

Social media content strategy for DMOs: examining linguistic style in times of crisis

Abstract:

The COVID-19 outbreak has drastically impacted destination marketing organisations' (DMOs) communication and consumer engagement on social media. The study examines consumer engagement during different stages of the COVID-19 pandemic (pre-COVID, lockdown, post-lockdown) based on the language used by DMOs in their social media communications. An analysis of 21,677 tweets recording 3.63 million impressions on 23 official Indian DMOs' Twitter handles was undertaken. The Linguistic Inquiry and Word Count dictionary examined the tweets' linguistic characteristics. Negative binomial regression was employed to test the hypotheses. Results show that 1) consumer engagement on Twitter, measured as likes and retweets, increased during lockdown; 2) the use of linguistic text features by DMOs has changed with the pandemic stages; and 3) while cognition significantly explained the changes in consumer engagement, positive emotion partially explained, and confidence failed to account for the changes. The findings provide operational guidance for DMOs on how to design social media content.

Keywords: Cognitive load theory; Content marketing; Consumer engagement; COVID-19 pandemic; Destination marketing; Twitter; Tourism crisis

1. Introduction

The contemporary world is increasingly susceptible to crises that have profound implications for both human life and the global economy. The COVID-19 pandemic serves as a stark illustration of the devastating impact such crises can have on the global tourism industry, leading to a significant downturn in tourism activities worldwide (Kaczmarek et al., 2021; Rasoolimanesh et al., 2021). Tourism destinations, in particular, are highly vulnerable to crises due to the hedonic nature of consumption, international travel, and the involvement of multiple stakeholders (Ritchie & Jiang, 2019). The COVID-19 crisis has laid bare the tourism sector's fragility, highlighting the critical importance of crisis communication for destination managers. Crisis communication involves managing and disseminating information during a crisis, focusing on response strategies while considering the crisis scenario and public perceptions (Wang & Dong, 2017). The impact of the pandemic was particularly acute for Destination Marketing Organizations (DMOs), as their primary responsibility revolves around promoting and attracting visitors to their respective destinations. Hence, crisis communication became a paramount aspect of destination marketing during this tumultuous time, aimed at rebuilding trust, reducing uncertainty, and supporting the tourism industry's recovery (Pachucki et al., 2022a; Rastegar et al., 2021). Consequently, DMOs had to pivot their focus toward crisis communication to address travellers' concerns and anxieties amid the pandemic.

Notably, social media communication emerged as a pivotal tool during the pandemic, as people grappled with social distancing and isolation (Pachucki et al., 2022a). Social media facilitates continuous interaction between marketers and consumers, extending brands' outreach and engagement with their consumers (Kim & Kim, 2020). Tourism communication underwent a seismic shift as marketers increasingly relied on social media (Moorman & McCarthy, 2021). As a result, scholars underscored the need for a deeper understanding of DMOs' social media communication, particularly during crises (Wut et al., 2021; Zenker & Kock, 2020). To adapt

comprehensively to evolving consumer behaviour, a thorough understanding of the shifts in the social media landscape became indispensable for crafting a distinctive social media communication strategy (Liu-Lastres, 2022). This underscores the importance of exploring how the pandemic has reshaped DMOs' social media communications about their destinations.

While travel and tourism literature has extensively explored crisis management, the role of social media in crisis communication has been relatively understudied (e.g., hotel industry- Wong et al., 2021; airlines industry - Leung et al., 2023; DMOs - Pachucki et al., 2022a, Pachucki et al., 2022b). A well-crafted social media content strategy for DMOs holds the potential to raise awareness, foster positive attitudes, and strengthen destination image (Kiráľová & Pavlíčka, 2015; Mao et al., 2020), all of which are crucial during and after a crisis. Despite some studies exploring the impact of social media usage on crisis communication results and organisational strategies (e.g., Rydén et al., 2020; Wang & Dong, 2017), research on "how the message is communicated" remains limited (Pachucki et al., 2022a). This knowledge gap could empower destination managers to tailor their social media content to align with evolving consumer psychological states during pandemic periods.

A pertinent cognitive psychology theory, Cognitive Load Theory (CLT), underscores the need to manage cognitive load for effective information processing, often achieved through strategies like simplifying complex information (Sweller, 2011). Extant communication research have taken support of Media Richness Theory (MRT) to compare visual elements with non-visual elements in posts, finding that visual posts generate higher engagement, particularly those with photos and videos (Li & Xie, 2020; Annamalai et al., 2023). In contrast to MRT, which focuses on communication channel effectiveness during crises (Pachucki et al., 2022a), CLT helps to explain the influence of linguistic factors of a post on consumer engagement by affecting the overall complexity and appeal of a message. However, there is limited knowledge

about the linguistic aspects of text content and its impact on consumer engagement in social media crisis communication for tourism destinations.

Linguistic styles used in online messages have been found to influence user perceptions (Wang et al., 2019). Understanding the linguistic styles that drive consumer engagement, especially during and after a crisis, is crucial. Research has underscored the importance of marketing communication during crises that conveys trust, resilience, and hope (Ertimur & Coskuner-Balli, 2021), making the analysis of linguistic styles embedded in the textual social media messages particularly relevant. However, there is limited literature on how DMOs can leverage the textual components of social media communication to instil confidence and engage consumers during uncertain times.

Recent destination marketing literature has explored cognitive information sharing (Chandrasekaran et al., 2022) and perceived contingency (Pachucki et al., 2021a). Recognising the significant synergy between cognitive information sharing and perception-based contingency in DMOs' social media communication is essential. Integrating these two elements enhances communication effectiveness, drives engagement, delivers relevant and personalised content, and allows DMOs to adapt to changing perceptions and needs, and prepare for future travel (Wang et al., 2019). To address this gap, this study examines the development of DMO communication from the pre-pandemic to the post-pandemic era and its impact on consumer engagement during various phases (pre-pandemic, during the lockdown, and post-lockdown). The temporal dimension allows us to explore the dynamic nature of crisis communication within the travel and tourism industry. Specifically, we investigate how DMOs responded to the crisis and their communication strategies with stakeholders. Furthermore, we explore how consumer engagement is influenced by different content strategies across various crisis phases. Therefore, this study specifically delves into the alterations in the textual content of DMOs' social media communication and consumer engagement induced by COVID-19. Furthermore,

1 this study elucidates the impact of textual content characteristics on consumer engagement
2 across various COVID-19 stages, offering operational guidance for DMOs in formulating
3 effective social media content strategies. This leads us to the two fundamental research
4 questions guiding our study:

5 • RQ1: How has the COVID-19 pandemic influenced (i) the consumer engagement and (ii)
6 the linguistic features in destination social media textual content?

7 • RQ2: How has the COVID-19 pandemic influenced consumer engagement with the textual
8 features in destination social media content?

9 This study is grounded in CLT (Sweller, 2011), which posits that communication effectiveness
10 hinges on conveying a message clearly and with minimal cognitive load for consumers. CLT
11 has been extensively employed to study consumer online behaviour, particularly during crisis
12 times when consumers must rapidly assimilate new information and adapt their behaviour
13 (Islam et al., 2020). CLT offers insights into factors influencing social media fatigue, making
14 it particularly relevant for enhancing communication effectiveness during crises like COVID-
15 19. To address these research objectives, we analysed 21,677 tweets shared by 23 official
16 Indian DMOs' Twitter handles in the pre-COVID, during-lockdown, and post-lockdown stages.

17 The paper is structured as follows: We commence with a review of relevant literature to
18 develop study hypotheses, followed by a discussion of methodology and data analysis. The
19 results are subsequently examined and contextualised within existing academic literature. We
20 conclude by presenting implications for the academic and practitioner communities and
21 offering guidance for future research endeavours.

2. Literature review and hypothesis development

2.1 Cognitive Load Theory

CLT posits that the human working memory possesses a finite capacity, and excessive information can lead to cognitive overload (Sweller, 2011). Originally conceptualized for instructional sciences, CLT has subsequently been widely used in explaining human online behaviour (Islam et al., 2020). CLT delineates the cognitive processes involved in information processing and categorizes them into three essential components: intrinsic load, extraneous load, and germane load (Sweller, 2011). Intrinsic load relates to the inherent complexity of the information being processed (Kirschner et al., 2018). In social media, this complexity may encompass the cognitive demands of interpreting sophisticated advertisements, assessing the credibility of product reviews, or comprehending detailed textual and visual content. Intrinsic load can be useful in guiding the development of content that aligns with the cognitive capabilities of specific target group, thus influencing their interactions and decisions within the digital ecosystem. Extraneous load pertains to the cognitive demands imposed by the presentation or delivery of information (Kirschner et al., 2018). In the context of social media, extraneous load may be influenced by factors such as the usability of the platform, the design and layout of posts, or the clarity of content presentation. Reducing extraneous load can enhance the user experience, facilitating smoother navigation and more immersive interactions with content, thereby impacting user engagement patterns in social media settings. Finally, germane load denotes the cognitive effort required for deep processing and meaningful interaction with information (Sweller, 2011). In the context of social media, germane load extends to activities such as critical analysis, reflective thinking, and the generation of thoughtful responses to content. Understanding germane load may be useful in informing strategies that encourage users to engage in thoughtful dialogues and reflective interactions. While intrinsic and extraneous load are a hinderance, germane load can actually help

engagement (Pittman & Haley, 2023). Ideal social media communication hence is one where information is presented to be persuasive and actionable but not to the extent that it overwhelms the consumer (Pittman & Haley, 2023).

Within the realm of DMOs' content strategy, CLT holds relevance due to its explanatory capacity. CLT suggests that the effectiveness of communication depends on the ease of information processing, minimizing the cognitive load on working memory to enhance understanding (Sweller, 2011). In particular, message attributes play a pivotal role in shaping consumer engagement, which can fluctuate based on contextual factors like ambiguity or certainty. The linguistic cues, along with visual and proximal cues and channel synchronicity, impact content load, which is especially important in crisis communication, where the message plays a central role in uncertain and ambiguous situations (Moffett et al., 2021). Hence, CLT offers robust support for the exploration of linguistic features utilized by DMOs and their impact on consumers during various phases of a crisis.

2.2 Social media and crisis communication

Social media has been recognized as a game changer for DMOs in engaging with their consumers (Rydén et al., 2020). Platforms like Facebook and Twitter provide opportunities for travellers to share their experiences while offering tourism entities a channel to promote their services and products. The benefits of social media for DMOs, including increased brand awareness, engagement, brand image, advocacy, and brand relationships, have been extensively studied (De Moya & Jain, 2013; Királ'ová & Pavlíčka, 2015). A well-crafted content strategy on social media can enhance engagement, visibility, positive perception, reputation, and ultimately drive higher visitation rates for destinations (Chandrasekaran et al., 2022; Királ'ová & Pavlíčka, 2015). Using social media during crises improves organizational reputation and decreases negative word-of-mouth (Austin & Gaither, 2019) while reducing perceived crisis responsibility (Xu, 2020). It enables relationship-building with stakeholders

(Eriksson, 2018) and facilitates reciprocal communication, known as "secondary crisis communication" (Luo & Zhai, 2017), where consumers express concerns and engage through liking, commenting, and sharing (Utz et al., 2013).

The COVID-19 pandemic has underscored the importance of social media in managing consumer brand engagement, as it experienced an unexpected surge in usage due to people spending less time outside and more time online (Mundel & Yang, 2021; Wang et al., 2022).

This surge can be attributed to the immersive nature of the social media experience, which provides consumers with an avenue to temporarily escape from life's challenges and, in doing so, fosters a sense of empowerment and control (Agarwal & Karahanna, 2000). To communicate effectively during crises, DMOs should understand consumers' psychological mind states and changing expectations. During COVID-19 lockdowns, increased time spent on social media due to limited in-person communication (Moorman & McCarthy, 2021) led consumers to seek solace, reminisce about past trips, and engage with social media content (Gretzel et al., 2020). Social media engagement through likes, comments, and shares is higher during crises than before (Pachucki et al., 2022a). These actions reflect consumers' involvement and cognitive processing of content (Abid et al., 2023). Consequently, heightened engagement with social media posts is expected during the crisis phase. With consumers gradually returning to normalcy post-crisis, we expect the engagement levels to mellow down compared to the crisis phase.

On social media, consumers engage through liking, retweeting/sharing, and replying/commenting. Liking signifies support for the content and the brand, while retweeting amplifies the message's credibility and extends its reach (Dolan et al., 2019). Replies may indicate brand affinity or aversion, potentially altering the post's meaning (Swani & Milne, 2017). Therefore, liking and retweeting are ideally suited to measure positive engagement (Tafesse & Wien, 2018; Tafesse, 2015). In line with this, we hypothesise:

H1: Consumer engagement with DMO posts on social media, measured as (a) likes and (b) retweets, is higher during lockdown than pre-Covid and post-lockdown.

2.3 Importance of textual content during crisis

Social media engagement involves the cognitive and emotional involvement of consumers (Smith & Gallicano, 2015). Consumers progress from interaction to a deeper immersion with social media content (Campbell et al., 2014). Given that current circumstances influence content interpretation (Keller, 2012), crises require appropriate content creation (Platon, 2020). The COVID-19 pandemic, as a health crisis, increases consumer uncertainty and necessitates a new form of social coexistence (Itani & Hollebeek, 2021). Crises create unexpected cognitive load and require decisive human intervention (Koselleck & Richter, 2006). To counter cognitive overload, positive emotions are beneficial (Fredrickson & Branigan, 2005), while decisive intervention fosters certainty and confidence (Koselleck & Richter, 2006). Hence, destination marketers should create content that elicits positive emotions and confidence, helping consumers cope with uncertainty. Since the linguistic expressions in social media texts are expected to drive consumer engagement (Pachucki et al., 2022a), this study focuses on crisis-induced changes in linguistic expressions of cognition, positive emotions, and confidence to influence consumer response. Figure 1 shows the theoretical framework underlying this study.

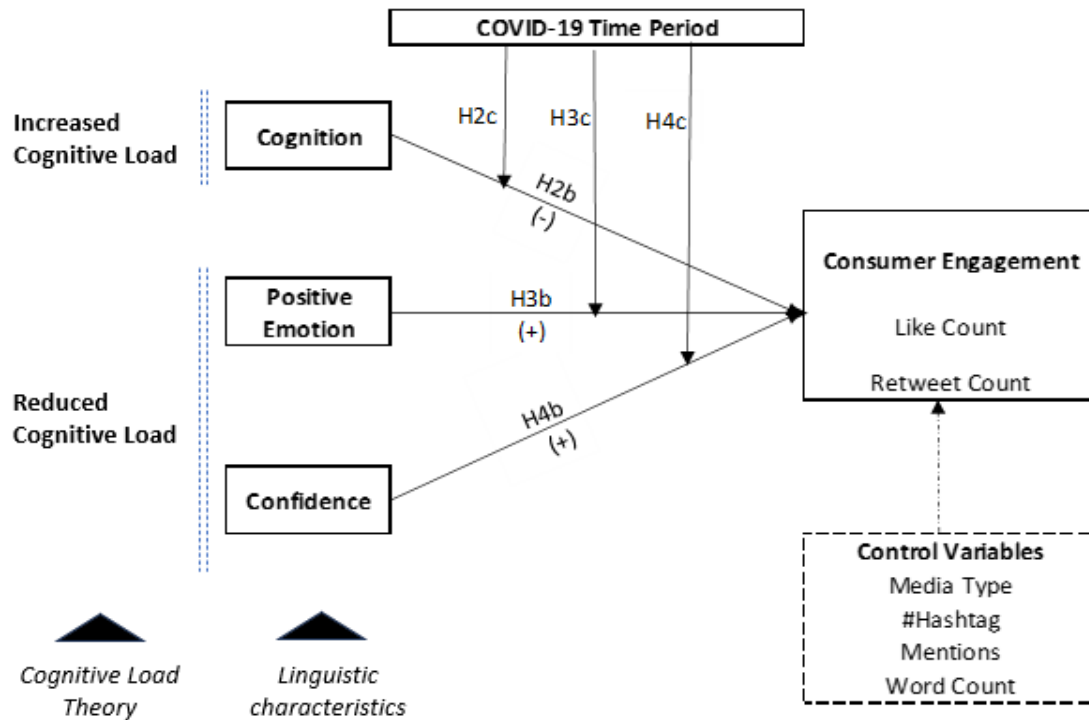


Figure 1 Caption: Theoretical framework

Figure 1 Alt Text: A pictorial representation of the framework detailing the influence of the independent variables, namely cognition, positive emotion, and confidence, on consumer engagement moderated by the COVID-19 phases.

2.3.1 Cognition

Cognitive language, characterized by words like "because" and "know," conveys causation and information dissemination (Brownlow, 2020). Cognitive messages that focus on the rational aspects of a product/service tend to overload consumers (Hlee et al., 2021). Complex and cognitively demanding language may result in a higher cognitive load for the consumer (Joksimovic et al., 2014). According to CLT, high extraneous cognitive load (relating to how information is presented; Sweller, 2011), in this case, due to complex language, may lead to reduced engagement as consumers may find it harder to process the information presented. In highly unstable conditions, providing specific information for rational processing becomes challenging (Pachucki et al., 2022a). Crises occur unexpectedly, triggering strong public responses that hinder systematic and deliberate information appraisal (Lu & Huang, 2018). During the COVID-19 pandemic, there was anxiety regarding its impact, duration, travel

1 restrictions, and the future. In such times, people are emotionally charged and seek easily
2 understandable and practical information. Using language that's difficult to understand can
3 overwhelm individuals during crises when they have limited mental resources for intricate
4 social media content (Joksimovic et al., 2014). Hence, in accordance with CLT, cognitive
5 language used by DMOs is likely to be less complex and easier to process for individuals who
6 are already dealing with stress and anxiety. Therefore, this study hypothesises that:

7 H2a: DMO posts on social media show a lower level of cognition during the
8 lockdown phase than pre-Covid and post lockdown

9 Next, the influence of cognition on consumer engagement and its varying effect across
10 COVID-19 phases is explored. Generally, human cognitive biases are impacted during
11 uncertain and risky periods (Phillips-Wren et al., 2019). Cognitive bias has also been found to
12 be one of the crucial outcomes of crisis information management hampering crisis recovery
13 (Paulus et al., 2022). Additionally, literature has firmly established the connection between
14 emotion and cognition, highlighting arguments that suggest they share the same neural
15 network. (Duncan & Barrett, 2007). Negative emotional states of individuals lead to
16 impairment of cognitive processing of messages resulting in the compromise of tasks that
17 require rational control (López & Naranjo, 2021). Translating this to social media engagement
18 during the crisis, consumers are less likely to engage with posts that possess cognitive content.
19 Posts that use cognitive language may be perceived by consumers as mentally taxing and less
20 appealing (Joksimovic et al., 2014). Consumers might be more inclined to scroll past or
21 disengage from posts that add to their cognitive burden, resulting in fewer likes and retweets.
22 Thus, the following hypotheses are proposed:

23 H2b: Cognition expressed in a destination social media post has a negative influence
24 on the number of likes and retweets

H2c: Cognition expressed in a destination social media post has a weaker influence on the number of likes and retweets during lockdown than pre-Covid and post-lockdown

2.3.2 Positive emotions

Consumers construct a symbolic reality around the crisis and its actors, which evolves over time (Lee, 2004). Specifically, when external causes are attributed to the crisis, people tend to react emotionally on social media (Utz et al., 2013), which in turn influences consumers' behaviour on social media (Luo & Zhai, 2017). During crises like COVID-19, people experience heightened emotions, such as anxiety and stress. This emotional intensity is reflected in the increased usage of emotional expressions on social media (Pachucki et al., 2022a). Positive emotions offer relief, hope, and optimism amid anxiety, making social media users value posts with positive content (Lachlan et al., 2019). In accordance with CLT, destination marketers may effectively convey positive emotions through clear and uplifting messages that lighten the cognitive load and increases the effectiveness of the message. Hence, destination marketers will likely share increased positive emotions to boost consumer positivity/morale. Therefore, this study hypothesises that:

H3a: DMO posts on social media show a higher level of positive emotions during the lockdown phase than pre-Covid and post-lockdown

Next, the influence of positive emotions on consumer engagement and its varying effect across COVID-19 phases is explored. Emotions play a crucial role in capturing consumers' attention and involvement, making them essential in social media posts (Pachucki et al., 2022a). Expressing emotions in posts increases attention and arousal, potentially boosting consumer engagement (Stieglitz & Dang-Xuan, 2013). Individuals with high affect intensity often employ emotion-oriented coping mechanisms, aiming to shift their emotional responses to stress through positive thinking and focusing on the positive aspects (Mattlin et al., 1990).

1 Positive information during a crisis can evoke hopeful and optimistic emotions, while negative
2 information may trigger anxiety, fear, and sadness (Lu et al., 2021). Lachlan et al. (2019)
3 observed that one of the most retweeted messages during Hurricane Irma conveyed hope,
4 featuring a dog rescuing another from the flood. Positive emotions in social media posts can
5 reduce cognitive load by capturing attention and promoting a positive affective state
6 (Hawthorne et al., 2019). According to CLT, reduced extraneous load can free up cognitive
7 resources for engagement and interaction (Pittman & Haley, 2023), making users more likely
8 to like and retweet such posts. During a pandemic, there is a heightened need for positivity and
9 emotional support. Positive emotions expressed in social media posts, such as happiness, hope,
10 or gratitude, can act as emotional buffers in times of stress (Tugade et al., 2004). Users are
11 more likely to engage with content that evokes positive emotions because it provides a
12 temporary escape (Donnelly et al., 2016) from the grim reality of a pandemic. Consequently,
13 posts that convey positivity may generate more likes and retweets as consumers seek out and
14 appreciate content that uplifts their spirits and offers a sense of connection with others. In line
15 with the above arguments, consumers are likely to engage more with posts that have a higher
16 valance during the crisis phase (as compared to pre-crisis or post-crisis). Thus, the following
17 hypotheses are proposed:

18 H3b: Positive emotions expressed in a destination social media post have a positive
19 influence on the number of likes and retweets

20 H3c: Positive emotions expressed in a destination social media post has a stronger
21 influence on the number of likes and retweets during lockdown than pre-Covid and
22 post-lockdown

2.3.3. *Confidence*

Confidence plays a crucial role in effective brand communication, encompassing feelings of security and certainty (Pachucki et al., 2022a; Rashid et al., 2020). It fosters trust and motivates individuals to take action (Rashid et al., 2020). During times of crisis, when uncertainty is high, instilling confidence becomes even more important. Brands can alleviate uncertainty by communicating content that conveys confidence (Platon, 2020). For instance, topics that promote assurance, trust, certitude, faith, solidarity, determination, and support can instil a sense of security by aligning thoughts and beliefs with actions (Rashid et al., 2020). In accordance with CLT, destination marketers may inspire confidence in the face of crises like COVID-19 by utilising clear and assured language, emphasising achievements, and offering reassurance and support. Hence, instilling a sense of security and trust through linguistic features that prompt confidence should play a key role in crisis communication by destination marketing managers (Rastegar et al., 2021). Therefore, this study hypothesises that:

H4a: DMO posts on social media show a higher level of confidence during the lockdown phase than pre-Covid but less than post-lockdown

Next, the influence of confidence on consumer engagement and its varying effect across COVID-19 phases is explored. A crisis like COVID-19 can significantly impact tourist confidence and create a sense of uncertainty by disrupting the normal functioning of society (Tandoc & Lee, 2022). Travelers face unpredictability and unfamiliarity due to lockdowns, social distancing measures, and travel restrictions. This new form of social coexistence during the pandemic has increased anxiety and uncertainty (Tandoc & Lee, 2022). To cope with these challenges, consumers seek confidence-building mechanisms to combat boredom and fulfil their travel needs (Itani & Hollebeek, 2021). Effective communication during a crisis should provide consumer-centric information that manages anxiety and instils confidence (Grace & Tham, 2021). Content that conveys confidence not only generates a positive attitude towards

the source but also enhances engagement with the content (Syrdal et al., 2023). In times of a pandemic, clarity and confidence in communication are highly valued (Atkinson, 2014). CLT suggests that reducing extraneous load can enhance engagement, as consumers can easily understand and relate to confident language in posts. Language that uses confident and assertive words can help alleviate the cognitive load associated with interpreting vague or ambiguous messages (Corley & Wedeking, 2014). People often seek information and guidance during crises, and they are more likely to engage with posts that convey certainty and authority. Such language can make it easier for consumers to understand the content, trust the information, and subsequently, engage by liking and retweeting. Confidence in language can act as a reassuring signal during uncertain times, driving higher engagement levels (Syrdal et al., 2023). Moreover, during a crisis, consumers are more likely to share confidence-related content with their social circles to alleviate anxiety. Thus, the following hypotheses are proposed:

H4b: Confidence expressed in a destination social media post has a positive influence on the number of likes and retweets

H4c: Confidence expressed in a destination social media post has a stronger influence on the number of likes and retweets during lockdown than pre-Covid and post-lockdown

3. Methodology

Twitter, with its massive user base of over 211 million daily active users, has emerged as the world's largest microblogging website and a vital platform for consumer engagement in social media (Statista, 2022). In India, Twitter has been extensively utilized by DMOs as one of the primary platforms for promoting their destinations (Chandrasekaran et al., 2022). Further, conversations revolving around tourism have consistently ranked as the top trending topics on

Twitter in the year 2021-2022¹. Hence Twitter platform was considered for the study. Data was collected using Twitter developer API that captures the tweets posted by the DMOs and the interactions received by the tweet. The captured metrics include tweet details like tweet text, the media type of the tweet, posting time, hashtags, mentions, URLs, and the like and retweet count.

3.1 Data

India represents the context of the study as it includes diverse destination types such as beaches, cities and mountains. With 610.22 million domestic tourist visits and 7.17 million foreign visits, tourism contributed to 5.19% of GDP in 2019-20 (India Tourism Statistics, 2022). To collect data, we initially verified official Indian DMOs' Twitter handles managed by the Ministry of Tourism, India. Among India's 28 states and eight union territories, we identified 20 states and three UTs with active and verified Twitter handles (indicated by a tick mark) for the period between March 25, 2019, and January 31, 2022. The data includes organic tweets related to destination information and promotion that serve as means to engage with tourists through social media. Typically, these DMO-generated tweets incorporate various media elements, including text, link, photo and video, with the goal of sharing information and promoting the destination (Pachucki et al., 2022a). The tweets are compared in three stages: pre- Covid (25th March 2019 to 24th March 2020), lockdown (25th March 2020 to 31st January 2021) and post-lockdown (1st February 2021 to 31st January 2022). The stages are decided based on the lockdown announcement by the Indian government (Pathak et al., 2023). By analysing tweets across different phases of a crisis, we can track the evolution of their communication strategies and subsequent consumer engagement. After removing tweets with no consumer engagement

¹ <https://marketing.twitter.com/en/insights/twitter-conversation-report-travel-2022>

(tweets with no likes and retweets) and retaining only tweets in English, the final dataset consisted of 21677 tweets registering around 3.63 million impressions. The unit of analysis in this context is a tweet shared by DMOs.

3.2 Variable Operationalisation

3.2.1 Independent variables

The linguistic characteristics of the tweet, namely, cognition, positive emotions and confidence, are measured using ‘Linguistic Inquiry and Word Count’ (LIWC; Pennebaker et al., 2015). LIWC is specifically designed to assess the content and style of text. It operates under the assumption that individuals frequently convey psychological information alongside the literal meaning of the text (Scholand et al., 2010). The dictionary comprises pre-defined word categories that capture linguistic characteristics like cognition, emotions, and confidence, which serve as the measures for the independent variables. Within LIWC, the psychological process of cognition encompasses 1403 words that primarily describe cognitive processes and memory, providing insight into various modes of thinking (e.g., remember, think, why). The psychological process of affect comprises 337 words specifically focused on measuring positive emotions (e.g., happy, love). The LIWC measure of clout signifies "the level of confidence in writing" is used to measure confidence (Syrdal et al., 2023).

3.2.2 Dependent variables

Consumer engagement is measured based on the number of likes and retweets (Abid et al., 2023; Annamalai et al., 2023). These metrics have been widely used to measure the popularity and dissemination of a tweet (Bonsón et al., 2015). Since replies can also be used to share negative sentiments, it is not considered as a measure of tweet popularity (Tafesse, 2015; Lahuerta-Otero et al., 2018; Tafesse & Wien, 2018; Abid et al., 2023).

3.2.3 Control variables

The media type of the tweet, the number of hashtags and mentions in the tweet, and the length of the tweet (word count) are considered as control variables. In lines with social media literature (e.g., Mao et al., 2020; Annamalai et al., 2021), the media type was classified as only text, text with link(s), text with photo(s) and text with video(s). Each post was dummy coded for the presence of one of the three media types with only text as the reference category. Consistent with count models, the number of followers of a DMO Twitter handle is passed as an offset parameter in the regression model to control for the effect of size (Swani & Milne, 2017). Table 1 shows the summary statistics of the main variables used in the study.

Table 1: Summary statistics of main variables

Variable	Mean	SD	Min	Max
Dependent variables				
Likes	147.6	552.47	1	38244
Retweets	20.01	62.97	1	3519
Independent variables				
Positive emotions	1.095	1.99	0	23.53
Cognition	4.679	4.25539	0	50
Confidence (Clout)	63.7	25.3786	1	99

3.3 Analysis

The analysis consists of two parts. The first part uses analysis of variance (ANOVA) to study the differences in linguistic characteristics of text content in DMO tweets (H2a, H3a and H4a) and the consumer engagement measures (H1) across the three COVID-19 phases (pre-Covid, lockdown and post-lockdown). The second part extends to examine the influence of linguistic characteristics of DMO tweets on consumer engagement measures (H2b, H3b and H4b) using a negative binomial regression (NB2; NBR) across the three COVID-19 phases (H2c, H3c and H4c).

The engagement measures consist of like and retweet counts attributed to each tweet shared by the DMOs. Count data such as these follow a Poisson distribution that adjusts for the probabilities of positive-only integers (Cameron & Trivedi, 1986). Furthermore, the distribution of the outcome variables is positively skewed (Table 1), violating the equi-dispersion assumption of Poisson distribution. To address this violation, NBR is used to model the number of likes and retweets (Moran et al., 2020). NBR aids in modelling over-dispersed count data by relaxing the assumptions of equi-dispersion. Because tweets are nested under different DMOs and are observed across pre-Covid, lockdown and post-lockdown periods, we fit a crossed random-effects model to control for the unobserved heterogeneity among the grouping factors (DMOs and pandemic periods). The NBR model is defined as $y_i \sim \text{NB}(\mu_i)$ (Cameron &

Trivedi,1986), where the model is expressed as a function of the log of the count variable predicted by the independent variables.

$$\text{Model 1: } \eta_i[\text{Like counts}] = \beta_0 + \beta_1 \text{Cognition} + \beta_2 \text{Positive emotions} + \beta_3 \text{Confidence} + \beta_4 \text{Media type} + \beta_5 \text{Hashtags} + \beta_6 \text{Mentions} + \beta_7 \text{Tweet length} + \beta_8 \text{COVID} - 19 \text{ phases} + \delta'_1 \text{DMO} + \delta'_2 \text{COVID} - 19 \text{ phases} + \log \text{Number of followers}$$

$$\text{Model 2: } \eta_i[\text{Retweet counts}] = \beta_0 + \beta_1 \text{Cognition} + \beta_2 \text{Positive emotions} + \beta_3 \text{Confidence} + \beta_4 \text{Media type} + \beta_5 \text{Hashtags} + \beta_6 \text{Mentions} + \beta_7 \text{Tweet length} + \beta_8 \text{COVID} - 19 \text{ phases} + \delta'_1 \text{DMO} + \delta'_2 \text{COVID} - 19 \text{ phases} + \log \text{Number of followers}$$

$$\text{Model 3: } \eta_i[\text{Like counts}] = \beta_0 + \beta_1 \text{Cognition} + \beta_2 \text{Positive emotions} + \beta_3 \text{Confidence} + \beta_4 (\text{Cognition} * \text{COVID} - 19 \text{ phases}) + \beta_5 (\text{Positive emotions} * \text{COVID} - 19 \text{ phases}) + \beta_6 (\text{Confidence} * \text{COVID} - 19 \text{ phases}) + \beta_7 \text{Media type} + \beta_8 \text{Hashtags} + \beta_9 \text{Mentions} + \beta_{10} \text{Tweet length} + \beta_{11} \text{COVID} - 19 \text{ phases} + \delta'_1 \text{DMO} + \delta'_2 \text{COVID} - 19 \text{ phases} + \log \text{Number of followers}$$

$$\text{Model 4: } \eta_i[\text{Retweet counts}] = \beta_0 + \beta_1 \text{Cognition} + \beta_2 \text{Positive emotions} + \beta_3 \text{Confidence} + \beta_4 (\text{Cognition} * \text{COVID} - 19 \text{ phases}) + \beta_5 (\text{Positive emotions} * \text{COVID} - 19 \text{ phases}) + \beta_6 (\text{Confidence} * \text{COVID} - 19 \text{ phases}) + \beta_7 \text{Media type} + \beta_8 \text{Hashtags} + \beta_9 \text{Mentions} + \beta_{10} \text{Tweet length} + \beta_{11} \text{COVID} - 19 \text{ phases} + \delta'_1 \text{DMO} + \delta'_2 \text{COVID} - 19 \text{ phases} + \log \text{Number of followers}$$

The β captures the effect of the independent variables on the dependent variable. The δ' term captures the group-level effects of *DMO* and *COVID-19 phases*. The $\log \text{Number of followers}$ is the offset term used to scale the mean. The two dependent variables are modelled separately (like count – Model 1 and 3; retweet count- Model 2 and 4) to measure the effects of independent variables on specific consumer engagement behaviours with destination social media posts. Further, two separate models – the main effects model (Model 1 and 2) and the interaction effects model (Model 3 and 4), are executed for each dependent variable.

4. Findings

First, we independently assess the alterations in consumer engagement (H1) and the linguistic attributes (H2a, H3a and H4a) resulting from COVID-19. Subsequently, we scrutinize how these linguistic attributes affect consumer engagement directly (main effects: H2b, H3b and H4b) and during the COVID-19 pandemic (interaction effects: H2c, H3c and H4c).

4.1 Comparison of consumer engagement across COVID-19 phases

ANOVA reveals how the COVID-19 pandemic (pre-Covid vs lockdown vs post-lockdown) changed consumer response behaviour in terms of likes and retweets of the tourist destination social media tweets (Table 2). Post-hoc test indicates significant increases in liking ($p < .001$) and retweeting ($p < .01$) destinations' tweets during the lockdown, as compared to pre-Covid. But there is no significant difference in engagement measures between lockdown and post-lockdown phases. Hence, the results partially support hypothesis H1.

Table 2: Comparison of social media measures across phases

	Pre-Covid		Lockdown		Post-Lockdown		Sig
	Mean	SD	Mean	SD	Mean	SD	
Social media engagement							
Like	125.9012	558.3550	159.6811	809.0679	156.2475	246.6274	<.001
Retweet	17.9137	59.0201	21.0068	94.3338	20.9750	31.0695	0.0037
Social media post linguistic features							
Cognition	4.3655	4.1315	5.1586	4.3836	4.5966	4.2341	<.001
Confidence	62.7512	25.1251	63.8639	25.4786	64.3272	25.4882	0.0005
Positive emotions	1.0634	2.0257	1.0505	1.9424	1.1499	2.0025	0.0034

4.2 Comparison of linguistic characteristics of DMO tweets across COVID-19 phases

We use ANOVA to compare the group means of different linguistic expressions used in the DMOs' social media posts (cognition - H2a; positive emotions - H3a; confidence - H4a) across the selected time periods ($n_{\text{pre-covid}} = 6880$, $n_{\text{lockdown}} = 6008$, $n_{\text{post-lockdown}} = 8789$). The results confirm that cognition, positive emotions and confidence differ significantly across the phases of pre-Covid, lockdown and post-lockdown (all $p < 0.05$). In greater detail, post hoc tests reveal that lockdown social media posts convey higher levels of cognition than pre-Covid and post-

lockdown social media posts ($p<.001$); the level of positive emotions in destination social media posts increased during the post-lockdown phase ($p<0.01$) than pre-Covid and lockdown. Linguistic expressions of confidence increased during lockdown ($p<.05$) and post-lockdown ($p<.001$) in comparison to pre-Covid. These results showed significant changes in the shared linguistic expressions but not in the anticipated directions. Hence, hypotheses H2a, H3a and H4a are partially supported.

Considering the findings affirm that the COVID-19 pandemic changed both consumer engagement and destination social media content, the influence of linguistic expressions shared in the social media content on consumer engagement measures, as well as whether these effects depend on the state of COVID-19 pandemic (pre-Covid vs lockdown vs post-lockdown) is further examined.

4.3 Effect of linguistic characteristics of DMO tweets on consumer engagement

In our mixed models, we incorporated random intercept terms at each group-level. The estimation procedure generates one random effect for each level of the grouping factor in our analysis. The fixed effect coefficients were estimated using the maximum likelihood method. Model fit was assessed through model comparisons using Akaike's information criterion.

Table 3 and Table 4 provide the results of fully specified models. The coefficients presented in the tables are incidence rate ratios (IRR). The IRR values clarify how changes in the independent variable influence the rate at which the dependent variable occurs while keeping other predictor variables constant (Carnovale & Yenyurt, 2015). An IRR coefficient below 1 indicates a decreasing rate, while a coefficient above 1 represents an increasing rate. The tables also show the variance contributed by different phases and the state.

Table 3: Results of the engagement model - Like count

Variables	Main effects (Model 1)		Interaction effects (Model 3)	
	IRR	Coefficient	IRR	Coefficient

<i>Main effects</i>				
Cognition	0.994	-0.006*** (0.002)	0.986	-0.014*** (0.003)
Positive emotion	1.011	0.011*** (0.003)	1.044	0.043*** (0.006)
Confidence	0.999	-0.001*** (0.000)	0.997	-0.003*** (0.000)
<i>Interaction effects of time periods</i>				
Cognition: Pre-Covid Phase			1.011	0.011** (0.004)
Cognition: Post-Lockdown Phase			1.011	0.011** (0.004)
Positive emotion: Pre-Covid Phase			0.961	-0.040*** (0.008)
Positive emotion: Post-Lockdown Phase			0.954	-0.047*** (0.008)
Confidence: Pre-Covid Phase			1.002	0.002*** (0.001)
Confidence: Post-Lockdown Phase			1.003	0.003*** (0.001)
<i>Control variables</i>				
Media type: link	0.776	-0.254*** (0.064)	0.776	-0.254*** (0.064)
Media type: photo	1.470	0.386*** (0.032)	1.463	0.381*** (0.032)
Media type: video	1.535	0.429*** (0.035)	1.519	0.418*** (0.035)
Hashtags	0.972	-0.028*** (0.003)	0.973	-0.027*** (0.003)
Mentions	1.049	0.048*** (0.007)	1.045	0.044*** (0.007)
WC	0.996	-0.005*** (0.001)	0.996	-0.004*** (0.001)
Pre-Covid Phase	0.792	-0.234*** (0.016)	0.674	-0.395* (0.156)
Post Lockdown Phase	1.298	0.261*** (0.015)	1.091	0.087 (0.121)
Intercept	0.001	-7.319*** (0.253)	0.001	-7.145*** (0.259)
<i>Random effects</i>				
DMO-level variance	1.452		1.442	
Period-level variance	0.057		0.000	
AIC	243824		243762	

Note(s): * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; standard errors are in parentheses.

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Table 4: Results of the engagement model -Retweet count

Variables	Main effects Model 2		Interaction effects Model 4	
	IRR	Coefficient	IRR	Coefficient

<i>Main effects</i>				
Cognition	0.993	-0.007*** (0.002)	0.994	-0.006* (0.028)
Positive emotion	1.003	0.003 (0.003)	1.032	0.032*** (0.006)
Confidence	0.998	-0.002*** (0.000)	0.997	-0.003*** (0.001)
<i>Interaction effects of time periods</i>				
Cognition: Pre-Covid Phase			0.997	-0.003 (0.004)
Cognition: Post-Lockdown Phase			1.000	0.000 (0.004)
Positive emotion: Pre-Covid Phase			0.956	-0.045*** (0.009)
Positive emotion: Post-Lockdown Phase			0.965	-0.036*** (0.008)
Confidence: Pre-Covid Phase			1.001	0.001 (0.001)
Confidence: Post-Lockdown Phase			1.001	0.001* (0.001)
<i>Control variables</i>				
Media type: link	0.997	-0.003 (0.068)	0.973	-0.027 (0.068)
Media type: photo	1.417	0.348*** (0.033)	1.396	0.334*** (0.033)
Media type: video	1.900	0.642*** (0.036)	1.857	0.619*** (0.036)
Hashtags	0.982	-0.0179*** (0.003)	0.983	-0.017*** (0.003)
Mentions	1.036	0.0355*** (0.007)	1.034	0.033*** (0.007)
WC	0.999	-0.001 (0.001)	0.999	-0.001 (0.001)
Pre-Covid Phase	0.717	-0.333 (0.152)	0.927	-0.076 (0.054)
Post Lockdown Phase	1.034	0.034 (0.140)	1.121	0.114* (0.052)
Intercept	0.000	-8.887*** (0.284)	0.000	-9.374*** (0.282)
<i>Random effects</i>				
DMO-level variance		2.115		1.711
Period-level variance		0.018		0.000
AIC		163326		163293

Note(s): * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; standard errors are in parentheses.

- 1 Table 3 and Table 4 show the empirical results of the effects of the linguistic characteristics of
- 2 DMO tweets on consumer engagement measures of the number of likes and retweets,
- 3 respectively. Cognition negatively impacts the number of likes ($\beta_{\text{likes}} = -0.0061$, $p < 0.001$) and

retweets ($\beta_{\text{retweets}} = -0.0069$, $p < .01$). H2b is supported. Positive emotions impact the number of likes ($\beta_{\text{likes}} = 0.0113$, $p < .001$). We find a suppression effect for positive emotions on the number of retweets, as the effect of the variable increased and gained significance ($p < 0.001$) after accounting for the interaction effect of Covid phases. Post hoc analyses were used to examine the impact of individual interaction effects between Covid phases and cognition, positive emotions, and confidence to determine the context of the suppression effect. The results validate that including the interaction term of positive emotions resulted in the statistical significance of the direct effect of positive emotions. Thus, H3b is also verified. Contrary to the hypothesis, confidence negatively influences the likes ($\beta_{\text{likes}} = -0.0013$, $SE = 0.002$, $p < .001$) and retweets ($\beta_{\text{retweets}} = -0.0017$, $p < .001$). H4b is not supported.

As for the interaction effects of COVID-19 time periods on the influence of linguistic characteristics on consumer engagement, the results show that cognition expressed in a destination social media post has a weaker influence on the number of likes during lockdown than pre-Covid ($\beta_{\text{likes}} = 0.0110$, $SE = 0.0037$, $p < .01$) and post-lockdown ($\beta_{\text{likes}} = 0.0113$, $p < .01$). Moreover, the incidence rate ratio (IRR) of Covid-phases for cognition is 1.011 for pre-Covid and post-lockdown time periods. This indicates that a post with cognition words recorded a 1.3% decrease in like count during the Covid period compared to pre-Covid and post-lockdown. However, there is no significant difference in the influence across periods for retweet count. Thus, H2c is partially supported with desired results for like count but not for retweet count.

The results show that positive emotions expressed in a destination social media post have a stronger influence on the number of likes during lockdown than pre-Covid ($\beta_{\text{likes}} = -0.0397$, $p < .001$; $\beta_{\text{retweets}} = -0.0453$, $p < .001$) and post-lockdown ($\beta_{\text{likes}} = -0.0470$, $p < .001$; $\beta_{\text{retweets}} = -0.0359$, $p < .001$). The IRR of Covid-phases for positive emotions is 0.961 for pre-Covid and 0.954 for

post-lockdown time periods. This indicates that a post loaded with positive emotions recorded around a 1.04% increase in engagement (both in terms of like count and retweet count) during the Covid period compared to pre-Covid and post-lockdown. Thus, H3c is supported.

The results of confidence expressed in a destination social media post have a weaker influence on the number of likes during lockdown than pre-Covid ($\beta_{\text{likes}} = 0.0021$, $p < .001$) and post-lockdown ($\beta_{\text{likes}} = 0.0026$, $p < .001$). A post with confidence words recorded a significant decrease in like count during the lockdown period compared to pre-Covid and post-lockdown. Though the impact of confidence on retweet count during post-lockdown ($\beta_{\text{retweet}} = 0.0013$, $p < .05$) was significantly higher than lockdown, there is no significant difference between lockdown and pre-Covid. Thus, H4c is not supported. The control variables, post media, hashtag count, mentions, and word count, exhibit most of the anticipated relationships with the outcomes.

5. Discussion

5.1 Consumer engagement across COVID-19 phases

Our initial analysis examined the comparison of consumers' engagement with DMO posts across COVID-19 phases. Interestingly, we observed a significant increase in consumer engagement during the lockdown period compared to the pre-pandemic period. These findings align with the research conducted by Pachucki et al. (2022a) in an Austrian mountain destination, where they also reported higher engagement on Facebook posts during the lockdown phase compared to pre-Covid times. Lockdown measures, which restrict in-person interactions, can lead to feelings of isolation and a heightened desire for social interaction. Engaging with social media posts may serve as a source of distraction and provide an escape from the anxiety induced by the circumstances. Contrary to our expectations, consumer engagement with DMO posts did not decline following the lockdown period but remained at

the same level. This indicates that the COVID-19 pandemic has accelerated the adoption and reliance on digital platforms, including social media, for information and communication (Amankwah-Amoah et al., 2021). The sustained high level of post-engagement suggests a shift in habits and potentially a long-term impact on consumer behaviour.

5.2 Linguistic characteristics of DMO tweets across COVID-19 phases

Analysis of linguistic content of DMO postings confirms that cognition, positive emotions and confidence differ significantly across the pre-COVID, lockdown and post-lockdown phases. Posts by DMOs exhibited a higher usage of positive emotions in the lockdown and post-lockdown phases than in the pre-COVID phase. This was because, in times of crisis, there is a likelihood of increased emotional intensity across the board, resulting in greater usage of emotional expressions in conversations (Pachucki et al., 2022a). DMOs may leverage these emotions by using a positive tone that instils optimism in their consumers. Our finding of DMOs posting a higher number of positive valence posts aligns with the finding of Lachlan et al. (2019), who found a similar result during the Hurricane Irma crisis. They also found that tweets that carried positive emotions also had a greater likelihood of being retweeted.

Next, posts by DMOs exhibited higher confidence in lockdown and post-lockdown phases compared to the pre-COVID phase. Instilling confidence ("this too shall pass", "things are getting better", "positive news coming up") in consumers is a crucial role of brand communication (Ritchie et al., 2004). Researchers (Ertimur & Coskuner-Balli, 2021) have called for increasing the usage of words that focus on confidence-building themes of solidarity, trust and resilience during times of crisis. These messages will likely develop a sense of comfort in consumers and enhance their connection with the brand (Rashid et al., 2020). Our study supports the findings of Pachucki et al. (2022a), who, in their review of Austrian tourism destination social media communication, found an increase in messages with linguistic characteristics signifying confidence.

1 However, while we had expected DMOs to post content with a lower level of cognition during
2 the lockdown period, our results revealed an increase in messages loaded with cognitive words.
3 The lower level of cognition was anticipated since consumers were already anxious and may
4 have preferred messages that did not require cognitive processing. Our results contradict the
5 findings of Pachucki et al. (2022a), who found a reduction in specificity in messages shared by
6 DMOs. The increase in cognitive words in our dataset could have been due to the perceived
7 need by Indian DMOs to reduce anxiety by providing greater information on health, hygiene,
8 safety and precautions.

9 **5.3 Effect of linguistic characteristics of DMO tweets on consumer engagement**

10 Analysis of DMO postings confirms that consumer engagement for posts with cognition,
11 positive emotions and confidence differ significantly across the pre-COVID, lockdown and
12 post-lockdown phases.

13 The inclusion of cognition words negatively impacted consumer engagement during the time
14 of lockdown as opposed to pre-pandemic levels. This is along expected lines since the negative
15 emotional state of consumers on account of pandemic-induced anxiety is likely to impair
16 cognitive processing (López & Naranjo, 2021). The results resonate with the findings of
17 Pachucki et al. (2022a), who also found a negative impact of conversations demanding higher
18 specificity and cognitive processing on consumer engagement. As explained by CLT, posts
19 with complex language may seem mentally demanding to consumers, making them less
20 appealing (Joksimovic et al., 2014). Consumers are more likely to ignore or disengage from
21 such posts, resulting in fewer likes and retweets. This finding also explains why we were
22 expecting a lower cognitive load from DMOs in their posting, which did not turn out to be the
23 case with Indian DMOs.

1 Including positive emotions positively impacted consumer engagement during the lockdown
2 as opposed to pre-pandemic levels. With heightened anxiety levels, posts gesturing positivity
3 are likely to generate a sense of hope and optimism (Lu et al., 2021) and resultantly garner
4 greater traction with consumers (Lachlan et al., 2019). Taking cues from CLT, positive
5 emotions in social media posts can reduce cognitive load (Hawthorne et al., 2019), leading to
6 increased consumer engagement (Pittman & Haley, 2023), especially during a pandemic when
7 emotional support is crucial. Such content may receive more likes and retweets as consumers
8 seek a temporary escape from the harsh reality, fostering a sense of connection (Donnelly et
9 al., 2016). Our result of greater positive emotions positively impacting consumer engagement
10 during times of crisis is in contrast to the findings of Pachucki et al. (2022a), who did not find
11 any impact of emotionality on consumer engagement during times of crisis. This contrast may
12 be emerging since Pachucki et al. (2022a) studied overall emotionality, including positive and
13 negatively valenced emotions. Lachlan et al. (2019), in their study including valence during
14 times of crisis, found a significant impact of positively valenced posts on consumer
15 engagement.

16 Finally, contrary to our expectations, the inclusion of confidence did not have a strong positive
17 impact on consumer engagement during the lockdown as opposed to pre-pandemic levels. In
18 line with the findings of Grace & Tham (2021), we had expected communication with greater
19 confidence to result in greater consumer engagement since it would alleviate their anxiety. As
20 per CLT, reducing extraneous content load boosts engagement as consumers prefer confident,
21 clear language in posts, especially in crises when they seek guidance (Corley & Wedeking,
22 2014). Crisis situations like this demand communication that discusses uncertainty and reduces
23 the same by providing consumer-centred information to manage consumer anxiety (Grace &
24 Tham, 2021). However, the number of likes dropped for posts with a higher confidence level.
25 A possible explanation of this comes from Liu et al. (2016). The study argued that

acknowledging uncertainty may positively impact trust and work better with consumers than presenting information as certainty or assurance. Consumers prefer risk communication to acknowledge uncertainty during the crisis period rather than adopting an assuring tone (Rogers et al., 2007), such as the use of clout words. Furthermore, establishing source credibility is vital for engaging consumers (Liu et al., 2016). Given the increased prevalence of misinformation during times of crisis, consumers may display a certain level of scepticism towards social media communication (Ahadzadeh et al., 2023). Extending this to tourism destinations, Pachucki et al. (2022a) suggested that the social media posts of DMOs should reflect higher uncertainty during the crisis phase than in the pre-crisis phase in their linguistic expressions.

6. Conclusion

This study examined the changes in social media communication strategies of 23 Indian DMOs during the COVID-19 crisis, focusing on linguistic characteristics and their impact on consumer engagement. The findings indicated that posts with positive emotions, lower cognitive load, and a balanced level of confidence gained higher engagement. These results are crucial for DMOs, as social media became their primary means of connecting with consumers during the lockdown. A well-crafted social media content strategy can enhance awareness, strengthen the destination's image, and engage consumers, not only during a crisis but also in regular marketing efforts. By understanding the implications of linguistic styles in social media communication, DMOs can improve their overall marketing strategies for effective destination promotion.

6.1 Contribution to Theory and Practice

The present study contributes to the literature on tourism crisis communication by emphasizing the significance of linguistic styles in social media communication during such periods. Addressing the call for research in this area (Mao et al., 2020; Pachucki et al., 2022a), we identify the linguistic elements that impact consumer engagement with DMO posts, extending

the application of CLT to the tourism crisis communication domain. This study contributes to the field in several ways. First, as necessitated by tourism and hospitality literature (e.g., Fissi et al., 2022; Pachucki et al., 2022a), the varying impact of COVID-19 stages on the textual characteristics of DMO tweets and consumer engagement was examined. Additionally, we explored the interaction effect between COVID-19 and the textual characteristics of DMO tweets on consumer engagement, providing insights into the integrated mechanisms. Second, addressing the need to consider theories beyond media richness theory (Pachucki et al., 2022a), the current research enhances the theoretical understanding of social media marketing in the context of tourism and hospitality by incorporating CLT. We introduced a conceptual framework that elucidates how tweet-related linguistic factors influence consumer engagement, shedding light on the role of linguistic factors in destination marketing strategies. This theoretical framework, serving as a foundation for social media marketing, can be readily applied to other experiential consumption contexts. Third, we expand our research to Indian DMOs' marketing efforts on Twitter, which is an area that has been under-explored (Chandrasekaran et al., 2023).

Our findings have practical implications for DMOs in shaping their social media content strategy. Contrary to the content strategy adopted by Indian DMOs in our study, we recommend focusing on content that requires a lower cognitive load, instils hope and optimism, and conveys an overall positive emotion. With an accelerated engagement levels in post-crisis phase in comparison to pre-crisis phase, the DMOs need to meticulously compose tweets to sustain the positive engagement. The DMOs are advised to prioritize travel experiences that incorporate positive emotion words rather than focusing on information laden with cognitive terms, as the findings indicate higher engagement during the post-crisis period. For instance, tweets crafted with positive emotion words (e.g., "Embark on a joyful journey, savouring attractions and dining delights, guided by our worry-free support") are likely to record

increased engagement than the same message expressed with cognitive words (e.g., "Initiate a journey of exploration, experiencing notable attractions and diverse dining options, all under the guidance of our reliable support system"; cognition words – exploration, reliable support system). Moreover, DMOs should be cautious about expressing excessive certainty in times of uncertainty, as posts with high confidence levels may not elicit heightened engagement. Though the confidence embedded in the DMO message seems to be on a surge across crisis stages, the consumers generally exhibit less preference for confidence expressive words. Therefore, DMOs may craft the message with less clout terms (e.g., Yearning for that long drive with soulful music? Worry not. The mountains are not going anywhere neither the forests. Stay home for now. This time shall pass!") than more (e.g., "Craving that scenic road trip with your favourite tunes? No need to fret. The mountains and forests will patiently await your return. Stay home for the time being. This too shall pass"; clout terms – No need to fret, patiently await). In total, an ideal tweet to gain maximum engagement in post-crisis should comprise of low cognition and clout words along with high positive emotion words (e.g., "Feeling so happy, loved & excited right now! 🌻 Can't wait!! 😊 Sip! Enjoy!! Relax by water!!!! 🏖️ #fun #love #sunshine"; positive emotion: 41.18, clout: 2.18, cognition: 11.75). Thus, DMOs are encouraged to utilize linguistic characteristics that align with consumers' varying mental states during different crisis situations (Moffett et al., 2021).

6.2 Limitations and future research

Despite the valuable insights gained from this study, it is important to acknowledge its limitations, which may restrict the generalizability of the findings. Firstly, the study primarily relied on CLT to explain the relationship between linguistic cues and consumer engagement. Future research could explore alternative theoretical perspectives, such as signalling theory, to further examine how DMOs strategically use language as a signalling mechanism during crises like COVID-19. While the current study provided theoretical underpinnings on differing

cognitive load depending on different linguistic factors and subsequent impact on consumer engagement, the study did not measure the specific change in cognitive load. Future researchers might want to measure specific influence of different linguistic factors and message types on cognitive loads. Secondly, given the contextual dependence of social media content strategy (e.g., Annamalai et al., 2021; Wong et al., 2021; Leung et al., 2023), it's important to note that the operational insights derived for DMOs to promote destinations may have nuanced differences with other travel-related contexts, like airline brands or hotel chains. Further, the study focused on Indian DMOs, which may limit the generalizability of the findings. Considering the cultural variations highlighted in the contrasting findings with Pachucki et al. (2022a), whose study was conducted in Austria, future studies could adopt a cross-cultural approach to gain a more comprehensive understanding of the phenomenon. Thirdly, while the current study demonstrated external validity by examining consumer responses to linguistic features in a real-world setting, enhancing internal validity through scenario experiments could further strengthen the findings. Fourthly, apart from the textual design of text length, it would be interesting to study the changes across the pandemic stages in the linguistic feature of storyteller in this context. Finally, the linguistic expressions by DMOs cannot be conclusively established to be purposefully chosen by them. Limitations notwithstanding, this work significantly addresses the objective of investigating the influence of textual elements in DMO's posts on consumer engagement across COVID-19 phases.

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