- Comparative Analysis of Behavioral and Neuroeconomics Models. In: Bilgin M., Danis H., Demir E., Can U. (eds) *Regional Studies on Economic Growth, Financial Economics and Management. Eurasian Studies in Business and Economics,7*, Springer, Cham https://link.springer.com/chapter/10.1007/978-3-319-54112-9_25

Kramer, A. F., Bherer, L., Colcombe, S., Dong, W. & Greenough, W. T. (2004). Environmental Influences on Cognitive and Brain Plasticity During Aging. *The Journals of Gerontology: Series A, 59*(9), 940-957.

Kratochwill, T. R. (Ed.). (1978). *Single subject research: Strategies for evaluating change*. New York: Academic Press.

Kressmann, F., Sirgy, M. J., Herrmann, A., Huber, F., Huber, S., & Lee, D. J. (2006). Direct and indirect effects of self-image congruence on brand loyalty. *Journal of Business research, 59*(9), 955-964.

Krijestorac, H., Konana, P. & Garg, R. (2018). *Decisions under the illusion of objectivity: Digital embeddedness and B2B purchasing*. Retrieved from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2954805 [accessed 30-11-2019]

Kuhl, J. (1984). Volitional aspects of achievement motivation and learned helplessness: Toward a comprehensive theory of action-control. In B. A. Maher (Ed.), *Progress in experimental personality research*, (Vol. 13, pp. 99–171). New York: Academic Press.

Kunda, Z. (1992). Can Dissonance Theory Do It All?. *Psychological Inquiry, 3*(4), 337-339.

Kuniyoshi, Y., Yorozu, Y., Suzuki, S., Sangawa, S., Ohmura, Y., Terada, K. & Nagakubo, A. Emergence and development of embodied cognition: A constructivist approach using robots. *Progressive Brain Research, 164*, 425–445.

Kupperschmidt, R. (2000). Multigeneration Employees: Strategies for Effective Management. *The Health Care Manager, 19*(1), 65-76.

Kurth, T. & Leitzmann, M. F. (2010). Awakening of the sleeping giant: Obesity and stroke in China. *Annals of Neurology, 67*(1), 1-2.

Lachman, R., Lachman, J. L. & Butterfield, E. C. (2015). *Cognitive psychology and information processing*. Psychology Press: London

Lai, A. M., Hsueh, P. S., Choi, Y. K., & Austin, R. R. (2017). Present and Future Trends in Consumer Health Informatics and Patient-Generated Health Data. *Yearbook of medical informatics, 26*(1), 152–159.

Lamb, V. M. (2012). *The 1950's and the 1960's and the American Woman: the transition from the "housewife" to the feminist.* Retrieved from: https://dumas.ccsd.cnrs.fr/dumas-00680821/document [accessed 02-04-2020]

Lambert, N. (2019). *An (in)convenient truth: Gen Z and the culture of instant gratification*. Retrieved from: https://www.sapho.com/blog/an-inconvenient-truth-gen-z-and-the-culture-of-instant-gratification/ [accessed 08-03-2020]

Lambert, T. A. (1972). Generations and Change: Toward a theory of generation as a force in historical process. *Youth and Society, 1*(4), 21-45.

Lamia, M. C. (2017). *On Being "Triggered": How Emotional Memories Affect Us.* Retrieved from: https://www.psychologytoday.com/gb/blog/intense-emotions-and-strong-feelings/201711/being-triggered-how-emotional-memories-affect-us [accessed 04-04-2020]

Lamia, M. C. (2012). *Emotional Memories: When People and Events Remain with You*. Retrieved from: https://www.psychologytoday.com/gb/blog/intense-emotions-and-strong-feelings/201203/emotional-memories-when-people-and-events-remain [accessed 04-04-2020]

Landwehr, J. Henneberg, S. C., Morgan, R., Heitmann, M. & Hermann, A. (2009). Consumer Decision Making and Variety of Offerings: The Effect of Attribute Alignability. *Psychology & Marketing, 26*(4), 333–358.

Langfield, A. (2013). *Today's teens more materialistic, less likely to work hard, study says*. Retrieved from: https://www.today.com/money/todays-teens-more-materialistic-less-likely-work-hard-study-says-6C9733988 [accessed 04-03-2020]

Lan, X., Legare, C., Ponitz, C., Li, S., & Morrison, F., (2011). Investigating links between subcomponents of executive function and academic achievement: A cross-cultural analysis of Chinese and American pre-schoolers. *Journal of Experimental Child Psychology, 108*, 677-692.

Lara, A. & Wallis, J. (2016). The Role of Prefrontal Cortex in Working Memory: A Mini Review. *Frontiers of System Neuroscience, 9(*173), 1-7.

Lash, S. (1993). Reflexive Modernization: The Aesthetic Dimension. *Theory, Culture and Society, 10*, 1–23.

Lasser, J. & Brooks, M. (2018). *Tech Generation: Raising Balanced Kids in a Hyper-Connected World*. Oxford University Press

Lather, P. (1986). Research as praxis. *Harvard Educational Review, 56*(3), 257-277.

Lautiainen, T. (2015). *Factors affecting consumers' buying decision in the selection of a coffee brand*. Retrieved from: https://core.ac.uk/download/pdf/38124382.pdf [accessed 13-05-2020]

Laufer, R. & Bengtson. (1974). Generations, Aging, And Social Stratification: On the Development of Generational Units*. Journal of Social Issues, 30*(3), 181-205.

Laverie, D. & Madhavaram, S. R. (2004). Exploring Impulse Purchasing on the Internet. *Advances in Consumer Research, 31,* 59-66.

Lavrakas, P. J. (2008). *Purposive Sample*. Retrieved from: https://methods.sagepub.com/reference/encyclopedia-of-survey-research-methods/n419.xml#:~:text=A%20purposive%20sample%2C%20also%20referred,be%20representative%20of%20the%20population.&text=In%20nonprobability%20sampling%2C%20the%20population%20may%20not%20be%20well%20defined [accessed 24th September 2020]

Lawless, C. (2019). *What is information processing theory?.* Retrieved from: https://www.learnupon.com/blog/what-is-information-processing-theory/ [accessed 22-11-2019]

Lawson, R. (1998). Consumer decision-making within a goal-driven framework. *Psychology and Marketing, 14*(5), 1-9.

Lee, J. & Hong, J. B. (2016). Predicting positive user responses to social media advertising: the roles of emotional appeal, informativeness, and creativity. *International Journal of Information Management, 36*(3), 360-373.

Lee B-K. & Lee, W-N. (2004). The Effect of Information Overload on Consumer Choice Quality in an On-Line Environment. *Psychology and Marketing, 21*(3), 159-183.

Lee. J., Park, D. H. & Han, I. (2008). The effect of negative online consumer reviews on product attitude: an information processing view. *Electronic Commerce Research Application, 7*(3), 341-352.

Leedy, P. & Ormrod, J. (2001). *Practical research: Planning and design (7th ed.).* New Jersey: Merrill Prentice Hall.

Legg, T. J. (2019). *What is negativity bias, and how does it affect you?.* Retrieved from: https://www.healthline.com/health/negativity-bias [accessed 06-03-2020]

Lennox, R. & Jurdi-Hage, R. (2017). Beyond the empirical and the discursive: The methodological implications of critical realism for street harassment research. *Women Studies Forum International, 60*, 23-38.

Lerman, K. (2015). *How millennials are reshaping health and wellness*. Retrieved from: https://www.quirks.com/articles/how-millennials-are-reshaping-health-and-wellness [accessed 30-10-2019]

Lerner, J. S., Han, S. & Keltner, D. (2007). Feelings and Consumer Decision Making: Extending the Appraisal-Tendency Framework. *Journal of Consumer Psychology, 17*(3), 184-187.

Les Mills. (2019). *Generation Active: The 80% clubs can't afford to ignore*. Retrieved from: https://www.lesmills.com/uk/clubs-and-facilities/research-insights/audience-insights/generation-active-the-80-your-club-cant-ignore/ [accessed 17-05-2020]

Lester, D.H., Forman, A.M. and Loyd, D. (2005). Internet shopping behaviour of college students. *Services Marketing Quarterly, 27*(2), 123-138.

Levitin, D. J. (2015). *Why the modern world is bad for your brain*. Retrieved from: https://www.theguardian.com/science/2015/jan/18/modern-world-bad-for-brain-daniel-j-levitin-organized-mind-information-overload [accessed 05-03-2020]

Levy, N., Harmon-Jones, C., and Harmon-Jones, E. (2017). Dissonance and discomfort: Does a simple cognitive inconsistency evoke a negative affective state?. *Motivational Science, 4*, 95–108.

Levy, N. (2014). Consciousness, Implicit Attitudes and Moral Responsibility. *Nous, 48*(1), 21-40.

Li, H., Baucom, B. & Georgiou, P. (2020). Linking emotions to behaviours through deep transfer learning. *Journal of Computer Science 6*(246), 6:e246 https://doi.org/10.7717/peerj-cs.246

Liberman, N., Sagristano, M. D., & Trope, Y. (2002). The effect of temporal distance on level of mental construal. *Journal of Experimental Social Psychology, 38*(6), 523-534.

Liberman, N., & Trope, Y. (1998). The role of feasibility and desirability considerations in near and distant future decisions: A test of temporal construal theory. *Journal of Personality and Social Psychology, 75*, 5-18.

Libet, B., Wright, Jr., E. W. & Feinstein, B., & Pearl, D. K. (1979). Subjective referral of the timing for a conscious sensory experience. *Brain, 102*, 193–224.

Liddle, A. J. (2010). *How to make the most of online advertising.* Retrieved from: http://nrn.com/article/how-make-most-online-advertising [accessed 04-03-2020]

Liehr, P. & Smith, MJ. (1999). Middle range theory: Spinning research and practice to create knowledge for the new millennium. *Advances in Nursing Science, 21*(4), 81-91.

Lin, C-T., Chen, C-W., Wang, S-W. & Lin, C-C. (2018). The influence of impulse buying toward consumer loyalty in online shopping: a regulatory focus theory perspective. *Journal of Ambient Intelligence and Humanized Computing, (2018),* Available Online: https://doi.org/10.1007/s12652-018-0935-8

Linde, S. (2020). *What is Parallel Processing? - Definition & Model.* Retrieved from: https://study.com/academy/lesson/what-is-parallel-processing-definition-model.html [accessed 04-04-2020]

Lister, M. (2020). *Generational Marketing: How to Target Millennials, Gen X, & Boomers.* Retrieved from: https://www.wordstream.com/blog/ws/2016/09/28/generational-marketing-tactics [accessed 03-02-2020]

Liu, H., Osburg, V., Jayawardhena, C. & Babu, M. (2019). *Do online reviews still matter post purchase?.* Retrieved from: https://www.emerald.com/insight/content/doi/10.1108/INTR-07-2018-0331/full/html [accessed 16-11-2019]

Lis, B. & Fischer, M. (2020). Analyzing different types of negative online consumer reviews. *Journal of Product and Brand Management, 3*(1), 1-9.

Livni, E. (2018). *A new study from Yale scientists shows how uncertainty helps us learn*. Retrieved from: https://qz.com/1343503/a-new-study-from-yale-scientists-shows-how-uncertainty-helps-us-learn/ [accessed 13-04-2020]

Lobb, A. E., Mazzocchi, M. & Traill, W. B. (2007). Modelling risk perception and trust in food safety information within the theory of planned behaviour. *Food Quality and Preference, 18*(2), 384-395.

Lockett, SH., Hatton, J., Turner, R., Stubbins, C., Hodgekins, J. & Fowler D. (2012). Using a semi-structured interview to explore imagery experienced during social anxiety for clients with a diagnosis of psychosis: an exploratory study conducted within an early intervention for psychosis service. *Behavioural and Cognitive Psychotherapy*, *40*, 55–68.

Losch, M. & Cacioppo, J. (1990). Cognitive dissonance may enhance sympathetic tonus, but attitudes are changed to reduce negative affect rather than arousal. *Journal of Experimental Social Psychology, 26*(4), 289-304.

Lovett, L. (2019). *Accenture study finds millennials, Gen Z are looking to technology, non-traditional settings for healthcare*. Retrieved from: https://www.mobihealthnews.com/content/accenture-study-finds-millennials-gen-z-are-looking-technology-nontraditional-settings [accessed 16-05-2020]

Lovstad, M., Funderand, I., Meling, T. Kramer, U. M., Voytek, B. Due-Tonnessen, P., Endestad, T., Lindgren, M., Knight, R. T & Solbakk, A. K. (2012). Anterior cingulate cortex and cognitive control: Neuropsychological and electrophysiological findings in two patients with lesions to dorsomedial prefrontal cortex. *Brain Cognition, 80*(2), 237-269.

Lu, H. P., Lin, J. C. C., Hsiao, K. L. and Cheng, L. T. (2010). Information sharing behaviour on blogs in Taiwan: effects of interactivities and gender differences. *Journal of Information Science, 36*(3), 401-416.

Luna, B., Marek, S., Larsen, B., Tervo-Clemmens, B. & Chahal, R. (2015). An Integrative Model of the Maturation of Cognitive Control. *Annual Review Neuroscience, 38,* 151-170.

Lupton, D. (1997). Consumerism, reflexivity and the medical encounter. *Social Science & Medicine, 45*(3), 373-381.

Lurie, N. (2004). Decision Making in Information-Rich Environments: The Role of Information Structure. *Journal of Consumer Research, 30*, 473-489.

Luxton, D. (2016). Chapter 1 - An Introduction to Artificial Intelligence in Behavioural and Mental Health Care. *Artificial Intelligence and Behavioural Healthcare*, 1-26.

Lynch, J. G. & Zauberman, G. (2007). Construing Consumer Decision-Making. *Journal of Consumer Psychology, 17*(2), 107-112.

Lynch, A. (2015). *Gen Z Kids Are Like Their Great-Grandparents. Here's Why*. Retrieved from: http://www.generationaledge.com/blog/posts/genz-like-grandparents [accessed 25-05-2020]

Lyon, E. (2010). *Examining Generation Y: stats, demographics, segments, predictions.* Retrieved from: http://sparxoo.com/2010/02/26/examining-generation-y-stats-demographics-segments-predictions/ [accessed 04-03-2020]

Lythcott-Haims, J. (2019). *Why boomers and gen x'ers are wrong to bash gen z.* Retrieved from: https://psmag.com/ideas/why-boomers-and-gen-xers-are-wrong-to-bash-gen-z [accessed 25-05-2020]

MacInnis, D. (2011). A framework for conceptual contributions in marketing. *Journal of Marketing, 75*(July 2011), 136-154.

Mackenzie, N. & Knipe, S. (2006). Research dilemmas: paradigms, methods and methodology. *Issues In Educational Research, 16*, 1-15.

Maclaran, P., Saren, M., Goulding, C., Elliot, R. & Caterall, M. (2012). *Critical Marketing*. London: Routledge.

Maddox, T. & Nduka, C. (2018). *Emotion, Cognition, Behaviour and the Brain Science of Learning.* Retrieved from: https://medium.com/digital-surgery/emotion-cognition-behavior-and-the-brain-science-of-learning-d1ec1233b95f [accessed 17-05-2020]

Mahaffy, K. A. (1996). Cognitive Dissonance and Its Resolution: A Study of Lesbian Christians. *Journal for the Scientific Study of Religion, 35*(4), 392-406.

Mahendran, A. (2015). Visible and invisible health problems of youth in India. *Pacific Business Review International, 8*(4), 109-114.

Mahloko, L., & Adebesin, F. (2020) A Systematic Literature Review of the Factors that Influence the Accuracy of Consumer Wearable Health Device Data. In: Hattingh M., Matthee M., Smuts H., Pappas I., Dwivedi Y., Mäntymäki M. (eds) *Responsible Design, Implementation and Use of Information and Communication Technology.* I3E 2020. Lecture Notes in Computer Science, vol 12067. Springer, Cham. https://doi.org/10.1007/978-3-030-45002-1_9

Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of the Society for Research in Child Development, 50* (1-2), 64-79.

Maity, M., Zinkhan, G. M. & Kwak, H. (2002). Consumer Information Search and Decision Making on the Internet: A Conceptual Model, *In Winter Educators Conference. Marketing Theory and Applications,* 13, 31–39.

Malhotra, N. K. (1982). Information Load and Consumer Decision-Making. *Journal of Consumer Research, 8*(4), 419-430.

Malterud, K., Sierssma, V. D. & Guassora, A. D. (2016). Sample Size in Qualitative Interview Studies: Guided by Information Power. *Qualitative Health Research, 26*(13), 1753–1760.

Mandl, M., Felfernig, A., Teppan, E. & Schubert, M. (2010). Consumer decision making in knowledge-based recommendation. *Journal of Intelligent Information Systems, 37*, 1–22.

Mannheim, K. (1927/1928) 1952. The Problem of Generations. In Karl Mannheim: Essays, edited by *Paul Kecskemeti*, 276–322. New York: Routledge.

Marchant, J. (2014). *The behaviour cycle.* Retrieved from: https://www.emotionalintelligenceatwork.com/resources/behaviour-cycle/ [accessed 10-5-2020]

Marewski, J., Schooler, L. & Gaissmaier, W. (2010). From recognition to decisions: Extending and testing recognition-based models for multi-alternative inference. *Psychonomic Bulletin & Review, 17*(3), 287-309.

Marikyan, D., Papagiannidis, S. & Alamanos, E. (2020). Cognitive Dissonance in Technology Adoption: A Study of Smart Home Users. *Information Systems Frontier*. https://doi.org/10.1007/s10796-020-10042-3

Martin, K., McLeod, E., Periard, J., Rattray, B., Keegan, R. & Pyne, D. (2019). The Impact of Environmental Stress on Cognitive Performance: A Systematic Review. *The Journal of Human Factors and Ergonomics Society, 61*(8), 1205-1246.

Martinez-Canas, R., Ruiz-Palomino, P., Linuesa-Langreo, J. & Blazquez-Resino, J. (2016). Consumer Participation in Co-creation: An Enlightening Model of Causes and Effects Based on Ethical Values and Transcendent Motives. *Frontiers in Psychology, 7*(793), 1-17.

Martinez-Mesa, J., González-Chica, D. A., Duquia, R. P., Bonamigo, R. R., & Bastos, J. L. (2016). Sampling: how to select participants in my research study?. *Anais brasileiros de dermatologia*, *91*(3), 326–330.

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research: a review of qualitative interviews in is research. *Journal of Computer Information Systems*, *54*(1), 11-22.

Marszalek, D. (2018). *Study: Consumer Activists More Likely To Buy Than Boycott*. Retrieved from: https://www.provokemedia.com/latest/article/study-consumer-activists-more-likely-to-buy-than-boycott [accessed 18-05-2020]

Martino, A., Shehzad, Z., Kelly, C., Roy, A. K., Gee, D. G. & Uddin, A. Q. (2009). Relationship between cingulo-insular functional connectivity and autistic traits in neurotypical adults. *American Journal of Psychiatry, 166*, 891-899.

Martzoukou, K. (2004). A Review of Web Information Seeking Research: Considerations of Method and Foci of Interest. *Information Research, 10* (2), 78-85.

Mason, J. (2002). *Qualitative researching*. London: Sage.

Mason, M. F., Norton, M. I., Van Horn, J. D., Wegner, D. M., Grafton, S. T. & Macrae, C. N. (2007). Response to comment on "Wandering minds: The default network and stimulus-independent thought. *Science, 317*(5834), 44-54.

Mather, M. (2016). The affective neuroscience of aging. *Annual Review Psychology, 66*(67), 213–238.

Matheson, J. (2018). *Self-Trust, Skepticism, and Peer Disagreement*. Retrieved from: https://www.baylor.edu/content/services/document.php/104060.pdf [accessed 17-05-2020]

Mathews, B. (2016). *The impact of technology on our brains' ability to learn*. Retrieved from: https://www.3plearning.com/blog/impact-technology-brains-ability-learn/ [accessed 21-05-2020]

Mathur, N. (2019). *Technology has significantly improved lives of Indian consumers*. Retrieved from: https://www.livemint.com/technology/tech-news/technology-has-significantly-improved-lives-of-indian-consumers-1564654270675.html [accessed 27-03-2020]

Mavrina, M. (2017). The Concept of Reflexive Management Of Consumer Demand. *Baltic Journal of Economic Studies, 3*(3), 38-46.

Mazzocchi, M., Lobb, A., Traill, W. B. & Cavicchi, A. (2008). Food Scares and Trust. *Journal of Agricultural Economics, 59*(1), 2-24.

McArthur, L. Z., & Baron, R. M. (1983). Toward an ecological theory of social perception. *Psychological Review, 90*, 215–238.

McBrearty, S. & Brooks, A. S. (2000). The revolution that wasn't: A new interpretation of the origin of modern human behaviour. *Journal of Human Evolution, 39*, 453-563.

McCoy, J. (2019). *Millennials and gen Z are using social media less: Here's how to earn their attention and loyalty now.* Retrieved from:

https://www.marketingprofs.com/articles/2019/41821/millennials-and-gen-z-are-using-social-media-less-heres-how-to-earn-their-attention-and-loyalty-now [accessed 30-11-2019]

McDonough, J. & McDonough, S. (1997). *Research Methods for English Language Teachers*. London: Arnold.

McFaddin, J. (2018). *Cognitive dissonance and teachers: when beliefs and mandates collide.* Dissertation, Georgia State University, 2018. Retrieved from: https://scholarworks.gsu.edu/ece_diss/40 [accessed 12-04-2020]

McGuire, P. K., Paulesu, E., Frackowiak, R. S. J. & Frith, C. D. (1996). Brain activity during stimulus independent thought. *Neuro Report, 7*(13), 2095-2099.

McGrath, A. (2017). Dealing with dissonance: A review of cognitive dissonance reduction. *Social and Personality Psychology Compass, 11*(12), 1-17.

McGregor, S. L. T. & Murnane, J. A. (2010). Paradigm, methodology and method: intellectual integrity in consumer scholarship. *International Journal of Consumer Studies, 34*, 419–442.

McKay, B. (2017). *How making a purchase is influenced by consumer bias*. Retrieved from: https://www.hub.tv/blog/how-making-a-purchase-is-influenced-by-consumer-bias/ [accessed 08-03-2020]

McKenna, N. (2019). *Accenture 2019 Digital Health Consumer Survey.* Retrieved from: https://www.accenture.com/_acnmedia/PDF-98/Accenture-2019-Digital-Health-Consumer-Survey-ENG.pdf#zoom=50 [accessed 18-05-2020]

McLaughlin, K., Eva, K. W. & Norman, G. R. (2014). Re-examining our bias against heuristics. *Advances in Health Science Education, 19*, 457-464.

McLeod, S. A. (2018). *Cognitive dissonance*. Retrieved from: https://www.simplypsychology.org/cognitive-dissonance.html [accessed 15-11-2019]

McLeod, S. (2008). *Information Processing*. Retrieved from: https://www.simplypsychology.org/information-processing.html [accessed 15-11-2019]

McNeill, F., Pinheiro, R. & Andre, C. (2012). *The heuristic approach and why we use it*. Retrieved from: https://onlinelibrary.wiley.com/doi/pdf/10.1002/9781118434260.ch3 [accessed 14-04-2020]

McRoberts, S. (2018). *Cognitive biases: A crash course for the millennial mind.* Retrieved from: https://www.entrepreneur.com/article/305986 [accessed 04-03-2020]

Medawar, P. B. (1969). *Induction and Intuition in Scientific Thought*. London: Methuen

Medikix. (2018). *The 11 generation z statistics advertisers must know*. Retrieved from: https://mediakix.com/blog/the-generation-z-statistics-you-should-know/ [accessed 08-03-2020]

Mehta, R. (2020). *Healthcare*. Retrieved from: https://www.pwc.in/industries/healthcare.html [accessed 29-04-2020]

Mendoza, N. F. (2019). *Why gen Z employees need to be managed differently than millennials*. Retrieved from: https://www.techrepublic.com/article/why-gen-z-employees-need-to-be-managed-differently-than-millennials/ [accessed 13-11-2019]

Mercier, H. & Sperber, D. (2011a). Argumentation: Its adaptiveness and efficacy. *Behavioural and Brain Sciences, 34*, 94-111.

Mercier, H. & Sperber, D. (2011b). Why do humans reason? Arguments for an argumentative theory. *Behavioural and Brain Sciences, 34*, 57-74.

Mercurio, N. (2020). *Reopen with Confidence: Ensuring Consumers Feel Safe in the 6-Foot Economy*. Retrieved from: https://www.ipsos.com/en-us/knowledge/customer-experience/making-customers-feel-safe-6-foot-economy [accessed 26-05-2020]

Messner, C. & Wanke, M. (2011). Unconscious information processing reduces information overload and increases product satisfaction. *Journal of Consumer Psychology, 21*, 9-13.

Mesulam, M. M. & Mufson, E. J. (1982). Insula of the old world monkey. III: Efferent cortical output and comments on function. *Journal of Comparative Neurology, 212*, 38-52.

Mesulam, M. M. & Mufson, E. J. (1982). Insula of the old world monkey: Architectonics in the insulo-orbito-temporal component of the paralimbic brain. *Journal of Comparative Neurology, 212,* 1-22.

Metin, I. & Camgoz, S. M. (2011). The advances in the history of Cognitive Dissonance Theory. International *Journal of Humanities and Social Science, 1*(6), 131-136.

Metzger, M. & Flanagin, A. (2013). Credibility and trust of information in online environments: The use of cognitive heuristics. *Journal of Pragmatics, 59*(Part B), 210-220.

Meyers, T. (2017). *How millennials view healthcare differently…and what to do about it.* Retrieved from: https://wellapp.com/blog/how-millennials-view-healthcare-differently-and-what-to-do-about-it/ [accessed 29-03-2020]

Miklosovic, J. C. (2010). Cognitive dissonance: effects of perceived choice on attitude change. *Modern Psychological Studies, 15*(2), 16-21.

Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook (2nd ed.).* California: Sage.

Miller, L. & Lu, W. (2018), *Gen Z is set to outnumber millennials within a year*. Retrieved from: https://www.bloomberg.com/news/articles/2018-08-20/gen-z-to-outnumber-millennials-within-a-year-demographic-trends [accessed 28-10-2019]

Miller, G. (2003). The cognitive revolution: a historical perspective. *Trends in Cognitive Sciences, 7*(3), 141-144.

Miller, J. B. & Noirot, M. (1999). Attachment Memories, models and information processing. *Journal of Social and Personal Relationships, 16*(2), 147-173.

Miller, J.O. (1988). Discrete and Continuous models of human information processing: Theoretical distinctions and empirical results. *Acta Psychologica, 67*, 191-257.

Miller, G. (1960). Human memory and the storage of information. *IRE Transactions of Memory, 2*(3), 129-137.

Miller, G. (1956). The magical number seven, plus or minus two: some limits on our capacity for processing information. *The Psychological Review, 6*(2), 81-97.

Miller, D. C. & Salkind, N. J. (2002). *Elements of Research Design*. Retrieved from: https://methods.sagepub.com/book/handbook-of-research-design-social-measurement/n9.xml

Mills, J. & Harman-Jones, E. (2019). An introduction to cognitive dissonance theory and an overview of current perspectives on the theory. In E. Harmon-Jones (Ed.), Cognitive dissonance: Reexamining a pivotal theory in psychology (pp. 3–24). American Psychological Association.

Mills, K. L. (2015). Possible Effects of Internet Use on Cognitive Development in Adolescence. *Media and Communication, 4*(3), 4-12.

Mintzberg H., Raisinghani D. & Theoret A. (1976) The Structure of "Unstructured" Decision Processes, *Administrative Science Quarterly, 21*(2), 246-275.

Mitchell, V-W. & Papavassiliou, V. (1999). Marketing Causes and Implications of Consumer Confusion. *Journal of Product and Brand Management, 8(*4), 319-342.

Mittal, B. (1988). The role of affective choice mode in the consumer purchase of expressive products. *Journal of Economic Psychology, 9*(4), 499-524.

Mitroff, I. & Bonoma, T.V. (1978). Psychological assumptions, experimentation, and real-world problems: a critique and an alternate approach to evaluation. *Evaluative Questioning, 2*(2), 235–260.

Misirlis, N. & Vlachopoulou, M. (2018). Social media metrics and analytics in marketing–S3M: a mapping literature review. *International Journal of Information Management, 38*(1), 270-276.

Mole, C. (2011). *Attention is cognitive unison: An essay in philosophical psychology*. Oxford University Press

Mohan, P., Sethi, H., Reddy, K. & Bhan, M. (2019). Designing primary healthcare systems for future in India. *Journal of Family Medicine and Primary Care, 8*(18), 17-20.

Montgomery, J. (2012). *Emotions, Survival, and Disconnection*. Retrieved from: https://www.psychologytoday.com/intl/blog/the-embodied-mind/201209/emotions-survival-and-disconnection [accessed 13-04-2020]

Moore, B. (2019). *Gen Z Wants Two-way Communication with Brands, Product Co-creation*. Retrieved from: https://wwd.com/fashion-news/fashion-features/gen-z-wants-two-way-communication-with-brands-product-co-creation-1203377198/ [accessed 15-05-2020]

Monrad, M. (2019). Self-Reflexivity as a form of Client Participation: Clients as Citizens, Consumers, Partners or Self-Entrepreneurs. *Journal of Social Policy, 18*, 1-18.

Moravec, H. 1988. *Mind children: The future of robot and human intelligence*, Cambridge: Harvard University Press.

Moreno, F. M., Moreno, S. F., Laufante, J. G. & Avila, F. (2017). The characterization of the millennials and their buying behaviour. *International Journal of Marketing Studies, 9*(5), 135-139.

Morriss, E. (2019). *Mind the generation gap in pharma marketing and market research.* Retrieved from: https://pharmafield.co.uk/marketing/mind-the-generation-gap-in-pharma/ [accessed 13-11-2019]

Morningconsult. (2020). *Understanding gen Z: How America's largest, most diverse, best-educated, and most financially powerful generation will shape the future*. Retrieved from: https://morningconsult.com/form/gen-z-report-download/ [accessed 05-03-2020]

Morse, J. (2019). The Changing Face of Qualitative Inquiry. *International Journal of Qualitative Methods, 19*, 1–7.

Morse, J. M. (1995). The significance of saturation. *Qualitative Health Research, 5*(2), 147–149.

Morse, J.M. (1995). *Qualitative research methods for health professionals*, 1st edition, London: Sage

Moustakas, C. (1994). *Phenomenological research methods.* Thousand Oaks: Sage.

MSR Blog. (2020). *About abductive reasoning*. Retrieved from: http://www.msrblog.com/science/mathematic/about-abductive-reasoning.html [accessed 24th September 2020]

Murray, K. (2020). *Customer Needs Vs Omnichannel*. Retrieved from: https://www.essentialretail.com/comments/customer-needs-vs-omnichannel/ [accessed 17-05-2020]

Murray, J. B. & Cherrier, H. (2007). Reflexive dispossession and the self: constructing a processual theory of identity. *Consumption Markets & Culture, 10*(1), 1-17.

Musco, S. & Ryan, R. (2019). *Gen Z is aging out of paediatrics—what does that mean for your growth strategy?*. Retrieved from: https://www.advisory.com/research/market-innovation-center/the-growth-channel/2019/08/gen-z-patients [accessed 7-11-2019]

Nageswari, R. (2019). *The evolution of consumer behaviour in the digital age. UGC Journal No. 45489.* Retrieved from: http://www.researchdirections.org/Management/articleupload/article851.pdf [accessed 30-11-2019]

Namey, E., Guest, G., Thairu, L. & Johnson, L. (2008). Data Reduction Techniques for Large Qualitative Data Sets. In: R. Altamira (Ed.), *Handbook for team-based qualitative research*, pp.76-89.

Narayana C.L. & Markin R.J. (1975) Consumer Behavior and Product Performance: An Alternative Conceptualization. *Journal of Marketing, 39*(4), 1-6.

Narayanan, S. & Georgiou, P. (2013). Behavioural signal processing: deriving human behavioural informatics from speech and language. *Proceedings of the IEEE 101*(5), 1203-1233.

Nasir, N. F., Roslin, R. M. & Chui, C. (2020). *Socioeconomic Realities in Society.* Malaysia: Universiti Pendidikan Sultan Idris

National Retail Federation. (2019). *Keeping Up with Gen Z*. Retrieved from: https://cdn.nrf.com/sites/default/files/2019-10/NRF%20Consumer%20View%20Fall%202019.pdf [accessed 16-05-2020]

National Retail Federation. (2017). *Gen Z brand relationships - Authenticity matters.* Retrieved from: https://nrf.com/research/gen-z-brand-relationships [accessed 18-05-2020]

NCCIH. (2019). *The use of complementary and alternative medicine in the United States.* Retrieved from: https://nccih.nih.gov/research/statistics/2007/camsurvey_fs1.htm [accessed 13-11-2019]

Nedungadi, P. (1990). Recall and consumer consideration sets: Influencing choice without altering brand evaluations. *Journal of Consumer Research, 17*, 263-276.

Netzer, J. (2019). *5 Generation Z Statistics on Spending Habits That Marketers Need to Know*. Retrieved from: https://khoros.com/blog/5-stats-generation-z-buying-habits [accessed 17-05-2020]

Newell. A. & Simon, H. A. (1972). *Human problem solving*. New Jersey: Prentice-Hall.

Newell, A. (1973). Production systems: models of control structures. In: W.G. Chase (ed.), *Visual information processing*. New York: Academic Press. pp. 463-526.

Newkirk, A. (2014). *The Interactions of Heuristics and Biases in the Making of Decisions*. Retrieved from: https://projects.iq.harvard.edu/expose/book/interactions-heuristics-and-biases-making-decisions [accessed 12-04-2020]

Nicosia F. M. (1966). *Consumer decision processes: marketing and advertising implications*. New Jersey: Prentice-Hall.

Nielsen. (2014). *Millennials are seeking the fountain of youth through healthy aging.* Retrieved from: https://www.nielsen.com/us/en/insights/article/2014/millennials-are-seeking-the-fountain-of-youth-through-healthy-aging/ [accessed 13-05-2014]

Nielsen. (2013). *Baby boomer Vs millennial brains*. https://www.smallbizlabs.com/2013/06/baby-boomer-versus-millennial-brains.html [accessed 06-03-2020]

Nilsson, N. J. (1980). *Principles of artificial intelligence*. Palo Alto: Tioga Publishing

Nock, M. K., Michel, B. D. & Photos, V. I. (2007). *Methodological advances and data analysis.* Retrieved from: https://us.corwin.com/sites/default/files/upm-binaries/19353_Chapter_22.pdf [accessed 24th September 2020]

Norman, G., Young, M. & Brooks, L. (2007). Non-analytical models of clinical reasoning: The role of experience. *Medical Education, 41*, 1140–1145.

Obmann, S. (2014). *Karl Mannheim's Theory of Generations*. Retrieved from: https://prezi.com/wfozyf0vjwix/karl-mannheims-theory-of-generations/ [accessed 18-06-2020]

Odou, P., Darke, P. & Voisin, D. (2019). Promoting pro-environmental behaviours through induced hypocrisy. *Recherche et Applications en Marketing, 34*(1), 74–90.

Oertzen, A-S., Odekerken-Schroeder, G., Brax, S. & Mager, B. (2018). Co-creating services—conceptual clarification, forms and outcomes. *Journal of Service Management, 29*(4), 641-679.

Okoro, D. P., Mmamel, Z. U., Okolo, V. O. (2019). Factors Influencing Consumer Choice of Brands of Custard in Enugu State. *International Journal of Managerial Studies and Research, 7*(11), 38-51.

Ong, Y. X. (2020). *Social Media Influencers for Destination Marketing – Application of the Self-Congruity Theory on Generational and Cross-Cultural Comparison*. Retrieved from: https://enter2020.ifitt.org/wp-content/uploads/2020/01/PhD-Workshop_Proceedings_2020-v4.pdf#page=66 [accessed 19-04-2020]

Ong, A. (2019). Chapter 5 – Cognitive dissonance in food and nutrition. *Trends in Personalised Nutrition*, *2019,* 105-133.

Ongur, D. & Price, J. L. (2000). The organization of networks within the orbital and medial prefrontal cortex of rats, monkeys and humans. *Cerebral Cortex, 10*, 206-219.

Ormston, R., Spencer, L., Barnard, M., & Snape, D. (2014). The foundations of qualitative research. In J. Ritchie, J. Lewis, C. Nicholls & R. Ormston (Eds.), *Qualitative Research Practice: A Guide for Social Science Students and Researchers* (pp. 1-25). California: Sage.

Osei-Frimpong, K., Wilson, A. and Lemke, F. (2016). Patient co-creation activities in healthcare service delivery at the micro level: the influence of online access to healthcare information. *Technological Forecasting and Social Change, 126*, 14-27.

Oshikawa, S. (1970). Consumer pre-decision conflict and post-decision dissonance. *Behavioural Science, 15*, 132-140.

Ouwaithe, W. (1987). *New Philosophies of Social Science: Realism, Hermeneutics and Critical Theory*. London: Macmillan

Owen, R. S. (1992). Clarifying the Simple Assumption of the Information Overload Paradigm. *Advances in Consumer Research, 19*, 770-776.

Owuamalam, C. K., Rubin, M. & Spears, R. (2018). A critical review of the (un)conscious basis for system-supporting attitudes of the disadvantaged. *Social and Personality Compass, 12*(11), 33-40.

Ozdemir, J. (2020). *The new brand loyalty: brands must be human to the core to thrive in the consumer revolution*. Retrieved from: https://www.prca.org.uk/The-New-Brand-Loyalty [accessed 17-02-2020]

Ozkan, M. & Solmaz, B. (2015). Generation Z – the global market's new consumers – and their consumption habits: Generation Z consumption scale. *European Journal of Multidisciplinary Studies, 5*(1), 11-19.

Page, B. (2020). *Ipsos Global Trends 2020: Understanding Complexity*. Retrieved from: https://www.ipsos.com/sites/default/files/ct/publication/documents/2020-02/ipsos-global-trends-2020-understanding-complexity.pdf [accessed 26-05-2020]

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Administration and policy in mental health*, *42*(5), 533–544.

Palmer, K. (2009). *Gen Y: Influenced by parents and materialism*. Retrieved from: http://money.usnews.com/money/blogs/alpha-consumer/2009/9/22/gen-y-influenced-by-parentsand materialism_print.html [accessed 04-03-2020]

Pandey, A. C. & Jamwal, M. (2016). Realizing the Impact of Cognitive Dissonance in Predicting Consumer Behaviour. *Journal of Social Sciences, 12*(1), 36-41.

Pankowski, M. (2019). *Gen Z will change the world*. Retrieved from: https://www.prweek.com/article/1661742/gen-z-will-change-world [accessed 4-11-2019]

Pant, V., Roy, H., Jain, A. & Upadhyai, R. (2019). A review of healthcare service quality dimensions and their measurement. *Journal of Health Management, 21*(1), 102–127.

Parasuraman, A., Zeithaml, V. & Berry, L. (1994). Alternative scales for measuring service quality: A comparative assessment based on psychometric and diagnostic criteria. *Journal of Retailing, 70*(3), 201-230.

Park, A. (2020). *7 things to know about Generation Z patients, workers*. Retrieved from: https://www.beckershospitalreview.com/consumerism/7-things-to-know-about-generation-z-patients-workers.html [accessed 17-05-2020]

Parment, A. (2013). Generation Y vs. Baby Boomers: Shopping behaviour, buyer involvement and implications for retailing. *Journal of Retailing and Consumer Services, 20*(2), 189-199.

Parment, A. (2009). *Automobile Marketing: Distribution Strategies for Competitiveness*, Saarbrucken: VDM Publishing.

Parsad, C., Prashar, S., Vijay, S. & Sahay, V. (2019). Role of in-store atmospherics and impulse buying tendency on post-purchase regret. *Journal of Business and Management, 24*(2), 1-24.

Pasricha, D., Gautam, S. & Jain, K. (2018). The pleasure and the guilt – impulse purchase and post purchase regret: A study of young Indian consumers. *Indian Journal of Marketing, 48*(3), 10-25.

Pasquini, L., Toller, G., Staffaroni, A., Brown, J. A., Deng, J., Lee, A., Kurcyus, K., Shdo, S. M., Allen, I., Sturm, V. E., Cobigo, Y., Borghesani, V., Battistella, G., Gorno-Tempini, M. L., Rankin, K. P., Kramer, J., Rosen, H. H., Miller, B. L., & Seeley, W. W. (2020). State and trait characteristics of anterior insula time-varying functional connectivity. *NeuroImage*, *208*, 116425.

Patel, D. (2017). *Millennials are breaking health myths at a rapid pace: Here's how*. Retrieved from: https://www.forbes.com/sites/deeppatel/2017/07/10/millennials-are-breaking-health-myths-at-a-rapid-pace-heres-how/#3801ceb85a08 [accessed 23-03-2020]

Patel, D. (2017). *8 ways generation Z will differ from millennials in the workplace*. Retrieved from: https://www.forbes.com/sites/deeppatel/2017/09/21/8-ways-generation-z-will-differ-from-millennials-in-the-workplace/ [accessed 06-03-2020]

Patton, M.Q. (2002). *Qualitative Research & Evaluation Methods. 3rd.* California: Sage

Patton, M. (1990). *Qualitative evaluation and research methods*. Newbury Park: Sage Publications.

Patton, M. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, *34*(5), 1189 - 1208.

Paucauskas, D., Rajala, R., Westerlund, M. & Mantymaki, M. (2018). Harnessing user innovation for social media marketing: case study of a crowdsourced hamburger. *International Journal of Information Management, 43*, 319-327.

Pawson, R. & Tilley, N. (1997). *Realistic Evaluation*. London: Sage.

Payne, J. W. (1982). Contingent decision behaviour. *Psychological Bulletin, 92*(2), 382–402.

Pennartz, C., Dora, S., Muckli, L. & Lorteije, J. (2019). Towards a Unified View on Pathways and Functions of Neural Recurrent Processing. *Trends in Neurosciences, 42*(9), 589-603.

Pessoa, L. (2013). *The cognitive-emotional brain: from interactions to integration*. Cambridge: MIT Press

Petraglia, M. D. & Korisettar, R. (2003). *Early human behaviour in global context: The rise and diversity of the lower palaeolithic record*. London: Routledge.

Pew Research Centre. (2014). *Generation X: America's neglected 'middle child'*. Retrieved from: https://www.pewresearch.org/fact-tank/2014/06/05/generation-x-americas-neglected-middle-child/ [accessed 03-03-2020]

Phaneuf, A. (2020). *Latest trends in medical monitoring devices and wearable health technology*. Retrieved from: https://www.businessinsider.com/wearable-technology-healthcare-medical-devices?r=US&IR=T [accessed 14-05-2020]

Phelps, E. (2004). Human emotion and memory: interactions of the amygdala and hippocampal complex. *Current Opinion in Neurobiology, 14*, 198-202.

Piaget, J. (1936). *Origins of intelligence in the child*. London: Routledge & Kegan Paul.

Picchi, A. (2015). *Raising a generation of materialists.* Retrieved from: https://www.cbsnews.com/news/raising-a-generation-of-materialists/ [accessed 13-11-2019]

Pilkington, K. & Butler, L. (2013). Chinese herbal medicine and depression: The research evidence. *Evidence-Based Complementary and Alternative Medicine*, *2013,* 1-14.

Pincus, J. (2006). The consequences of unmet needs: the evolving role of motivation in consumer research. *Journal of Consumer Behaviour, 3*(4), 27-35.

Pinder, J. (1926). Art history after generations. In: P. Wilhelm (eds.), *Philosophy, Between generations in Art,* pp. 1 – 16.

Ping-Kun, H. & Pi-Yueh, C. (2012). Cognitive Dissonance Theory and the Certification Examination: the Role of Responsibility. *Social Behaviour and Personality: An International Journal, 40*(7), 1103-1111.

Piotrowicz, W. & Cuthbertson, R. (2014). Introduction to the Special Issue Information Technology in Retail: Toward Omnichannel Retailing. *International Journal of Electronic Commerce, 18*(4), 5–15.

Pippin, R. (1987). Kant on the Spontaneity of the Mind. *Canadian Journal of Philosophy, 17*(2), 449-475.

Plecher, H. (2019). *Total population of India 2024*. Retrieved from: https://www.statista.com/statistics/263766/total-population-of-india/ [accessed 23-12-2019]

Politser, P. (2008). *Neuroeconomics: A guide to the new science of making choices*. Oxford: Oxford University Press.

Polkinghorne, D. E. (1988). *Narrative knowing and the human sciences*. Albany: State University of New York. Press.

Pope, C. & Mays, N., (1999). Qualitative methods in health research. In: C. Pope & N. Mays (Eds.) *Qualitative research in health care*, pp. 1–10.

Popper, K. R. (1972). *Conjectures and Refutations*. London: Routledge & Kegan Paul.

Posner, M. I. (1978). *Chronometric explorations of mind*. Hillsdale: Erlbaum.

Post, C., Sarala, R., Gatrell, C. & Prescott, J. (2020). Advancing Theory with Review Articles. *Journal of Management Studies, 57*(2), 351-376.

Price, S. (2019). *Global digital healthcare market to surpass $234.5bn by 2023*. Retrieved from: https://www.healtheuropa.eu/digital-healthcare-market-234-5bn-2023/94032/ [accessed 24-03-2020]

Pras, B. (1978). Explaining Consumer Decision Making through Evaluation Process Models. *Journal of Marketing Research, 15*(3), 426-445.

Premack, R. (2018). *Millennials love their brands, Gen Zs are terrified of college debt, and 6 other ways Gen Zs and millennials are totally different.* Retrieved from: https://www.businessinsider.com/gen-zs-habits-different-from-millennials-2018-6?r=US&IR=T [accessed 16-06-2020]

Presser, S., & Blair, J. (1994). Survey Pretesting: Do Different Methods Produce Different Results? *Sociological Methodology, 24*, 73-104.

Priporas, C.-V., Vellore-Nagarajan, D. & Kamenidou, I.(E). (2022). Stressful Eating Indulgence by Generation Z: A Cognitive Conceptual Framework of New Age Consumers' Obesity. *European Journal of Marketing*, Vol. Ahead-Of-Print No. Ahead-Of-Print. https://doi.org/10.1108/ejm-06-2021-0386

Priporas, C-V. (2020). Smart Consumers and Decision-making Process in the Smart Retailing Context through Generation Z Eyes. In E. Pantano (Ed.), *Retail Futures*, Emerald Publishing Limited, pp. 147-162.

Priporas, C-V., Chen, Y., Zhao, S., & Tan, H. (2020a). An exploratory study of the upper middle-class consumer attitudes towards counterfeiting in China. *Journal of Retailing and Consumer Services, 53*, 101959.

Priporas, C-V., Kamenidou, I., Nguyen, N., & Shams, R. (2020b). The impact of the macro environment on consumer scepticism towards cause-related marketing: Insights from the economic crisis. *International Marketing Review, 37*(5), 841-861.

Priporas, C-V., & Vangelinos, G. (2008). Crisis management in pharmaceuticals. Evidence from Greece. *International Journal of Pharmaceutical and Health Care Marketing, 2*(2), 88-102.

Priporas, C-V., & Poimenidis, I. (2008). Services managers' awareness of crisis management: Attitudes and preparation. *Innovative Marketing, 4*(3), 37-45.

Priporas, C-V., Stylos, N. & Fotiadis, A. (2017). Generation Z consumers' expectations of interactions in smart retailing: A future agenda. *Computers in Human Behaviour, 77*, 374-381.

Priporas, C-V., Stylos, N. & Kaminedou, I. E. (2019). City image, city brand personality and generation Z residents' life satisfaction under economic crisis: Predictors of city-related social media engagement. *Journal of Business Research*, *119*, 453-463.

Probst, E. (2020). *How Covid-19 Fosters New Purchasing Behaviour.* Retrieved from: https://www.ipsos.com/en-us/knowledge/consumer-shopper/How-Covid-19-Fosters-New-Purchasing-Behavior [accessed 26-05-2020]

Proulx, T., Inzlicht, M. & Harmon-Jones, E. (2012). Understanding all inconsistency compensation as a palliative response to violated expectations. *Trends Cognitive Science, 16*, 285–291.

Proust, J. (2013). *The Philosophy of Metacognition: Mental Agency and Self-Awareness*. Oxford: Oxford University Press.

Pryer, J. (2019). *7 vital stages of the consumer decision making process [2019 update].* Retrieved from: https://www.communigator.co.uk/blog/consumer-decision-making-process/ [accessed 08-03-2020]

Purnawirawan, N. Eisend, M., Pelsmacker, D. & Dens, N. (2015). A meta-analytic investigation of the role of valence in online reviews. *Journal of Interactive Marketing, 31*, 17-27.

Purves, D., Augustine, G., Fitzpatrick, D., Katz, L. C., LaMantia, A-S., McNamara, J. & Williams, M. (1997). *Neuroscience. 3rd edition*. Sunderland (MA): Sinauer Associates. Available from: https://www.ncbi.nlm.nih.gov/books/NBK10799/

Raab, M. & Gigerenzer, G. (2005). Intelligence as smart heuristics. In R. J. Sternberg & J. E. Pretz (Eds.). *Cognition & Intelligence (pp. 188-207)*. Cambridge: Cambridge University Press.

Rainey, J., Hunt, A., & Scott, B. (2002). Shaping tomorrow's logistics. *Maxwell AFB (AL): Air Force Logistics Management Agency, 3*(4), 1-9.

Rao, A. R., & Olson, E. M. (1990). Information Examination as a Function of Information Type and Dimension of Consumer Expertise: Some Exploratory Findings. *Advances in Consumer Research, 17*, 361 - 366.

Rao, R. P. & Ballard, D. (1999). Predictive coding in the visual cortex: a functional interpretation of some extra-classical receptive-field effects. *Natural Neuroscience, 2*, 79-87.

Raphael, B. (1976). *The thinking computer*. San Francisco: W. H. Freeman & Co.

Rameshwar, S., Barsalou, L. W., Pechmann, C., & Moore, M. (2001). Goal-derived categories: The role of personal and situational goals in category representations. *Journal of Consumer Psychology, 10*(3), 147-157.

Rashid, Y., Rashid, A., Warraich, M. A., Sabir, S. & Waseem, A. (2019). Case Study Method: A Step-by-Step Guide for Business Researchers. *International Journal of Qualitative Methods, 18*, 1–13.

Rassuli, K. M. & Harrell G. D. (1990). A New Perspective on Choice. *Advances in Consumer Research, 17*, 737-744.

Ratneshwar, S., Pechmann, C. & Shocker, A. D. (1996). Goal-derived categories and cross-category consideration. *Journal of Consumer Research, 23*(3), 240-250.

Rawwas, M., Arjoon, S. & Sidani, Y. (2013). An Introduction of Epistemology to Business Ethics: A Study of Marketing Middle-Managers. *Journal of Business Ethics*, *117*(3), 525-539.

Read, S. & Ranjan, R. K. (2019). Bringing the individual into the co-creation of value. *Journal of Services Marketing, 33*(7), 904-920.

Reddy, P., Singhal, S. & Velamoor, S. (2018). *Why the evolving healthcare services and technology market matters.* Retrieved from: https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/why-the-evolving-healthcare-services-and-technology-market-matters [accessed 14-05-2020]

Reed, A.E. & Carstensen, L.L. (2012). The theory behind the age-related positivity effect. *Frontiers of Psychology, 3.* https://doi.org/10.3389/fpsyg.2012.00339.

Reimer, T. & Benkenstein, M. (2016). Altruistic eWOM marketing: more than an alternative to monetary incentives. *Journal of Retailing and Consumer Services, 31*, 323-333.

Reisenwitz, T. & Iyer, R. (2015). Understanding Cognitive Age: The Boomers' Perspective. In: Campbell C. (eds) Marketing in Transition: Scarcity, Globalism, & Sustainability. *Developments in Marketing Science: Proceedings of the Academy of Marketing Science*. Springer, Cham https://doi.org/10.1007/978-3-319-18687-0_95

Reisinger, D. (2019). *Millennials and generation Z have a big problem with traditional health care in the U.S.A.* Retrieved from: https://fortune.com/2019/02/13/millennials-healthcare/ [accessed 7-11-2019]

Reno, J. (2016). *Alternative medicine finally becoming more mainstream*. Retrieved from: https://www.healthline.com/health-news/alternative-medicine-becoming-mainstream [accessed 13-11-2019]

Ricci, L., Lafranchi, J-B., Lemetayer, F., Rotonda, C., Guillemin, F., Coste, J. & Spitz, E. (2018). Qualitative methods used to generate questionnaire items: A systematic review. *Qualitative Health Research, 29*(1), 149–156.

Richardson, H. & Saxe, R. (2018). Development of predictive responses of theory of mind brain regions. Developmental Science, Available online: https://onlinelibrary.wiley.com/doi/pdf/10.1111/desc.12863?casa_token=mCUIdoA agu0AAAAA:pfWVGxmpiIpP6v2XqN9R5YVyJvKVbf5TL3chKtfc9BJ6d2cT5ObqWcYuk-OoGFHbruMpTV8DeZhhYPGw

Richards, K. (2003). *Qualitative Inquiry in TESOL*. Basingstoke: Palgrave Macmillan.

Richards, L. (1999). *Using NVivo in Qualitative Research*. London: Sage

Rigby, D. K. (2011). *The Future of Shopping*. Retrieved from: https://hbr.org/2011/12/the-future-of-shopping [accessed 16-05-2020]

Ripton, J. T. (2019). *5 ways Millennials and Gen Z are revolutionizing the healthcare industry.* Retrieved from: https://medcitynews.com/2019/10/5-ways-millennials-and-gen-z-are-revolutionizing-the-healthcare-industry/?rf=1 [accessed 17-05-2020]

Roberts, R. (2020). Qualitative Interview Questions: Guidance for Novice Researchers. *The Qualitative Report 2020, 25*(9), 3185-3203.

Robbins, K. (2019). *Health consumerism is not a disruption, it's a revolution*. Retrieved from: https://thejournalofmhealth.com/health-consumerism-is-not-a-disruption-its-a-revolution/ [accessed 17-02-2020]

Robinson, M. T. (2020). *The generations*. Retrieved from: https://www.careerplanner.com/Career-Articles/Generations.cfm [accessed 07-03-2020]

Rocco, T. S. & Plakhotnik, M. S. (2009). Literature Reviews, Conceptual Frameworks, and Theoretical Frameworks: Terms, Functions, and Distinctions. *Human Resource Development Review, 8*(1), 120-130.

Rodgers, B.L. & Knafl, K.A. (2000). *Concept Development in Nursing. Foundation, Techniques and Applications. 2nd Edition*, Philadelphia: Saunders Publishing

Romanycia, M. H. C. & Pelletier, F. J. (1985). What is a heuristic?. *Computational Intelligence, 1*(1), 47-58.

Ross. L. (2019). *Millennial Online Shopping Habits – Statistics and Trends [Infographic].* Retrieved from: https://www.invespcro.com/blog/millennial-online-shopping-habits/ [accessed 13-05-2020]

Ronis, D. & Greenwald, A. G. (1978). Twenty years of cognitive dissonance: Case study of the evolution of a theory. *Psychological Review, 85(*1), 53–57.

Rooney, K. (2019). *5 things we get wrong about young people, according to a US study.* Retrieved from: https://www.weforum.org/agenda/2019/11/generation-z-young-people-teenagers-health-drinking-pregnancy-work-social-impact/ [accessed 07-03-2020]

Rose, S., Spinks, N., & Canhoto, A. (2015). *Management research: Applying the Principles*. Oxon: Routledge, Taylor and Francis.

Rosely, N., Yusof, R. N., Hashim, H. & Adzharuddin, N. A. (2019). Discovering meaning behind consumer involvement in counterfeit consumption behaviour. *International Journal of Academic Research in Business and Social Sciences, 9*(1), 830-845.

Rosen, B. (2001). *Masks and Mirrors: Generation X and the Chameleon Personality*, Boston: Praeger Publishers.

Rothgerber, H. (2020). Meat-related cognitive dissonance: A conceptual framework for understanding how meat eaters reduce negative arousal from eating animals. *Apetite, 146*(1), 104511.

Rubin H. Rubin, l. S. (1995). Qualitative interviewing: The art of hearing data. Thousand Oaks: Sage

Ruiz, S. & Sicilia, M. (2020). The Effect of Web-Based Information Availability on Consumers' Processing and Attitudes. *Journal of Interactive Marketing, 24*(1), 31-41.

Rumelhart, D.E. and McClelland, J. L. (1982). An interactive activation model of context effects in letter perception: part 2. The contextual enhancement effect and some tests and extensions of the model. *Psychological Review, 89*, 60-94.

Ruthberg, S. & Bouikidis, C.D. (2018). Focusing on the fundamentals: A simplistic differentiation between qualitative and quantitative research. *Nephrology Nursing Journal, 45*(2), 209-212.

Ryan, S. (2010). Bringing Cultural Background Knowledge to the Surface to Better Understand Cross-Cultural Conflict in Specific Contexts. *Intercultural Communication Studies, 29*(1), 214-235.

Ryan, A., Tahtinen, J., Vanharanta, M. & Mainela, T. (2012). Putting critical realism to work in the study of business relationship processes. *Industrial Marketing Management*, *41*(2), 300-311.

Ryerson, L. (2018). *Generation Z probably has no idea what these 28 things are*. Retrieved from: https://www.insider.com/90s-things-gen-z-wont-understand-2018-4 [accessed 16-06-2020].

Saadi, H. (2014). *Demystifying Ontology and Epistemology in Research Methods*. Retrieved from:
https://www.researchgate.net/publication/260244813_Demystifying_Ontology_and_Epistemology_in_Research_Methods#fullTextFileContent [accessed 28th September 2020]

Safavi, K. (2019). *Today's consumers reveal the future of healthcare*. Retrieved from:
https://www.accenture.com/us-en/insights/health/todays-consumers-reveal-future-healthcare [accessed 16-10-2019]

Sakai, H. (1999). A multiplicative power-function model of cognitive dissonance: Toward an integrated theory of cognition, emotion, and behaviour after Leon Festinger. In E. Harmon-Jones & J. Mills (Eds.), Science conference series. *Cognitive dissonance: Progress on a pivotal theory in social psychology* (p. 267–294). American Psychological Association.

Sales, J. M., Natalie, A. M. & Fivush, R. (2013). Does making meaning make it better? Narrative meaning-making and well-being in at-risk African American adolescent females. *Memory, 21*(1), 97-110.

Salomone, E., Shephard, E., Miloslavljevic, B., Johnson, M. H., Charman, T. & BASIS Team. (2018). Adaptive Behaviour and Cognitive Skills: Stability and Change from 7 Months to 7 Years in Siblings at High Familial Risk of Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders, 48*, 2901-2911.

Salzberger, T. & Koller, M. (2007). Cognitive dissonance as a relevant construct throughout the decision-making and consumption process – an empirical investigation related to a package tour. *Journal of Customer Behaviour, 6*(3), 217-227.

Sande, G. N. & Zanna, M. P. (1987). Cognitive Dissonance Theory: Collective Actions and Individual Reactions. In: Mullen B., Goethals G.R. (eds) Theories of Group Behaviour. *Springer Series in Social Psychology*. Springer, New York.

Sandelowski, M., Voils, C.I. & Knafl, G. (2009). On quantitizing. *Journal of Mixed Methods Research, 3*(3), 208–222.

Sandelowski, M. (2004). Using qualitative research. *Qualitative Health Research, 14*(10), 1366–1386.

Sanders, A.F. (1977). 'Structural and functional aspects of the reaction process'. In: S. Domic (ed.), *Attention and performance, 6.* Hillsdale: Erlbaum. pp. 3-25.

Sanders, A.F. (1980). 'Stage analysis of reaction processes'. In: G.E. Stelmach and J. Requin (eds.), *Tutorials in motor behaviour*. Amsterdam: North-Holland. pp. 331-354.

Saper, C. B. (2002). The central autonomic nervous system: Conscious visceral perception and autonomic pattern generation. *Annual Review of Neuroscience, 25*, 433-469.

Saunders, M. N. K., Lewis, P., & Thornhill, A. (2019). Research methods for business students. London: Pearson Education Limited.

Saunders, M., Lewis, P. & Thornhill, A. (2012). *Research Methods for Business Students 6th edition*, London: Pearson Education Limited.

Saunders, M., Lewis, P. & Thornhill, A. (2007). *Research methods for business students* (4th ed.). Harlow: Prentice Hall.

Saunders, M., Lewis, P. & Thornhill, A. (2009). *Research methods for business students*. Harlow, England: Prentice Hall.

Schaie, W. & Willis, S. (2006). Cognitive Functioning in Baby Boomers: Longitudinal and Cohort Effects. London: Routledge.

Scher, S. J. & Cooper, J. (1989). Motivational basis of dissonance: The singular role of behavioural consequences. *Journal of Personality and Social Psychology, 56*(6), 899–906.

Scherer-Rath, M, Van den Brand, J & Van Straten, C. (2012) Experience of contingency and congruent interpretation of life events in clinical psychiatric settings: A qualitative pilot study. *Journal of Empirical Theology 25*(2),127–152.

Schippers, M. C., Edmondson, A. C. & West, M. A. (2014). Team Reflexivity as an Antidote to Team Information-Processing Failures. *Small Group Research, 45*(6), 731-769.

Schlossberg, M. (2016). *Teen generation Z is being called 'millennials on steroids,' and that could be terrifying for retailers*. Retrieved from: http://uk.businessinsider.com/millennials-vs-gen-z-2016-2 [accessed 2-11-2019]

Schooler, J. W., Smallwood, J., Christoff, K., Handy, T. C., Reichle, E. D. & Sayette, M. A. (2011). Meta-awareness, perceptual decoupling and the wandering mind. *Trends in Cognitive Sciences, 15*(7), 319-326.

Schneider, W. J. & Newman, D. A. (2014). Intelligence is multidimensional: Theoretical review and implications of specific cognitive abilities. *Human Resource Management Review, 25*, 12-27.

Schneider, W. & Shiffrin, R. M. (1977). Controlled and automatic human information processing: Detection, search, and attention. *Psychological Review, 84*(1), 1–66.

Scholz, R., & Tietje, O. (2002). *Embedded case study methods*. California: Sage Publications.

Scholz, T.M. and Vyugina, D. (2019). Looking into the Future: What We Are Expecting from Generation Z, In Scholz, C. and Rennig, A. (Ed.) *Generations Z in Europe* (*The Changing Context of Managing People*), Emerald Publishing Limited, pp. 277-284.

Schroeder, J. (2017). *Millennials and Their Kids: Why They're Choosing DIY Education.* Retrieved from: https://www.forbes.com/sites/julesschroeder/2017/11/09/millennials-and-their-kids-why-theyre-choosing-diy-education/ [accessed 13-04-2020]

Schroder, H. M., Driver, M. J. & Streufert, S. (1967). *Human Information Processing.* New York: Reinhart and Winston.

Schutz, A. (1967). *The phenomenology of the social world (G. Walsh & F. Lenhert, Trans.).* Chicago: Northwestern University Press.

Seeley, W., Menon, V., Schatzberg, A., Keller, J., Glover, G., Kenna, H., Reiss, A. L. & Greicius, M. D. (2007). Dissociable Intrinsic Connectivity Networks for Salience Processing and Executive Control. *Journal of Neuroscience, 27*(9), 2349-2356.

Seemiller, C. & Grace, M. (2019*). Generation Z: A Century in the Making*. London: Routledge.

Seidman, I. (2013). *Interviewing as qualitative research: A guide for researchers in education & the social sciences (4th ed.)*. New York: Teachers College Press.

Seigel, M. Tullis, T. & Djamasbi, S. (2010). Generation Y, web design, and eye tracking. *International Journal of Human Computer Studies, 68*(5), 307-323.

Seitz, M. J., Bode, N. W. F. & Koster, G. (2016). How cognitive heuristics can explain social interactions in spatial movement. *Journal of the Royal Society, 13.* Available online: http://dx.doi.org/10.1098/rsif.2016.0439

Setia M. S. (2016). Methodology Series Module 3: Cross-sectional Studies*. Indian journal of dermatology, 61*(3), 261–264.

Slade P, Haywood A., & King H. (2009). A qualitative investigation of women's experiences of the self and others in relation to their menstrual cycle' *British Journal of Health Psychology*, *14*, 127–141.

Shah, P. (2015). Kill it or keep it? The weak brand retain-or-discard decision in brand portfolio. Management. *Journal of Brand Management, 22*(2), 154-172.

Shaikh, A. A., Karjaluoto, H. & Hakkinen, J. (2018). Understanding moderating effects in increasing share-of-wallet and word-of-mouth: a case study of Lidl grocery retailer. *Journal of Retailing and Consumer Services, 44*, 45-53.

Shanteau, J. (1992). How much information does an expert use? Is it relevant?. *Acta Psychologica, 81*, 75–86.

Shareef, M. A., Mukerji, B., Alryalat, M. A. A., Wright, A. & Dwivedi, Y. K. (2018). Advertisements on Facebook: identifying the persuasive elements in the development of positive attitudes in consumers. *Journal of Retailing and Consumer Services, 43*, 258-268.

Shareef, M. A., Mukerji, B., Dwivedi, Y. K., Rana, N. P. & Islam, R. (2017). Social media marketing: comparative effect of advertisement sources. *Journal of Retailing and Consumer Services, 46*, 58-69.

Sharifi, S. S. & Esfidani, M. R. (2014). The impacts of relationships marketing on cognitive dissonance, satisfaction, and loyalty: The mediating role of trust and cognitive dissonance. *International Journal of Retail and Distribution Management, 42*(6), 553-575.

Sharma, M. (2019). *View: India needs to face up to its flaws*. Retrieved from: https://economictimes.indiatimes.com/news/economy/indicators/view-india-needs-to-face-up-to-its-flaws/articleshow/71781764.cms?from=mdr [accessed 15-11-2019]

Sharma, M. K. (2014). The impact on consumer buying behaviour: Cognitive dissonance. *Global Journal of Finance and Management, 6*(9), 833-840.

Sharma, R., Sharma, M. & Sharma, R. K. (2011). The patient satisfaction study in a multispecialty tertiary level hospital, PGIMER, Chandigarh, India. *Leadership in Health Services, 24*(1), 64-73.

Shavers, P. R., Collins, N. & Clark, C. L. (1996). Attachment styles and internal working models of self and relationship partners. In G. J. O. Fletcher & J. Fitness (Eds.), *Knowledge structure in close relationships: A social psychological approach* (pp. 25-61). Mahwah, New Jersey: Erbaum

Shaw, T. (2020). *Invisible Manipulators of Your Mind*. Retrieved from: https://getpocket.com/explore/item/invisible-manipulators-of-your-mind [accessed 15-05-2020]

Shaw, A. A. (2018). *Consumer decision making process*. Retrieved from: https://www.marketingtutor.net/consumer-decision-making-process-stages/ [accessed 01-04-2020]

Shen, Y., Sun, H. & Chan, H. C. (2013). Understanding consumer decision making for complex choices: the effects of individual and contextual factors. *Proceedings from 34th International Conference on Information Systems, Milan,* Reshaping Society Through Information Systems Design 5, pp. 4509-4521.

Shiau, W-L., Dwivedi, Y. K. & Lai, H-H. (2018). Examining the core knowledge on Facebook. *International Journal of Information Management, 43*, 52-63.

Sheth J. N., Newman, B. I. & Gross B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business Research, 22*(2), 159-170.

Sheth J. N. & Howard, J. A. (1969). A Theory of Buyer Behaviour. *Journal of the American Statistical Association*, Available online: DOI: 10.2307/2284311

Shirky, C. (2011). *Cognitive Surplus: How Technology Make Consumers into Collaborators*. New York: Penguin Press

Shreshta, P. (2017). *Motivational Cycle*. Retrieved from: https://www.psychestudy.com/general/motivation-emotion/motivational-cycle [accessed 16th December 2020]

Shukla, S., Bharadwaj, P. & Gupta, M. (2019). *Marketing to centennials in digital world*. Book Bazooka

Shultz, T., Leveille, E. & Lepper, M. (1999). Free choice and cognitive dissonance revisited: Choosing "lesser evils" versus "greater goods". *Personality and Social Psychology Bulletin, 25*(1), 40-48.

Sigman, M. & Deheane, S. (2008). Brain Mechanisms of Serial and Parallel Processing during Dual-Task Performance. *Journal of Neuroscience, 28*(30), 7585-7589.

Simon H.A. (1959). Theories of Decision-making in Economics and Behavioural Science. *The American Economics Review, XLIX*(3), 1-17.

Singh, S. & Gopalkrishna, G. (2014). Health behaviours & problems among young people in India: Cause for concern & call for action. *Indian Journal of Medical Research, 140*(2), 185–208.

Sinhasane, S. (2019). *Healthcare consumerism: What is it and how does it affect healthcare?*. Retrieved from: https://mobisoftinfotech.com/resources/blog/consumerism-in-healthcare/ [accessed 18-02-2020]

Sinha, R. & Pati, S. (2017). Addressing the escalating burden of chronic diseases in India: Need for strengthening primary care. *Journal of Family Medicine and Primary Care, 6*(4), 701-708.

Sirgy, M. J. & Su, C. (2000). Destination image, self-congruity, and travel behaviour: Toward an integrative model. *Journal of Travel Research, 38*(4), 340-352.

Sirgy, M. J. (1986). *Self-congruity: Toward a theory of personality and cybernetics*. Praeger Publishers/Greenwood Publishing Group.

Sirgy, M. J. (1985). Using self-congruity and ideal congruity to predict purchase motivation. *Journal of business Research, 13*(3), 195-206.

Slater, J. (2019). *India's economic growth stumbles to 6-year low, deepening worries over future.* Retrieved from: https://www.washingtonpost.com/world/asia_pacific/indias-economic-growth-stumbles-to-6-year-low-deepening-worries-over-future/2019/08/30/2c57b326-cb28-11e9-9615-8f1a32962e04_story.html [accessed 15-11-2019]

Slagle, J. R. (1963). A heuristic program that solves symbolic integration problems in freshman calculus. In *Computers and thought.* Edited by E. A. Feigenbaum and J. Feldman. McGraw-Hill Inc., New York, pp. 191-203.

Smallwood, J. & Schooler, J. W. (2006). The restless mind. *Psychological Bulletin, 132*(6), 946–958.

Small, G. W., Moody, T. D., Siddarth, P. & Bookheimer, S. Y. (2009). Your brain on Google: patterns of cerebral activation during internet searching. *American Journal of Geriatric Psychiatry, 17*, 116-126.

Smith, S. M., Fox, P., Miller, K., Glahn, D., Fox, M. P., Mackay, C., Filippini, N., Watkins, K., Toro, R., Laird, A. R. & Beckmann, C. (2009). Correspondence of the brain's functional architecture during activation and rest. *PNAS, 106*(31), 13040-13045.

Smith, S. M., Fabrigar, L. R. & Norris, M. E. (2008). Reflecting on six decades of selective exposure research: Progress, challenges, and opportunities. *Social and Psychological Compass, 2*(1), 464-493.

Smith, E. R., & Semin, G. R. (2004). Socially situated cognition: Cognition in its social context. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, (Vol. 36, pp. 53–117). San Diego: Academic Press.

Smith A.D. & Rupp W.T. (2003). Strategic online customer decision making: leveraging the transformational power of the Internet. *Emerald Insight, 27*, 418-432.

Smith, E. E. (1968). Choice reaction time: an analysis of the major theoretical positions. *Psychological Bulletin, 69*, 77-110.

Snape, D. & Spencer, L. (2003). The foundations of qualitative research In J. Richie & J. Lewis (Eds.), *Qualitative Research Practice* (pp. 1-23). Los Angeles: Sage.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research, 104*, 333-339.

Snyder, M. & Uranowitz, S. W. (1978). Reconstructing the past: Some cognitive consequences of person perception. *Journal of Personality and Social Psychology, 36*, 941-950.

So, J., Achar, C., Han, D., Agrawal, N., Duhachek, A., & Maheswaran, D. (2015). The psychology of appraisal: Specific emotions and decision-making. *Journal of Consumer Psychology, 25*(3), 359–371.

Somerville, L.H., Jones, R.M., Casey, B.J., (2010). A time of change: behavioural and neural correlates of adolescent sensitivity to appetitive and aversive environmental cues. *Brain Cognition, 72*(1), 124–133.

Solso, R. L. (1979). *Cognitive psychology*. New York: Harcourt Brace Jovanovich Inc.

Spence, P. (2020). *Life Sciences 4.0: securing value through data-driven platforms*. Retrieved from: https://www.ey.com/en_gl/life-sciences-securing-value-data-driven-platforms [accessed 28-03-2020]

Spencer, S. J., Josephs, R. A. & Steele, C. M. (1993). Low self-esteem: The uphill struggle for self-integrity. In R. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard*. New York: Plenum.

Spitzer, J. (2018). *Consumers want their digital healthcare experience to be more like retail: 4 things to know*. Retrieved from: https://www.beckershospitalreview.com/patient-experience/consumers-want-their-digital-healthcare-experience-to-be-more-like-retail-4-things-to-know.html [accessed 18-02-2020]

Spotify. (2019). *Everything You Wanted to Know About Gen Z (But Were Afraid to Ask).* Retrieved from: https://newsroom.spotify.com/2019-06-03/everything-you-wanted-to-know-about-gen-z-but-were-afraid-to-ask/ [accessed 06-03-2020]

Srinivasan, N. & Punj, G. (1992). Influence of problem recognition on search and other decision process variables: a framework for analysis. *Advances in Consumer Research, 19*, 491-497.

Stake, R. E. (1995). *The art of case study research.* California: Sage.

Stanek, D. (2019). *The future of healthcare looks a lot like retail*. Retrieved from: https://www.modernhealthcare.com/assets/pdf/CH1176491026.PDF [accessed 19-02-2020]

Stanford Encyclopaedia of Philosophy. (2020). *Ancient Scepticism*. Retrieved from: https://plato.stanford.edu/entries/skepticism-ancient/ [accessed 15th December 2020]

Stankevich, A. (2017). Explaining the Consumer Decision-Making Process: Critical Literature Review. *Journal of International Business Research and Marketing, 2*(6), 7-14.

Stanovich, K.E. & West, R.F. (2000). Individual differences in reasoning: implications for the rationality debate. *Behavioural Brain Science, 23*, 645–726.

Stebbins, R. A. (2001). *Exploratory research in the social sciences. Qualitative research methods* (Series 48). California: Sage.

Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp.261-302). New York: Academic Press.

Stefansson, H. O. (2020). Is risk aversion irrational? Examining the "fallacy" of large numbers. *Synthese, 197*, 4425–4437.

Stein, M. (2017). *Information Overload — the Disease of the Digital Age.* Retrieved from: https://medium.com/@mhstein3/information-overload-the-disease-of-the-digital-age-2c78534328d5 [accessed 08-03-2020]

Stenger, M. (2019). How Digital Technology Shapes Cognitive Function. Retrieved from: https://www.opencolleges.edu.au/informed/features/digital-technology-shapes-cognitive-function/ [accessed 21-05-2020]

Stephen, O., Ademola, A. M. & Adepeju, O. B. (2019). Personal variables differentials in the use of strategies to reduce dissonance in supervisors' feedback among pre-service teachers. *Journal of Teaching and Teacher Education, 7*(2), 47-56.

Sterling, C. (2017). *6 Reasons It's Great for Different Generations to Learn Together*. Retrieved from: https://ccsuconed.wordpress.com/2017/11/03/6-reasons-its-great-for-different-generations-to-learn-together/ [accessed 16-06-2020]

Sternberg, S. (1969a). The discovery of processing stages: extensions of Donders' method. *Acta Psychologica, 30*, 276-315.

Sternberg. S. (1969b). Memory scanning: mental processes revealed by reaction-time experiments. *American Scientist, 57*, 421-457.

Stentz, S. & Macce, J. (2013). *American Consumerism in the 1950s*. Retrieved from: https://www.nhvweb.net/nhhs/socialstudies/tkieffer/files/2013/09/American-Consumerism-in-the-1950s.pdf [accessed 03-04-2020]

Stevens, B. (2019). *Amazon to donate all unsold items to charities in the UK and US*. Retrieved from: https://www.chargedretail.co.uk/2019/08/15/amazon-to-donate-unsold-items-to-charities-in-the-uk-and-us/ [accessed 19-05-2020]

Stevens, F. L., Hurley, R. & Taber, K. (2011). Anterior Cingulate Cortex: Unique Role in Cognition and Emotion. *Journal of Neuropsychiatry and Clinical Neuroscience, 23*(2), 120-125.

Stinson, S. (2013). *The cost of chronic disease.* Retrieved from: https://www.bankrate.com/finance/insurance/cost-of-chronic-disease-1.aspx [accessed 4-11-2019]

Stone, J. (2003). Self-consistency for low self-esteem in dissonance processes: the role of self-standards. *Personality and Social Psychology Bulletin, 29*(7), 846-858.

Stoneham, L. M. (2005). *Advances in Sociology Research – Volume 2.* New York: Nova Publishers

Stone, J. & Cooper, J. (2001). A Self-Standards Model of Cognitive Dissonance. *Journal of Experimental Social Psychology, 37*, 228 –243.

Stone, J. (1999). What exactly have I done? The role of self-attribute accessibility in dissonance. In E. Harmon-Jones & J. Mills (Eds.), Science conference series. Cognitive dissonance: Progress on a pivotal theory in social psychology (p. 175–200). American Psychological Association.

Stroud, N. J. (2017). Selective exposure theories. In K. Kenski & K. H. Jamieson (Eds.), *The Oxford Handbook of Political Communication* (2nd ed., pp. 1-19) DOI: 10.1093/oxfordhb/9780199793471.013.009_update_001

Sturm, V., Brown, J., Hua, A., Lwi, S., Zhou, J., Kurth, F., Eickhoff, S., Rosen, H., Kramer, H., Miller, B. L., Levenson, R. W. & Seeley, W. (2018). Network Architecture Underlying Basal Autonomic Outflow: Evidence from Frontotemporal Dementia. *Journal of Neuroscience, 38*(42), 8943-8955.

Suh, B. (2019). *Can AI Nudge Us to Make Better Choices?.* Retrieved from: https://hbr.org/2019/05/can-ai-nudge-us-to-make-better-choices [accessed 13-05-2020]

Swann, W. B., & Read, S. J. (1981). Acquiring self-knowledge: The search for feedback that fits. *Journal of Personality and Social Psychology, 41*, 1119-1128.

Sway, R. (2018). *The gen x factor*. Retrieved from: https://www.therobinreport.com/the-gen-x-factor/ [accessed 03-03-2020]

Syed, J., Mingers, J., & Murray, P. (2009). Beyond rigour and relevance: A critical realist approach to business education. *Management Learning*, *41*(1), 71-85.

Tapscott, D. (1998). *Growing up Digital: The rise of the net generation*, New York: McGraw Hill

Tashakkori, A., & Creswell, J.W. (2007). The new era of mixed methods. *Journal of Mixed Methods Research, 1*(1), 3-7.

Tashakkori, A.& Teddlie, C. (Eds.). (2003). *Handbook of mixed methods in social & behavioral research*. California: Sage

Tashakkori, A.& Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. California: Sage

Taylor, B. (2018). *How important is online privacy to Gen Z?.* Retrieved from: https://jaywing.com/news/z-5-privacy [accessed 16-05-2020]

The Health Foundation. (2011). *Competition in Healthcare*. Retrieved from: https://www.health.org.uk/sites/default/files/CompetitionInHealthcare.pdf [accessed 30-03-2020]

Thirthalli, J., Zhou, L., Kumar, K., Gao, J., Liu, H., Vaid, H., Hankey, A., Wang, G., Gangadhar, B., Nie, J-B. & Nichter, M. (2016). Traditional, complementary, and alternative medicine approaches to mental health care and psychological wellbeing in India and China. *Lancet Psychiatry, 2016*(3), 66–72.

Thogersen, J. (2009). Consumer Decision-Making with Regard to Food Products. In Teresa de Norohna & Peter Nijkamp, *Traditional Food Production and Rural Sustainable Development: A European Challenge*, Amsterdam: Ashgate Publishing.

Thogersen, J. (2004). A cognitive dissonance interpretation of consistencies and inconsistencies in environmentally responsible behaviour. *Journal of Environmental Psychology, 24*(1), 93–103.

Thomas, C., Bourdeau, A. & Tagler, M. (2019). Interhemispheric communication and the preference for attitude consistent information. *Laterality, 24*(3), 342-354.

Thompson AR, Clarke SA, Newell RJ, Gawkrodger DJ. (2010). Vitiligo linked to stigmatization in British South Asian women: a qualitative study of the experiences of living with vitiligo. *British Journal of Dermatology, 163*, 481–486.

Thorn, E. K. (2006). *Women as Producers and Consumers in 1950s America: An Analysis of Spatial Hysteresis*. Retrieved from: https://www.semanticscholar.org/paper/Women-as-Producers-and-Consumers-in-1950s-America%3A-Thorn/f62ad2c3ad183f007b5ca324595f0ecbc08739dc

Thorpe, S. (2000). Data analysis in qualitative research. *Evidence-Based Nursing, 3,* 68-70.

Toet, A. & Korteling, J. E. (2020). *Cognitive biases Section to be published in the Encyclopedia of Behavioral Neuroscience, Elsevier Science*. Retrieved from: https://www.researchgate.net/profile/Je_hans_Korteling/publication/338403182_Cognitive_biases_Section_to_be_published_in_the_Encyclopedia_of_Behavioral_Neuroscience_Elsevier_Science/links/5e12ffdf92851c8364b28b5e/Cognitive-biases-Section-to-be-published-in-the-Encyclopedia-of-Behavioral-Neuroscience-Elsevier-Science.pdf [accessed 25-05-2020]

Torraco, R. J. (2016). Writing Integrative Literature Reviews: Using the Past and Present to Explore the Future. *Human Resource Development Review, 15*(4), 404-428.

Torraco, R. J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human Resource Development Review, 4*(3), 356–367.

Tottenham, N., Tanaka, J.W., Leon, A.C., McCarry, T., Nurse, M. & Hare, T.A. (2009). The NimStim set of facial expressions: judgments from untrained research participants. *Psychiatry Research, 168*(3), 242–249.

Touroutoglou, A., Hollenbeck, M., Dickerson, B. & Barrett, L. F. (2012). Dissociable large-scale networks anchored in the right anterior insula subserve affective experience and attention. *NeuroImage, 60*(4), 1947-1958.

Transamerica Center for Health Studies. (2019). *Millennials: Digital natives disrupting healthcare.* Retrieved from: https://www.transamericacenterforhealthstudies.org/docs/default-source/research/tchsmillennialreport2019_final.pdf [accessed 7-11-2019]

Trends Healthcare. (2019). *The retail spill over in healthcare*. Retrieved from: https://www.telusinternational.com/articles/retailization-of-healthcare [accessed 19-02-2020]

Trochim, W. M. K. (1989). An introduction to concept mapping for planning and evaluation. *Evaluation and Program Planning, 12*(1), 1-16.

Tsang, S. J. (2019). Cognitive Discrepancy, dissonance, and selective exposure. *Media Psychology, 22*(3), 394-417.

Tsparalis, S. (2020). *The concept of generations: An introduction to the millennial generation*. Retrieved from: https://www.linkagegreece.com/index.php/the-concept-of-generations-an-introduction-to-the-millennial-generation/ [accessed 02-03-2020]

Twitte, P. (2017). In-Store and Online Retail: How To Understand the Modern Fashion Consumer. Retrieved from: https://www.imrg.org/blog/in-store-and-online-retail-how-to-understand-the-modern-fashion-consumer/ [accessed 16-05-2020]

Tyung, C. M., Amin, H. U., Saad, M. N. M. & Malik, A. S. (2017). The Influences of Emotion on Learning and Memory. *Frontiers in Psychology, 8*(1454), 1-22.

Uddin, A., Rahman, N. M., Kamaly, M. H., & Alam, M. B. (2014). Perception Level of Potato Growers Towards Production Technologies in Northwest Bangladesh. *Journal of Life and Earth Science*, *8*, 55-61.

UNFPA. (2019). *Young people.* Retrieved from: https://india.unfpa.org/en/topics/young-people-12 [accessed 31-12-2019]

University of Nevada. (2017). *Brain's anterior cingulate cortex and its tie to human learning.* Retrieved from: https://www.sciencedaily.com/releases/2017/09/170925151439.htm [accessed 12-04-2020]

Urquhart, J. (2019). *How to reach generation z & millennials … by a gen z*. Retrieved from: https://hyperweb.com.au/how-to-reach-generation-z-millennials/ [accessed 10-03-2020]

Valentine, O. (2018). *4 insights into generation x every marketer should have*. Retrieved from: https://blog.globalwebindex.com/trends/4-insights-into-generation-x-every-marketer-should-have/ [accessed 03-03-2020]

Van Veen, V., Krug, M. & Schooler, J. (2009). Neural activity predicts attitude change in cognitive dissonance. *Nature Neuroscience, 12,* 1469–1474.

Vasileiou, K., Barnett, J. & Thorpe, S. (2018). Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology, 18*, 148 – 152.

Vasiliadis, C., Priporas, C-V., Bellou, V. & Adronikidis, A. (2013). Customers' cognitive patterns of assurance: A dual approach. *The Service Industries Journal, 33*(13-14), 1242-1259.

Veale, R., Quester, P. & Karunaratna, A. (2006). The role of intrinsic (sensory) cues and the extrinsic cues of country of origin and price on food product evaluation. *Pacific Journal of Marketing and Logistics, 21*(1), 195-207.

Nagarajan, D.V., Priporas, C-V & McPherson, M. (2021a). Sustainable Branding in Healthcare within Generation Z in a Developing Economy. In P. Foroudi & M. Palazzo (Eds.), *Sustainable Branding: Ethical, Social, and Environmental Cases and Perspectives, (1st edition)*, pp. 324-343. London: Routledge

Nagarajan, D.V., Priporas, C-V & McPherson, M. (2021b). Pre-Decisional Cognitive Dissonance Shaping Consumer Behaviour Within Generation Z: Preliminary Evidence, In *Proceedings of the 14th International EuroMed Academy of Business Conference*, (September 22nd – 24th, 2021).

Velmans, M. (1991). Is human information processing conscious?. *Behavioural and Brain Sciences, 14*, 651-726.

Vennare, J. (2019). *Gen Z: The ultimate wellness consumer.* Retrieved from https://insider.fitt.co/gen-z-wellness/ [accessed 03-10-2019]

Vaidis, D. C., & Bran, A. (2018). Some prior considerations about dissonance to understand its reduction: comment on McGrath (2017). *Social Personality Psychology Compass, 92*, 1–13.

Vigo, J. (2019). *How New Technology Affects Our Consumption Of Art And Media*. Retrieved from: https://www.forbes.com/sites/julianvigo/2019/08/14/how-new-technology-affects-our-consumption-of-art-and-media/#32bee5296eb2 [accessed 17-05-2020]

Viola, E. & Wainwright, V. (2020). *Honest Generation*. Retrieved from: https://www.wearefuterra.com/2020/04/highlights-from-the-honest-generation/ [accessed 18-05-2020]

Viswesvaran, C., Deshpande, S. & Joseph, J. (1998). Job satisfaction as a function of top management support for ethical behaviour: A study of Indian managers. *Journal of Business Ethics, 17*, 365-371.

Vivekanandarajah, A. (2019). *How is technology changing the landscape of digital healthcare marketing?.* Retrieved from: https://www.hypeinsight.com/how-is-technology-changing-the-landscape-of-digital-healthcare-marketing/ [accessed 30-03-2020]

Vlad, E. (2020). Analysis of consumer behaviour related to social media. In: Concepts of Quality Connected to Social Media and Emotions. *Sustainable Management, Wertschöpfung und Effizienz. Springer Gabler*, Wiesbaden.

Von Economo, C. (1926). A new type of special cells of lobus cinguli and lobus insulae. *Journal of Neurology and Psychiatry, 100*, 706-712.

Vos, D. & Singleton, P. (2020). Travel and cognitive dissonance. *Transportation Research Part A: Policy and Practice, 138*(August 2020), 525-536.

Vygotsgy, L. (1987). *Thought and language (A. Kozulin, Ed.).* Cambridge: MIT Press.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University Press.

Vygotsky, L. S. (1998a). Infancy (M. Hall, Trans.). In R. W. Rieber (Ed.), *The collected works of L. S. Vygotsky: Vol. 5. Child psychology* (pp. 207-241). New York: Plenum Press. (Original work written 1933-1934)

Waddington K. & Fletcher C. (2005). Gossip and emotion in nursing and health-care organizations. *Journal of Health Organization and Management*, *19*, 378–394.

Wagner, M.G. (2006). *International Conference on Internet Computing*. London: Routledge

Wallace, T. (2018). *The 2018 Omni-Channel Retail Report: Generational Consumer Shopping Behavior Comes Into Focus.* Retrieved from: https://www.bigcommerce.co.uk/blog/omni-channel-retail/#financing-finds-an-online-heyday [accessed 16-05-2020]

Walsh, C. (2018). *Becoming Empowered – Self-Reliance, Self-Esteem and Self-Confidence*. Retrieved from: http://www.carynwalsh.com.au/empowered-woman-program-self-reliance-self-confidence-self-esteem/ [accessed 03-07-2020]

Walsh, J. (1988). Selectivity and Selective Perception: An Investigation of Managers' Belief Structures and Information Processing. *The Academy of Management Journal, 31*(4), 873-896.

Walters, C. (2019). *The empowered customer*. Retrieved from: https://www.pwc.com/gx/en/industries/healthcare/emerging-trends-pwc-healthcare/new-entrants-healthcare-provision.html [accessed 18-02-2020]

Wan, C-S. & Chiou, W-B. (2007). Using Cognitive Dissonance to Induce Adolescents' Escaping From the Claw of Online Gaming: The Roles of Personal Responsibility and Justification of Cost. *Cyber Psychology and Behaviour, 10*(5), 663-670.

Wang, Y. (2012). Cognitive Mechanisms and Formal Models of Consciousness. *International Journal of Cognitive Informatics and Natural Intelligence, 6*(2), 23-40.

Wansink, B., Park, S. B., Sonka, S., & Morganosky, M. (2000). How soy labelling influences preferences and taste. *International Food and Agribusiness Management Review, 3*, 85 - 94.

Warren, C., Schneider, S., Smith, K. & Hibbing, J. (2020). Motivated viewing: Selective exposure to political images when reasoning is not involved. *Personality and Individual Differences, 155*(1), 1-12.

Warner, G., Parr, J. & Cusack, J. (2019). Workshop report: Establishing priority research areas to improve the physical health and well-being of autistic adults and older people. *Autism in Adulthood, 1*(1), 20-26.

Waters, M. (2018). *"The gen Z is destroying everything" takes are coming*. Retrieved from: https://theoutline.com/post/4751/gen-z-is-destroying-everything-takes-millennials-consumers?zd=1&zi=thakzk54 [accessed 13-11-2019]

Waters, H. & Graf, M. (2018). *Chronic diseases are taxing our health care system and our economy.* Retrieved from: https://www.statnews.com/2018/05/31/chronic-diseases-taxing-health-care-economy/ [accessed 1-04-2020]

Wearesocial. (2020). *We are Gen Z*. Retrieved from: https://wearesocial.com/uk/wp-content/themes/wearesocial/attach/genz/We_Are_Gen_Z-Their_Power_and_their_Paradox.pdf [accessed 05-03-2020]

Weebly. (2014). *1950s – Age of affluence.* Retrieved from: https://ageofaffluence.weebly.com/consumerism.html [accessed 03-04-2020]

Weick, K. E. (1989). Theory construction as disciplined imagination. *Academy of Management Review, 14*(4), 516–531.

Weiner, B. (1995). *Judgments of responsibility: A foundation for a theory of social conduct*. California: Guilford Press.

Wellington, J. (2000). *Educational research: Contemporary issues and practical approaches*. London: Continuum.

West Virgina University. (2015). *As baby boomers age, do their decisions get better or worse?.* Retrieved from: www.sciencedaily.com/releases/2015/06/150605182356.htm [accessed 06-03-2020]

WGU. (2019). *Who is Gen Z and how will they impact the workplace?.* Retrieved from: https://www.wgu.edu/blog/who-is-gen-z-how-they-impact-workplace1906.html [accessed 06-03-2020]

Wharton. (2020). *How technology is changing healthcare in India*. Retrieved from: https://knowledge.wharton.upenn.edu/article/technology-changing-health-care-india/ [accessed 18-02-2020]

Wheeler, J. (2028). *For Gen Z, online privacy is like bathroom privacy - Respect it*. Retrieved from: https://www.genzinsights.com/gen-z-sees-online-privacy-kind-of-like-you-see-bathroom-privacy-show-them-respect [accessed 16-05-2020]

Whittemore, R. & Knafl, K. (2005). The integrative review: update methodology. *Journal of Advance Nursing, 52(*5), 546-553.

Whiteley, N. (1987). Toward a Throw-Away Culture. Consumerism, 'Style Obsolescence' and Cultural Theory in the 1950s and 1960s. *Oxford Art Journal, 10*(2), 3-27.

Whittington, T. Heese, I., Garmon-Jones, M. & Garfield, M. (2018). *Retail Revolutions: Exploring the impact of E-commerce on Local Physical Retailing.* Retrieved from: https://pdf.euro.savills.co.uk/uk/commercial-retail-uk/retail-revolutions---ecommerce-and-local-physical-retailing.pdf [accessed 14-05-2020]

Wicklund, R. A., & Brehm, J. W. (1976). *Perspectives on cognitive dissonance*. Hillsdale: Lawrence Erlbaum Associates.

Willig, C. & Rogers, W. S. (2017). *The SAGE Handbook of Qualitative Research in Psychology*. California: Sage

Williams, Z. (2020). *10 Characteristics of the DIY Consumer [updated 2020].* Retrieved from: https://www.venveo.com/blog/10-characteristics-of-the-diy-consumer [accessed 05-04-2020]

Williams, C. (2007). *Research Methods*. *Journal of Business and Economic Research, 5*(3), 65-72.

Willis, G. B. (2015). *Pretesting of Health Survey Questionnaires: Cognitive Interviewing, Usability Testing, and Behaviour Coding*. Retrieved from: https://www.researchgate.net/publication/273202647_Pretesting_of_Health_Surve

y Questionnaires Cognitive Interviewing Usability Testing and Behavior Coding# fullTextFileContent [accessed 6th November 2020]

Wilson, T. D. & Brekke, N. (1994). Mental Contamination and Mental Correction: Unwanted Influences on Judgments and Evaluations. *Psychological Bulletin, 116*(1), 117 – 142.

Wilson, P. (1995). Unused relevant information in research and development. *Journal of the American Society for Information Science, 46*(1), 45-51.

Winston, H. P. (1977). *Artificial intelligence.* Manila: Addison-Wesley Publishing Co. Inc.

Wong L. (2008). Data analysis in qualitative research: a brief guide to using nvivo. *Malaysian family physician: the official journal of the Academy of Family Physicians of Malaysia*, *3*(1), 14–20.

Woo, A. (2018). *Time To Wake Up To The Next Consumer Powerhouse: Gen Z*. Retrieved from: https://www.forbes.com/sites/forbesagencycouncil/2018/07/23/time-to-wake-up-to-the-next-consumer-powerhouse-gen-z/#49f9275253f4 [accessed 18-05-2020]

Wood, S. (2020). *Generation Z as consumers: Trends and innovation*. Retrieved from: https://iei.ncsu.edu/wp-content/uploads/2013/01/GenZConsumers.pdf [accessed 05-03-2020]

Woodside, A.G. (2010). *Case Study Research: Theory, Methods and Practice*, Emerald Group Publishing Limited, UK.

Wordstream. (2019). *5 Essential Strategies for Marketing to Generation Z*. Retrieved from: https://www.wordstream.com/blog/ws/2019/08/21/marketing-to-generation-z [accessed 13-05-2020]

World Economic Forum. (2020). *Building the healthcare system of the future*. Retrieved from: http://reports.weforum.org/digital-transformation/building-the-healthcare-system-of-the-future/ [accessed 24-03-2020]

Wroblewski, M. T. (2018). *Generation X Consumer Behaviour*. Retrieved from: https://yourbusiness.azcentral.com/generation-x-consumer-behavior-9585.html [accessed 03-03-2020]

Xie, J. & Chen, Y. (2008). Online consumer review: word-of-mouth as a new element of marketing communication mix. *Management Science, 54*(3), 477-491.

Yacoby, R. (2020). *Service Marketing Tips & Tactics For 2020*. Retrieved from: https://www.mayple.com/blog/service-marketing-tips-tactics-for-2020 [accessed 14-05-2020]

Yap, S. F., and Gaur, S. S. (2014). Consumer dissonance in the context of online consumer behavior: A review and research agenda. *Journal of Internet Commerce, 13*(2), 116-137.

Yeager, A. (2020). *How the COVID-19 Pandemic Has Affected Field Research: Unable to travel to international or remote sites, some researchers are losing critical data*. Retrieved from: https://www.the-scientist.com/news-opinion/how-the-covid-19-pandemic-has-affected-field-research-67841 [accessed 26th September 2020]

Youmatter. (2020). *Globalization: definition, benefits, effects, examples – What is globalization?.* Retrieved from: https://youmatter.world/en/definition/definitions-globalization-definition-benefits-effects-examples/ [accessed 17-05-2020]

Young, D. S., & Casey, E. A. (2019). An examination of the sufficiency of small qualitative samples. *Social Work Research, 43*(1), 53–58.

Young, B. L. & McCulloch, A. (2015). *Baby boomers, mental health and ageing well: A review.* Retrieved from: https://www.mentalhealth.org.uk/sites/default/files/getting-on-full-report.pdf [accessed 06-03-2020]

Youngson, R. (2014). *Generation Y' self-centered and materialistic, or searching for meaning?.* Retrieved from: https://heartsinhealthcare.com/generation-y-self-centered-materialistic-searching-meaning/ [accessed 04-03-2020]

Young, H. (2019). *Millennials vs. gen Z: How are they different?.* Retrieved from: https://www.salesforce.com/blog/2017/10/how-millennials-and-gen-z-are-different.html [accessed 7-11-2019]

Zachos, E. (2015). *Technology is changing the Millennial brain*. Retrieved from: https://www.publicsource.org/technology-is-changing-the-millennial-brain/ [accessed 06-03-2020]

Zainal, Z. (2007). Case study as a research method. *Journal of Humanity,* Retrieved from: http://psyking.net/htmlobj-3837/case_study_as_a_research_method.pdf [accessed 27-09- 2020]

Zamawe F. C. (2015). The Implication of Using NVivo Software in Qualitative Data Analysis: Evidence-Based Reflections. *Malawi Medical Journal: The Journal of Medical Association of Malawi*, *27*(1), 13–15.

Zardoroznyj, M. (2001). Birth and the 'reflexive consumer': trust, risk and medical dominance in obstetrics encounters. *Journal of Sociology, 37*(2), 117-139.

Zeki, S. & Shigihara, Y. (2014). Parallel processing in the brain's visual form system: an fMRI study. *Frontiers in Human Neuroscience, 8*(506), 1-19.

Zhang, Y. & Huat, G. K. (2019). *Impact of online reviews on consumer post-purchase attitude change and transaction failure*. Retrieved from: https://aisel.aisnet.org/icis2019/crowds_social/crowds_social/19/ [accessed 16-11-2019]

Zhang, K., Zhao, S. J., Cheung, M. & Lee, M. K. O. (2014). Examining the influence of online reviews on consumers' decision-making: A heuristic–systematic model. *Decision Support Systems, 67*, 78-89.

Zhou, J. & Seeley, W. (2014). Network Dysfunction in Alzheimer's Disease and Frontotemporal Dementia: Implications for Psychiatry. *Biological Psychiatry, 75*(1), 565-573.

Zizlsperger, L., Savigny, T. & Haarmeier, T. (2012). Selective Attention Increases Choice Certainty in Human Decision Making. *PLoS ONE 7*(7): e41136.

Zoghby, J. (2018). *Why brands must move from communication with consumers to conversation*. Retrieved from: https://www.adweek.com/brand-marketing/why-brands-must-quickly-shift-from-communication-with-consumers-to-conversation/ [accessed 30-11-2019]

Zonkel, P. (2016). *AIDS crisis loomed over Generation X.* Retrieved from: https://www.presstelegram.com/2016/01/02/aids-crisis-loomed-over-generation-x/ [accessed 10-03-2020]

APPENDIX A: STUDIES ON COGNITIVE DISSONANCE

Author(s)/Year	Purpose(s)	Methodology	Country	Main findings
Festinger & Carlsmith, 1959	To test Festinger's Theory	Quantitative	Not Specified	• Resulting literature showcased that if an individual partakes in an uncomfortable errand that is deficiently compensated

				, his/her perception of undertaking this assignment is at conflict with his insight of getting no prize. • Consequently, the individual decreases dissonance by looking for justifications, for example, increasing the appeal of the goal
Festinger (1957)	Introduction of the dissonance theory	Literature Review	Not Specified	• Cognitive Heuristic Elements are drivers • Cognitive Dissonance stimulates action

Aronson & Mills (1959)	To test a group of women joining a group	Survey	Not Specified	• Found that those with highly intense experiences, were more appreciative of the group than the other two groups
Aronson, Devine & Patricia (1994)	To experiment and test prevalence of dissonance	Experiment of 112 students in induced compliance paradigm	USA	• The first experiment yielded supporting proof for both of these recommendations. • The second experiment imitated the first examination and precluded a self-discernment based elective clarification

				for the dissonance decreased discoveries in the first instance.
Aronson (1960)	To understand how dissonance is reduced	Literature review	USA	• People reconcile their beliefs and actions to reduce dissonance
Losch and Cacioppo (1990)	To study post decisional dissonance	Experiment	Italy	• Dissonance is a post-decisional motivator
Stone (1990)	To posit the self appropriately within dissonance	Literature review	USA	• Emphasized that the primary question "what have I done?" is a defining factor for individuals in their efforts to understand themselves

Joule (1986)	To understand if dissonance produces internal cues	Quantitative	Not specified	• Dissonance generates internal cues
Swan and Read (1981)	To determine how dissonance is addressed	Quantitative with undergrad students	USA	• Ascertained self-rationalisation to be the approach.
Scher and Cooper (1989)	To test that no pre-requisite is needed for dissonance	Students experiment of writing against beliefs	USA	• The data demonstrated that in both situations, dissonance was triggered
Cooper and Fazio (1984)	To conceptualise a new look model for dissonance theory	Literature review	USA	• Incentivising base for dissonance is the perceived liability toward repugnant outcomes
Kunda (1992)	To detail whether dissonance theory can explain all the neo-dissonance	Literature review	Turkey	• Refuted this understanding, by stating, "inferring that all motivational findings boil

	theories that were brought under the dissonance banner			down to dissonance as a theory, is not very useful without showing how dissonance theory can account for the full range of motivational phenomena
Aronson and colleagues in 1960, 1962 and 1974	To highlight dissonance can explain all motivation and neo-theories	Literature review	Varied	• Three propositions whilst elaborating the concept of self: - To preserve a consistent, stable and predictive sense of self. To preserve a competent sense of self. To preserve a morally good sense of self

Harmon-Jones and Mills (1999)	To bring a neurological backing to action-based dissonance	Literature review	USA	• Framework brought the understanding of placing neural processes in the context of motivating cognition • In action-oriented mind post purchase, dissonance will enforce action
Gosling, Denizeau & Oberle (2006)	To test denial of responsibility in reducing dissonance	Conducted three experimental trials	France	• Two experiments reaffirmed the hypothesis that individuals following a differed behaviour appreciated having the 'mode of reduction' of dissonance

				offered to them first regardless of whether they were "trivialization", "attitude change" or "denial of responsibility".
				• The third experiment however, highlighted that denial of responsibility affected the unfavourable intuitive state generated by dissonance
Wan and Chiou (2007)	To understand personal responsibility and justification of cost in dissonance	Two experiments were undertaken to look at whether moral obligation	China	• Experiment 1 uncovered that youthful players who felt a solid awareness of other's expectations

		and justification of cost may play essential factors in affecting youth players' demeanour change and their eagerness to take part in cognitive dissonant conduct.		seemed to show more noteworthy demeanour change. In the second experiment, the discoveries demonstrated that players would in general utilize justification of cost so as to diminish or wipe out the dissonance between their disposition toward web-based gaming and paid up cost. • Adolescent players who saw a greater

				expense in internet gaming were less ready to take part in mentally conflicting conduct
Salzberger and Koller (2007)	To understand in tourists visits	Quantitative	Germany	• Dissonance can be found in pre-decisional stages
Keng and Liao (2009)	To highlight post-purchase dissonance among consumers who were buying durable products	Quantitative	China	• Study highlighted dissonance felt after purchase affected repetitive purchase intentions.
Hamza and Zakariya (2012)	To investigate the outcomes of cognitive dissonance in a post purchase context	Quantitative	Pakistan	• Cognitive dissonance existed in the post-purchase stages when respondents felt a sense of regret on

				their purchase.
				• Respondents who experienced such psychological conflict were not likely to indulge in WOM (word-of-mouth).
				• They were probably going to decline repurchase of the items and look for better options in the market
Costanzo (2013)	To examine pre-decisional dissonance applicability	Literature Review	USA	• Much of the theoretical thinking on the subject of decision situations has been concerned with how the

				person behaves during the period when he is in conflict, that is, before he has been able to come to a decision.
Hasan and Nasreen (2014)	To investigate the connection between post-dissonance and consumer behaviour	Quantitative	Pakistan	• Impulse purchasing brought out higher rates of cognitive dissonance contrasted with planned purchasing
Bolia et al. (2016)	To understand financial purchase and dissonance during outcomes	Quantitative	India	• Consumers who investigated numerous options experienced less dissonance contrasted with those who took a look at none.

Banerjee (2017)	To conceptually understand consequences of cognitive dissonance from consumer behaviour perspective	Conceptualization	India	• Re-affirmed all cited literature above in relation to Festinger's initial theory of 1957.
Brannon and Gawronski (2019)	To understand what is cognitive consistency and why does it matter?	Conceptual re-analysis	USA	• The aversive feeling that is illustrated by inconsistent beliefs serves as a signal that the current system of beliefs has to be revised for the sake of context appropriate action. • Cognitive dissonance can be seen as a mediating factor toward an outcome.

Fazio, Zanna and Cooper (1977)	To understand self in relation to dissonance	Literature review	USA	• Proposed detailing factors in each of the theories individually, that the two theories are not contradictory but complementary
Ronis and Greenwald (1978)	To further understand the "self", "esteem" and "dissonance"	Literature review	USA	• Mental character of the inspiration for subjective change can be deciphered, in ongoing explanations of the dissonance theory, as a need to save one's 'self-esteem' as opposed to a

				need to keep up rationale among perceptions
Thogersen (2004)	To test dissonance	309 consumers in ERB environment	Denmark	• Results from this quantitative study suggested that the influence of the desire to be consistent in behaviour depended on the perception of moral importance of conducting oneself in a responsible way towards the environment
Mills and Harmon-Jones (2019)	To understand current thoughts on cognitive dissonance theory.	Literature Review	USA	• There are currently various paradigms being used: -

				a) Free-choice paradigm b) Induced Compliance Paradigm c) Effort- Justification Paradigm d) Alternative paradigms are also arising for e.g. self-perception. • The existence of dissonance leads to "selective exposure" to information.
Tsang (2019)	To try and demonstrate how cognitive dissonance relates to information preferences.	• Quantitative • Web-based experiment • N = 876 undergraduat	USA	• The results reinforce Leon Festinger's theory purely in that there is psychological discomfort & unpleasantness after exposure to incongruent info.

		e stud ents		• Discomfort is seen to lead to dissonance, increasing information hostility. Also is coherent with the studies of (Mills and Harmon-Jones, 2019).
Carpent er (2019)	To advance that existing research can be synthesized using the self-concept approach to cognitive dissonance.	Theoretical literature review	USA	• Humans are biased towards their highly valued beliefs and tend to ignore differing evidence to hold on to those personal values. • The greater the gap between what we know and

				what is presented to us, the greater the likelihood of shifting notions.
				• Cognitive Dissonance Theory is applicable only to people with high sense of self (self-esteem) and that SE and the 'Self' is a moderating factor with regard to reaction to messages.
Cooper (2019)	To analyse the process from the perception of cognitions in the social environment t o the unpleasant	Literature Review	USA	• Found its time for a two-pronged approach to dissonance in the coming decades.

	arousal state of dissonance			• The main properties always remain for cognitive dissonance: a) Is it experienced as a discomfort? b) Does it propel people to take action? c) Are people more comfortable after the action has been taken? • When actions cause unwanted consequences, we ask who is responsible? Or see who can be blamed? Whilst, in the

				absence of consequences there is no dissonance. Therefore, choice and the individual both are important factors.
Bran and Viadis (2019)	To understand cognitive dissonance theory and the flaws in it.	Literature Review (including the various new paradigms).	USA	• Further research is needed on operational distinction for the triptych elements of cognitive dissonance theory. • In addition to investing effort in systematic and standard operationalization of these concepts, the examination of the whole

				model could deeply improve the theory and the understanding of human psychology. • In the present state assessing inconsistency may be the most relevant way to assess the dissonance construct.
De-Lanauze and Siadou-Martin (2019)	To propose a conceptual model based on cognitive dissonance theory for modelling change intentions.	• Quantitative • Two case studies with hypothesis testing.	France	• Psychological discomfort is increased by the contact with dissonance producing external information. • Consumers may at the same time minimize the

				effects of additional cognition by implementing informational strategies such as trivialization or discreditation to defend their consumption behaviour.
		• N = 501 French consumers.		
Ryan (2019)	To determine various definitions (Book)	N/A	USA	• People function better when they feel they are free to decide. • The drive and motive to see the other end of the scale is lost whilst in a controlling environment.
Costanzo (2013)	To examine pre-decisional dissonance as a	Literature Review	UK	• Provides evidence regarding the

| | motivating factor in consumer decision making. | | | popularity and resurgence of research on cognitive dissonance theory and asserts that researchers in the field of consumer modelling may gain a better understanding of consumer decision-making when studying pre-decisional consonance.
• Majority of research studies were limited to post-decisional influences. |
| Brooksbank and | To determine post-decisional | Grounded Theory | New Zealand | • Dissonance is one of the |

Fullerton (2020)	dissonance states in B2B consumers and sales reps			post-decisional states
Ong (2019)	To examine the potential influence of cognitive dissonance on (a) health/nutrition communication, and (b) food/nutrition attitude/behaviour.	• Literature Review • Practical Framework Suggestions	Singapore	• Novel attitudinal dimensions of cognitive dissonance were seen. • Communication is not appreciated when high cognitive dissonance is felt towards a particular food or diet.
Walanchale and Dolchai (2019)	To reveal the prevalence and influence of cognitive biases at different stages of travel.	• Systematic Literature Review	Thailand	• Cognitive bias is the main underlying causes of suboptimal decisions. • There is seen to be irrational decision making and

				bounded rationality which states that although an individual makes a rational choice, he/she may lack rational choice, due to cognitive limitations.
Amaral et al., (2019)	To test if cognitive dissonance theory-based BP (Body Project) is similarly effective in different cultures.	• Quantitative • N = 40 • Assessment-only (N = 22) condition. • Four group	Brazil	• The dissonance-based eating disorder prevention program was efficacious with Brazilian female adolescents. • Support the usefulness of cognitive dissonance-based programs in the reduction of risk factors

		sessions		related to body dissatisfaction from this cultural standpoint.
		• 408 exercises.		
		• Pre-test and Post-test evaluation only – n=22.		
Odou et al., (2019)	To understand Promotion of Pro-Environment Behaviours through induced hypocrisy	• Quantitative • Three experiments conducted	France	• One of the difficulties encountered in the research relates to measuring cognitive dissonance. • The negative association with inappropriat

				e personal behaviours is difficult to measure. • When the contradiction between what individuals say and what they do is made salient in the field of environmental protection, i.e. in a situation of induced hypocrisy, it indirectly reduces the resulting dissonance.
Stephen et al., (2019)	To assess the influence of four personal variables on the use of strategies to reduce dissonance.	• Quantitative • N = 189	Nigeria	• A scenario that may cause dissonance with teacher trainees may be their knowledge of

				exigencies of motivation and reinforcement in facilitating learning of concepts. • Proof of the need to assess cognitive dissonance effect, how and where it stems from, as the hypothesis is nullified in the study.
Jeong et al., (2019)	To develop a conceptual cognitive framework on the theory of cognitive dissonance.	• Projective technique • Covariance-based	South Korea and USA	• Social information consumption on an SNS is associated with uncomfortable feelings from getting exposed to external-self-

		struc tural equa tion • N = 425		differing opinions. • Opposing views on social media brings out cognitive dissonance.
Shultz, Leveille and Lepper (1999)	To test free choice paradigm of cognitive dissonance theory and its variance with the overall attractiveness of the choice options.	• Qua ntita tive • Hyp othe sis Testi ng • N = 107 • Fren ch Spea king (13- year olds)	USA	• A difficult choice between generally less desirable alternatives produced a large increase in participants. • Evaluations of the chosen alternative, whereas a difficult choice between generally more desirable alternatives produced a large

				decrease in evaluations of the rejected alternative.
Beauvois and Joule (2019)	To show how the theoretical developments resulted in original hypotheses even in new experimental paradigms and present the particularities of the radical view relative to other versions of dissonance theory.	Literature Review	France	• Within the experimental framework of forced compliance: dissonance theory is not a theory of consistency and the reduction of dissonance is not to serve a morally good ego. • Responsibility as a factor is questionable for arousing dissonance.
Marikyan et al. (2020)	To examine the effect that the disconfirmation has on the arousal of	Qualitative	UK	• To cope with psychological discomfort, users withdraw the behaviour

	psychological discomfort, 2) To explore whether psychological discomfort triggers behavioural coping mechanisms, and 3) To examine how coping mechanisms correlate with user satisfaction with technology performance and decisions.			causing psychological discomfort and seek consonant information to reaffirm the decision to purchase the technology. In addition, the study found that satisfaction with the technology performance and the decision is determined by the positive effect of the consonant information seeking, but not the behaviour change.

Vos & Singleton (2020)	To review the applicability of cognitive dissonance theory for understanding relationships between travel-related attitudes, behaviours, and satisfaction associated with travel modes and residential locations.	Literature Review	Not specified	• Cognitive dissonance theory can provide valuable insights into satisfaction levels with travel and the place of residence, while also helping to explain changes in travel-related attitudes and choices of where to live and which travel mode to use.
Rothgerber (2020)	Focuses on understanding guilt and meat-related cognitive dissonance post consumption	Literature Review		• Culture, meat related consumption-based post decisional dissonance is very evident. Factors

			415		inducing the post-consumption dissonance is related to guilt.
Smith, Fabrigar and Norris (2008)	To reflect on six decades of selective exposure research.	Theoretical Literature Review	Canada		• It is plausible that increased inflexibility of an individual might result in them being more motivated to seek out attitude-consistent information. • Time constraint during information exposure effects the amount of information people are able to process.

				• Attitude congruent selective exposure would be strongest when the goal to process consistent information are present, in conjunction with limits on capacity restrictions.
Stroud (2017)	To provide an overview on the theory of selective exposure.	• Self-Report Study • Laboratory Report • Unobtrusive Mov	UK	• Selective Exposure is a linchpin of communication. • It is imperative to understand when and why people select news and information, otherwise,

		eme nt • Forc ed Vs Selec tive Expo sure		we will have an incomplete understandin g of communicati on and its effects.
Bardin, Vidal, Facca, Dumas & Perrissol (2018)	To establish whether biased evaluation also occurs with informational dissonance. To examine (1) whether an individual's attitude or behaviour may be biased by information perception and whether this phenomenon was related to the perception of the information's novelty.	• Two Qua ntita tive Expe rime nts • N = 94 • 65 wom en and 29 men (Me dian Age = 37.9 0, SD =	France	• Selective exposure was linked to a supporter's self-analysis of information. • A biased realisation effect of information quality by people's attitudes as a factor of selective exposure exists. • A person's attitude leads to their "objective

		11.0 9) • Five-point scale ranking system • Factor Analysis		evaluation" of information. • Prevention information being well-known (for instance: smoking causes cancer) is not likely to produce an inclination to wilfully expose oneself to it.
Johnson, Neo, Heijnen, Smits & Veen (2020)	To test the extent of confirmation bias in Dutch Facebook users' selection and sharing of opinionated news about three political issues.	• Online Experiment • Free-choice paradigm given to parti	USA	• Strong evidence of selective information consumption and self-expression behaviours seen.

		cipa nts to exer cise. • N = 399		
Martine z et al., (2019)	To investigate how reputation affects information search, and how its result affects understood reputation.	• Qua ntita tive • Data from Infor mati on Displ ay Boar d • N = 1811	France	• Evidence of a confirmation bias (between positive information and the information search), and support information avoidance theories. • Prior reputation only affected the online information search for consumers with no opinion, or with a positive

				opinion of a show's reputation.
Prolloch s et al., (2018)	To enhance the understanding of how humans, perceive information embedded in financial news.	• Qua ntita tive • Cont rolle d Neur oIS labo rator y expe rime nt	Germany	• Raises the question of whether the interplay between cognitive and affective processes can lead to an undesired emotional state that causes humans to avoid potentially relevant information.
Browne and Parsons (2012)	To supplement the work of Davern et al. by discussing much of the recent work.	Literature review	USA	• Review provides many illustrations of IS research in these areas, including memory and categorizatio

				n (basic cognition) and heuristics and biases (behavioural decision making).
				• Gives a fuller picture of the breadth of cognition-based work in the IS in general.
				• Provides further evidence of the importance of cognitive research in IS and suggests additional enduring questions for future investigations.

Albarracin and Mitchell (2004)	To identify individuals and their behaviour of chronically believing that they can successfully defend their attitudes from external attack.	• Quantitative • Five experiments	USA	• Studies 1 and 2 validated a measure of defensive confidence as an individual difference that is unidimensional, distinct from other personality measures, and generalizes across various personal and social issues. • Studies 3 and 4 provided evidence that defensive confidence decreases preference for pro attitudinal information. • Study 5 demonstrate

				d that people who are high in defensive confidence are more likely to change their attitudes as a result of exposure to counter attitudinal information.
Hart et al., (2009)	To assess whether exposure to information is guided by defence or accuracy motives.	• Quantitative • Meta-Analysis	USA	• In support of the importance of accuracy motivation, an uncongeniality bias emerged when uncongenial information was relevant to accomplishing a current goal.

				Moderate preference for congenial over uncongenial information (d=0.36).
Sweeney et al., (2010)	To examine information avoidance and provide a unique framework to integrate the contributions	Literature Review	USA	• Information avoidance is a paradoxical behaviour as humans have complex brains/neural networks capable of acquiring and handling large amounts of information.
Jung, Erdfelder, Doner and Broder (2019)	To investigate both motivational and cognitive antecedents of decision inertia.	• Quantitative • Hypothesis testing usin g a	Germany	• Decision inertia is driven by action-orientation and decision autonomy but not by preference for

		belief updating task		consistency or indecisiveness. • Concerning cognitive antecedents, it was found that individual differences in the evidence required to change a decision are not linked only to decision inertia specifically.
Li, Alos-Ferrer and Hugelschafer (2019)	To investigate decision inertia in probability-updating tasks.	• Quantitative • Two-decision paradigm	Germany	• Decision inertia is in both required and autonomous decisions, but the effect of inertia is clearer in the latter.

				• Found the same effects of decision inertia when reinforcement is aligned with Bayesian updating, but if the two latter processes conflict, the effects are limited to autonomous choices. • Additionally, both studies show that the tendency to rely on decision inertia is positively associated with preference for consistency.

APPENDIX B: INTERVIEW GUIDE

Introduction/Context to the Participant – In every successive generation the approach to consumer decision-making differs owing to time, age and technological and social advancements. However, the stance and understanding of previous generations are also known to affect the future generations' perspectives. This study aims to understand and delineate the effects of inner instincts and finer cognitive processes in shaping consumer behaviour in generation Z within a healthcare context. I would like to ensure you that all information provided is strictly confidential and every participant will be identified by a code number. Furthermore, I would also like to emphasise that I am interested in your personal opinions/experiences and stances and that there are no right or wrong answers.

S.No	SECTION 1 – INTRODUCTION – NAME, AGE, CHOICE DESCRIPTIONS
1	What is your most preferred way of healthcare and why? (Allopathy, Alternative medicine, DIY (Do-It-Yourself) – thanks to google etc…)
Probe on	*provide examples for participation from participant*
1.1	Why do you prefer this option? What made you choose this particular option?
2	How did you make the choice?
3	What are the modalities or approaches or sources you use when choosing your HC option?
	SECTION 2 – PARTICIPANTS HABITS AND HEALTHCARE BEHAVIOUR INSIGHTS
4	How do you absorb and deal with new information whilst you are researching about your health requirement? Open Ended to understand – how do they assimilate new information – is it in consonance or in dissonance?
4.1	Is there a delayed decision-making or do you postpone health seeking as well (over couple of hours/a day)?
4.2	Was there a shift or change in your response/thoughts from the initial stage to later stages? Probe: Time and change in consumer behaviour

5	What is the most important/critical aspect that facilitated your process of making this choice? Please provide an example of an instance.
	Removed Probe
6	When you made this choice of taking this care, or decided not to: - I would like to go through some of your inner experiences…
Probe on	- *when you sensed it, what were you doing?* - *What was your state of mind prior to your choice? Once you made the choice and at this moment?* *Can you explain the feelings you had at the time?* - *Specify the feelings that you ignored? And specify the feelings you held on to?* - *What feeling overpowered the rest and why do you feel so?* *Which of the feelings sustained? Please elaborate…*
7	How do you feel that need taking over your digital research? Explain how you sense it.
Probe on	*- Can you describe the experiences? More specifically: -* *- Your moods.* *- Feeling frustrated due to information overload* *- Faith in the data…*
8	Is there any process you employ to arrive at your own need for specific healthcare?
8.1	Do you utilise that when faced with dilemma and options in terms of healthcare consumption?
9	Is this the case every time you research about a healthcare requirement or does it vary based on the need felt? Please explain with examples to the best of your ability. Preferably three examples to understand type and intensity of your need.
9.1	The last time you had a healthcare requirement, was it a similar approach from an earlier healthcare requirement and subsequent choice to be made?

Probe on	- *What differed in the scenario at that time, (magnitude of unpleasantness, type of need etc.)?* - *Why and how (please explain the emotions/feelings in the process)?* *Also, kindly explain the process you undertook (if that differed too).*
SECTION 3 – PARTICIPANTS HEURISTIC RELIANCE BEHAVIOUR AND UNDERSTANDING	
10	Why do you feel the necessity to be sure before fixing on a choice? What understanding, prompts this?
Probe on	- *life experiences* - *seeing your parents' lives etc...* *or even that of your older or younger siblings.*
11	Can you describe your mechanism to be sure of a decision?
11.1	Explain the process of identifying factors you consider when you make a choice of your healthcare?
12	How much are you aware that you are sure in most of your decisions? Please describe with some examples.
12.1	What indicators personally suggest this for you? *Can you specify points/instances of surety…?*
12.2	Kindly provide examples as how you recognise this in yourself?
13	Would you call yourself action-oriented? If so, please explain your rationale by providing examples indicating the trait.
SECTION 4 – CONCLUSION	
14	In your words, explain an instance when you required healthcare. Narrate how you proceeded through the different stages.
14.1	Explain, the differences in your mental state that you were able to sense. You can provide an example of an instance too.
15	In case that you feel frustrated with oncoming information due to content marketing, how do you deal with it? Please explain in terms of the technology used (apps, devices and essential elements from a consumer angle), your

	psychological mindset (feelings, emotions and orientation of the mind) and social context (if any).
15. 1	Highlight how does your understanding of technology, personality and your social context influence your choice. Example…

APPENDIX C: INTERVIEW TRANSCRIPTS

Q1: What is your most preferred way of healthcare and why?

RP35: I'm from Bangalore. Now I'm 24 years and my interest major is into science psychology. And I'm also into dance and sports. Yeah. So regarding healthcare, I had a lot of problems, like regarding my nerves and its related weakness, basically bad blood circulation problems and all that. So, I prefer Ayurveda and Siddha medicine in terms of treatment currently.

Q1.1: Why do you prefer this option? What made you choose this particular option?

RP35: Previously I was taking allopathy, but I wasn't very comfortable with it. Then, slowly I started looking for alternate options for my knee problems, like when I had Jaundice et cetera, and also my knee problem. I was sceptical, but soon I felt that was really comfortable with the approach to treatment and with no side effects. It takes a little more time, than when I took allopathy, but I am very much comfortable with that and I never used to feel tired or something like I'm taking a foreign body inside/allopathic medicine. I don't feel like that. So it's just like, okay, fine. And let's me be while being treated in course.

Q2: How did you make the choice?

RP35: I frequently experimented and I read a lot before and have consulted a bit before but never vehemently. And so I just resorted to it again.

Q3: What are the modalities and approaches of how you selected Ayurveda and Siddha?

RP35: There's no process actually. She was a trusted doctor who was my family friend, my mom's friend. So that's how I didn't do much research on it. Just won't do much of research on anything because I just figured, I don't know and I feel it's a headache to process too much information. So, I take the easy way I trust them and it's fine as long as I'm cured by the approach. But slowly, now because of trial and error I am changing my approach also.

Q4: In this regard, if someone gives you new information or a particular treatment option, how do you deal with that? How do you, how do you absorb that information?

RP35: I would look into it. Definitely. I would take the positive aspects of it if I'm convinced regarding the same. Also, it depends on what the problem is because currently when I had one of my knee injuries and I answered, I looked at the allopathy doctor who took me through the procedure of say, you have to take those medicines. It won't work. And you dance all that. I was not very convinced. I was like, no, this is not happening. My one injury

can't stop me from doing things I love. And then when I went to the Ayurveda doctor, I already covered, they were like, it can be cured over time. Just give it rest and keep doing few things that they prescribed within a specific time period and pace. Like you heat this mud sling, it and keep your leg on that you will feel better. I felt more positive about the same things and I felt there is cure in this. Because one their confidence spoke. Second, they informed me everything. Third, they provided a no side-effect procedure. So that's how so I keep I take into account the processes, but I should be convinced finally. So, it depends on what is the situation.

Q4.1 : Is there a delayed decision-making, which is like, say for example, you postpone your healthy, eating over a couple of days to process information on different kinds.

RP35: Yeah. True. That, that happens as I process everything before I decide. Especially when mainstream doctors say a complete no! Yeah. I just don't believe, or that I keep trying for a better medicine choice and Ayurveda in most cases gives me that.

Q4.2: Was there a difference in terms of your thought processing? Like from the initial stage of a no for the latest stage a yes.

RP35: It was basically, yeah. So like a lot of folks, I just thought immediately when I had that pain and immediate cure was just allopathic. And I was like, I have to get it operated etc. But, once I went there and when after the two checkups the allopathic doctor said these medicines, can't be fully cured, they would like ask me to use these orthotic kind of slippers, slippers and et cetera. And I was like, this is gone. I was like, no, not happening. I'm not an old 80 year old. I can't even give up because that's my passion – sports and dance. Then I decided to come back to Ayurveda and Siddha, I was still not very confident very frankly speaking, because I didn't know what to expect until I see the results even if they said they can cure. And I also didn't keep doing it very frequently to be already honest. I was lazy. So after a point, I was like, maybe it's not working. But, then I slowly started seeing results and when I had to get to do some programs and there were deadlines, then I actually started following more seriously, and then I could see the results more faster. And that's how then I was like, this is perfect. I can go forward with Ayurveda.

Q5: if I were to ask you, what is the one most critical aspect in terms that facilitated your process of making that choice of Iowa, what would that be?

RP35: A medic telling me I can't vis-à-vis a person saying I can.I don't take no for an answer easily. Everything can be dealt with approach is key!.

Q6: you made this choice of taking this care, or decided not to: - I would like to go through some of your inner experiences….

Probe on: So when you sensed that requirement of that you have at that particular point, what were you doing? What was your current state? What was, what was your state?

RP35: I was basically very depressed because I wasn't able to play sports a lot. And when I went for Ayurveda, I actually went to two, three doctors in Ayurveda with also because they have different ways of prescribing because it's old tradition. They used to give it for two weeks and then come back to me after two weeks. And then I was not really confident. Like I was in such so much pain. How will it go in two weeks? And so I had a lot of confusion and internal uneasiness and a lot of conflicts, frustration inside of me. I don't know where to go.

What is the right thing? And even then I researched out then that was the time I actually saw on Google and tried to find medications and all, but then I was like, okay, let me disregard every approach and like to stick to what I can keep changing and shifting like this - Ayurveda. And that's how so it was, it, it included a lot of confusing frustration and that when I was depressed, because I couldn't dance that finally after I started the process, I was really happy because by two, three months they said six months rest, but still I saw it started showing results within two months of my medication and procedure. So then I was really happy.

Probe on: so prior to your choice, you kind of explain to me what your mindset was that you

RP35: wanted to somehow you know, get back to dancing and you're confused as to what is going to work. And then of course I stuck to it.

Probe on: Now, once you made the choice after that, how was your state of mind? What was your state of mind?

RP35: I was still apprehensive. I was not very confident. But yeah, that was, that was a basic state, but I started with my medication.

Probe on: Okay. So currently at this moment, what's your state of mind in relation to them?

RP35: I'm very happy actually. I'm I believe in it, but the thing is it's it takes a portion of time and energy. If we give that time to follow the principles on point, then its good. I learned that. So you, mentally have to prepare yourself that you have to give yourself time and it's a long-term cure.

Probe on: can you explain those feelings you had at that time, that particular time when through prior to the choice during the decision-making process?

RP35: I was like, when I had the pain, I was actually very, I, as I told you, very confused, drastic, basically depressed. And then only later scissors was I confident and that in that position, when I was taking the treatment, I was still like, okay, maybe happens or it will happen or not kind of, not very okay with it that until I see the results. I was uncertain until seeing the results. Yeah.

Probe on: So in terms of the feelings, so every person who takes a decision, right. They have feelings that they follow their feelings that they ignore. So what are the feelings you ignore?

RP35: I didn't actually ignore any feelings. I let myself process all the things. Because basically that period, it was not very happy time at all. That's all I remember.

Probe on: if you were to specify the feeling that you held onto, what, what would that be?

RP35: Hope. That's it.

Probe on: Overpowering feeling?

RP35: Hope and passion to do what I used to do – travel, play etc.

Probe on: were there any feelings through the whole process that's sustained that just continued through the process that you started seeing results and after seeing the results also, were there any one particular couple of, couple of feelings that sustain?

RP35: What has been started, has to be continued. That's all.

Q7: How do you feel these needs taking over your digital research?

RP35: Actually now because I'm telling you that I have it constantly on mine. I'd have to keep taking medicines. I'm also exploring and researching some exercise stuff that I could do to stop medicine. So I first concentrate a sports visit there at the store. So I ended up at a few exercises for my ligament, tight muscles, because, because of the way they said it was going to effect and now, so looking into other exercises where they can do like CrossFit training or something, which would help me better and stop medication completely. And it's just related. So when I can do things with, I like I'm in a really bad mood and I just don't feel very good about myself. And I have to keep going as a very busy person that I am. I don't like sitting in one place. I keep doing different things and just sit calm, doing nothing is not my life. So that puts me down. So that is the main motivation basically. And I also enjoy doing things. It's just stuff that I have to keep myself busy and running around for things. But each of those,

Probe on: but do you feel frustrated with all the information that you get when you're digitally researching stuff.

RP35: I don't basically see. I ignore. Like YouTube video searches. I don't, but when I do, I do it for some time and, but later I'm like, whatever, let me see what works out by trial and error and I'll see tomorrow based on what I feel after processing the info. But if there's something that I really find useful, I do note it down.

Probe on: So what is your other mode of research?

RP35: I just asked people who had the same experiences. I talked to people and get their input. People I trust a lot. It's just, they share the same experiences.

Probe on: So in terms of the information that they give you, how much is your faith in that data?

RP35: I would try it out anyways. It's not I do believe that and I try it though. I like to try and everything and see for myself.

Q8: Is there any process like you employ to arrive at your own healthcare need or requirement?

RP35: I'm actually not a person who is very much concerned about health because I've been through so much health issues. It's just another one. But when there is a problem, it depends if I need an immediate solution, or got to live with it. I first check Ayurveda as that is now my default option, then Googling bit, suppose I'm not convinced on the approach, and what it comes with, I'm still looking for different options, then I start over. Which is: whats my need, what does Ayurveda provide, is it hampering my goals and lifestyle? If not ok. Else, let's see anything in Siddha medicine, or homeopathy etc.

Q8.1: Is this like every time you have a healthcare requirement decision process where you first go in for Ayurveda?

RP35: It does change. So if that is something okay, I'll just give you an example. So suppose that just feeling or not, I'm just not okay. Feel safe, just calm things. I just go to, allopathic prescribed sometimes when, if it is very mild. If I feel there's something serious and I can't put my legs down, I first go to Ayurveda, also because I'm comfortable with her. And then the other thing is like my knee pain, which I couldn't bear and I needed immediate help. Then the I consult allopathy for pain killers and if I have performance deadlines. I will do that as a quick fix. Then come back to Ayurveda, when I have bandwidth to undertake the long process. So based on the requirement, it changes. So it's, it's also the deadline and goal and intensity of the requirement.

Q9.1:Last time you had a healthcare requirement did you employ a different approach to the mentioned?

RP35: It was the same as going to Ayurveda. My knee and foot was the same because I had to dance very quickly. So I look, but then I am now looking into exercises etc.

Q10: When you're choosing a healthcare option, why do you feel the necessity to be sure of it?

Probe on: Like, for example, is it because of life experiences? Is it because of seeing your parents' lives or that have older siblings or younger siblings? So what may prompts you to be prompts you to feel the necessity, to be sure of a decision?

RP35: My personal wellbeing only. Nothing else. Nothing adopted. I don't get influenced by anything, or I've never seen anyone as inspiration, and I don't stick to that. I want to feel better and get back to being me. So it's completely self oriented. It's my wellbeing oriented. Yeah. Okay.

Q11: So can you describe your mechanism of how you become sure. Of a decision? Like in case of my healthcare choice

RP35: I compare all and based on my requirement as to when I should reach the goal, I'll be like, okay. This I am sure of.

Q11.1: if there are specific factors that you consider for making a choice, a health care choice, and you wanted to list those factors down what would that be?

RP35: Duration alone. Duration of treatment. Reaching my goals. And when someone says, no – then go elsewhere. I mean, personal health is important. That's all I finally feel. There's nothing that drives me. It's just the goal. That's it the time, the goal, the task on hand, if it is interesting to do and I am passionate about it. Also, the process prescribed. For example, if someone gives me okay, take this is good for you in your long-term then I don't, I usually don't go for that. I want something that cures fast whilst long-term and sustainable. via and taking the medicine. Yeah.

Q12: So how much are you aware that you are full of most of your decisions as a person actually

RP35: I don't believe too much in researching to become sure and aware. I believe as a person, I know. If these things are ticked off, then I'm sure. I can't give a percentage or something...because life varies.

Q12.1: What indicators personally suggest that for you? Points of surety?

RP35: I feel calm when I know I'm sure of the decision and its right. That's how I know I'm probably sure. Sudden confidence comes up. It is, I'm just just thinking when I'm talking to you. Exactly. I have a lot of different perspectives regarding being sure. So first I considered as like, sometimes when I have to do it, it's like advice versus willpower is what I feel, new medications. For example, if I have to be young sports for some field work, I mean, like on the ground for some match at the play and I sprained my leg and I'm not, well, I don't really care about that. So then comes like the confidence. Okay. Suppose I've take medicine now for a few, and once I'm back, I want people who are very very positive and they say, okay, so this can be dealt with and be done it now I'll give you, so so and so meds or procedure. But, if they're like why you did this or that we'll learn to work with as best possible – then I am not very sure of them and I move on.

Q13: Would you call yourself action-oriented?

RP35: Yes. A lot I'm a person who just needs like, to get on yeah. It's in quick solutions because let's face it. It could also be attributed to my generation in terms of like attention span and requirement of this. We can't wait sometimes. Also, my personality, maybe at times, I can't do slow things at all. Like, suppose yoga, for example my motivation is very low to do yoga because it's a very silent, so like that I go up to sleep.

Q14 and Q14.1: in your words if I, if you take one particular example or health care requirement, I mean, you gave me quite a few. Yeah. Right. If you can take a one example of when you're required care and proceeded through the different stages of, you know decision-making and at the same time, the mental stage, could you just give me just one example?

RP35: So I think my muscular issues for the same example it's had on my foot. So at that time, as I told you, it, for some allopathic denied with it, a previous States where it looks at the same. So when I had to undergo that, I was very unsure. And then I look at the, do I was

an Ayurveda before everything. I knew that there is a serious concern because I couldn't even put my foot down. And when I went there, I was still like, okay, may be nothing happens, lost hopes completely. Once they saw and said, its pretty bad. I'm like not happening. I was like, I lost faith. Maybe this is not going to get cured at all. And then I started thinking about my personal choices as to what is happening etc. My future…And I went really low on my own self-esteem. Even hope in any doctors' cure nothing I was positive about. And then I took that time of 15 days of time to feel better about myself. And then I thought, okay, maybe I could do something for this. And then it's when I took to Ayurveda again. Actually that was when I spoke to a lot of people because I have to be sure of what I'm doing and who had the same experience and in what, what is the duration they took and also how far was it successful? So then I didn't stick onto one doctor. Then I had the process of elimination in my head. I also consulted more number of people who had the same experiences, also visited two, three more Ayurveda doctors to check all approaches. And finally, when I added all the information I took one Ayurveda doctor and started the course of process and meds. initially, it was very lethargic. I was not very confident. But then when I had my program is fast approaching, I had all, I had no other go, I had to get better. That's it. So then I took, to following rigorously. While I was following it, I felt a lot better. I perform. And then I was really happy about the result.

Probe on for insight clarity: Perfect. Perfect. Okay. This is very interesting. So so if you know, your self-esteem came back and then you started the Ayurveda and the Google research and all of that. So it's in a way how you took control of your own situation together.

RP35 – yeah.

Q15.1 So how does your understanding of technology, your understanding of your personality and your understanding of your social context, if any, influence your choice in terms of healthcare influence your healthcare choice and processing the information that is suggested by other people.

RP35: Okay. So when it comes to my healthcare of, for non for my, basically when I save it to my beauty con concepts or healthcare, in terms of my skin, et cetera, I go digitally. I use technology a lot because the new videos or whatever that is uploaded that to homemade remedies. And so I take up the bed and then when it comes to my social context, doesn't really affect me a lot. I taught. So when it comes to my personal context, as I told you the same thing, so it's the self-driven.

End of Interview of RP35

Okay. Perfect. Yeah, I think we're done. Thank you for your time.

RP2: Im a psychology student and I am 22. I am hope I have cleared my net exam. So I'm hoping that I will be a lecturer.

Q1: what is your most preferred way of healthcare and why

RP2: I prefer complimentary, I already can read the medicine that is working. But takes time to do the job. But no side effects mainly.

Q1.1: can you explain why you prefer that? Why do you prefer this option?

RP2: When compared to allopathy, when you take Ayurveda/Siddha and Any complementary meds, I have seen they have lesser or no side effects and show greater results. My issue is cystic acute acne and sinusitis. Uh, the allopathic medicines have caused lots of major side effects, including I had a, at point of time, I had a very high fever because of the heat generated with the medicines, but in the case of Ayurveda and over there, I had never faced that. It is just, it was all, uh, or the external medication done internal life on it comfortably.

Q2: What made you choose this particular option amongst the other complimentary options?

RP2: So before I had experimented all sorts of, I went to various doctors for this and I never had a cure for all of the, uh, so I would be given a dual course of two weeks of antibiotics. And after two weeks of antibiotic, then the cystic acne would pop out again causing more sinus. It was a never-ending process. So what I thought was, okay, let me, let me try the alternative ways. And it actually worked, I actually started doing it at home remedies. Those working as doctors then the main remedy they prescribe should work for you. The main goal that has been referred to the doctor and the procedure with the doctor should definitely work. So that is how I started venturing into that. And the lady was actually working for me instead of instructing me.

Q3: what are the modalities or the approach or the sources you use, um, so is of information you use when choosing a healthcare option? What would that be?

RP2: I, uh, what I thought I went by, uh, uh, recommendations from my friends who have undergone the same at one point of time. Uh, what I found was sometimes their skin had worked and this, their skin/nasal issues probably should have been solved, not mine. So I jumped into it and I started venturing into the clinics. I went to every dermatologist in Chennai. I found, I took the prescription and just compared with the other one, my previous dose. And when, when the same, I just, I don't follow the medication and just see how different they are in. I am almost was it around 10 to 15 dermatologist in the past two, two years. Basically, compared what each dermatologist was giving. I have a family full of doctors and they helped me to differentiate between each drug also and I did my own further research. So I knew this, I knew what this drug will do and how this drug will react. So after that only I started taking it. So first, my own approach where I started comparing and then referred to the family for a cross-verification. Loads of googling. Even now, I do for, take all the information things up and three out of the whole, how long does it take for it, for it to work? Yeah. So for when I start course, I first started and after 10 days 30 something, even one pimple are gone. And then I get interested in knowing more about this, uh, medicine and then start Googling more and then check more. So when I, when I have the follow-up next time, I say, I checked online, all these were the things spoken of,: some of it is working. Some not etc…you know. But if it is not working, I'll just ask them with the points I have seen specifically and as fully informed so they can't fool me. If they say, uh,

I agree with, if there is some clash and I argue that that is all it tells me. Also, Yeah. Before, before starting a new doctor Uh, no, I don't do anything much of research only little. Because their perception might be different. Mine will be different so late. I don't have a reference much, after the course of treatment, only if the code works, you do this, but the second follow-up, if doesn't. I start the whole process again.

Q4: So how do you absorb and deal with the new information that you get on when you're digitally researching? When you're looking for a particular health care requirement?

RP2: So see if I, I will put up a gentle term for best Acne care dermatologist in Chennai with experience in sinus resulting issues. So I'll get a list of 10. So for each in clinic name, I will Google and there'll be lots of reviews. Even there'll be contact numbers of the people who put up the review. Sometimes I would call them up and ask. Sometimes it is just going, it's just me reading all the reviews. If it is above four, I will definitely try nothing less than four because I have a, it's been a long process. Right. So that is how I take it. For pop ups content, I have actually not gone into them. I disclose that because I don't know how that will work. I am very sceptical. I don't know how far that is true. So I use the close option and its irritating. I don't engage with that sort of content. Also, because I don't know if it is going to be a failed approach.

Q4.1: So in terms of the healthcare decision, like you said, you prefer Ayurvedic and complimentary. Is that like a delayed decision making?

RP2: I guess I see if I, if I started to postponed, it's gonna get worse. So taking a decision immediately would be helpful for me as well as a doctor to prescribe a course of treatment. I used to be, So if they jump in immediately, no way what ever happened, it's going to be seen the right way, whatever happens in all of it. But due to experience and seeing severe, severe side effects, it is worsening the cause and then its another higher dose of the medicine. And having to change doctors again and again… So no. No longer do I jump. So whatever happens now, after one and a half years with this issue and all the pain. I'm clear if there is something I wait for a day or two, if it doesn't get a result, I'll just go after researching a bit on who can help even within Ayurveda. I won't jump in nowadays. Before I was naïve and did.

Q4.2: So in terms of your decision making, was there like a shift or change in the process?

RP2: If that was until I found out the alternate of medicine, that was a lot of, uh, this confusion happening. I thought this clinic will do me. This will, this will clear this, but nothing worked as soon as they stopped the course. It was just for that, the odd at the time of the pimple and the acne. It was not for detoxing my whole body. So where the alternative focuses on detoxing cleansing the whole system. So they're dangerous. There is no toxic level that causes that. So yeah, so allopathic medicine just focuses for that period of time, but just two months after the course is stopped after the medicine is completely out of your blood, the issue starts to craze again. Okay. So, whereas in Irita or see that at first, they see that you were systems cleansed completely. There's no toxin or something. Gum, external thing is present in your blood. And then after cleansing, they give that, uh, give you the course of medicine and then you see there'll be nothing after that mindless, smallest one will go off, but you get to see 90% of the results that,

Q5: what is the most important, critical aspect that facilitated you to come to Ayurveda as a shift? Um, what would that be?

RP2: Side effects of the allopathic medicine. A lot of it, I had the I'm already wearing a six high power lenses. My power is also high. My eyes should not get that dry. So the medicines had caused so much of dry eyes, which I couldn't, if I, I had keep my eyes closed all the time, it doesn't work. And, uh, yeah. And then my lips started going gray in the acne started doubling up like a storm.

Q6: I'd like to go through some other inner experiences when you made a choice.

Probe on: when you sense that requirement of your acne, uh, what were you at that particular time? What were you doing? What was your scenario

RP2: It would exactly pop up before my exam, like two weeks before them, I would have just seen the table and they'll already be an acne or my face. Okay. I thought I, it was definitely not because of stress. I'm not a person who takes this one. Um, no, not at the school after school. Uh, then I thought, uh, it was, it was randomly coming, but it never used to go to it would stay. So I thought, okay, this needs attention.

Probe on: Yeah. So when you, when you made the choice of, um, Ayurveda what was your state of mind prior to that?

RP2: I was a bit hesitant/sceptical even for it to work on me properly. How will this work? Those kind of thoughts. So it was just too much of doubts. I didn't want to leave that alone also because of the pain. Right. I just, okay. Yeah. It was not completely satisfied at first when I chose it. Right. And then I, said okay. Let me try. No side effects anyway. And that was the main thing that I had. I was confident that this look has nothing to lose for me, but it may work.

Probe on: So once you made the choice, what was your mindset?

RP2: I was actually happy. I was confident to move forward with the course of treatment, actually. Especially from seeing results. Well, actually, uh, it's been four months and say I do not have any new acne and resulting sinus. Even the old ones and mucus issues are gone. I have not yet started my treatment yet. Just the cleansing procedure in Ayurveda happened and nothing else, not even a scar is there now. It was severe and now nothing.

Probe on: Well, that's great. So at this particular moment, in regards to the choice you made and what is your state of mind,

RP2: I feel I have taken the right decision and I'm satisfied with, uh, with the procedure and the Ayurvedic medicine I'm using.

Probe on: Specify the feelings that you ignored? And specify the feelings you held on to?

RP2: Actually. I never had anything. I am basically focused on everything that I felt and read. I processed everything. I wouldn't say that I didn't ignore, but I had exams coming up so, I just really went with the flow.

Probe on: And if I would ask you what feelings you held on to, will the, do you remember those

RP2: Let's try it. What's to lose.

Probe on: What feeling overpowered in the decision.

RP2: Well, overpower. Just go for it was running on my mind I think.

Probe on: And why do you feel that that overpower other emotions?

RP2: I had a confidence. This is definitely going to show me this result. I just have the confidence. I don't know where it came from. I just have the confidence. Okay. Let me give it a shot. Its just confidence...a gut feeling, like the doubt disappeared and I felt peace.

Q8: if I were to ask you, is there any process you employ to arrive at your own need for healthcare, what would it be?

RP2: Um, no, what I do is I just note down what my issue is, and I'll see if we can solve it on their own, or if I need assistance, if they are going to be needing assistance, then I left to take it out of the, if I get the doctor's appointment or if I have to move to some other doctor that there's a clash of needs that is, uh, if not, I'm going to have someone at home to help me out. So I don't have actually a proper exact step as you see. But I can say this...its like I wait based on my pain and then start. the information search, search on Google. If I'm able to get dermatologist, go to different dermatologists, see the reviews. I mean, I will see the reviews and then go, and then based on what they recommend, you have a family network that will help you out in understanding each drug or each requirement or each treatment of home remedy or whatever, right. Yeah, exactly.

Q8.1 Do you utilize this process when faced with options for all healthcare requirements?

RP2: Yeah, I do. But in the end I go with what I feel good about. It's like a gut feeling. Let me give you an example, so when I talked to the doctor, she will ask me so many questions and I would wait for the answer. So then if I feel okay, this doctor will be able to help me, then I know, like, you just know, when you talk to someone, you'll have that feeling. That is how it works. Like another instance, I thought they went out and personally, what, what they did was they just gave her the ointment and the medication, which didn't work. So I kept changing and finally one, uh, the doctor was good with the diagnosis and everything. The pimple was gone for a few, few months, and then again, it didn't. So then I thought, okay, neither of this is working. So let me talk to him. The doctor, she was the one who told me this won't work until you cleanse your system. So she explained the importance of every step and how to go about the process and patiently answered questions and gave so much information, everything. She just told me what the whole process and how would it lead

results. So, you know, if you get more information, you will almost be attracted to that. So that is my way. It's a fully informed decision, rather than my parents' blind faith approach. Because, I have tried and felt unsatisfied. So I thought, okay, let me, let, let me ask the doctor and let her explain. She did. She explained me the whole process. And that's how I decided.

Q9.1.now, you said that you're fully into that the last time you had a healthcare requirement. Also, you had a similar approach?

RP2: Yes!

Q10: Why do you feel the necessity to be, to be very, very sure before fixing a choice?

RP2: Because I have experienced, and spent a lot with the previous doctors unnecessarily. my mom said, if it is not going, you're not doing anything, you're going to leave it like that. I can't take that as my facial way. I have to change my issue. Never give up and no No! for an answer. So basic painful life experiences and misdiagnoses. Yeah. I would say if someone asked me how to get over the acne, I can definitely guide them to do what they want. Seriously. I've learned so much.

Q11: can you, uh, describe your mechanism to be of a decision? can you describe your process?

RP2: Yeah, so starting, I just, uh, I even review the area, the place I'll go to the doctor. I will follow, um, his advice and then see, I have to continue. See everyone doesn't give you, doesn't ask you to start the medication the very next day you visit the doctor. So I enlist. Cool. I will see how he advises me. And if he's able to diagnose, then I will ask my questions to see if, uh, if I'm right for his understanding. And then I proceed do not that I just jump into whatever the medicine he gives it. It's like, Okay. That's more like a gut feeling on all of them. Okay.

Q11.1: So if I were to tell you, if I were to ask you the process of like specific factors that you consider when making a choice, what would that be?

RP2: It would be the experience of the doctor, then the review from the others that is important because if there is no review from others, then how can I trust the place then, um, then me personally going, and then that way, when he/she gives the diagnosis and then I go, then I accept this treatment plan. So these are the factors that I consider to be each being clear with the diagnosis. He should not go out on the same point again and again – then something is fishy! Then they should give the factors that the data and evidence is there and can be held responsible. Like how to say, the justification is genuine, adds up and is right – makes sense to me and my need specifically not anyone else.

Q12: if I would ask you, how much are you aware that you are sure of most of your decisions?

RP2: Mostly sure based on all my reading and information checks. You know no one can be completely sure. And there are other factors like something may happen financially, or family ties etc. The situation controls I believe so we can control what only we can. Yeah,

sure. I know, I know the situation, some things that are practical influences you can say, so that 15% is on the go. I approach the situation. If I have something coming up in, I need to know about, you know, the details at least to know I can solve it. I can handle it. Well, that is how I go for it. I don't just blindly jump into it because I know to go to be a failure. For sure.

Q12.1: So can you specify if there were, if you can, any specific points of your surety of your surety?

RP2: my confidence. It is just, I am them confident. This will work. Doubts disappeared.

Q13: Do you call yourself action oriented as a person? Explain your rationale.

RP2: Yeah. So for, for the acne and sinus situation, um, I was the one who followed up with the doctor for the treatment plan and I made sure that she gave me everything correctly. She gave me all the information correctly. I made a plan for her to check on me that I'm following it on daily basis. I give her reports and she gives me – like a monitoring of my progress. That's me being action-oriented for myself.

Q15: in case you felt frustrated with oncoming information and you basically didn't even look into it. Right? Because we haven't asked you one question. So in case you feel frustrated or, you know, like angry or you don't look in the information that comes to you via content marketing, uh, can you explain how, in terms of the, for those of your understanding of technology, in terms of understanding of yourself as a personality and your social context influences that particular reaction for you?

RP2: I actually don't consider much of other. I don't let it influence. I will see the pros and cons. Then only take the decision I will. If someone is small, I don't just go follow the norm. I just, okay. I need to check upon it and then say, okay, then I approve with them. It is not, uh, something if someone says, yes, okay, this is right for me. I don't just go do it that way. I need time to know why is it? No. Or why is it? So I just don't let it influence me, Even if I read something up and it says something bad, I just check it up with the expert, the, of [inaudible] condition. So it is not right. It is not, it doesn't do justice. Right.

Same for content marketing like that pop ups you said. I don't go into them. I don't use an app to block or something. I disclose it to the is, ask me, why do you want to close this out? I'm not interested. That is the option I do. And I actually don't get much of these very rarely when I'm searching it. My mobile only I get not in my laptop or it doesn't matter much. I don't focus on them much.

End of Interview of RP2.

RP13: Im from Udupi, India. 25 years old. I am a lawyer by profession, but am a budding tennis player and social worker as well. I have chronic back pain and epilepsy.

Q1: What is your most preferred healthcare approach and why?

RP13: Ayurveda if a choice, but I believe in my own approach of making lifestyle changes and self-developed my exercises. I had two instances where, um, uh, where he hit me so strong, that the doctors, are not taking care of my health is something that perspective. So, I

wanted to know how epilepsy comes to and what can I do take care of myself as everyone is not always going to be around. So I thought that, you know, to help me through that, I need to process certain information and certain things that I need to do during those situations. I learned about my body and literally learned how my body functions, like, you know, where, where does my, you know, body go wrong with when and where? So I found, uh, doing intense workout and all that. My body doesn't accept that HIIT. Uh, so, and also I learned that the blood flow that goes in my body, it wasn't sufficient to the head. Right. So, and I ensure that it exists to fulfil that also build up suddenly.

Q1.1 Why is this your preferred option?

RP13: I developed, a phobia towards going to hospitals because of all the meds and injections etc. So I started to prefer self-care. So having to have a kind of deficiency, or I don't know what, it's, what they call it, but having to have this kind of dangerous thing. So I thought, um, being adequate with my own intelligence, how our body functions, it was best option. So I never expect that I was never dependent on someone. That's why I prefer may be. Also, Fear. Fear, fear of losing things in life. Like a lessening the risks in my life which was very much already. Also, not being a burden on others. Everything should be me.

Q3: What Your sources of information, your modality for choosing self-prescribed and developed healthcare?

RP13: I saw some informations. Yeah. But really it was Google for me to help. Yeah. Yeah. Google for me. And then as being a social worker, I began to learn things. So I thought, okay, it's good. So that again, lesson nights, and then there's something lately. I been doing that for being as sportsman. Also. I contributed something to my health and all that, I guess. So I have not shied away. That's all.

Q4: So how do you observe and deal with the new information you get when you're researching about your health care requirements? So say for example, you're not researching about epilepsy or researching about health care requirement. How do you absorb and deal with new information that keeps coming up? Like, you know, content marketing.

RP13: You can't do much only, I guess, push it away and the rest actually. Also, I am responsible for the content being pushed because I searched with terms so I can't be bothered. But, yeah I push most of it away if it doesn't interest me. Some information on the blood flow - that was a new information and good information, then I took it slightly because I am the one who responsible for all this stuff. So can I say, like, it depends on what kind of information is sent to you. So for example, it is, if it's very interesting about you and your blood flow and all of that, then you look into it. But if it's about medicines or what you can do, then you don't look at it.

Q4.1: So is there delayed decision making in terms of your healthcare seeking?

RP13: I give it time, actually. We don't. I know in India also, there's a saying that you don't implement something quickly or something. It doesn't happen anymore. It's another, it's a democratic country. So nothing happens quickly. So that is good that I give to my body also a slow process of waiting and doing treatment. And that is time I wait, I process that

information. I will also practically do it if it works – experiment a bit on myself. Mostly. I don't quickly react to things. Yeah. You process it. And then we confirm the messages. You can, you know, rely on Google, always, you know, sometimes. Then experiment on myself in a small way. Then full-fledged.

Q4.2: Was there a shift in response from initial to later stages.

RP13: So for instance, recently I have back pain. Okay. See, you can get your back man, you know, leave and all that. So I first started with the know and, uh, uh, reduction of my, and I intense exercising. I used to cycle around 20 kilometers. So I stopped that first one, pop that. And then I waited for something to probably get healed in this type, in this, and then it'll be months. So, and then I began taking pain now in India. So I took that. And then, uh, that wasn't enough there wasn't so aggregated heal my pain. And then slowly I approached the doctor when I think so she was in a homeopathic doctor, I guess he exercised, she asked me to go hard with a yoga thing, the first push in yoga. So I tried that, but it was hurting my knee. So I thought, okay, it's not that. And then slowly, they even asked me to take homeo medicine over there, going on like medication, like, you know, drinking that smoothie of moringa leaves So they asked me to have that. And once I had that, then I any improvement in my body, I was more by body. Had that. The more of my brain said that Come on, you're not supposed to betray us like this. Okay. It doesn't help. It came home. Then I did, I did tell my father, I had this pain. So since he has a big history of back pain and I'm back disclosed, so he was explaining, I know, explaining those things. So he told me, that's what you do. One thing I will say, I recommend say, do it consistently say anything that you need to do is should have consistency. So he advised me to do that. Then, uh, he also advised to, you know, sit in the proper position, then sleep in a position that you need to say. That's when I learned to sleep, how we, we learn to sleep in right position. That's how I do it. Give it time, giving it time might take things slow. I also understood gradual effects are better.

Q5: What is the most critical aspect that facilitated this approach that made this approach come to be sought?

RP13: For instance, for my back. My dad also has. I see him walk now, I don't want to be like that. He took meds didn't work. So, better I take control of my health. We get old someday. I don't want to be that. I don't want to be a pressure to someone. So that, yeah, that was the thing that prompted me to not do. Yeah. I understood. We need to not understand the situation. So they don't have to say in every situation, not only your health influences or affects you, it also affects someone else. I came to understand that.

Q6: When you made this choice of taking your own care to yourself, then we'll be in our experiences that people go through. So I'd like to go through some prompts for your inner experience, and then you can answer those prompts, right?
Probe on: what was your state of mind prior to your choice?

RP13: So the state of mine was probably, it might get healed someday. Yeah. There was one thing they are going to give. And first thing you obviously get many weaker doctor or something, some homeopathic doctor. And then I thought, okay, probably we get here the treatment. How can they know? Because there have always a determination I want, do I want to be a burden? All of this was the first priority again, but still you cannot sit down

during this long in one place and then play tennis again was important. Anything will take time to heal was my thought. So it doesn't happen instantly. That was my thought process.

Also, I was angry on myself for damaging the back. Because I play tennis which means I have to miss matches and you get annoyed. I know at one point of the night you get, you get up in the night and you find your back responsible for you not being able to get up. You're not to go out of the bed. What are you doing? And all that. That was a worst situation for me. So I thought that if you need to get out somehow my thought process and my understanding more of my body is needed. That's how…

Probe on: Once you made the choice of, you know, doing your exercises and everything on your own, what was running in your mind at that time

RP13: Skeptical. Nothing will happen. I'm doomed. But I will try because I have my goal. I was thinking, you know, suddenly I was saying it won't be fine ever may be. But I still like give time. And I guess I was determined to get out of it. So at certain point I was like, okay, it's better. And then slowly there was a gradual improvement I saw with my own self-developed routine and treatment. That belief to get out helped may be…not sure.

Probe on: Whats your state of mind now in relation to your choice of self-care?

RP13: Yeah, I do. I feel really happy. I have not much back pain and I feel, I feel that I took, I know I was able to learn something about myself. I know, despite it all doctors being, you know, you know, the doctor it's of their own field, I also understand it is also partial responsibility of you to normal your own body. So I understood that. And secondly, I think I'm happy. So doing consistently is something you need to do to keep yourself out of some pain. You need to find the right requirement for what you need to do and what can be prescribed. In my case, I learned my body and researched and did what was needed.

Probe on: did you ignore any particular feelings at that particular time of making the decision?

RP13: I never gave any specific idea for me to ignore because I understand any human being as a mixed people. So I gave importance to every feeling and also submit certain decisions shouldn't be taken in an instance of feeling and that kind of feeling. I didn't even give a room for, you know, being lazy that you don't need to, that I don't do. I didn't give them, I didn't get with room for that. That I ignored…idea of lazy – may be.

Probe on: Feelings held on to?

RP13: Passion to get back to playing tennis. Believing in the videos and stuff I saw and implemented.

Q7: How do you feel that understanding takes over your digital research for your health care requirement?

RP13: I like, I know saying something, then you must do that. So I was that in that position, probably instigated that feeling and we did go do something. I think. So in that instance, as I should have processed information, and then I told you as before, I don't like to sticking in one place. So, I need to get up and do stuff. So, I learned that when something instigates you and instigates me, you have to go learn about it. So in that instance, I, I gained a lot. I had a back problem. My goal was tennis, so, I went and learned all google had to offer about it. That's how I understood the pain, the goal to get out and do – I started google more possibilities etc based on my need to play tennis again.

Probe on: did you get like frustrated with the information that you are getting all the time?

RP13: I was not frustrated about the information, but the practical part where they had that instance where take this moringa leaves etc…I was angry.

Probe on: Well, what about faith in the data that you saw on Google and stuff?

RP13: My emotion on information was totally high. Google was like God for me sitting with pain. You always pushing me to go for it within me. But, that doesn't mean I read and believe all. I read, and since I know my body, I see if it will fit my need. Then only experiment. I don't want other problems.

Q8: So is there like a process you employ to arrive at your own health care requirement?

RP13: I don't know the process that you have it more technically or what do you call it in terms of inner scientific and methods, but we have our own ways, you know, to understand that what is needed. And you know, I feel that consistent doing of certain required things for your body, is better than medicines. There was information processing a lot for me. So, Yeah, there may be a process. Let me explain. I know I went to a doctor first. I stopped and it wasn't working. Then I went to a doctor saying that, uh, I stopped cycling, but it wasn't helping it. And what should I do? And then she guided me and then that wasn't working. And, uh, and that was a process. I have to understand, not to take things on my own, but also to have an understanding and you have others, you know, you can't be too trusting of others. So I went collected information. What was really working on me. I proceeded along with it. What wasn't working. I stopped, I guess it doesn't mean that I didn't give it time. I gave time. Wasn't working. Basic, experimenting on my own self. Yeah. It was more to kind of experiment. I didn't have to, you know, grab all the sudden information that just because some doctor said might be good on my body. It doesn't mean because he is a doctor he knows me more...I know myself more than anyone. So I trust only myself and my knowledge, research and experimentation.

Q9: So when you're faced with any healthcare requirement, is this the same process you do?

RP13: I think so…I don't do the jumping to conclusion thing. I process. Also, it depends on that particular need. So whatever, if it's a one that you can give time, you take time, then you take you action...you know.

Q10: why do you feel the necessity to be sure before fixing on a choice or a healthcare procedure?

RP13: My own experiences, good, bad and ugly.

Q11: Describe your mechanism to be sure of a decision?

RP13: My mechanism to be sure. Yeah. Let's see. I give a time. I give time, I google, I find information suitable to my body and then I'm convinced. Even if I do fail, it will only be my decision. I don't usually. I know my need and am sure.

Q11.1: What are the important factors you consider when you make a healthcare choice?

RP13: Um, firstly, if I get anything weird happening in my body, I, firstly, I become aware of it. It was, you need to be, you can't be not aware. So I'm aware of it. Firstly, you need to be aware first that whats happening. Then, whether it is dangerous and non-dangerous, and the whole family is going to be affected or not. Then you need to work on it and you see options – again Google and see best modes for the requirement. So I understand that you need to first be aware of yourself and then work on it, work totally on it. Once you work on it, then give certain, uh, I give time, mostly thing. I give it time. Then time, you know, if time isn't going to make things good, the bad. And then, then we learn it's bad. That's how I, I don't know if this method is going to be effective on me, but I believe, yeah, there was the most effective way. I'll give it time for sleep. And during all this, I analyze myself even like a specimen if I can say – study myself you know. You have your own understanding on what things arise, when does it arise and all that. So I first know about myself and then I approach, I don't immediately apply anything. I make sure my body I understand. Then what options? How they are and was it for others? And then I go on for further input. Like you go for a doctor/ayurvedic expert etc, informative person.

Also, I do this because, so I might go see a doctor and then I'll explain what things are like. And he might ever get a bit of a better picture to treat me. And also explaining that to a doctor might help him even more. Then if he's got, you know probable ideas. If that works with the information I have, then yes. If not, Yeah. I give that time first and then I give time and then wait for, you know, if that doesn't work, I don't jump into anything and give it time. So I need to understand all that before choosing one. Or I move on to another approach. I'm not fixated to one approach or style – I like to experiment on myself and see.

Q12: how much can you say you are aware of that you are sure. Of most of the decisions,

RP13: I am partially confident, not confident fully in the decision, I try to be more adaptive.

Q13: would you call yourself action-oriented?.

RP13

Yes, in healthcare decisions mainly. Generally, of course depends on the situation. Because health always my first thought is get back to playing tennis and helping people as a social worker.

Q15: In case you feel frustrated with those kind of messages that come up. How do you deal with it? Like in terms of technology and apps you use, do you use ad blockers or any sort of devices? Do you from a consumer I'm going to, do you like your mental state? Do you get angry? Do you feel emotions from your social context? Like how does your understanding of technology understanding of your personality and your social context, determine how you deal with these sort of messages?

RP13: I understand that everybody works for a living. So they are not doing because, they want to but because they have to. I'm also responsible for their targeting as I key in the search terms…that's what you call I think. But, I don't stay long with that information, but certain information you might get to learn from a lot. Depends.

End of interview

APPENDIX D – PARTICIPANT CONSENT FORM

Middlesex University London

Participant Identification Number:

CONSENT FORM

Title of Project: Cognitive Dissonance within Generation Z Shaping Consumer Behaviour: A Case of the Indian Healthcare Industry

Name of Researcher: Durga Vellore Nagarajan

Please initial box

1. I confirm that I have read and understand the information sheet dated ....………….……for the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason and without penalty .

3. I agree that this form that bears my name and signature may be seen by a designated auditor.

4. I agree that my non-identifiable research data may be stored in National Archives and be used anonymously by others for future research. I am

assured that the confidentiality of my data will be upheld through the removal of any personal identifiers.

Delete 5 and or 6 if not applicable:

5. I understand that my interview may be taped and subsequently transcribed.

6. I agree to take part in the above study.

_____   _____
                                                              _____
Name of participant   Date   Signature

_____   _____
                                                              _____
Name of person taking consent   Date   Signature
(if different from researcher)

_____   _____
                                                              _____
Researcher   Date   Signature

1 copy for participant; 1 copy for researcher