

**A phenomenological study of the experience of competitive cyclists following
a critical incident: impact upon performance.**

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Dedication

To my family, who supported me through difficult times and gave me the encouragement, space and self-belief to complete this work; especially to Jan, who sadly didn't make it to the end.

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My thanks also go to my participants, who I hope are still happily cycling.

Abstract

This qualitative study seeks to illuminate the psychological impact of a critical, sport related negative incident upon competitive cycling performance and to inform therapeutic practice with this client group. Interpretive Phenomenological Analysis (IPA) was used to analyse data from semi-structured interviews with a purposive sample of 7 competitive cyclists who had experienced a negative critical event such as an accident, fall or crash during their cycling participation and who found that the incident had a negative impact upon their performance.

Analysis of the data focused on the participants' experiences relating to the perceived impact of the critical incident upon performance. Six master themes emerged from the data encapsulating the experiences of the respondents: 1. Focus on self; 2. Focus on anxiety; 3. Physical injury; 4. Perceptual and decision-making processes; 5. Impairment of cycling performance; 6. Coping, adaptation and growth.

The findings suggest that an integrative/eclectic therapeutic approach would be the most effective in tailoring interventions for this client group, in consideration of the breadth and nuance of the reported impact upon cycling performance. Counselling psychologists' training and philosophical orientation equips them with the necessary skills and abilities to deliver such interventions.

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1. Introduction

Prologue

During the final few weeks of writing up this research project, a distressing but serendipitous event occurred that brought the subject matter of the research into a significantly wider public focus. On 12th June 2019 Chris Froome, 4 times winner of the Tour de France, sustained serious injuries in a crash while descending at over 30 mph on a course reconnaissance in the Dauphine Libere stage race in eastern France. The severity of his injuries indicates a lengthy process of physical recovery; the as yet unknown psychological impact of this critical event signifies the importance of the present study to the world of competitive cycling.

1.1: Introduction and Background

The present research aims to assess the contribution of counselling psychology and psychotherapy in illuminating a specific set of client problems. The focus of the research is the experience of competitive cyclists who have had an accident or otherwise negative “critical incident” during the course of their participation in competition or training, and who have noted a negative impact upon their performance attributed to the incident. There is a limited focus within wider psychological research, theory and practice upon the impact of what might be considered relatively minor negative life events such as cycling accidents. Existing research in a similar vein is centred mainly upon the impact of road traffic accidents on car drivers and passengers (Mayou, Bryant, & Duthie, 1993; Mayou & Bryant, 2003). There is little information in the available literature concerning the psychological impact of critical incidents in sporting contexts, even less in relation to competitive cycling.

The impact of this work is that it will represent a resource to assist in overcoming the kinds of difficulties experienced by the respondents in the study by describing and illustrating their lived experience and narratives regarding the perceived impact of the negative or critical event upon their sporting performance. This will be available within the domains of counselling psychology and psychotherapy as well as in literature

specific to the cycling community and as such will stand as a resource for practitioners working with this client population and similar client groups; to organisations responsible for the welfare of competitors, as well as facilitating self-care by individual competitors who have experienced similar types of difficulty.

My interest in the research topic derives from an alignment of both professional and personal interests. It embodies dilemmas both within my own practice and in the wider communities of psychology, psychotherapy and counselling psychology. The practice of Western psychotherapy is dominated by a medical model discourse derived from psychiatry (Johnstone, 2008) with a focus on the nature of psychopathology, accurate clinical diagnosis and appropriate treatment. Within the theory and practice of counselling psychology there exists a tension between such technical approaches, and notions derived from humanistic psychology emphasising a philosophy of openness and enquiry, an absence of dogma and an emphasis on the therapeutic relationship as the primary vehicle for improving clients' wellbeing (Clarkson, 2013).

The origins of counselling psychology lie in understandings of normal growth, change and self-actualisation (Joseph, 2017) rather than in the diagnosis and treatment of abnormality. However, much of the relevant literature that might explain the psychological impact of critical events upon the respondents in the present study is located within psychological perspectives deriving from positivist traditions. Such understandings would conceptualise their difficulties in terms of a diagnostic category involving symptoms with a defined aetiology, including some combination of cognitive, physiological and biological features, with accompanying treatment protocols.

The kinds of difficulties described by the respondents following critical events are frequently categorised as anxiety disorders using diagnostic criteria arising from either the Diagnostic and Statistical manual of Mental Disorders (DSM) (American Psychiatric Association, 2013), or the International Classification of Diseases (ICD) (World Health Organisation, 1993) classifications. I will argue that such classifications are of limited value in developing an understanding of the richness and complexity of the experience of those affected by sporting critical events, and in developing effective therapeutic interventions.

Such classifications normally label the cluster of responses to stressors or critical events as anxiety disorders, with the aim of identifying appropriate and effective

evidence-based treatments. The more serious stressors, where there is a threat to physical integrity of self or others, are generally described as traumas, with consequent symptoms understood as post-traumatic anxiety.

For example, DSM-5 defines an Adjustment Disorder as:

“the presence of emotional or behavioral symptoms in response to an identifiable stressor(s) occurring within 3 months of the onset of the stressor(s)”
(APA, 2013).

An individual would meet these diagnostic criteria if the symptoms can be shown to be having a negative impact on their everyday functioning.

Although there is much outcome research supporting the effectiveness of various therapeutic interventions in treating such symptoms (Cukor et al., 2010), there is relatively little information in the literature about the lived experience of those affected by critical events. The present research intends to utilise the accounts of the respondents to illustrate in-depth how the athlete experiences the impact attributed to a critical event, so that such effects can be fully understood and appreciated by practitioners charged with the responsibility for improving wellbeing and reducing the impact of the event upon the competitor’s performance.

In adopting a phenomenological approach for the study, I seek to question some of the assumptions made within the extant psychotherapeutic literature regarding the nature of human responses to critical events, resisting the temptation to take the notion of psychological trauma as given and exploring as closely as possible the collective idiographic experiences of a group of competitive cyclists who have found their performance negatively affected as a result of a stressful or critical experience. This involves broader understandings within psychology that encompass notions of adaption, growth and change rather than elimination of pathology. However, my approach to this work does not exclude cognitive and body-oriented understandings of such phenomena and assesses the role that these forms of knowledge can play in developing a fuller understanding of the nature of difficulties experienced following critical incidents.

1.2: Personal Relevance

My own interest in the research topic arises out of two sources. The first is my own participation in competitive cycling. I cycled and first raced as a schoolboy and junior

(up to age 18) and returned to the sport following many years as a successful amateur distance runner. I continue to participate in cycle races in the UK and France with a moderate degree of success against other veteran riders.

Arising from my own participation, I experienced a critical incident shortly before commencing the doctoral programme when I crashed and broke my wrist and shoulder. On my return to riding after my physical recovery, I found that I began to experience some difficulties in situations that resembled my accident. I started to notice behaviours of wariness, cautiousness and hesitation, as well as feelings of fear and trepidation about a recurrence of the same outcome. These experiences were not present prior to the incident. This led both to some avoidance (of icy or wet road conditions) and heightened psychological anxiety and physical tension when cornering. Both factors inhibited my performance, effectiveness and enjoyment. I was in the fortunate position of having access to therapeutic resources within my own professional networks and was able to work with an experienced Eye Movement Desensitisation and Reprocessing (EMDR) practitioner on the trigger situations described above and found that as a result of a brief therapeutic intervention my wariness and cautiousness in these settings significantly reduced. My therapist knew the sporting context reasonably well and had some understanding (as an occasional fellow participant) of the nature of the difficulties in competition that I experienced. Following this therapeutic input, I was able to develop and implement self-help techniques that enabled the development of my skill levels in cornering and descending (another area of vulnerability following my critical incident) to the extent that within 12 months of the incident, I was more competent at this aspect of my performance than I had been prior to my accident. My recovery during therapy also motivated me to undergo some skills coaching from a technical point of view that further enhanced my capabilities.

As well as my own difficulties, I had also observed similar developments in other cyclists encountered among personal networks. Stan (name changed) was a professional cyclist during the 1980s, participating at the highest level on the continent including riding the Tour de France. He had been hit by a car while out cycling more recently and sustained a complex elbow fracture. When riding with him, I was struck by his behaviour, a complete contrast to the level of skill and confidence he had relied upon during and since his time as a professional. He was visibly anxious and “jittery”

when approaching corners or riding near cars and would brake or slow down frequently in anticipation of danger.

Thus, through personal experience and observations of other impacted competitors there arose a curiosity as to how psychotherapy and counselling psychology might be better equipped to understand and respond to such phenomena.

1.3: Professional context

The other source of inspiration for this project has been my experience in professional practice. I have worked in full-time private practice as a counselling psychologist since 2000. Although I began by undertaking general private client psychotherapy my practice gradually became increasingly focused on assessing and treating the psychological impact of critical and traumatic events. This involved working with clients pursuing personal injury civil claims after having been involved in (mostly) road traffic accidents and who demonstrate subsequent symptoms of psychological distress. In the context of this work, I have become familiar with the difficulties experienced by car drivers, passengers and motorcyclists following road traffic accidents (Mayou et al, 1993) as well as developing significant expertise in therapeutic interventions designed to alleviate such problems.

In beginning this type of client work I was faced with a series of conflicts and dilemmas reflected in the theoretical antecedents of the present research. As a counselling psychologist, I work with clients from an integrative perspective (Fear & Woolfe, 1999), believing that no single therapeutic approach is superior and using a breadth of psychological knowledge and skills to work collaboratively with each client. In beginning work with treatment agencies offering client referrals I would be frequently asked whether I could “deliver” CBT, to which I answered in the affirmative, omitting to emphasise that I did so as part of a wider integrative approach. I was, of course, aware that Cognitive Behaviour Therapy (CBT) was a National Institute for Health and Clinical Excellence (NICE) evidence-based recommended treatment for post traumatic anxiety (NICE, 2005) and evidence was required that this approach was being used in treatment undertaken on behalf of the agencies. I considered and rejected the possibility of undertaking a pure form of CBT with these clients, preferring to work in an integrative manner. This involved an emphasis on the core conditions of therapy derived from humanistic psychology (Thorne, 1991) and awareness of

existential concerns regarding the significance of potentially life-threatening trauma (Corbett & Milton, 2011), as well as CBT interventions. I found this approach successful to the extent that clients generally tended to respond and recover well. My view that a single therapeutic approach is insufficient for the development of effective interventions for problems following critical events has become gradually more entrenched in light of numerous anecdotal examples encountered within my clinical experience that have shown CBT to be often ineffective as a single approach. In undertaking the present research I am concerned to add to the body of knowledge informing interventions for the types of difficulties experienced by this client group.

Although most clients involved in accidents leading to personal injury claims are car drivers and passengers, a small proportion are motorcyclists and an even smaller proportion are pedal cyclists. The first competitive cyclist I saw in this context, for a medico-legal assessment, was also figural in my motivation for carrying out this study.

Andy also reported a similar experience to that of Stan described above. He was hit by a car while out training and found that his performance in group road races had been adversely affected. He remarked that he would be “hitting the brakes” when cornering in a large group and losing several places in the bunch of riders as a consequence. He had become so frustrated with this negative impact on his performance that he had given up the idea of competing at his previous elite semi-professional level. This was the first time I had encountered in a professional context a first-hand elaboration of the impact of an accident on an elite rider’s performance and I began to wonder whether there was room in the literature for knowledge that would help riders such as Stan and Andy regain the levels of skill and confidence necessary to compete at the highest level without any discernible negative impact of the index critical event. I suspected that most therapists working in the field would have little awareness of the contextual demands of cycle racing and therefore might not be well placed to offer therapeutic interventions of sufficient specificity to enable elite competitors to overcome their difficulties and return to, or even exceed, their previous levels of functioning.

I have also worked therapeutically with elite level competitors from other sports. Although the technical features of their performance affected by their difficulties differed from cycling, there seemed to be a common theme of “holding back” when involved in aspects of their sport that are perceived to be potentially hazardous. A

point-to-point jockey I worked with after a fall felt she was holding back in competition and seemed to have lost touch with her confident and skilful pre-accident self. A national level downhill skier lost confidence after a fall in training and noticed a heightened sense of fear and hesitation in competition, leading to impaired performance. Both competitors responded well to psychotherapy and recovered their previous level of form. So although the very specific context of each sport differs in terms of the triggers that might evoke dysfunctional responses within the athlete, the present study needs to consider to what extent findings derived from competitive cyclists may be applicable to athletes in other disciplines.

1.4: Personal/Professional interface

The two strands of experience outlined above create an unusual position for me as a researcher, for as well as being a professional with an interest in the phenomena under study, I am also part of the wider sampling frame from which the respondents are drawn, having direct experience of the kind of difficulties faced by the respondents. This creates a tension that brings both strengths and weaknesses; on the one hand, my own past experience might make it easier for me to enter the respondent's experiential world, but the danger is that I may inadvertently impose my own interpretations upon the material they present. I hope I have been sufficiently aware of this tension during both the information gathering and analytic processes for the advantages to outweigh the disadvantages.

A further reflection of this duality exists in a development within my own practice which arose out of the formulation of the present research in its early stages. Following the client work with what might be termed “sports trauma” described above, as well as some performance enhancement work with cyclists referred to me by their coaches through existing cycling networks, I decided to set up a separate practice identity, “*Cyclotherapy*” in order to establish a facility whereby therapeutic and performance enhancement work with competitive cyclists could be made available. During the period of the research it became evident both anecdotally and through the interview process that cyclists negatively affected by critical events did not generally recognise that their difficulties could be understood as responses potentially amenable to therapeutic change and instead tended to see them as personal failings or the inevitable direct consequences of their accident.

Thus, alongside the ongoing research process, I worked with many cyclists experiencing difficulties following critical events and was able to use this to reflect upon the potential applied context and impact of my research findings, bringing a degree of circularity that reflected the iterative element of the chosen methodology.

1.5: Theoretical and Philosophical Focus

I consider myself an integrative counselling psychologist, irrespective of whatever particular variety of therapy I might be formally practising at a specific time. My training in various contexts through the Independent Route to chartership included humanistic, psychodynamic and cognitive-behavioural perspectives. More recently, in the years immediately prior to commencing this research, I also completed training and accreditation as an EMDR therapist.

My identity as a counselling psychologist encompasses a belief that the primary vehicle for improving the lives of clients is the quality of the therapeutic relationship (Clarkson, 1998) rather than any particular set of techniques or protocols. This approach involves placing the client, not the therapy, at the centre of the therapeutic frame and using both the therapeutic relationship and the principles of psychotherapy to effect change.

When I began working as a therapist, firstly in couples counselling, student counselling and later private practice, it was relatively easy to adopt a humanistic/integrative approach with clients, but when I began working more frequently in practice with clients who presented with symptoms of distress following critical incidents, I began including techniques derived from CBT into my integrative approach and found in most cases positive change and growth in clients. Gradually I became more involved in the treatment of psychological trauma and I hoped through EMDR training and practice to enhance my effectiveness in this type of work. During the formulation stage of this project, I intended to locate the research within a framework of EMDR theory and practice, as I believed at the time that this approach would be most effective in understanding and alleviating the difficulties reported by the client group in the study.

However, when I began the research process, I became aware that I was finding difficulty integrating EMDR into my client work. Although EMDR interventions were often effective, something for me was not right. I gradually acknowledged that using the directive and formulaic techniques of EMDR was taking me too far away from my

comfort zone as a humanistic, relational therapist. I noted that I started looking for “excuses” not to use EMDR with clients and eventually, although I had by this time achieved EMDR accreditation, I made the decision to stop using the approach. Around the same time, partly as a consequence of the above, I began to feel that locating the present research in a single therapeutic orientation did not match with my own stance as a counselling psychologist nor what I encountered in the early stages of the research process; of the seven participants in the research interviews, only one had taken part in formal therapy as a consequence of his index accident, as part of his legal claim against a driver. The remainder had tended to self-manage their difficulties by a combination of various coping mechanisms (principally avoidance of feared stimuli), but all found their experience of participation impaired. I felt, therefore, that a position of theoretical openness was more appropriate to enable as wide as possible a view as to how clients might be helped therapeutically, either by traditional face to face therapy or by other methods.

At issue here is a key debate within psychotherapy and counselling psychology: treatment approaches for the types of problems following critical or traumatic incidents tend to derive from a medical model that views psychological or psychiatric disorders as objective states with regular and measurable symptoms. Such conditions are regarded as pathologies to be eradicated by evidence-based treatments and techniques. Counselling psychology, deriving from humanistic and experiential traditions, would see such post-event difficulties as problems in living no different to other client concerns. Interventions use the therapeutic relationship to engage with clients’ lived subjective experience and promote understanding and growth rather than resolution of “symptoms”.

1.6: The Sporting Context

Competitive cycling has a much greater presence in the public consciousness than it did perhaps 10 years ago, initially due to the success of GB track cyclists at the last few Olympic Games and since 2012 following the dominance of British riders in the Tour de France and other major continental stage races. Nevertheless, some explanation of the nature of competitive cycling is necessary to contextualise the present study and make it fully understandable to the lay reader. It will become evident that for the competitive cyclist, the kinds of problems and concerns recounted by my respondents create significant obstacles to their maximal performance.

The index incidents cited by the respondents as critical events causal in their difficulties take place in a variety of different environments, some during competition and some not. The focus of this work is upon the minute and subtle effects of the incident upon each respondent's participation in cycle training and racing. In accordance with the phenomenological and hermeneutic stance of the research, the focus is upon the meanings ascribed to these experiences by the athletes. Some understanding of the sporting context is essential to fully understand the riders' concerns.

Competitive cycling in the UK is divided into two main formats: events that involve individual riders completing a set distance in the shortest possible time "against the clock", known as time trialling; and road racing, where a group of riders set off together to complete a course of variable distance with the outcome decided by a "first past the post" principle.

Road time trials mostly take place over set distances; in the UK they tend to be over 10, 25, 50 or 100 miles. Exceptions to the set distance format involve races that measure how far a rider can cover in a set time, usually 12 or 24 hours. Each event will have a prize list for the first few riders, but the attraction of this form of racing is that each individual can take pleasure in measuring their performance against either their own previous best efforts, riders they may know and ride against regularly or agreed age-related standard times. "Beating the hour" for 25 miles is a target of many good standard club riders, whereas for an elite rider the 50-minute barrier is the standard to beat. The current British competition record for 25 miles stands at 42 minutes. In time trials, riders set off at minute intervals, with the notional presence of riders in front or behind providing some stimulus to increased effort, to catch them or not be caught. It is considered a pure form of cycle racing, often called "the race of truth", just rider against the clock.

Time trials are organised by clubs over set, accurately measured courses. To avoid traffic, the majority take place on quieter roads or very early in the morning (6.a.m. starts are not uncommon in summer) or on midweek evenings. However, to achieve superfaster times it is considered acceptable to utilise the drag effect provided by faster motorised traffic, as well as smoother and better maintained road surfaces, and so some courses use dual carriageways, even during the afternoon, where cars can be passing at more than 70mph, sometimes quite close to the rider. Despite there being

safety limits in the form of maximum traffic counts, there is an obvious increase in risk on such courses, and there have been numerous collisions between cars and cyclists, unfortunately including several fatalities, one of which figures in the present study.

To give an idea of peak performance in such events, British competition record for 10 miles was set in 2016 by Polish professional rider Marcin Bialobolocki, (who also holds the 25 mile record mentioned above) with a time of 16 minutes 35 seconds, an average speed of 36.2 mph. This emphasises the importance of the “every second counts” philosophy in cycle sport, as someone beating Bialobolocki’s time by a single second would gain the prestige of being a competition record holder.

Timed events also take place on circular banked tracks known as velodromes, either indoors or outdoors. These generally tend to be over shorter distances, as little as a kilometre, and involve only one or two riders at a time riding against the clock. A recent variant of track racing that has recently been the focus of attention is “The Hour” (Hutchinson, 2006), where the aim is for a solo rider to travel the furthest possible distance on an enclosed track in 60 minutes. The world record for this event has been broken several times recently, as professional cyclists seek the kudos and publicity that being record holder brings. Currently, the title is held by the Belgian Victor Campenaerts at 55.089 kilometres (almost 34 miles), beating Bradley Wiggins’ previous benchmark set in 2015 by 563 metres.

Road racing operates along very different lines, in that the object is to be first over the line at the end of the race, with the placings often decided by tactics rather than who is the strongest rider. Races tend to be organised according to ability, so that riders of a similar level are grouped together; for adults this ranges from elite, first then down to the fourth category, with veteran riders over 40 (35 for women) tending to be grouped according to age. The size of groups can vary from perhaps a dozen to 70 or 80 riders.

Many road races take place on the open road, competing for space with motorised traffic, with a small proportion using enclosed circuits. In recent times many of the latter are purpose-built circuits run by local authorities, whereas others can be disused aerodromes, motor racing circuits or even former military bases. Group or “bunch” racing also takes place in velodromes, using fixed wheel bikes (there is no freewheel

so the rider is continuously pedalling) without brakes; reducing pedalling speed or riding up the bank of the track are the only means of slowing down.

I have excluded from the remit of this study the category of “off road” cycling, encompassing activities such as trail riding, mountain biking, downhill racing and cyclo-cross. Although still often competitive, these events take place on comparatively soft ground on bicycles specially equipped to suit the terrain and often with riders wearing additional protection such as full-face helmets and elbow and knee padding. Most of the danger elements referred to above do not apply to this type of riding due to the absence of traffic and hard road surfaces and the relatively slow speeds (downhill racing excepted) and unhelpful terrain; there is generally no advantage in bunch racing. Accidents and injuries do, of course, occur in these types of events, but they are unlikely to have the same psychological impact on performance as those experienced by road cyclists, as the main features contributing to their difficulties are speed, traffic and the close proximity of other riders.

Whether on road or track, group or “bunch” riding is a highly technical activity, not for the unskilled or fainthearted. The idea of being “in the bunch” is to conserve energy; being close behind another rider saves at least 20% of a rider’s energy, so it is important to stay as close as possible behind the rider in front (“on the wheel”) to gain maximum aerodynamic advantage.

The main danger in road racing tends to be other riders rather than motorised traffic, as a large group of riders is more highly visible to cars than an individual time triallist. Additionally, road races are required as a minimum to be preceded by a lead car to warn oncoming traffic, with many having the addition of motorcycle outriders. Safety is also enhanced by the presence of marshals with warning flags at road junctions. Accidents in road races tend to involve an individual rider losing control, either by slipping due to road conditions or misjudging speed on a bend or descent, or by losing concentration and touching the wheel of a rider in front. Dependent on the proximity and speed of other riders this generally leads to a knock-on effect where a large number of riders can crash to the ground at speeds in excess of 25mph. Significant injury, in the form of cuts, grazes and fractures are not uncommon in such circumstances, although serious injury and fatalities are comparatively rare, being mostly confined to accidents while descending mountains in continental stage races. Riders have to wear helmets in road races, both in the UK and Europe. This is not the

case in time trialling, although most riders choose to do so, as much for aerodynamic efficiency as for safety considerations.

1.7: Impact of critical incidents on cycling performance

The physical impact of cycling incidents will vary with the precise circumstances and will inevitably involve some period of recovery back to (hopefully) full function. The present study concerns itself with the psychological impact of such events as critical incidents. The danger for the competitor is some loss of “edge”; that small but highly significant portion of the agglomeration of skills and aptitudes that make up a rider’s overall performance. Any loss of confidence, technical effectiveness or focus can have a significant effect on performance. For the solo time triallist, anxiety about nearby traffic is likely to distract from concentration upon maximal power output. For the road racer, riding in close proximity to others can be a nerve-wracking experience leading to “backing off” and losing the wheel of the rider in front. Both categories of rider can also be hampered by their perception of the road surface, particularly when cornering and descending, again leading to a loss of speed. Minor changes in the rider’s psychology can have a marked impact upon performance, as well as potential consequences for overall wellbeing.

1.8: Aims and focus of the study

The study aims to give psychological space to the competitive cyclist who experiences a critical event affecting performance and to give this niche area of psychological difficulty a recognised place within psychological theory, research and practice. It is indicative of this degree of specialisation that almost all the background material upon which the rationale for the study is based is anecdotal, arising largely from my own clinical practice and professional and sporting networks. The aim is to heighten awareness within the field of counselling psychology and psychotherapy of the idiography of the impact of negative incidents in sporting contexts, with the hope that conclusions drawn from this specific sample can be used to inspire research and inform practice in other sporting arenas. This application of psychotherapeutic knowledge to sporting contexts is, as will be demonstrated below, barely extant in the research literature and has a limited profile compared to research into other areas of psychological difficulty, such as depression or eating disorders, where the personal impact is potentially much greater. One can only imagine the response a cyclist would get from their GP when presenting with difficulties descending and cornering when

cycling. Such issues are generally held to be outside the scope of what is considered to be psychopathology and are context specific. However, for the individual athlete affected by this type of problem, it is a matter of major importance, as evidenced by my own clinical work with this client group.

The nature of post-accident difficulties for cyclists is present to a limited extent within informal literature aimed specifically at the cycling community, presented in specialist journals and websites (see, for example, Yelsa, 2015). While such information can be helpful, I am concerned to give a sound empirical basis to this set of difficulties to ensure that, as far as possible, interventions are effective and appropriate by encompassing the lived experience of those affected.

This research aims to capture the phenomenological experience of the individual competitor in situations, such as those described above, where identifiable changes in behaviour, cognition or perception inhibit performance. Furthermore, for the serious competitor, their participation in sport is closely intertwined with their very sense of identity, and as such, these limitations in performance are likely to provoke changes in self-concept, self-esteem and overall wellbeing. Support for this assertion is provided by Brewer, Van Raalte & Linder (1993) and the narrative work of Sparkes (1998, 2019), who note that a strong athletic identity can act either as a positive or negative influence on wellbeing. Potential benefits identified by these researchers included a stronger sense of self, whereas risk factors potentially having a negative impact on wellbeing include the consequences of injury. Although the present study is focused on psychological as opposed to physical injury (as in Sparkes' study above) it can be hypothesised that any disruption to the individual's level of competence in, or engagement with, cycle sport is likely to have significant implications for notions of self, identity and wellbeing.

During recovery, the rider will aim to return to a setting where the likelihood of repetition of the events triggering their negative response is relatively high, accepted as a risk factor consequent on the level of competitiveness involved. It is therefore vitally important, as demonstrated by the case of Andy above, that post incident anxiety does not even minimally inhibit performance, as even a very slight deterioration in performance due to the critical event can have considerable consequences in elite level competition; In Lance Armstrong's (2003) words, at this elite level "every second counts".

Consequently, there is a need to ensure that recovery from the negative impact of critical events should enable the competitor to regain the level of sporting function they enjoyed prior to the incident. This necessity places demands upon any treatment modality in that it must ensure that the competitor is prepared to re-engage with their sport with at least the same level of confidence as before their incident. Otherwise, the treatment cannot be considered to be effective. This research will aim to gain further understanding of the phenomenological experience of competitive cyclists affected by critical incidents and to employ this knowledge to inform therapeutic practice in order that such demanding treatment outcomes can be achieved. My hope is that this research will inform best practice in this aspect with the chosen client group, and serve to inspire research in other sporting contexts.

1.9: Research Question:

Research Question: How is the impact of a cycling related critical incident experienced by competitive cyclists during performance?

1.10: Contribution and Impact

This research will make a significant contribution to the field, as a literature search has revealed only a minimal amount of previous work in understanding the nature of sporting trauma, none of it in cycling. It is my ambition that this work will begin to stimulate interest among therapists who might wish to become involved with athletes as clients, as well as capturing the attention of sporting officials or team managers who might see the potential benefits of quicker and more complete recovery from the psychological impact of critical injury for their athletes.

Therapeutic applications deriving from the research will enable individuals affected to overcome difficulties more quickly and efficiently by having access to therapeutic resources that will enable them to resume elite level competition. The research will also contribute to a broader understanding of the impact of negative critical events in other sports and stimulate research involving athletes from other disciplines. There are potential applications for cycling organisations in the form of national and professional teams. I believe that these organisations will be interested in the potential gains for athletes experiencing impairment of performance following accidents or other incidents, by means of the application of finely tuned therapeutic interventions specifically designed for such situations.

The research sample will be drawn from this one sport, which raises important questions about the generalisability of the findings. The focus on cycling is, of course, influenced by my own interest in the sport and the easy availability of a research frame. It is also a sport increasing in popularity and public profile, particularly in the UK (British Cycling, 2018). Due to in part the continuing success of UK cyclists in the international arena on both road and track, participation in cycling continues to increase in popularity. There is value in enabling all cyclists who experience the unfortunate but inevitable consequences of accidents to return to competition unencumbered by performance inhibiting after effects. A wider knowledge and availability of appropriate therapy for this client group will be an example of a positive application of psychology to society. British Cycling as a sports body has already established an international reputation for its emphasis on the psychological preparation of athletes for competition, so this work will be a valuable addition to existing provision and practice.

The present study contributes to the theory and practice of counselling psychology in several ways. Primary among these is an application of counselling psychology to a sporting context, an area not generally figural within the counselling psychology literature (Murphy, 2017), although recent doctoral research by Hilton (2019) into athletic identity sits alongside the present work as an extension of counselling psychology into a sports setting. This novel application of counselling psychology in sport serves to highlight several key debates and asks fundamental questions about the boundaries of the discipline and about who counselling psychology might be “for”. I have already advocated above that the client population represented by the respondents in the study would not normally fit established notions of psychological distress that commonly present among clients seeking therapy. Additionally, the study raises important questions about the principles underlying ideas of recovery in therapy that again may challenge existing practice. The present work also foregrounds for counselling psychologists some relatively unexplored issues of athletic identity and the consequences of disruption of that identity upon psychological wellbeing (Willard & Lavalley, 2016), as well as wider questions regarding the impact of the client’s specific sporting context on their presenting issues and the implications of context specificity for therapeutic interventions.

The study raises debates about similarities and differences between differing professional and academic domains within psychology. As a work exploring the

application of counselling psychology in a sporting context, the question arises of boundaries and overlap between these different professional arenas. Among the areas of significance here is the respective prominence given to the notion of psychological wellbeing as opposed to gains in performance, as well as the relationship between the two. As counselling psychologists, we are used to evaluating therapeutic outcomes in terms of growth, change and reduction in unhelpful emotional and cognitive states to enhance wellbeing (Woolfe, Dryden & Strawbridge, 2003); outcomes in the form of performance improvements in a sporting context are less familiar and belong traditionally within sports psychology. The incorporation of performance-specific outcomes thus represents a challenge that psychotherapists and counselling psychologists working with elite athlete client populations will need to embrace. Potentially the present study will enhance knowledge in both disciplines and perhaps bring them closer together, a welcome development in the context of growing public awareness of the importance of mental health in sport (Purcell, Gwyther & Rice, 2019).

2: Literature Review

2.1: Introduction

In this chapter, I will contextualise the present study within the broader field of psychotherapy and counselling psychology. I shall consider to what extent existing theory and research can explain or illuminate the experience of competitive cyclists who report a negative impact upon their performance following a critical incident. I begin by looking at some of the understandings of the nature of critical incidents within the psychological literature in order to capture the essential features of such events. I shall then examine how some of the major theoretical approaches within psychology might illuminate the relationship between critical events and their various cognitive, emotional, behavioural and physiological sequelae. Also of interest are research studies investigating the psychological consequences of road traffic accidents, some of which include data related to cyclists, which lie close to the subject matter of the present research. The potential contribution of these studies to understanding the experience of the respondent group will be assessed. Later in the chapter, I shall reflect upon the limited available literature specifically relevant to accident-related

difficulties experienced by cyclists, including some sociological and social constructionist perspectives. Finally, I will assess the contribution of existing knowledge within sports psychology to the present study.

Theories that attempt to explain the genesis of psychological sequelae of critical incidents will normally also offer a view as to how such difficulties might be addressed, treated or otherwise ameliorated. Conducting a review of psychotherapeutic approaches to critical incident sequelae is intertwined with wider tensions, themes and debates within counselling psychology and psychotherapy that present differential understandings of human functioning. As part of the evaluation of the variety of approaches reviewed, the implications of such understandings for the practice of counselling psychology and psychotherapy will be considered. I shall also outline the more specific implications of these various theoretical approaches for the treatment of accident-related psychological sequelae.

2.2: Psychological Understandings of Critical Incidents

My initial assumptions and formulations in the early stages of this research project took as given that the incidents that the respondents had been involved in were “traumatic” and that responses could be collectively packaged under the label of “anxiety”. However, these initial assumptions have been bracketed during the research process as a result of changes and developments in my own practice described above. Thus, I have been concerned to avoid the temptation to label both the precipitating events and responses to them, again in the spirit of openness and enquiry (Clarkson, 2013) and the phenomenological stance of a piece of counselling psychology research, so that I can remain open to new possibilities.

A review of the available literature regarding the impact of critical incidents reveals that there is a wide acceptance of a positivist stance that espouses a view that psychological/psychiatric disorders possess an objective reality; the key issues being accurate classification and diagnosis of recognisable disorders and their effective and appropriate treatment (Scott, 2018). Much space is given in the psychological and psychotherapeutic literature to definitions and classifications involving trauma and anxiety responses. DSM-5 and ICD-10 classifications define the essential features of traumatic events and classify various sets of responses to them as specific psychiatric disorders. Such a view represents the dominant positivist and nomothetic tradition

within mainstream psychology. In contrast, counselling psychology derives from a humanistic/existential tradition that regards humans holistically rather than as a collection of parts or sub-systems (Woolfe et al., 2003). Counselling psychology offers an alternative to the medical model and favours “being in relation” as the key element in therapy rather than technical expertise in a particular approach (Clarkson, 1998). Thus, to truly reflect the phenomenological emphasis of the study, I have chosen not to dwell on such taxonomic phenomena and instead to adopt as a heuristic the notion that, for the purposes of this research, the impact of the critical event consists of those cognitive processes and behavioural acts that the respondents regard as having arisen from a particular event and are experienced as both unnatural (in the sense that they did not occur noticeably before the events in question) and negative in their effect upon their participation in cycling. In approaching this area of study, I felt it was important to be as open as possible as to what constituted the psychological impact of the event for the respondents, rather than to attempt to “fit” the experience into some pre-existing category or definition. Therefore, it is inevitable that as a heuristic device, such a conceptualisation of psychological change is likely to undergo transformation in light of findings and conclusions from the present research. Although the respondents in the study were recruited on the basis that they recognised their own responses as “anxiety” this was again a shorthand, heuristic device enabling suitable participants to be identified and recruited for the study.

Although understandings of critical incidents are closely intertwined with the specific underlying assumptions of varying psychological perspectives, I have found some attempts at definition useful in developing a broader conceptualisation of the nature of such incidents that can serve as templates to later evaluate specific theoretical approaches. The questions to consider here are: what is it about such events that create later psychological difficulties for those who experience them? What psychological mechanisms are involved in the creation of these difficulties? There is only relatively limited information in the literature about what are the essential features that make an incident “critical” in the sense that it has some lasting negative psychological consequences. It is far easier to find information on the nature of the psychological consequences and methods of treatment than on the nature of the incident itself. Even a British Psychological Society (BPS) recommended textbook on counselling psychology contains a chapter on trauma counselling for emergency

service personnel that fails to address the fundamental nature of trauma, taking it as understood that traumatic events are those that have serious psychological consequences (Tehrani, 2017).

Caine (2003) offers a useful starting point for understandings of critical incidents from the perspective of Critical Incident Stress Management (CISM). Caine suggests that unexpected events or critical incidents have an emotional impact that could overwhelm a person's normal coping skills and cause distress in otherwise healthy people. A critical incident is described as "any sudden unexpected event that has an emotional impact sufficient to overwhelm the usual effective coping skills of an individual and that causes significant psychological distress" (p 46). However, on closer analysis, the types of event regarded as critical incidents are generally the more serious events on the spectrum, including sexual assault or abuse, fire or explosion, natural disasters and "mass casualty". Most of the critical events described by the respondents in the present study are at the less serious end of the scale, involving relatively minor personal injury, so it is unclear how Caine's definition can help situate the types of incident experienced by those in the present study.

Burns & Rosenberg (2001) agree that there is no comprehensive definition of critical incidents in the literature. Their study uses interviews with nurses regarding challenging events arising out of patient care and found that the interaction of various components of the event determined whether it was "critical". They suggest that the meaning given to the event by the nurses was a highly important factor as to whether or not cognitive, behavioural or affective changes were triggered by it.

Flannery (1999) also contributes to the debate from an emergency mental health perspective and offers the notion of a critical incident as "an event which serves as a perceived threat or challenge to one's wellbeing" (p.77). Flannery goes on to explain that if such an event begins to overwhelm the individual's coping mechanisms, then impaired functioning and ultimately psychiatric disorder can be the result. What is useful in relation to the present study is that the notion of "extreme stressor" critical incidents is introduced, serious events including natural disasters and extreme violence that frequently result in the experience of psychological trauma. These are contrasted with less serious events, similar to those encountered in the present study. The work acknowledges that minor critical events are not necessarily to be regarded as traumatic but can still lead to later psychological difficulty.

Serlin & Cannon (2004) offer a definition of traumatic events from a humanistic perspective, portraying such incidents as events that threaten our very existence, shaking the foundations of the self and reminding us of our mortality. There is again an absence of any clear exposition of what defines a traumatic event and the work offers a tautological approach, common to much of the literature, accepting that a traumatic event is anything that produces symptoms of trauma.

Further insights from a humanistic perspective concur that critical events overwhelm an individual's coping resources and as a consequence disrupt the meanings that people have made of their lives (Wigren, 1994). When an incident overwhelms coping resources, it creates a need for a new "sensemaking", a process by which individuals attempt to explain unusual or confusing events by creating new meanings and understandings of the world and their sense of self within that world (Maitlis, 2009). Maitlis' research explores the impact of injury upon musicians who can no longer play professionally due to the effects of their injury and describes their attempts to assign new meanings to their experience and identities. Although a different client group from the respondents in the present study, there are likely to be similarities with respect to identity and the meaning that sporting activity holds for the respondents. The sports psychology literature also offers helpful insights into the importance of sporting identity and the negative consequences of disruption to identity through injury or transition to retirement (Fairlie et al., 2020).

The present study employs a qualitative methodology to explore the experience of competitive cyclists following a critical event. From a similar epistemological perspective Sparkes' ethnographic and narrative studies (1998, 2019) usefully offer insights into the experiences of athletes in specific physical and sporting contexts. Using examples from sporting contexts such as wheelchair bodybuilding, rugby and basketball, cyborg athletes and other instances of embodiment in sport, Sparkes' work is particularly apposite as it frequently deals with the effects of interruption of an athletic project by events such as illness or injury. Sparkes, Brighton & Inckle (2018) employ narrative accounts from an ethnographic study of disabled athletes to explore meanings and experiences of disability sport for those who became involved following spinal cord injury. Sparkes uses narrative accounts to explore meanings of the interruption for the athlete and the consequent reconstruction of the self through alternative or adaptive sporting activity. Qualitative research of this nature involves

significant immersion on the part of researchers in the field with the aim of capturing the lived experience of the respondents, as well as giving them a “voice” that might otherwise be unheard. The contribution of the present work similarly aims to give voice to this specific realm of sporting experience.

Another useful thread in developing understanding of the nature and impact of critical events is provided by Levine (2010), who asserts that to fully appreciate the nature of traumatic events, we need to consider the notion of mind-body interaction. This involves an understanding of trauma in biological terms, a view that sees trauma not as an event producing emotional pain but one that releases primal defences “more appropriate to our amphibian or reptilian evolutionary predecessors” (p. xi). Our response to a critical event can involve a holding in of this physical response that we cannot overcome. Therapy must, therefore, involve giving the body expression in addition to talking therapy. Such approaches may be particularly appropriate in a sporting context, given the physical context in which the respondents’ difficulties occur.

There are also relevant contributions to the context of the present work from the field of neuroscience. Schore’s (2002) work foregrounds developmental history and the subsequent impact on right brain development as important factors in the response to critical or traumatic incidents in later life, moving the focus from the nature of the incident itself to individual differences in early attachment experience. Drawing on the work of Bowlby (1969) on attachment theory, Schore suggests that episodes of hyperarousal and dissociation occurring due to insecure attachment during infancy are imprinted upon the developing nervous system located within the maturing right brain, leading to the creation of inefficient coping mechanisms in face of stressful events in later life. Such individuals will be more sensitive to stressful events in later life and thus vulnerable to the development of stress related difficulties in the face of subjectively perceived overwhelming events, such as those experienced by the present study’s respondents. Schore approaches this matter from a positivist medical perspective, taking the diagnostic category of PTSD as given, which is at odds with a more nuanced understanding of the responses to critical events adopted in the present work, reflective of the grounding of the work within counselling psychology. I agree with Rizq (2007) in advocating a “tread softly” approach to the role of neuroscience within psychotherapy and counselling psychology. The latter discipline generally takes an oppositional stance to the medical model when working with psychological distress but

at the same time as counselling psychologists, we should avoid the danger of a “neuroseptic response” (Carroll, 2018) and be open to working psychotherapeutically with neuroscientific and neurodevelopmental understandings. Rizq argues that the relational, affective role of the therapist in psychotherapy carries with it the capacity to alter some of the responses based in procedural memory established by developmental experiences (Stern, 1983). Stern’s view is that this quality of “being with” the client as a healing mechanism for trauma is a feature of those therapies that work at relational depth and emphasises the unconscious relational processes at work within psychodynamic psychotherapy. Cognitive therapies, in contrast, are likely to be less effective in the absence of such relatedness. In the context of the present work, the importance of this debate for counselling psychology cannot be understated; it suggests that to make sense of client presenting problems in this area, an approach must be undertaken that encompasses the view that

“We cannot separate our psychological being from our biological and neurophysiological foundations, nor from the complex relational network within which we were created and are now embodied.” (Rizq, 2007 p.15)

The importance of early attachment in understandings of later responses to critical events is also emphasised in the work of Abbass (2015) and Neborsky & Ten-Have Delabije (2018), again from a psychodynamic perspective. Drawing upon the early work of Bowlby and grounded in neuroscience, their emphasis is upon the impact of the quality of early attachment bonds on emotional experience. Disruption to the attachment bond negatively impacts brain structure and development, rendering the individual vulnerable to emotional dysregulation in the face of challenges in later life. In relation to the present study, this research again emphasises that in understanding responses to critical events it is important to consider developmental history as well as the nature of events themselves and emphasises the valuable contribution of counselling psychology to this field by bringing knowledge from developmental psychology to the table as well as opening up therapeutic opportunities.

2.3: Psychological explanations of the impact of critical incidents

The literature I have reviewed thus far in relation to the nature of critical events has led to the conclusion that it is impossible to isolate a definition of what constitutes a critical event from the wider theoretical contexts in which understandings of such events are situated. In the absence of any such clear understanding, I shall instead

examine how a range of psychological approaches link critical events and their consequences. In doing so, I will ask the questions: “how might this approach help illuminate the difficulties experienced by my respondents”, and “what does the approach offer in the way of helping to improve their difficulties?” In this section, I will examine a range of theoretical understandings that may help illuminate the psychological processes that explain the relationship between the precipitating incidents in which the respondents were involved, and the nature of the behavioural, cognitive and emotional responses reported as part of the negative impact upon performance.

As noted above, much of the potentially relevant literature attempts to explain the relationship between what are understood as “traumatic” incidents and a range of diagnosable psychological symptoms, including Post Traumatic Stress Disorder (PTSD) and other less severe post-trauma anxiety disorders. Although I have attempted to avoid such definitions and diagnostic categories in setting out the parameters of the current study, I shall still review this sub-domain of psychological writing to evaluate the extent to which such literatures can offer a degree of understanding of the phenomena under study.

2.3.1: Cognitive-Behavioural Approaches

Foa and colleagues suggest that post trauma stress responses have been present in the literature for more than 100 years (Foa, Steketee & Rothbaum, 1989). For instance, Janet (1889) had already suggested that the intense emotions generated during trauma interfered with the information processing of such events so that memories of them become dissociated from consciousness and instead are stored as visceral sensations (such as anxiety and panic) or visual images (such as nightmares and flashbacks). The degree of similarity across symptoms arising from different events eventually led to the establishment of the diagnostic category of PTSD in 1980 (APA, 1980). Foa considers and quickly rejects simple behavioural explanations of PTSD symptoms in terms of stimulus-response (S-R) associations demonstrated by Watson’s “Little Albert” experiment (Watson & Rayner, 1920) due to the wide range and variety of PTSD symptoms. Watson’s behaviourism suggests that fear and avoidance are behaviours learned by classical conditioning, where an original traumatic event produces such behavioural responses in similar situations by a simple pairing of the unconditioned stimulus (in our case an event such as an accident or

injury when cycling) and unconditioned response (e.g. fear). In this sense, “learning” takes place, with the same behavioural response being exhibited in situations that resemble the index event. Although this simple explanation of the responses of those involved in accidents has severe limitations, in that it is a process occurring without conscious awareness, it is clear from anecdotal and clinical experience that the behavioural consequences of cycling accident victims is highly context specific, occurring only in very similar settings to the precipitating event.

How else might this association be explained in more complex terms? If we now turn to examine the contribution from a cognitive perspective, the notion of anxiety as faulty information processing predominates within the cognitive and cognitive-behavioural literature relating to anxiety. This approach is exemplified in the work of Aaron Beck, one of the “founding fathers” of Cognitive Behaviour Therapy (CBT) (Beck, Emery & Greenberg, 1985; Beck & D.A Clark, 1988; Beck & D.A. Clark, 1997; D.M. Clark, 1986). From Beck’s standpoint anxiety involves “the selective processing of information perceived as signifying a threat of danger to one’s personal safety or security” (Beck & Clark 1988, p29). Beck and colleagues understand anxiety as perceptual state of overestimation of the threat present in a particular situation. This contrasts with the style of processing involved in “nonclinical” or more rational anxiety, where the estimate of danger is more in keeping with the realities of the situation. Anxiety from this faulty information processing perspective represents “a perceived physical or psychological threat to one’s personal domain” (Beck & Clark 1988, p 23). Clearly this ability to react to perceptions of danger has survival value, but the nature of cognitive anxiety involves maladaptive cognitive schemas that involve overestimating the degree of threat associated with a specific environment and underestimating the individual’s ability to cope or manage the threat. This view of anxiety is echoed in the work of Foa and colleagues (1989), who posit the presence of “fear structures” in memory, in the shape of cognitive programs to recognise and escape danger. For the post-accident cyclist this would imply that there is a bias in their appraisal of the degree of danger present in settings that resemble the initial event, coupled with a similar bias in their ability to meet the threat, leading to a range of characteristic behavioural and emotional responses that represent the reported impacts upon their performance and engagement. Foa’s work does give us perhaps a useful way of distinguishing a relatively specific, situational psychological response,

where the fear structures are related to a particular context, from more complex presentations such as those found following major traumatic events, where the fear structures are wider and thus violate the sufferer's more basic sense of safety and wellbeing (Foa & Kozak, 1986).

Treatment of anxiety from a cognitive perspective involves a suppression of this automatic threat mode of processing together with the activation of more constructive and reflective modes of thinking in trigger situations, involving a combination of verbal mediation and exposure to feared stimuli (Beck & D.A. Clark, 1996). The process encourages the client to reflect and elaborate upon their automatic threat-related cognitions and includes a strong element of psychoeducation regarding the nature of anxiety and the normalisation of symptoms to improve self-efficacy. Treatment also includes a behavioural element of graded exposure to feared situations as well as cognitive restructuring to enable re-appraisal of feared situations as less threatening. Clients are encouraged to identify and modify the negative cognitions that are triggered by the feared situation or environment and thus alter their emotional and behavioural responses (D.M. Clark, 1986).

From the philosophical and methodological perspective of the present study these explanations of accident related emotional and behavioural phenomena are of limited value for an increased understanding of the experiential nature of such phenomena. The existing cognitive behavioural literature, with its relatively narrow conceptualisation of anxiety responses, tells us nothing about what it is like to experience the types of problems encountered by the respondents and by implication the wider population of cycling accident victims who encounter an impact upon their performance. This is, of course, understandable, in that the popularity of CBT as a treatment for post trauma anxiety is based upon evidence of its efficacy and cost-effectiveness (Layard & Clark, 2014). However, the various theoretical pillars supporting cognitive explanations of anxiety emerge from existing knowledge within experimental social and cognitive psychology rather than from empirical investigation involving those who experience anxiety. The present study attempts to address this issue by offering insight into the raw, lived experience of those affected following a critical incident who, due to the importance for them of the negative impact, are likely to be articulate and specific as to its effect upon them.

The literature confirming the efficacy of CBT in the treatment of post trauma anxiety is vast and unequivocal, (Layard & Clarke, 2014), leading to its inclusion in National Institute for Health and Care Excellence (NICE) guidelines as a treatment of choice for anxiety generally and PTSD in particular in the UK (NICE, 2005). Beneath the surface, however, lies a much bigger debate within psychotherapy and counselling psychology about the quality of the evidence base for these assertions of efficacy. This, in turn, raises questions about the potential usefulness of CBT as a therapeutic intervention for the kinds of client problem experienced by the respondents in the current study.

This important issue has been highlighted recently in complementary papers by Scott (2018) and Timimi (2018), who debate the reasons behind the acknowledged failure of the government's Improving Access to Psychological Therapies (IAPT) programme, which delivers CBT in the NHS in accordance with the aforementioned NICE guidelines. Scott argues that the limited success of IAPT is due to a lack of adherence to those guidelines, firstly because of a lack of employment of a valid diagnostic system, in that appropriate interview and psychometric testing techniques are not being used to accurately diagnose disorders and thus indicate appropriate treatment plans. Secondly, lack of "technical expertise" in CBT is claimed as a factor in low recovery rates. Timimi takes a position of extreme doubt regarding the appropriateness of CBT to address client problems, suggesting that low recovery rates reflect the nature of therapy itself, rather than diagnostic or technical failures. Timimi takes the view that there are important factors other than technical expertise that influence outcomes in therapy. However, what is far more important is an issue upon which the two researchers agree: how "recovery" is measured in CBT outcome studies raises doubt about the potential effectiveness of the approach for the kinds of problems encountered by the present client group. As far as NHS CBT treatment is concerned, any measured improvement in the client's presenting issues is regarded as a successful outcome, rather than considering the notion of a full recovery. What is clear from the exposition of cycle sport outlined above is that any psychological intervention offering recovery from the impact of critical events needs to be able to return the athlete to at least the level of competitive functioning they enjoyed prior to the incident; anything less would not be considered a "recovery" in sporting terms. A similar degree of improvement would be expected in a footballer injured in a tackle; to

be anything less than 100% confident in future encounters would be an unsatisfactory outcome and significantly reduce the player's effectiveness.

There is another wider issue here in a counselling psychology context: the aforementioned problem of diagnosis and "caseness". It is unlikely that the kinds of difficulty experienced by the respondents in this study would be considered as "serious" difficulties worthy of therapeutic intervention. There is also a reasonable argument that limited NHS resources would not be best employed in helping cyclists to overcome difficulties following accidents that, other than affecting their engagement with cycling, have only minor effects on overall wellbeing.

It may be the case that cognitive behavioural models can offer some insight into the nature of the problems experienced by competitive cyclists following accidents, but the model can tell us little about the content of their experience; nor can it provide a robust and effective means of psychological intervention that brings measurable improvements in performance. Traditional psychotherapeutic approaches will need to rework notions of successful outcomes (i.e. in terms of performance measures as well as those of wellbeing) in order to meet the needs of athlete populations similar to those in the present study.

2.3.2: EMDR and Adaptive information processing

An examination of the relevance of approaches that see the impact of critical incidents in psychophysiological terms will be considered. Building upon developments in neuroscience mentioned above, this notion of the response to critical events as faulty information processing based upon characteristic physiological changes following the event underpins a number of "body oriented" approaches to the conceptualisation and treatment of trauma that question the effectiveness of more traditional talking therapy treatments such as those derived from purely cognitive approaches (Rothschild, 2000).

Van der Kolk's (1994) pivotal work suggests that a traumatic or critical event becomes problematic because it cannot be integrated with existing neural memory networks, instead remaining in a raw, unprocessed form containing the sensory and emotional elements of the experience. Stressful experiences such as the type of incidents cited as critical by the respondents are thus "locked" or frozen neurologically so that the normal mechanisms that allow resolution or processing of such memories do not

develop (Cvetek, 2008). When a memory of a critical event is triggered, by for example being in a similar environment, the individual experiences the emotional and physiological reactions that belonged appropriately to the index event but are not relevant to current functioning. When a critical event such as a cycling accident occurs, the distressing memories of the event are stored as sensory and physiological data with related environmental information stored alongside, so that situations that resemble the original trauma will evoke specific physical responses (van der Kolk, 1994). So for a cyclist, a traumatic injury occurring in a particular context, such as when cornering, descending or riding in a large group will tend to lead to emergency responses relevant to that context: braking or otherwise slowing down, coupled with muscle tension and rigidity and dissociation from the current environment.

In explaining how such traumatic events are "engraved" upon the memory, van der Kolk employs the distinction between declarative and non-declarative memory processes. Declarative memory (sometimes called semantic memory) is an active, constructive process involving the integration of a new event or piece of information into existing mental schemas. Non-declarative, or implicit, memory consists of conditioned emotional responses, skills and habits, and sensorimotor sensations related to specific experiences. Van der Kolk's research suggests that the experience of a cycling-related critical incident creates interference to declarative memory, so the experience is not processed and integrated into existing memory structures but stands out as a distinct experience that carries a high emotional charge.

As a therapeutic model derived from this psychobiological approach to critical events Eye Movement Desensitisation and Reprocessing (EMDR) therapy continues in this information processing tradition by offering a theoretical model that suggests that the raw, unprocessed experiences of an upsetting negative incident produce pathological responses, such as anxiety in response to a current or future event, which we are unable to modify consciously because we cannot connect them with stored, integrated experience. This accords with the anecdotal and clinical evidence found among cyclists referred to in my introduction, who frequently expressed frustration at their inability to consciously modify their unhelpful responses following their accident. EMDR offers a means of reducing the impact of traumatic incidents by means of an Adaptive Information Processing (AIP) model (Shapiro, 1995), which claims to facilitate an adaptive resolution of this unprocessed material by stimulating relevant

neural networks that move the traumatic material to more appropriate memory systems, thus eliminating the pathological trauma response.

During EMDR therapy the client is asked to recall the most distressing aspect of the memory together with the accompanying currently held negative beliefs and associated bodily sensations. At the same time, they are asked to move their eyes from side to side (normally by following the therapist's fingers or some form of electrical "light box") or use some other means of bilateral stimulation (BLS) such as tapping, pulses or auditory impulses. The aim of the process is to desensitise the client to the distressing memory and reprocess the memory so that the cognitions associated with it are more in keeping with the reality of their present environment.

The standardised version of EMDR therapy involves an eight-stage protocol beginning with history taking and formulation. There then follows a preparation phase in which the client is helped to develop appropriate coping resources to manage the processing of their distressing memories. Then the assessment phase identifies the components of client's target memory, associated negative belief(s) about the self, a desired positive cognition that the client would rather believe in relation to the memory, bodily sensations when thinking about the memory and subjective units of disturbance (SUDS) (Wolpe, 1990) ratings for level of distress and level of belief in their positive cognition. This is followed by the desensitisation of the memory using BLS. After this the positive or preferred cognition is 'installed', again using BLS.

EMDR is a forward looking therapy and within its eight stage protocol the client is helped to develop strategies, using the *future template*, to assist with managing anxiety in hypothetical future situations. These are in the form of resources such as beliefs, positive self-talk, visual images and other strategies designed to minimise the impact of any residual traumatic anxiety in specific future situations that have previously been affected by the critical incident. In general, the future template is aimed at helping the individual to function effectively in a specific future context, but for the elite athlete, the level of functioning required must be at least equal to, if not better than, premorbid functioning. Thus a greater emphasis may need to be placed on the future template for the elite athlete. In addition, the types of resource needed are likely to be quite specific to the sport, as they involve a far greater level of complexity of cognitive and physical processes than an individual overcoming anxiety in an everyday context.

There are a number of features of EMDR that, on the surface at least, may be helpful in both understanding and ameliorating the difficulties encountered by the respondents in this study. These features include the breadth of psychological problems EMDR can potentially be used for, in that although EMDR has been primarily used as a therapy for PTSD, more recent studies claim efficacy in treatment of a much wider range of psychological difficulties linked to adverse life events (Logie, 2014). Compared to CBT, there is little concern with diagnosis and categorisation of psychological distress, so in theory there is no reason to exclude the (relatively minor) difficulties that arise from a cycling accident from its remit. The approach would not appear to distinguish between, for example, severe psychological symptoms arising from a distressing combat experience and a cycling related incident, as both are distressing events that leave unprocessed memories that may be amenable to reprocessing with the EMDR protocol. This understanding is based on the supposition that the disturbing event is stored dysfunctionally in the memory and gives rise to negative images, feelings and cognitions when the memory is triggered.

This acceptance among the EMDR community that the therapy is appropriate for any “distressful experience” (Cvetek, 2008) and not just for major life-threatening events (sometimes distinguished “small t” rather than “large T” traumas) sits well with the range of event types experienced by the respondents in this study, the majority of which did not result in what would be regarded as serious injury.

Also in its favour is the availability of some, albeit very minimal, evidence as to the effectiveness of EMDR in sporting contexts. In the literature search I came across three studies, two published in journals devoted to specific sports and one an unpublished doctoral thesis, which referred to the use of EMDR for sporting incidents. Crabbe (1996), an American veterinary scientist and competitive dressage rider, writes about her own experience of undergoing EMDR with a therapist who had herself used EMDR to overcome residual anxiety from a horse riding injury. Crabbe found that a single session of EMDR improved her own performance as a rider. She had experienced several falls when riding, including one that involved an emergency admission to hospital. She also noted that other emotions, such as guilt for spending so much time on her hobby, were also contributing to her distress, as well as a general performance anxiety. Crabbe’s article also gives other anecdotal examples of dressage riders’ performances being improved by the use of EMDR. Although this

does not constitute hard evidence for the effectiveness of the approach, its attractiveness lies in the lack of focus on “pathology”; instead the emphasis is upon improvement and the reduction of very specific anxieties that negatively affect a rider’s performance. However, there is a significant difference between dressage riding and cycle sport in terms of the level of physical risk involved; Crabbe confirms that the anxieties experienced by riders did not normally derive from accidents occurring during competition, but from riding in general. This raises the question of whether there is something different about a critical event that involves physical injury and one where the distress is purely psychological.

A different perspective is offered by Graham (2004), who investigated competitive swimmers who had experienced a variety of negative sporting events. This work is useful in that it gives us a much broader idea of what might be a negative critical incident in sporting contexts; as well as including those who had experienced a distressing accident when swimming (e.g. hitting a wall when turning and inhaling water) others had experienced various forms of non-physical distress, including embarrassment, disappointment or criticism during or after competition. Graham noted that whatever the source of the distress, the swimmers found that negative self-statements and images of the traumatic event would intrude on the starting blocks, resulting in anxiety and impaired performance. She found that employing EMDR techniques enabled the athletes to reprocess the physical, physiological and emotional aspects of the trauma more efficiently so that competitive situations did not trigger unhelpful responses. Graham suggests that athletes who have experienced an upsetting competitive experience of any kind may have difficulty with competitive anxiety.

I encountered another psychologist and competitive cyclist who had undertaken doctoral research in a similar area. Gracheck (2010) based her thesis on a single case study of an international level competitive cyclist who was helped to improve his descending skill and speed using an adapted variant of EMDR specifically tailored for the purpose of performance enhancement. This approach again lends support to the notion that EMDR is potentially more than a treatment for severe trauma and might be used as a performance enhancement intervention both in sport and other performance settings where anxiety may have a negative impact (Foster & Lendl, 1996). Such anxiety is often accounted for by a historical performance trauma (Grand, 2009) that

may or may not be physical in origin, that can be processed to resolution using the EMDR protocol.

In Grachek's study the athlete's goal was to reduce anxiety and consequently increase speed when descending, an advantageous attribute in competition. The reported improvement was remarkable, with the rider reducing his time taken to descend a local training hill by almost a minute over a five month period as well as reporting that he was "able to descend confidently in a pack of racers at 50mph during a road race" (p.67). Although the applicability of Gracheck's study is limited by its single case design, before and after measures on descending speed and a number of other psychometric properties point towards EMDR being a potentially effective intervention to overcome specific cycling related difficulties similar to those reported by my own respondents. However, as Gracheck acknowledges, the version of EMDR administered to the athlete was "non-standard", tailored specifically as a sporting intervention. A much closer analysis of therapeutic method would be needed before drawing any firm conclusions about the validity of EMDR in general for this type of intervention.

Additionally, although Gracheck's study is nominally one measuring performance improvement over a number of facets of competition, it is revealed later in the work that the cyclist in question had actually experienced a high speed crash while descending in a race, hence his stated desire for an improvement in descending speed. This again acknowledges the overlap between interventions supporting performance enhancement of a particular skill or attribute on the one hand, and those aimed at improving wellbeing by overcoming the impact of a critical or distressing incident on the other. This means that, albeit unintentionally (the cyclist's critical incident was not an element of the inclusion criteria for Gracheck's study), the study is a single case example of how EMDR might be used to overcome the effects of cycling accidents on performance and as such has clear relevance to the present study.

Other than the three studies mentioned above, there is little research evidence that EMDR has any specific applicability to sports related accidents. EMDR has been used extensively with Post Traumatic Stress Disorder (Van der Kolk, 1996), but there is little research into the use of EMDR for performance anxiety (Oglesby, 1999). EMDR is widely recognised as an effective treatment for psychological trauma (NICE, 2005).

but little is known about the effectiveness of EMDR as a therapy for athletes who have experienced accident, injury or other trauma (such as failure or humiliation) in sporting contexts. Therefore, one of the aims of the present study is to reveal as much as possible about the structure of the experience of cyclists reporting impairment on performance so that therapeutic interventions are as focussed as possible on achieving the kind of positive outcome reported by Gracheck.

The contribution of Gracheck's research to the present study is that serious consideration is given to the extent of recovery or improvement demanded from a psychotherapeutic intervention. It is of note that the researcher is also a competitive cyclist, fully aware of the importance of successful performance outcomes in therapy. This has been noted above as a potential serious failing of CBT, especially when delivered through the IAPT programme, where the criteria for recovery may not meet the requirement for a significant performance enhancement. In the context of what might be termed "sporting trauma" more is required of therapy in that the athlete needs to be, as far as possible, *totally* free of any residual inhibition that might impact upon performance in the slightest, and that ideally developed coping responses, as in the case of Gracheck's cyclist, will hopefully facilitate *even more* effective performance than was the case prior to the trauma. The demands placed upon interventions for difficulties encountered by cyclists following critical incidents, both for maximum resolution of unhelpful situational responses and for specific performance enhancement, require a much greater level of knowledge about the experience of athletes who develop sports related trauma. It is from a greater understanding and awareness of this experience within the therapeutic community that modes of intervention can be developed for specific groups of athletes. The present study thus aims to contribute to this gap in psychological knowledge.

2.3.3 Contribution of Road accident research studies

This area of theory and research is probably closest to the present client group in its focus, in that the emphasis is upon the development of psychological symptoms following a specific event that resembles the events experienced by the respondents. Some studies of road accidents do identify road cyclists as a sub-category, but none make any distinction between commuter, leisure or competitive cyclists. In that sense, this research area may be of only limited use in understanding the impact of road accidents on competitive cyclists.

Road accident studies are of relevance to the present study as there is an acknowledgement that as critical events, road accidents often create psychological distress that can fall short of formal psychiatric definitions such as PTSD but still create emotional disturbance that has an impact on functioning. Scott & Stradling (1992), writing from a cognitive-behavioural perspective, also argue that although most outcome research into the effectiveness of treatments for post traumatic pathology uses clients with a formal diagnosis of PTSD, many clients experience what they term “sub-syndromal” PTSD, symptoms that are below the level that would fulfil diagnostic criteria.

There is also a common thread among many studies that asserts that the needs of road accident “victims” are not being adequately met (Jeavons, 2001), echoing the view underpinning the present research that such critical incidents can have significant effects upon wellbeing but that access to appropriate support for those affected is limited. The present study aims to further knowledge of the psychological impact of accidents in one closely contained sporting field, but there is much that can be learned from previous research in similar areas that can provide a knowledge base for the current research.

Investigation of the psychological consequences of road accidents is a relatively new area for psychological research, with the earliest (Norwegian) prospective study of the impact of road traffic accidents appearing to date from the 1980s (Malt, 1982). Most studies in this area share common limiting features, in that they tend to focus on those who have attended hospital for the injuries following the incident, use psychometric instruments to identify psychological (in many cases described as “psychiatric”) distress, and as such tend to be concerned with psychiatric diagnosis, the variables influencing the progression of symptoms over time, and the availability of appropriate treatment. These factors are regarded as significant limitations in informing the context for the current study, although there are useful points of contribution.

In one of the earliest English language studies in this area, Mayou et al. (1993) followed up a sample of road accident victims presenting with physical injuries at hospital and noted the frequency of symptoms classified as PTSD, travel anxiety or general effects on being a driver or passenger. A range of measuring instruments were used to elicit details of symptoms, including the use of semi-structured interviews, although unfortunately the detail of these is only minimally reported upon

(the symptoms described in the interviews were simply coded for severity). However, of relevance to the present study are the brief references to sequelae of accidents such as cautiousness when driving and avoidance of accident related situations that cause distress, features that appear among the testimony of my respondents. Mayou's study also contextualises the present study in that a range of psychiatric symptoms were common sequelae of less severe road accidents, pointing out that due to the widespread prevalence of injuries in road traffic accidents such symptoms were of greater clinical significance than those caused, for example, by natural disaster. The researchers found that anxiety about travel was "persistent and disabling" among 20% of their sample one year post accident (p.650), emphasising the value of research into the impact of critical incidents in general. Similarly, Ellis et al. (1998) followed up a sample of children involved in motor vehicle accidents and found significant psychological effects at follow up, with 50% of their sample experiencing avoidance and 39% displaying symptoms of travel anxiety.

In the same vein, Taylor & Koch (1995) undertook a review of the available literature, arguing that the psychiatric consequences of motor vehicle accidents had historically been relatively overlooked by clinicians and researchers in favour of studies investigating the nature and treatment of more general phobias and combat related PTSD. They cite more recent studies of motor vehicle accidents that show the prevalence of pain related depression and specific accident related phobias such as avoidance behaviours. However, in common with most of the research in this area, there is an emphasis upon (psychiatric) diagnostic categories and criteria, although there is some useful discussion of a range of avoidance behaviours encountered by those who have had accidents. There is here a similarity to some of the behaviours described by respondents in the present study. Taylor & Koch explain the acquisition of symptoms such as phobic avoidance of accident related settings with reference to classical conditioning (Wolpe, 1981) and suggest that systematic desensitisation could be an effective treatment for these issues. The overall value of such research is to highlight a range of difficulties following relatively common everyday events that previously have traditionally not been considered serious enough to warrant investigation by researchers and practitioners in the field.

Further insight into the type of emotional distress arising from motor vehicle accidents is provided by Jeavons (1991), who undertook a longitudinal study looking at factors

influencing the development of symptoms over time. As before, there is much debate about diagnostic labels and categories. However, Jeavons provides a helpful acknowledgement that there is much symptomology that would not necessarily meet formal diagnostic criteria but would nevertheless cause significant emotional distress. Jeavons also counsels against relying upon data gathered from only those more seriously injured in accidents as those with minor injuries (or indeed witnesses, as evidenced by one of my participants) can still be markedly affected by the event. There is also support for the methodology employed in the present study, as Jeavons suggests that a qualitative approach would be more useful in identifying the nature and extent of emotional distress among research participants who have generally been asked to respond to psychometric instruments regarding their symptoms.

Later research by Mayou, Bryant & Ehlers (2001) began to include different categories of road user, identifying a sub-group of injured cyclists for the first time. Participants were followed up after one year and three years post accident, with a significant portion (16%) still experiencing symptoms of travel anxiety or phobia after 3 years. Mayou & Bryant (2003) continued the practice of identifying sub groups, again including cyclists, among those involved in accidents but were as before concerned with developments in psychological outcomes over time and did not report on any specific issues among the cycling sub-sample. They also continued the practice of collecting data from those presenting at a hospital with physical injuries, thus potentially excluding many involved in cycling accidents who either self-treat or are not physically injured.

Much more recently, citing both the increasing popularity of cycling and the absence of research investigating the impact of traffic injuries on the psychological health of cyclists as motivating factors behind their research, Craig et al. (2016) separated out cyclists as a sub-group in a study designed to compare the psychological impact of road traffic injuries upon cyclists in comparison with car occupants. Although the study continues the practice of selecting respondents who have presented at hospital with physical injury (significantly excluding those with “only” soft tissue injuries), it provides a valuable insight into the psychological profiles of cyclists as opposed to other road users. A range of psychometric measurements were taken, including adjustment to pain, development of trauma symptoms and general psychological distress. The authors found that cyclists demonstrated significantly better psychological health both immediately post-accident and at six months, indicative of greater psychological

resilience. They hypothesised that this greater resilience might derive from the respondents' engagement in physical activity, but without any information on the extent of involvement in cycling such a claim is difficult to substantiate. Nevertheless, it highlights the use of adaptation and coping strategies to manage performance difficulties.

Another study focusing on factors influencing outcomes of physical injury among cyclists involved in accidents has been carried out by Gopinath et al. (2016). This study pinpointed socio-economic and psychological factors that appeared to promote greater resilience among cyclists injured in road traffic accidents compared to other road users. It is of note that the bulk of available research on the impact of accidents on road users in general and cyclists in particular has been carried out in Australia, where there appears to be significant public policy concern regarding the increasing incidence of cycling injuries, driven in part by increased participation in cycling (Gopinath, 2016, p.2).

Further studies in this area also highlight the need for treatment of psychological sequelae as well as physical injuries, stressing both the importance of early intervention by means of CBT to reduce the incidence of PTSD (Bryant et al., 1999) as well as the limited availability of treatment for accident victims (Jeavons, 2001).

Although such research is relevant in that it recognises the possibility of the presence of clinical psychological symptoms among cyclists following accidents, its value to the present study is limited in many ways. The respondents were all seen following hospital admission, which excludes less serious accidents, accidents occurring other than on public roads or those choosing not to attend hospital; the sample must be assumed to be a random sample of cyclists, not necessarily competitive, who are injured on the roads; there is only the most basic detail about the kinds of difficulties experienced by the respondents, subsuming them under diagnostic categories such as Acute Stress Disorder, travel anxiety or travel phobia. There is an absence of research designed to inform therapeutic practice with specific client groups in sporting contexts, whose needs are likely to be quite different from the majority of victims of road traffic accidents. The present study seeks to address these issues.

2.3.4: Humanistic/Existential approaches

Most of the preceding material on the impact of critical incidents is located within theoretical perspectives deriving from a medical model of psychological distress, conceptualising the consequences of such events as diagnosable pathological responses that may be amenable to treatment. I have indicated above how such approaches to the phenomena might be problematic for counselling psychology, so it is essential to consider psychological approaches that do not make such assumptions but still offer insight into the phenomena under investigation. Reflecting its broadly humanistic value base, counselling psychology brings a rich variety of understandings of psychological trauma that may be pertinent to the presenting problems of these cyclist respondents. An analysis of the definitional complexities surrounding similarity and difference among the realm of humanistic/existential therapies is beyond the scope of this work (Burston, 2003). Suffice to say that this involves a cohort of approaches that reject the medicalisation and categorisation of psychological distress and instead see “problems in living” and an inevitable consequence of the human condition. Humanistic approaches to critical or threatening events offer insights as to how encountering the experience of trauma can bring us closer to our humanity by presenting us with existential challenges, especially in forcing us to confront our mortality. Rather than being a collection of responses labelled as “symptoms”, these approaches conceptualise the impact of traumatic events as creating existential threats and making us face our basic helplessness and mortality (Serlin & Cannon, 2004).

Such approaches also challenge traditional understandings of recovery in therapy, rejecting notions of quantitative, measurable “outcomes” prevalent in the more technical approaches to trauma. Instead, the emphasis is upon a qualitative notion of growth, change and greater wellbeing, in a sense seeing the experience of adversity, such as physical or psychological trauma, as both an expected aspect of our existence to be embraced and an experience potentially bringing benefit to the individual in terms of a restructuring of self-concept and a change in value systems (Carver, 1998). The implications for therapeutic interventions from a humanistic perspective are in clear contrast to those approaches previously considered:

“its clinical approach is nonprogrammatic.... There are no manuals. Humanistic psychology is a process, a Socratic dialogue.....that resists quantification,

manualisation and pathologising of other people” (Serlin & Cannon 2004, p.318).

Instead, emphasis is placed upon therapist qualities and the nature of the therapeutic relationship in creating a transformative, healing environment.

This more holistic approach to the experience of emotional suffering is also present in the Experiential perspective outlined by Greenberg (1998). Here the focus is on subjectivity, regarding the individual as a whole, reflexive, conscious being who must face the “givens of existence” inherent in a challenging critical event. Again, the emphasis is upon the normality of challenges to our wellbeing, rather than using concepts such as “psychological trauma” to pathologise such happenings. Deriving from the experiential approach, Greenberg’s process experiential therapy is one of a number of humanistically based therapies that emphasise the limitations of cognitive behavioural and neurobiological approaches, in that they ignore the important aspects of human functioning outlined above. These ideas are also found in some integrative approaches to psychotherapy.

In an overview of existential approaches to trauma Corbett & Milton (2011) also present a rejection of the medicalisation of trauma (Joseph, 2010), stressing that the difficulties presented by traumatic events involve more than just “symptoms”. Rather than pathology, anxiety is viewed as an inevitable state of being when the individual confronts the existential and situational givens of existence (Kasket, 2017). Drawing upon van Deurzen’s (1997) four-dimensional conceptualisation of the individual’s relationship to the world (physical, social, psychological and spiritual), psychological trauma or crisis is seen as creating a heightened sense of mortality and physical vulnerability. Traumatic circumstances create an unfamiliar existential environment for the individual, involving threats to values and sense of security (May, 1996) and incorporating a sense of loss, as well as requiring a realignment across the existential dimensions. Recovery in existential terms involves the individual consciously confronting and incorporating their fears, leading to growth and creating greater authenticity in the individual’s existence (Pitchford, 2009).

Humanistic and existential therapeutic approaches offer potential advantages in improving negative performance impacts for the sporting client in that notions of growth and change are preferable to psychometric measures of symptom amelioration

used in CBT. For instance, Newman (2004) notes that only 50% of CBT clients achieve what is termed “high end state functioning” following therapy. There are implications for counselling psychology here. Newman proposes a more integrative form of therapy, “adding on” elements not present in pure CBT such as using the therapeutic relationship to work with clients in a more “emotionally alive fashion” to deepen rather than regulate emotional processing, the latter of which Newman suggests is the case in both CBT and EMDR. This deeper processing potentially leads to improved outcomes but places demands upon therapist qualities that some psychotherapeutic trainings may not be able to meet.

One of the attractions of cognitive-behavioural and information processing approaches to anxiety following critical incidents is their relative simplicity, both in theoretical terms and in relation to their largely manualised approaches to treatment and outcome measurement. Humanistic and experiential approaches offer more complex understandings of such reactions to events and significant implications for therapist training and qualities.

So although approaches to the phenomena under study that appear more congruent with the underlying philosophy of counselling psychology may provide richer and fuller insights into the experience of the respondents, are these disadvantages outweighed by the relative difficulty in delivering interventions leading to performance improvement as well as improving overall wellbeing? This issue represents a fundamental conflict in psychotherapy and counselling psychology, in that what may be attractive in theoretical and philosophical terms may not accord with real world demands for interventions that are both effective and readily accessible.

2.3.5: Contribution from Sports Psychology

As a sub-discipline within psychology, sports psychology seeks to identify potential applications of wider psychological theory to enhance sporting performance and achievement (Galluci, 2008). The theoretical basis for sports psychology interventions derives mainly from cognitive and psychophysiological models of stress and anxiety, such as Hardy’s (1990) catastrophe model of performance in sport. This suggests that an individual's cognitive interpretation of anxiety is important because of the impact it has upon performance (Jones & Swain, 1992; Jones, Swain, & Hardy, 1993). The athlete's perception and interpretation of anxiety may be detrimental to performance if

an event is perceived as threatening (Jones & Swain, 1992; Jones, Swain et al., 1993; Nordell & Sime, 1993; Rotella & Learner, 1993). There is wide agreement across the sports psychology literature that an athlete's cognitive perception along the continuum of threat-challenge is a key predictor of the level of performance related anxiety, with perceptions of threat likely to trigger fight or flight responses unhelpful to competition (Turner, 2014). The modification of such perceptions through psychological intervention aims to lessen the negative impact on performance. This approach suffers from the lack of any analysis of antecedent events or characteristics that may underpin performance anxiety, leaving the "mental skills" approach of mainstream sports psychology open to a "one size fits all" critical evaluation. Although there is a significant amount of material devoted to anxiety in general, and performance anxiety in particular, there is very little reference to the impact of critical incidents as a distinct subject area within the available sports psychology literature.

Interventions based on models deriving from cognitive behavioural understandings of anxiety are designed to modify the athlete's thought processes to minimise any negative impact upon performance. These interventions are part of the sports psychologist's "toolkit" and no particular therapeutic skills are assumed or required. However, there is little evidence within the literature of attempts to identify the source of performance anxiety or in any attempt to look beyond tried and tested interventions to reduce its incidence among athletes.

The available literature applying psychology to competitive cycling largely ignores the potential impact of critical incidents on performance (Miller, op. cit). A rare example is the contribution of Veltkamp (2016), who provides an analysis of fear of descending among professional cyclists. Veltkamp's analysis usefully combines psychological theory and knowledge of professional cycling, using the example of Bradley Wiggins' brief episode of descending anxiety during the 2013 Giro d'Italia stage race. Using the example of the "Visual Cliff" study (Gibson and Walk, 1960), Veltkamp contends that fear of falling is one of our earliest learned fears. Significant cycling experience enables a professional rider to overcome such fear, but a negative event can intervene and take away a rider's faith in their own ability to manage descents. Wiggins' experience occurred in wet weather and followed a minor accident when he slid off his bike on a bend. The day was also the second anniversary of the death of another rider that occurred while descending in the same event, something marked by the

riders in a brief ceremony at the start of the stage and clearly within their collective awareness. There are numerous other examples of experienced professional cyclists suddenly developing (usually short lived) episodes of descending anxiety (Cyclingquotes.com, 2013), emphasising that even the most experienced rider is not immune from the impact of a critical incident. It also suggests that complex psychological processes underpin such behaviour, which the present study seeks to uncover and explore.

2.3.6: Wellbeing and performance

Although there is little evidence within the literature regarding the specific impact of critical incidents on performance, there is significant research within the sports psychology literature that seeks to illuminate matters of athlete mental wellbeing in relation to performance. Gracheck's (2010) study has already been cited as an example of an intervention that blurs the distinction between outcomes couched in terms of performance enhancement as distinct from psychological wellbeing, in that her single respondent was ostensibly engaged in a performance enhancement intervention but was later found to have experienced a critical incident that may have affected overall wellbeing and precipitated a performance limitation as a consequence.

Whereas traditional approaches in sports psychology have focussed upon the identification of negative mental health "symptoms" using the language and concepts of mental illness (Uphill, Sly & Swain, 2016) and a reduction of these symptoms through treatment interventions, the present study reflects a change of emphasis that seeks to maximise athlete wellbeing rather than adopting a positivist, pathological approach. This change in emphasis reflects the potential and growing contribution of counselling psychology to sport and also constitutes a challenge to the more general positivist tradition in psychology outlined above, seeing mental wellbeing among athletes as a continuum between "languishing and flourishing" (Keyes, 2002, p.210) rather than simply the absence of "mental illness".

Working from a positive psychology perspective, Brady & Grenville-Cleave (2017) go further by suggesting a theoretical distinction between wellbeing and illbeing based upon distinct biological sub systems, seeing them as conceptually separate constructs. The usefulness of moving away from a medical model position is emphasised by Schinke et al. (2017) who argue that such historical conceptualisations

of psychological difficulty as “mental illness” acting as barriers to effective performance have been an impediment to athletes seeking support due to notions of shame around the negative connotations associated with psychological difficulty (Gulliver, Griffiths & Christensen, 2012). This point is illustrated within elite cycling by former Olympic champion Victoria Pendleton who describes very strong feelings of guilt and shame that initially prevented her from seeking help for her own psychological distress (Pendleton, 2012). Counselling psychology’s emphasis on growth and change as well as an avoidance of terminology reflecting diagnosis and pathology may in future encourage athlete engagement with therapeutic interventions and act as a positive force supporting both athletes’ wellbeing as well as enhancing performance.

In a recent paper, Giles et al. (2020) note the circularity of the wellbeing/performance relationship, in that as a consequence of sports participation, athletes typically develop psychological skills contributing to self-esteem, motivation and resilience (Weinberg & Gould, 2019). These skills, in turn, enhance performance, but conversely aspects of sporting participation such as physical injury, underperformance and maladaptive coping mechanisms can have a negative effect on mental wellbeing (Rice et al., 2016).

The present study contributes to knowledge and development within this context in both academic and applied terms. In relation to the difficulties experienced by the respondents in the present study, it has already been noted that they would be unlikely to meet formal diagnostic criteria within existing classificatory systems, so conceptualising the nature of their difficulties as existing along a continuum of wellbeing/illbeing would sit more comfortably with the principles of counselling psychology by normalising such difficulties as unfortunate unintended consequences of participation in competitive road cycling. A further advantage of this perspective is that athletes are more likely to seek out intervention for what they might regard as “sub clinical” mental health matters as they are less likely to feel stigmatised, particularly as evidence shows that athletes are less likely to seek help for mental health difficulties than the general population (Gulliver, *op.cit.*).

3: Methodology

3.1: Rationale for a qualitative method

Much research into psychotherapy is understandably concerned with its effectiveness. Emphasis is generally placed upon the efficacy of particular treatments with specific areas of psychological difficulty. Such research tends to produce data which are quantitative, such as that which demonstrates significant differences between groups in independent measures designs or pre- and post-treatment measures using within-groups designs. Outcome research generally aims to discover widely generalizable findings that can validate a particular treatment modality (Lambert & Bergin, 1994). Other quantitative research within the positive-empiricist epistemological tradition seeks to identify variables influencing treatment outcome, such as theoretical orientation or therapist and client characteristics (Roth & Fonagy, 1996).

There are fundamental questions about the value and contribution of such research to psychological knowledge (Marzillier, 2004) and the consequent neglect of research that considers clients' experiences in therapy. There are a number of qualitative studies in the literature that relate to experiences of anxiety among particular populations, including dental phobic patients (Abrahamsson, Berggren, Hallberg & Carlsson, 2002); patients within a GP practice with anxiety and depression (Kadam, Croft, McLeod & Hutchinson, 2001) and students experiencing "library anxiety" (Mellon, 1986). These studies aim to identify and describe individual experience in a particular mental health context, although most of them employ grounded theory as a method (see below). The present study reflects this different epistemological position, in that the form of knowledge sought by the research is not aimed at proving the efficacy of a method, but to find out much more about the characteristic lived experience of a defined potential client population. In conducting this research, I am curious as to how these people experience the situations they encounter in their pursuit of personal challenge and excellence in their sport, following a negative cycling incident. I hope, as a result, to enable the wider psychological community to be better informed about the lifeworld of the respondents and thus be in a better position to meet their needs, as well as those in similar contexts, therapeutically. To this end a qualitative approach is preferable to explore and describe sense making and meaning attributed to an experience in a specific context. Qualitative research is concerned with the quality and texture of experience (Willig, 2008), as opposed to the establishment

of cause-and-effect relationships and can produce rich and informative data that can be systematically analysed and findings discussed and disseminated. The use of qualitative methodology has been relatively neglected in psychotherapy research (Hodgetts & Wright, 2007) and consequently, there is a strong argument for the use of qualitative approaches, either standing alone or as a complement to quantitative research, to provide rich descriptive detail that considers participants motives, expectations and concerns (M. Williams, McManus, Muse & J. Williams, 2011).

3.2: Rationale for the use of Interpretative Phenomenological Analysis.

Having decided upon a qualitative approach a choice of methodologies presents itself (Finlay & Ballinger, 2006). As the aim of the research is to gather information about the phenomenological world of competitive cyclists affected by a critical incident, I decided that the most appropriate approach was to employ Interpretative Phenomenological Analysis (IPA) (Smith, 2003) to analyse the data gathered from participants. IPA is one of several qualitative research methods inspired by phenomenological philosophy, which collectively focus on rich description of some aspect of experience (Davidsen, 2013). Phenomenological approaches to research differ as to their relative focus on description of phenomena as opposed to interpretation, reflecting differing philosophical underpinnings.

As a philosophical approach phenomenology, as proposed initially by Husserl (1983), takes human experience as its subject matter, to be examined in the way that it occurs on its own terms. Initially, Husserl's concern was to consider how an individual might come to accurately know their own experience, but phenomenology has since developed as a means of researching and "knowing" the experience of others, and it is this feature that delineates IPA as a method (Smith, Flowers & Larkin, 2009).

Central in Husserl's transcendental phenomenology is the notion of "bracketing", to put to one side the world that we take for granted in order to focus on the structure of our perception of that world within conscious experience. Heidegger also contributed to the phenomenological project by including hermeneutic and existential elements, questioning the possibility of knowing experience from other than an interpretative stance. Heidegger's phenomenology conceptualises experience as a "lived process" (Smith, Flowers & Larkin, 2009, p.21) in which individual experience is seen as embodied and situated in relation to the physical and social world and cannot be

considered in isolation. Heidegger also introduced an existential element to phenomenology, that our being in the world (*dasein*) has a temporal and finite dimension. These concerns are reflected in IPA as a methodology, in that “being in the world” is seen as temporal and relational, giving researchers a way of interpreting peoples’ meaning making activities and concerns in the context of their lifeworld.

Phenomenological research aims to uncover rich descriptions of phenomena as they are experienced (Finlay & Ballinger, 2006). Within a broad range of approaches, Giorgi’s phenomenological method (Giorgi & Giorgi, 2003) aims to identify *essences*, the structures of meaning in human experience by means of phenomenological reduction and close description. In contrast, IPA is concerned with how that experience is given meaning or structure but acknowledges that as researchers, we cannot gain direct access to this experience and rely instead upon an interpretive or hermeneutic stance. We are thus engaged in the “double hermeneutic”, attempting to make sense of our respondents’ meaning making activities. Husserl’s phenomenology, embodied in the approach of Giorgi, aims to uncover the essential nature of a person’s conscious experience (transcendental phenomenology). In contrast, IPA adopts a stance derived from hermeneutic/existential phenomenology in which, as observers of this experience, we can only interpret this experience as best we can.

IPA provides both a philosophical stance (methodology) and a process (method) for the analysis of qualitative data and allows a phenomenological approach to the analysis of first-person accounts. It is an approach that enables the researcher to understand the first-person perspective from a third person position and its use in health and psychotherapeutic settings is growing (Smith & Osborn, 2004; Vincent, Jenkins & Larkin 2013).

IPA is considered an appropriate methodology for the present study primarily due to the specificity of the context within which the respondents’ difficulties are experienced. In Giorgi’s terms, knowing the essence of how (for example) *anxiety* is experienced by the respondents is of limited value in itself, as it is felt that the sporting and cultural context in which anxiety is experienced also carries significant psychological weight. In the wider context, the study hopes to inform therapeutic practice as well as enhancing performance in this specific client domain, so to use the researcher’s interpretive stance in relation to the respondents’ lifeworlds helps situate this work in

an applied, real world sports setting within the wider fields of psychotherapy and counselling psychology. IPA is a dynamic process where the researcher plays an active role involving their own acknowledged preconceptions and interpretations in an iterative process in which otherwise latent meanings can be revealed and understood, using the hermeneutics of suspicion (Ricoeur, 1970). In the present study, the researcher's knowledge of the context in which the respondents' difficulties are situated can be seen as a valid constituent element within the research process that enables otherwise latent themes to be revealed and considered.

Another strength of IPA in relation to the aims of the present study lies in the fact that in contrast to other qualitative methods such as discourse analysis (Potter and Wetherell, 1987) IPA is concerned with respondents' cognitions, what they think and believe about the matter under investigation (Smith, Jarman & Osbourn, 1999). This feature can be considered to be useful in the therapeutic field, as the perceptual processes involved in making sense of perceived psychological difficulty are likely to provide valuable insights for a number of differing therapeutic approaches.

The current research accords with an hermeneutic/existential phenomenological perspective aiming to understand the individual's experience in this particular context, describing the structure and content of their consciousness. Additionally, IPA is a particularly suitable method for this enquiry, as rather than testing a hypothesis, the aim of the study is to further the understanding of the phenomena under investigation in order to illuminate therapeutic practice. IPA's idiographic approach, using a small purposively selected sample, seems best suited for capturing the rich detail of this experience for each participant, as well as providing a method for identifying common themes across participants. The use of a clearly defined method is felt to be an advantage for a novice researcher in the field, as although other phenomenological methodologies are available, there is a relative lack of transparency and consistency regarding methods for analysing data (Finlay, 2009). The use of IPA enhances the trustworthiness of the study by employing a method of analysis familiar to many researchers and, as such, more open to critical evaluation.

Other considered qualitative approaches

Both grounded theory (Strauss & Corbin, 1994) and thematic analysis (Braun & Clarke, 2006) were considered but rejected as possible methodologies. Thematic

analysis can also be used to look for themes and patterns within qualitative data and is theoretically a much more flexible and accessible approach but lacks IPA's focus upon the lived experience of the participants. Although it is a fine difference, the aim of the present study is to illuminate the contextual experience of the cyclist in relation to the participation in sporting activity rather than to identify more general themes that emerge from the data. Similarly, grounded theory, used in many of the studies of specific clinical populations mentioned above, seeks to illuminate patterns within data but primarily as a means of theory generation and verification of hypotheses rather than description of experience.

3.3: Participants and Sampling

3.3.1: Inclusion and Exclusion Criteria

I sought for the study competitive cyclists who were conscious of a current or very recent negative effect upon their performance or participation in the sport attributed to an accident, crash or other similar event. Exclusion criteria included non-competitive cyclists, those who had not yet returned to active cycling following an incident and those who had experienced a difficulty historically that had now resolved. My reasoning behind these exclusions was that the focus of interest was to understand the lived experience of cyclists who continued to participate in the sport despite their difficulties. My hope was that the research, by illuminating this experience, would contribute to an improvement in the performance of cyclists (and possibly other performance athletes) following competition-related incidents. I believed that focusing on cyclists who were continuing to participate would provide far richer data than those who had chosen not to return to cycling following an incident.

Formal inclusion criteria were as follows:

The participant engages in competitive road cycling, is a member of a recognised club or body and demonstrates a significant time commitment, in the form of training and racing, to the sport.

They have experienced an accident or other critical event while competing in, or training for, cycling events.

They are aware of a change in behaviour or experience following the event

that has a recognisable impact upon their effectiveness, enjoyment or success in competition.

Participants will still be engaging in their sport rather than avoidant of it.

I did not include in the criteria any restriction on how long ago the index accident or event might have occurred. My interest was in the continuing and present (or at least very recent, in that the participant would still have a clear memory of this period and be able to articulate their experience) impact of this event on their cycling. From clinical experience working with victims of road accident trauma, I am aware that the impact of such events can last many years. As discussed above, the complex nature of responses to critical events would render meaningless placing any time constraints on index events.

I did not exclude from the study, participants who had undergone some form of therapeutic intervention to reduce the impact of the incident on their performance. I believed that the acknowledgment of a continuing impact on their cycling activity was the important criterion for inclusion, rather than whether or not they had experienced any improvement as a result of the intervention.

3.3.2: Recruitment

Participants were recruited from several online cycling forums. I chose this method because it was the quickest and most efficient way of reaching a wide audience of competitive cyclists who would be likely to meet the inclusion criteria for the study. The engagement with a forum is taken to indicate a significant level of interest in the sport, involving reading and contributing to posts about a wide variety of topics related to matters such as equipment, training strategies and race information. The forums chosen were those aimed at competitive rather than recreational cyclists and encompassed those who would be likely to engage in competitive road cycling, whether in individual time trials, mass start road racing, track racing or as a component of triathlon.

Potential participants were simply asked to respond to a post on the forum, to which they could respond to me by direct message to preserve their anonymity. A sample posting is presented in appendix A.

I received initial responses from around 15-20 cyclists. Some were excluded as they clearly did not meet the inclusion criteria; for example, in one or two cases the participant had not physically recovered from an accident sufficiently to participate in cycling. Others revealed that they had experienced some effect on their participation historically, but this had now resolved. I considered that this would not produce the freshness in the account of their difficulties demanded by an IPA study. Those not meeting the criteria at this point were thanked for their interest and the reason for their exclusion explained to them.

Each respondent who *prima facie* appeared to meet the inclusion criteria (approximately 15) was then sent by email a participant information sheet giving more details about the proposed research. The sheet restated details about the nature and purpose of the research and confirmed that respondents could choose to withdraw at any point. Information was included about the possible risks (see below) and benefits of taking part, steps to be taken to safeguard anonymity and confidentiality of data and how the data might be disseminated and published. Each respondent was asked to read the information sheet and indicate their consent to taking part in the research by signing and returning the consent form.

Ten respondents returned their consent forms and indicated their willingness to continue. One shortly withdrew before his interview took place as he was about to move house.

3.3.2: The Sample

Of the respondents who had expressed an interest in taking part in the study, 9 were ultimately interviewed. Of these, two interviews were later excluded from the analysis as it became clear during the interviews that both respondents did not meet the inclusion criteria on closer inspection, despite having indicated in previous correspondence that they did in fact do so. In one case the respondent had not actually returned to cycling following injury as he was still undergoing physical rehabilitation, so it was not possible to assess the impact of the incident on his actual performance. In the other case the respondent acknowledged an effect of a historical incident that took place around 5 years ago, but he had recovered well in the space of a few months and was not experiencing any current difficulty. It was not possible

during the interview to gather any meaningful data on the impact of the accident as the respondent appeared to recall any negative effect only dimly.

Of the remaining 7, four were female and three were male. All were primarily road cyclists and identified themselves as such. Although the gender balance does not represent the competitive cycling world in general, where females are very much a (growing) minority, it is more likely to represent the subset of the cycling population affected by accidents, as there is some evidence to suggest that in London at least, females are more likely to be involved in serious road accidents (Leach, 2010).

To preserve anonymity (several of the participants are well known within the cycling community), I have given each a pseudonym and given only brief details of the incident that precipitated their difficulties. Although no restriction was placed upon the timescale within which the index event took place, all were between 1 and 4 years before the date of the interview. Details of each participant are as follows:

- Amy was competing in an ultra-long distance event abroad. While riding alone down a slight incline she lost control of her bike due to gravel and crashed, injuring herself. She also revealed an earlier incident, about 5 years previously, when she was clipped by a lorry when turning right.
- Mike was involved in a collision with a car that pulled out in front of him when he was competing in a local individual time trial.
- Erin collided with a car that pulled out in front of her when descending a hill on her regular training commute to work.
- Max was clipped by the door mirror of a car that passed him on a training ride. Despite the impact he managed to retain control of his bike but was emotionally shaken. He had also previously been involved in a serious accident as a pedestrian four years earlier when a car mounted the pavement and injured both him and his young children.
- Carol witnessed the immediate aftermath of a fatality involving another competitor during a solo time trial but was not herself physically injured. She stopped and gave assistance to the injured rider.
- Rachel lost control of her bike and crashed on a muddy and slippery corner during a group race on a closed racing circuit. No other riders were involved.

- Steve crashed in similar circumstances to Rachel. He was cornering in a race when his wheels lost grip with the road surface and he crashed, in dry conditions.

Apart from Max and Carol, all were physically injured to the extent of fractures, cuts and bruising. None of them were more seriously injured. Although participants often described their physical injuries, I did not enquire further regarding the extent or nature of the physical injury.

The matter of precipitating events merits some examination. Inclusion criteria specified that participants attributed their current or recent performance inhibition to a cycling related incident. Of course, the extant body of theory on the genesis and origins of psychological trauma suggests that matters are more complex than this. It does not, therefore, exclude the possible contribution of earlier, non-cycling critical experiences (this was likely to be of relevance in Max's case). Nevertheless, the study excluded, for example, a cyclist who perceived an impact on their performance following a personal assault unconnected to their cycling life. I sought participants who clearly sensed a connection between their identified trigger event and their changed performance, as I felt that this direct sense of connection would provide richer data and more depth of reflection from the participants.

Biographical details of the respondents appear in appendix B.

3.4: Data Collection and Analysis

3.4.1: Interview Settings

All interviews took place in confidential settings appropriate to the purpose of the study. They took place in either dedicated consulting rooms normally used for psychotherapeutic work, rented meeting rooms, or in the client's own home in appropriate confidential circumstances. Geographically there was something of a spread among participants; although some lived and/or worked within easy travelling distance of my work base in the Midlands, others were more distant. I was also fortunate that all of the participants appeared willing and enthusiastic to participate in the research. I have access in the course of my clinical work to a number of occasional consulting rooms throughout the Midlands and I was able to use these as convenient locations for most of the interviews, as participants only needed to travel up to 30 minutes to a suitable location. Two who lived at slightly more distant locations were interviewed in their homes. A further two lived over 150 miles from my base but

we were able to meet at mutually convenient locations when both participants and I were working away from base. All participants who travelled to interviews were offered travelling expenses, but all declined; the collective response was that they felt the research would be of benefit to the wider cycling community and were pleased to take part.

3.4.2: Interview Structure

Having reaffirmed the nature and purpose of the research and re-checked informed consent, I began each interview collecting some data that would contextualise the participant's reported performance difficulties and also act as a further check on inclusion criteria. Information collected thus included biographical data such as age, work role and geographical location and also information about the participant's historical involvement in competitive cycling. I also asked them to say something about their motivation for engaging in competition and to identify success goals and desired outcomes. Although this information was not subject to formal analysis, I felt it was important to learn a little about each participant in these respects in order to facilitate the research activity of entering into their experiential world. These early explorations also helped to establish rapport and put the interviewee at ease before moving on to the core material of each interview.

Each participant was asked to describe the event (or events) they identified as leading to their difficulties, as well as giving some insight as to their experience of the event and its immediate aftermath. They were also asked to outline the nature and extent of any physical injuries sustained. Again this was partly to confirm that each participant met the inclusion criteria, as well as creating a set of memory structures that would enable them to connect with their account of the experiential awareness of their post-accident difficulties.

I did not employ a formal interview schedule as such as I intended that as interviewer, I would be engaged in leading each participant through their experience of cycling related difficulty. As a novice research interviewer, I was guided by established practice in the field (Kvale and Brinkmann, 2009) in preparing my general orientation to the interviews. I did have a clear focus as to the nature of the information I hoped to gain from the participants and in practice used prompts and questions (Rubin & Rubin, 2005) to elicit this experience as fully as possible. My aim was to adopt an

approach involving a combination of structure and flexibility, constituting a “conversation with a purpose” (Legard et al., 2003).

The interview schedule included:

- Description of the participant’s level of involvement in the sport
- Experience of the index critical accident or incident
- Cycling contexts or situations in which difficulty is currently experienced
- Other ways the event is re-experienced, e.g. flashbacks, intrusive rumination
- Exploration of the cognitive, emotional, physical and physiological experience of the participant during competition
- Exploration of the impact of their difficulty on performance, motivation, level of involvement and self-esteem.

The full schedule is presented as appendix C

All interviews were audio recorded and later were transcribed verbatim. This process was undertaken by a professional agency familiar with handling confidential data, with systems in place to maximise client confidentiality and secure storage and data transmission.

3.4.3: Reflexive note on the interviews

As a therapist not used to acting as a research interviewer, I found this new activity difficult at first, my first two or three interviews reflecting this. My annotation of the transcripts includes several glaring examples of “therapeutic” interventions, such as reflecting back, summarising and trying to help the participant when they appeared to be struggling to express themselves. On reflection, the use of a pilot interview would have been a significant improvement in order to familiarise myself with the practice of research interviewing. This omission was partly due perhaps to an overestimation of my own capabilities in this activity, but also due to time pressure. In addition, I would have felt a little uncomfortable conducting a pilot interview with a genuine respondent as I would then be presented with an ethical dilemma of how to use any data acquired and how to explain their role in the proceedings without misleading them. An alternative would have been to conduct a pilot with a volunteer who would otherwise be excluded from the study, such as someone personally known to me, who otherwise would have met the criteria. Ultimately, I do not believe that my interventions in any

way compromised the integrity of the interviews, as the amount of data given spontaneously by the participants was more than sufficient to enable the analysis to take place.

3.4.4: The Analytic Process

This was my first experience of IPA (in fact, of any significant qualitative research of any description) and as such I felt it appropriate to be closely guided by existing practice in terms of how to undertake the analysis. During the period covering the research interviews, I was fortunate to be able to undertake a training day in IPA for novice researchers run by an experienced practitioner in the field, so I was able to gain a little practical experience of IPA as well as being able to share experiences with other relatively novice researchers. However, as an acknowledged novice IPA researcher I relied heavily upon the approach outlined by Smith, Flowers & Larkin (2009) and the steps undertaken reflect very closely those suggested by Smith.

Data Analysis

The analysis began with a detailed reading of transcripts and a review of tapes. Any relevant ideas, emerging themes, comments and reflections upon the text were recorded as unfocussed notes, normally in the margin of the text. Second stage analysis involved identification and labelling of themes that capture the meaning of each section of text. The third stage involved giving the themes a structure, forming them into clusters of concepts that appear to have shared meaning. Next, a summary table of themes was produced, together with quotes or keywords that illustrate each theme.

The analytic process was started when the data from all respondents had been transcribed. Page layout of the original transcribed documents was altered to incorporate wide margins on both sides of the paper for handwritten notes. The documents were then printed out so that handwritten notation of the transcripts could be made. I believed that physical handling and annotating transcripts would be more “real” than working with the information digitally, thus enabling a closer engagement between researcher and transcript.

Analysis began with detailed reading and re-reading of transcripts. Each interview was also replayed during one of the readings in an attempt to stay as close as possible to the participants’ account of their experience, by paying attention to para-verbal

aspects of the interview that may not have been noted by the transcriber. These included tone of voice, hesitations, laughter and any other utterance felt to be significant.

Once a sense of familiarisation with the transcript was achieved, the process of annotation began. This second stage of analysis involved making initial comments and reflections upon the participant's narrative as unfocussed notes in the right hand margin of the text. These included descriptive comments on the content of the section of text, observations on the participant's use of language in the section and conceptual comments, often interrogative in nature, moving towards a broader understanding of the participant's concerns.

The third stage of analysis involved identifying and labelling emergent themes that capture the meaning of each section of text, attempting to capture concisely the psychological essence of the participant's concerns as expressed in that section of text. These initial themes were recorded in the left-hand margin and when each transcript was complete they were recorded in a separate list in chronological order. A sample interview transcript showing initial notes and emergent themes is shown in Appendix E.

The next stage involved giving these emergent themes a structure, forming them into clusters of concepts that appear to have a shared meaning. This was done visually, in that the themes were printed out and then cut up, so each was on a separate sheet of paper. I then began to group themes that appeared to have a shared or duplicated meaning, sorting and re-sorting until a further level of superordinate themes was arrived at. A photographic example of this stage of the work in progress is provided in Appendix D.

Once a summary of superordinate themes was available for each participant, the focus moved to comparison across cases. These were abstracted to a reduced number of master themes, using a similar process to that used to reveal superordinate themes for each case.

It must be stressed that the above narrative constitutes a linear presentation of the stages involved. In practice, the process was truly iterative, going backwards and forwards through the various stages of analysis to ensure that the process stayed true to the initial transcript as far as possible.

In order to facilitate the presentation of findings from the analysis, a summary table of themes was produced, together with illustrative quotes or keywords from among the participants that illustrate each theme. A summary table showing the distribution of themes across respondents appears in Appendix F.

2.3.5: Trustworthiness of the Study

Clearly the major factor likely to affect validity is my own participation as researcher. IPA recognises we cannot directly know participants' worlds. As researchers, we interpret the participant's experience; thus the danger in any research activity involving interpretation is the possibility of the researcher's own experience leading to bias and distortion in the interpretation process. The risk, in this case, exists at two levels: one is by virtue of my position as an external interpreter of the participant's experience; the other is due to my experience as a competitive cyclist who has experienced first-hand the phenomenon under investigation. To maintain the validity of the data, an independent psychologist researcher was engaged to critically examine my initial research interview and audit a proportion of the transcripts to ensure that the themes emerging from the analysis of the data are represented within the transcripts of the interviews. In addition, emergent themes were constantly cross-checked across participants' accounts to ensure they were actually represented in the data.

3.4.6: Ethical considerations

Standard ethical procedures (BPS, 2010) such as anonymity of the participants, informed consent prior to participation and debriefing were employed. Research participants have experienced a negative critical event that impacts their performance. The research interview involved recalling that event in addition to exploring its impact and current meaning. I am experienced as a therapist and assessment interviewer in cases involving severe psychological trauma as well as being trained and experienced in critical incident debriefing and believe I am skilled in those techniques necessary to manage any negative emotional impact as a result of participation in the research process. These measures and techniques were applied to all research interviews. The debriefing process following the research interview, in addition to enabling the participant to process any discomfort triggered by the interview process, involved offering the participant some brief psychoeducation around psychological consequences of critical events. This included a basic explanation for and normalisation of psychological sequelae, as well as brief suggestions for self-help

techniques. All participants were also given information on finding suitable therapists by recourse to the listing of accredited therapists on BPS, BABCP (British Association for Behavioural and Cognitive Psychotherapies) and the EMDR Association (United Kingdom and Ireland) websites. A clear boundary was maintained throughout the process of data gathering between my role as researcher and that of therapist. Preliminary information given to participants made this clear, and the distinction was maintained throughout the interview process.

The research was conducted according to ethical principles for research published by the British Psychological Society (BPS, 2010). Approval to carry out the study was given by Metanoia Institute and Middlesex University.

Informed Consent

Some limited initial information regarding the study was contained in the original forum posts seeking participants. Those who responded were sent a copy of the participant information sheet giving fuller details about the nature and purpose of the research. Each was asked to return a signed copy of the consent form to confirm that they had fully understood the nature of the study and were freely giving their informed consent to take part.

Confidentiality

The information sheet also outlined the steps to maintain confidentiality and anonymity of participants' identities as well as their data. All data identifying participants was stored securely and each was given a pseudonym for publication and dissemination. Only some identifying characteristics of participants and their index events have been included in this work in order to minimise the possibility of a participant being identified by anyone reading the work. However, there is a balance to be struck; to make the research meaningful some of the circumstances and characteristics of index events need to be included, and it is not beyond the realms of possibility that someone reading this work who was close to the participant would be able to identify them. The nature of IPA places participants' accounts at the centre of the research process and extracts from those accounts need to be presented in order to make the study both meaningful and transparent. However, as far as possible I have ensured that identities would not be easily revealed to the general public or even to members of the wider cycling community.

Participant Wellbeing

Given the nature of the participant group, attention was paid to the matter of potential emotional harm being done to participants through their participation in the research. The initial information sheet sent to all potential respondents highlighted this issue and prepared respondents as to what they might experience during the interview process:

Sometimes people find that talking about unpleasant events can be upsetting. This is a perfectly normal response and your interviewer will be an experienced clinician used to managing such situations to ensure that no harm is done. Alternatively, if it turns out that your difficulties might require some form of professional intervention you will be given information on appropriate sources of help.

Participants were also informed that they were free to withdraw at any time from the interview.

By fulfilling the inclusion criteria for the study, all the participants had experienced a critical event that was having some impact on their performance. I was aware that the research interview might involve the possibility of re-experiencing that event in addition to exploring its impact and current meaning. As a clinician experienced in psychological trauma, I am aware of the potential for distress when clients speak about upsetting matters, balancing the need for appropriate enquiry with the requirement to do no harm through the interview process. I considered myself sufficiently skilled in techniques necessary to manage distress and the prevention of re-traumatisation.

I could sense on two or three occasions that participants were beginning to become upset. I responded on each occasion by acknowledging their distress and the difficult nature of the material they were revealing, giving them the option of a break or of discontinuing. However, ultimately all participants completed the interviews without significant difficulty.

The debriefing process following the research interview, as well as enabling the participant to process any discomfort triggered by the interview process, involved offering the participant some brief psychoeducation around the psychological sequelae of critical incidents. This included explanation and normalisation of symptoms, as well as some suggestions for self-help techniques. I considered it was

important to normalise the difficulties that participants described to ensure no-one was left feeling that they were in some way unusual.

I also felt it was appropriate to say something about the recovery process. Two of the participants had already undergone some CBT after their accidents through the medico-legal process and found it helpful, but the others had tended to rely upon their own resources and coping mechanisms. I gave all participants information as to how they might gain access to appropriate therapeutic support if they felt they needed it either at the time or at some point in the future. All participants were given information on finding suitable therapists by recourse to the listings of accredited therapists on the websites of the EMDR Association (United Kingdom and Ireland), BPS and BABCP.

To some extent, there was a danger of boundaries between therapist and researcher becoming blurred at this point, but I believed it was ethically and professionally appropriate for me to offer information to participants about other potential means of managing their difficulties in addition to their own coping mechanisms. On conclusion of each interview, I was satisfied that in each case an effective compromise was attained between exploration of difficult material and the maintenance of client wellbeing.

Following each interview, participants were also questioned as to how they had experienced the interview process. All rated it as a positive experience with several indicating that it was the first time that they had spoken at any length about the impact of their index event upon them. They were given the opportunity to ask any questions about the interview process and the aims of the research. Most were very interested about the potential uses of the data. Information was given about the likely pattern of dissemination of the work and steps taken to anonymise data and preserve confidentiality.

3.4.7: Reflections on IPA

I began the research process as a complete novice in the philosophy and practice of IPA. I placed a great deal of reliance upon the sequential stages of analysis outlined in Smith and from the above-mentioned training workshop on IPA. I was also fortunate to be able to receive feedback on my early attempts at the analysis from a psychologist colleague who had recently completed an IPA study as part of a practitioner doctorate in clinical psychology. I was also able to network with one or two other experienced

researchers, including my research supervisor and practice supervisor. The initial feedback I received confirmed that at first I was concentrating too much on getting the method “right” and losing sight of the underlying philosophy of IPA, which is about staying close to the client’s experience. This feedback was invaluable and I became able to work with that in mind, rather than wider issues and things became easier and more relaxed. I also found that staying close to the research question helped. As the analysis developed, I began to get to grips with the idea of phenomenology as personal meaning making. I also began to appreciate the iterative nature of the IPA process, going back and forth within the data and adopting an active role in interrogating the data and interpreting the latent meanings within the accounts, employing my knowledge of the context in which the respondents’ difficulties are located.

After I had successfully gone past the stage of treating the analysis as a technical exercise, I found the notion of “tuning myself” (Embree, 1997) to engage with the text a useful exercise. I was able to borrow from my own experience as a cycling competitor and began each analysis session with a brief meditation aimed at grounding, centring and maximising focus and flow, in the same way I would prepare for training or competition when cycling. I found this most helpful in keeping my focus on the participant’s account and their lived experience.

4. Analysis and Findings

In this chapter, I will explore in detail the thematic structure emerging from the IPA analysis. Six master themes were revealed, each consisting of a number of superordinate themes. These are briefly summarised in the table below. I will then go on to explore each of the Master themes in detail.

Table of Master themes across participants

Master theme	Constituent superordinate themes
1. Focus on Self	➤ Negative/critical commentary on self.

	<ul style="list-style-type: none"> ➤ Making sense of self: commentary, analysis, explanation. ➤ Intrapsychic dialogue and conflict. ➤ Reflection and contrast with previous self.
2. Focus on anxiety	<ul style="list-style-type: none"> ➤ Physical anxiety symptoms ➤ Intrusivity/re-experiencing ➤ Avoidance of accident-related triggers
3. Physical Injury	<ul style="list-style-type: none"> ➤ Physical effects of accident
4. Perceptual and decision making Processes	<ul style="list-style-type: none"> ➤ Cognitive Process in decision making ➤ Evaluating safe/unsafe contexts ➤ Sensory experience of danger ➤ Sense of vulnerability
5. Impairment of cycling performance	<ul style="list-style-type: none"> ➤ Flow, concentration, focus and awareness ➤ Pleasure, presence and mastery

	<ul style="list-style-type: none"> ➤ Avoidance and safety behaviours
6. Coping, adaptation and growth	<ul style="list-style-type: none"> ➤ Adaptation and Coping strategies ➤ Impact and recovery ➤ Growth, integration of experience and positive change

4.1 Master theme 1: Focus on Self

This theme illustrates the ways in which the participant’s relationship with their “self” is constructed, reflected upon, described and evaluated in the context of their response to their own post -incident experience. I was struck in many of the participants’ accounts by the articulation of a sense of fragmentation of the self; of different parts of the self engaging in “conversations” which might be analytical, questioning, conflictual or critical in nature. There is a sense of a loss of control in this process of fragmentation, in which aspects of participants’ selves that were previously unfamiliar play a more prominent, often unhelpful part in affecting their behaviour and experience when cycling. This was often apparent in the language, constructs and metaphor used, which potentially revealed the more latent aspects of their experience.

Four superordinate themes were identified within this master theme:

- Intrapsychic dialogue and conflict;
- Making sense of self: commentary, analysis and explanation;
- Negative/critical commentary on the self;
- Reflection and contrast with previous self and others.

1a: Intrapsychic dialogue and conflict.

This superordinate theme is concerned with presence in participants’ accounts of notions of separateness within the self in relation to their explanation and description of their difficulties when cycling. Most reported experiences of different “parts” or

representations of the self that were appearing to communicate with each other about matters related to the impact of their difficulties upon their behaviour as cyclists. This notion of dialogue is typified by Carol's internal conversation about the danger of racing on dual carriageways, (for cyclists these are significant due to both the speed of overtaking traffic and the existence of slip roads where cars join the carriageway, again often at speed) where she questions the appropriateness of her motivation for doing so and reflects this in her description of her internal dialogue:

Yeah, I stepped away from it last year because I had to... I attempted to race, having a break through the winter after the accident and what the hell was I doing carrying on racing on dual carriageways. Yeah, and I said to myself I am not going to do dual carriageways this year.....

In her use of the phrase “*what the hell*” I sensed that Carol was quite perplexed and saw this behaviour as somehow odd or strange, as if she cannot believe she had previously ridden on busy roads and been unconcerned. She also questioned her behaviour in relation to continuing with racing on the road even when she described experiencing extreme anxiety at times. I believe that here the dialogue is between the part of Carol that is motivated to carry on doing what she did before in terms of cycling competition and another part that seems to represent the “stuck” aspect of her traumatic experience. She spoke of her internal dialogue, in this case taking place the night before an event, about the risk in continuing to compete in events similar to the one in which her traumatic incident occurred:

I kind of feel like, why am I doing this, why am I doing this to myself? Sort of when getting into bed I can see (name of fatally injured fellow competitor) lying on the concrete, you know and I think, oh blimey, why are you doing it to yourself.....

I was very aware here of an almost palpable tension here between two opposing forces; that which motivates Carol to continue with a form of competition that involves riding alone in close proximity to cars travelling at speed; and that which highlights the risk present in such an activity. Carol's account suggests to me that she has only experienced this tension since her index incident, suggesting the more cautious “voice” within her was previously dormant. There is also a strong sense of questioning, of doubt or disbelief about her behaviour in her account, her “*oh blimey*” suggestive of

the seriousness of what she is doing, with the phrase “*lying on the concrete*” additionally giving a telling insight into the finality and gravity of the events she experienced on the day.

This type of self-talk is also present in Erin’s account of her attempts to manage her anxious responses when racing. She describes her internal dialogue when approaching a corner, often a difficult situation for a cyclist who is anxious due to the perception of risk: when racing this is ideally done with the least possible reduction in speed:

There are times when I will be telling myself, stay off the brakes, stay off the brakes or can you get round this bend?

I formed the impression here of a real sense of conflict between opposing needs, at the same time an attempt to maximise performance (I view the repetition of the plea to stay off the brakes as emphasising a sense of urgency) but also to stay safe- it is this latter internal voice of caution that I noted was prevalent among the respondents following their critical incident and caused them difficulty in competition.

Mike, who also had a race related incident, appeared to demonstrate the same form of fragmentation of the self in a slightly different context, both in acknowledging his tendency towards displacement activity to sabotage his attempts to go out on his bike, as well as his conflict about returning to racing:

I would then find myself making excuses to myself, I’d say “ooh I must finish that job first”

And later:

And I knew that the season was going to finish and I just had to force myself to do at least one time trial before the season finished. I knew that I had to do that just to break the duck.

Mike’s testimony here, I believe, reveals the tension between the part of him motivated to train and race and the cautious and restrictive part arising out of his trauma. My interpretation here was of a sense of separateness and fragmentation of the self in the form of a continuing and insoluble dilemma, with a meeting of literally opposing *forces* taking place- the word to me is indicative of the strength of will required to counter the cautiousness resulting from his incident.

Several other participants also described a variety of situations in which they would “talk to themselves” in the sense that there would be an internal conversation involving one part of the self “offering” information or support to another. Steve spoke of “*having a word with myself*”; Rachel spoke of “*giving myself a goal*” in her progress towards recovery. These terms for me reveal the respondents’ attempts at developing novel mental strategies to overcome their perceived difficulties that they had not previously needed. The ways in which these internal conversations were spoken about created an impression of the respondents having to engage in conscious mental activity more than they normally would in order to overcome their post -incident difficulties.

Often participants would label, locate or otherwise identify these separate fragments of the self, providing evidence of their attempts at sense making of their difficulties. Rachel describes her experience of subsequent racing in similar conditions to her accident, when she habitually fears that she will lose control of the bike and explains:

*Em, like, it is because the vivid memory I have is that the road surface was damp when I crashed. Em, so I think I will lose control of the bike.....
Despite the fact I know, I know in myself it is pretty irrational...*

Erin’s label for this troubling cognition is an “irrational” part of her. For Carol, it was her “head” in dialogue with some other, less clearly defined, part of her about exposure to risk:

My head is just saying to me... it was like this last time and it could be anyone, it could be you, you know.

She also spoke in terms of her self as distinct “halves”:

And I would think bloody hell, why am I doing this and then half of me would think no, no, no, no, you have got to...

Similarly Steve brings in a notion of “mind” to understand his behaviour and also clearly identifies separate parts of his self:

Yeah, after a while I sort of had a bit of a word with myself as such, and just thought, I have just got to relax, I was just so very tense on the bike and It was just kind in my mind not being able to go for that limit or.. and relax, yeah.

On another occasion Steve also used the phrase “*in the back of my mind*” to locate the “source” or locus of his anxiety, whereas Carol spoke about her awareness of an unconscious process in bringing unwanted material to the fore. She also evokes a sense of a loss of previous control and mastery (a theme that appears more fully later in the analysis) when harnessing some of the cognitive strategies she habitually employed in training and competition and attributes this disruption of her normal functioning to an unconscious source:

Instead of visualising me say climbing a mountain in Majorca, I would shut my eyes and think “oh, bloody hell I am thinking of that day, no”. Em, my subconscious was bringing it back

I formed the impression that all of these utterances contained a common theme in the shape of an attempt to create some kind of story or “theory” about the causes of their behaviour in these specific circumstances, with a real sense that as serious athletes they experience a significant disruption to their “normal” processes of self-talk in competitive situations. There was also for me a strong sense of these cautious inner voices being difficult to master or control; Carol’s *oh bloody hell.....no* seeming to embody her sense of profound frustration and helplessness in relation to her unhelpful mental process.

Carol’s description of her experience when training also demonstrates another recurrent feature in the various accounts, that of a use of language that involves talking about the self in the second as well as the first person:

Even then you couldn’t give everything in the interval you were doing, because you would be like, well no, hang on when you visualise, you are supposed to think of something that motivates you.

Rachel also adopted this linguistic device as a means of describing a situation that seemed somewhat alien and slightly perplexing to her:

if you are not relaxed you are riding the track and you are not riding, you know, you are concentrating so much you are not actually riding the bike and riding the, you know, riding the race if you like

The use of the second person to refer to their own behaviour was most often apparent in descriptions of aspects of their riding behaviour that were departures from their premorbid experiences. I wondered whether the use of this linguistic device indicated an embarrassment and reluctance to accept such characteristics, in that the description of the self in the third person created a sense of distance that the use of the first person would not be able to achieve, perhaps indicating the behaviour was hard to “own”. I also sensed a degree of unfamiliarity, possibly even bewilderment, about this change in behaviour, as though the participants were adopting this way of referring to themselves as almost “not I”. I noticed this shift in mid-sentence in Max’s narrative, where he adopts the third person to recount aspects of his behaviour that seemed uncomfortable for him to acknowledge. I sensed his laughter was a reflection of this discomfort :

I don't think I am as confident or as assertive in traffic as I would have been before and that obviously, in an odd way makes things worse. If you spend all your time sort of grovelling in the gutter wishing you were somewhere else (laughs) em...

It seemed to me that for Max the experience of “grovelling in the gutter” was not a familiar or welcome one for him and was a departure from his normal riding experience. He describes this in terms of “you” rather than “I” to reflect this change from the confident and assertive person he was pre-morbidly to the person who now rather embarrassingly “grovels in the gutter”. In addition his use of metaphor potentially gives an insight into his experience, creating an impression both of humility and worthlessness deflected by his laughter. On closer analysis I would suggest that the *gutter* has both literal and metaphorical meanings for Max; as well as riding close to gutter to be away from traffic the word also implies a lowly or degraded condition, perhaps a reference to Max’s self-evaluation of his changed behaviour.

1b-Making sense of self: commentary, analysis and explanation

In contrast with the previous theme, which focussed on fragmentation within the self, here participants are concerned with the search for meaning and explanation as applied to matters relevant to the research question. It is also distinct from a further superordinate theme that attempts to capture self-criticism; this theme is more neutral and analytical rather than evaluative in tone. I was particularly interested in

discovering to what extent reflection had already taken place among participants and being sensitive to the fact that an interviewee might “come to awareness” during the interview itself.

An example of the former is when Mike expresses some frustration when trying to explain his difficulty when cycling, contrasting it with his pre-existing and acknowledged “phobia” of snakes:

And I know it's an irrational fear. I also have a completely irrational fear of snakes. And I know it's an irrational fear and I can't even see them on TV..... I know what irrational fear is, I know a snake on the TV can't hurt me, but I still can't look at it. But this is just so bizarre but I can't seem to get over it.

I was struck by the word *bizarre* as a powerful descriptor here, in that it reveals a sense of the degree of difficulty for Mike in comprehending his lack of success so far in overcoming his anxiety. I also viewed the use of the term as an indication of his difficulty in finding a psychological explanation for his behaviour, in contrast to his readiness to accept his fear of snakes. However, at the same time, the juxtaposition of his acknowledged phobia of snakes and his responses while cycling potentially make explicit an attempt to give the latter a greater sense of legitimacy, reflecting perhaps some ambivalence but also his helplessness. This example typifies participants' attempts to search for an explanation for their anxious and avoidant reactions to something that was previously a source of pleasure and enjoyment and constituted a significant part of their identity. Mike went on to demonstrate further his process of sense making by questioning whether his avoidance of cycling was a life-stage matter:

And so I analysed as to whether or not I was just, having had 6 to 9 months off, I was just getting a bit lazy. I just thought “I'm fifty something now and do I really want to go do all this hard work”. But I don't think it's that, I'm still happy to go for three swim classes a week and put quite a bit of effort in there, so I have no problem doing that, you know, I'll come home from work early if I'm working somewhere else, and I'll put off doing something else to go to swim class.

Mike's account demonstrated his efforts over time to understand and make meaning of his behaviour, clearly a major source of frustration to him. I thought that his use of the term *analysed* in his narrative constituted an attempt to formulate a "theory" as to why he was behaving the way he was, to find some kind of resolution of his puzzlement. Other interviewees, however, were much more tentative and gave the impression of being still puzzled and mystified. Carol reflected her uncertainty about the source of her internal conflict about continuing to race on dual carriageways (see above), saying:

"Erm whether it's some sort of self-defence, I don't know".

Rachel described her feelings about her bike after her accident:

When I saw the bike.... Erm, and I didn't really want to get on that bike or do anything with it. I mean for me to have a dirty bike or a bike that, you know, could be going rusty with mud on it is unheard of. I suppose probably a bit like most roadies really.

Again here I felt that the reference to *unheard of* behaviour on her part of not maintaining a bike was an attempt to emphasise her acknowledgement of the strength and longevity of the impact- her use of the phrase *going rusty* appearing to convey a sense of something deteriorating over time due to neglect. I also noted the positioning of herself in relation to other serious cyclists, as part of the unwritten code among serious cyclists is the diligent maintenance of equipment. It is as though Rachel sees herself no longer a "full member" of the community due to the effects of her incident.

Max demonstrated another dimension to this sense making when he appeared to acknowledge that the interview process itself was instrumental in helping him to analyse and reflect upon his experience and to engage in some sort of initial formulation, saying:

I guess, you know, as you are asking about how it feels now and what feels different, I guess in some circumstances I am more or less expecting something like that to happen when I wouldn't normally.

Similarly, Steve appeared to come to some initial awareness when responding to an interview question. I asked him what he noticed about himself in a situation similar to that of his index incident (a crash while cornering in a race). He prefaced his

response by the phrase “mmm interesting,” his tone of voice indicating that this was something he had not reflected upon before. This was something I was conscious of during many of the interviews. For many, such an interview is the first opportunity they have to talk about and reflect upon the incident under consideration, as they will tend to find it difficult or embarrassing to talk about such effects in social or sporting settings.

1c: Negative and Critical Self Commentary

This theme brings together participants’ evaluations that tended to be self-critical, in contrast to the previous two themes, which have been more descriptive or analytical and curious in tone. In the interviews, the negative stance towards the self was not always explicit but often implicit in vocalisations, tone of voice, hesitations, facial expression and non-verbal gestures that drew my attention in the analysis. Most, but not all, participants demonstrated this theme during the interviews; Carol in particular, stood out from the others in adopting a stance towards herself that was more accepting rather than critical.

Amy demonstrated both verbal and more subtle elements of the theme. Her discipline was ultra-long distance solo competitive rides and after her accident, she describes her experience of guilt after stopping during such an event due to her anxiety in heavy traffic, voicing her apology to her helpers who were following by car:

I was nearly crying by the time I got to the roundabout and I said, “I’m sorry, I have got to stop” and that was the first time I have ever stopped in a race..... And I wrote a letter to the organiser to apologise for not finishing.

The contextual aspect of Amy’s apology drew my attention; it is normal practice for a competitor to give apologies for not starting an event entered in advance, but it was the first time I had heard of a written apology for not finishing. What stood out for me was that for Amy the behaviour was something to be apologised for, indicating perhaps feelings of shame, a personal failing of character. I wondered if she would have responded in the same way to a mechanical or physical problem. Amy’s narrative suggested to me that her difficulties were self-regarded as weakness and as such formed part of a wider societal discourse around mental illness and shame (Gilbert, 2002).

Amy also spoke of the effects of her earlier accident in 2003 in similar terms, this time expressing self-criticism more subtly in nervous laughter. She had been hit by a lorry when making a right turn and was cautious of making these types of manoeuvres subsequently as a result:

I would stop at the side of the road sometimes (laughs)

Among the respondents, there appeared to be a marked gender difference with respect to the degree of explicitness and forcefulness of self-critical commentary, with the three males using stronger metaphors to describe their behaviour. For example, Mike evaluates his difficulty in overcoming his avoidance of going out on his bike using language incorporating elements of physical conflict:

I mentally kicked myself for being such a wimp and not being able to force myself and go out

Again I was struck by the harsh attitude conveyed by the words *kick*, *wimp* and *force* and formed the impression of a strong element of self-criticism and personal weakness in Mike's reflexive view of his post-accident experience.

Max also demonstrates this use of hyperbolic self-critical language and metaphor when describing his behaviour when becoming anxious and "freezing" at busy junctions as;

I can get badly dropped and freak out sitting at a roundabout.....

Here, his use of the term *freak out* is interesting, both perhaps injecting an element of humour as a deflection but also seemingly allocating his behaviour to an undesirable and pejorative category. I am aware from my own involvement in the cycling community that for a competitive cyclist to admit to such behaviour, flying in the face of their normal mastery of the road, is an uncomfortable experience. As athletes, competitive cyclists are well versed in overcoming both psychological and physical pain, seeing the ability to do so as an essential part of their make-up. As a breed, they inevitably see themselves as mentally resilient, so the behavioural sequelae of traumatic incidents are understandably somewhat alien to the average competitor and at least in part account for the narrative examples above.

Steve typifies this competitive mentality and also adopts a self-critical position with his use of language-*get a grip*- and an interrogative tone in an evaluation of his post incident riding behaviour, saying:

Yeah, I felt with myself sometimes I would after a race get off and think come on, get a grip, you know what you should be doing and why aren't you doing it? Why are you riding like this? Yeah.

The frustration in his account came across very strongly and I suspected that again there was an element of shame present, so I asked Steve whether he had shared any of this experience with others. He responded: *No, not really. I kind of kept it to myself, yeah*, strengthening my impression that this would not be easy material to reveal in competitive circles.

Among the females within the sample, the language appeared to be gentler and slightly more moderate, and I wondered whether this indicated a potential gender difference in the degree to which vulnerability might be experienced as shameful. Rachel also had the negative experience of pulling out of an event due to her anxiety because she was *getting in such a state*. Even in a milder tone there is a sense that the response is somehow ridiculous, uncalled for. As I was listening to the transcript at this point, I sensed a clear frustration in her tone at this behaviour. Similarly, Erin's self-critical stance also revealed itself in her tone of voice rather than in the content of her narrative. I noted this in listening to the transcript, in particular a passage in which she describes her tendency to "feather the brakes" (to do some gentle braking to control speed) when approaching corners in a race, which can mean losing ground to other less anxious riders. Her sense of frustration and disappointment in herself as she offers her account of her behaviour was revealed in her vocal tone when describing this experience.

1d Comparison with premorbid self and others

Participants invariably made before and after comparisons in their behaviour and experience when cycling, using their previous behaviour as a point of reference for comparison with post-accident functioning. It was evident throughout the accounts that the deterioration of present performance or enjoyment was a matter of major concern for the participants. As competitive cyclists, the maximal fulfilling of potential

is a continuing goal; anything detracting from this is therefore of great significance, with the previous level of more effective functioning being used as a point of comparison.

I noticed that several participants also used the hypothetical “other” to make comparisons, wondering whether this implied that in their behaviour as anxious cyclists, the respondents were displaying characteristics they believed were inconsistent with the prevailing cultural norms within the cycling community.

Later in the analysis, a separate master theme, Impairment of Cycling Performance, focuses on the specific impacts experienced by participants on their cycling behaviour. I felt it was important to distinguish these more technical and behavioural changes from what is encompassed by the present theme, which is more about capturing the attitude and perspective taken towards these changes, attuned to the notion of selfhood, rather than the changes themselves. Again, I noted that this attitude was subtly revealed in inflection, tone of voice and gesture as well as in spoken language.

Amy stood out as a participant acutely aware of the changes brought about by her accident and in the interview, I had a sense that she was voicing this impact for the first time. I have noted above, the guilt she experienced when not completing a race. Later she added “*and that was the first time I have ever stopped in a race*”, a bare but profound statement acknowledging a major change for her compared to her previous experience during a lengthy career in competition. Carol acknowledges this before/after contrast as part of her conflict about carrying on competing, saying “*I was kind of thinking how it used to be, the real kicks*” conveying here a sense of the enjoyment she used to get out of a form of competition that was now a source of tremendous anxiety for her. The use of the word *kicks* implies an intensity of enjoyment and involvement looked back upon with a hint of what I would describe as nostalgia, the good old days.

This theme of change and contrast with previous functioning was also evident in Erin’s comment of “*I probably wouldn’t do that now*” in relation to a specific change in her riding habits, dealt with more directly in a later theme. Similarly, she looks back at her previous level of functioning when racing, noting:

When I have done that fine in a bunch and been confident in a bunch with riders it's just to stay off the brakes and just ride the corner and now I won't, even by myself

Noting the frequent use of the then/now dichotomy, I formed an impression of the incidents as constituting watershed moments in the sporting career narratives of the respondents. Erin here starkly demonstrates that there has been a fundamental change in her orientation to this technical aspect of competition, potentially reflective of a change in the self at an almost structural level, so natural did the previous level of functioning appear to be in contrast to current, more unnatural, functioning. There is evidence that amongst almost all of the group, these changes are viewed as long-standing and, in most cases, relatively permanent and inevitable consequences of their negative cycling events. There is a sense in which they are saying "this is me now", as though they have acknowledged, if not reluctantly accepted, a relative permanence of the impact which they are powerless to change.

Mike spoke with a sense of bewilderment about his reluctance to go out on the road and train, even when encouraged to do so by other riders. He commented on one incident when he received such an invitation to go for a training ride:

It was such an instant decision that my instant reaction was "no". This time last year my instant reaction would have been "yeah, that's a good idea"

I contend here that the contrast between these automatic, non-thinking responses reflects the degree to which the new response is seen as deeply ingrained, as though it has become second nature for the participants.

Mike also reported that a previous source of support and motivation for him, that of a friend who acted as a coach and designed training programmes for him, was no longer effective, and I gained the impression here of a real sense of loss and an acknowledgement of a significant degree of impact:

I've sort of got a coach in that one of my best friends is a coach, so he's regularly coached me, luckily for free, for the last two or three years. And I've even asked him to do a basic programme for me, but nothing really helped..... I haven't

asked him to set me a real programme. But even that I don't think would motivate me

Max acknowledges changes in his sense of self and his sense of danger when riding in traffic:

I don't think I am as confident or as assertive in traffic as I would have been beforeI am more or less expecting something like that to happen when I wouldn't normally....I mean I have always thought that I was quite a safe rider

His comment evokes for me the sense that he sees his current response as somehow “abnormal” and makes clear contrasts with his previous or “normal” functioning. Both Mike and Max’s narratives give the impression that the changes they have identified are significant in that they lie at the very heart of their engagement with their chosen sport, threatening to sabotage the whole experience for them.

Comparison with others was another way in which post incident behaviour was given a reference point to establish a sense of deviation from the norm. This element was identified in only a small proportion of the participants, but I felt it belonged within this theme because of the purpose of contrasting present behaviour with what was regarded as the expected and habitual state of affairs. Rachel expressed this element in the form of a veiled question to me as the interviewer, asking, “*I don't know if other people who have had accidents get like that?*”, a question that also arguably asks whether her responses are normal or in some way deviant. Steve also contrasted himself with a perception of other riders having a different history:

You have got it pretty fresh in your mind of the consequences of that, where I guess other people who have not crashed in a while or who have never crashed in those circumstances are oblivious to it.

Amy also adopted the perspective of the other, when commenting on her avoidance of specific types of course when competing:

I suppose it's OK really, but then other people might think “why don't you race here anymore”, or whatever, they wouldn't understand why, you see

As a final example of employing the peer group as a reference point, Max demonstrates his awareness of both the perspective of other riders towards him as well as his sense of contrast to them by saying:

I have comments from people when a car comes.....I am more cautious than most of my peers and people that I ride with.

These comparative narratives are again suggestive of an experience that as competitive cyclists they now are possessed by some elusive quality, consequent on their index event, that sets each respondent apart from their peers in the cycling world, who might have difficulty understanding their predicament.

4.2 Focus on anxiety

This theme gathers together the experience of what appear to be manifestations of behaviours understood in psychology as “anxiety” and often found in a variety of contexts. Later themes deal in far more detail with the very particular impact of these responses on cycling performance and the cognitive and perceptual processes that underpin those effects. The focus of interest here is upon how those manifestations of anxiety are experienced, described and commented on by this client group in the context of their cycling experience. The three sub themes cover typical manifestations of anxiety following a critical or traumatic event:

- a) physical symptoms;
- b) re-experiencing;
- c) avoidance.

2a- Physical Anxiety

It is notable from an overview of the interviews as a whole that the participants did not seem to attribute much relevance or importance to specific physical manifestations of anxiety in themselves, in comparison to their concerns about the impact of their experience on performance, participation or enjoyment. My knowledge of the wider community of cycling from which this sample is drawn leads me to suspect that as serious athletes, the participants are less likely than non-athletes to pay attention to

physical symptoms in particular, which are accepted (like physical discomfort when competing) as part and parcel of sporting endeavour and therefore less worthy of comment than something which slows one's performance.

Despite this, most of the participants spoke of the physical manifestations of anxiety to some extent, if only briefly. Amy spoke of herself *quivering* at the time she abandoned the race referred to above due to her anxiety in speeding traffic. Carol referred to her experience of physical sickness in two slightly different contexts. The first was when she was racing in similar circumstances to her index event and became aware of traffic slowing ahead of her. She immediately feared another fatality as there were riders ahead of her, noting:

I felt a bit sick, I must admit. You can feel quite sick when you are racing anyway, but it is a different sickness. It's like, it's your stomach is just like woo.

She was also aware of her physical response prior to the same race, adding:

as I was signing on I could see my hands were really shaking.

Similarly, Rachel referred to stomach sickness when revisiting for the first time the racing circuit on which she crashed on a slippery corner:

It was really difficult and it made me feel sick

Rachel also spoke of the physical effects upon her of simply visualising herself returning to that form of competition using a very powerful metaphor to make sense of her symptom:

Because I actually can't even envisage rolling a bike up to the start line of a road race, starting. I mean I think about it and as I think about it I just start thinking no there is no way I can do that and start feeling like tense across my head.....like my head is in a bit of a vice.

Mike used elements of the instinctive flight, fight or freeze response to danger when he referred to his reluctance to go out and ride his bike as:

Erm, I don't know to express it. It's almost as though I'm paralysed, in that I'm unable to actually... (pauses)

Max also used very physical language in speaking about how his anxiety had changed his posture when cycling in busy traffic. He spoke of being *uptight*, when he senses danger in this setting, adding:

I think it is just tension and anxiety..... You know, I can feel my thumbs and wrists tightening up as well.....The other thing, just thinking about it, I have noticed, on some, I get quite tense not just with cars passing in the same direction as me but if people are coming in the opposite direction and they are going quite fast.

Steve also described his posture on his bike following his incident in physical terms. Like Rachel, he had crashed on a racing circuit when cornering and spoke about the physical change he noticed, as well as the impact on his performance, when he was able to return to this form of competition:

I have just got to relax, I was just so very tense on the bike anddefinitely upper body, shoulders and arms....and that was causing all the problems which was making, it makes the bike hard to handle when you are too tense and gripping the bars too much and not letting the bike sort of flow.

The vocabulary of anxiety is familiar, encompassing sickness, tightness and tension, shaking and quivering, paralysis in specific bodily locations. I noted the contrast between what were accepted as “normal” sensations of bodily awareness in endurance sport (Carol’s *a different sickness*) and these more recent, alien intrusions. I also had the impression that the respondents felt they had the psychological skills to manage the former but found the accident-related responses more difficult to manage, with again a sense of powerlessness shining through.

2b Intrusivity/Re-experiencing

This sub theme includes references made by the participants to instances in which memories of the index event unwantedly intrude upon consciousness and are remembered or re-experienced in a performance context, whether during or before. Not all participants spoke about such events, but it appeared in most of the narratives. Re-experience phenomena appear as a common symptom within formal diagnostic

categories across the spectrum of anxiety as well as being among the diagnostic criteria for PTSD (DSM-5). Across the four participants who expressed this theme in their narrative, there were clear differences in the strength and intensity of re-experiencing, to some extent dependent on the nature of the index event.

Having witnessed a fatality, it was not surprising that Carol's narrative showed the most extensive evidence of re-experiencing her index event as part of her overall anxiety response. She acknowledged that this occurred both before and during competition as well as during her non-cycling life. She spoke of a recent experience the night before a race:

I wasn't so bad on Saturday, but even just before going to bed, I sort of, my brain would be, I would be seeing [xxxxx] lying there definitely. You know, definitely.....kind of feel like, why am I doing this, why am I doing this to myself? Sort, of when getting into bed I can see [xxxxx] lying on the concrete, you know and I think, oh blimey, why are you doing it to yourself.

Carol went on to reveal another episode of re-experiencing her trauma driving to the same event the following day. What reveals itself to me here is how she gives meaning to the intrusive image, interpreting it as a reminder about the risk inherent in what she continues to do and questioning why she continues to expose herself to that risk:

.....and then driving there. When I am driving down the dual carriageway all of a sudden I would be seeing, what I thought was a bag and then, no, it's [xxxxx] and I think, Carol, why are you racing?

She also found, as mentioned briefly earlier in the theme related to fragmentation of the self, that the image intruded when she was engaged in her usual visualisation strategy while training on the "turbo", (an indoor training device where a bike is clamped with the back tyre off the ground against a roller, allowing much normal cycling activity to be carried out indoors):

Yeah, it did used to affect me on the turbo and on the turbo I used to kind of visualise, not so much now, it has moved on quite a bit from there. I probably have moved on a fair bit, but say last year when I was on the turbo I would try and visualise, there would be music playing, and if it was the music I used to

train to around about the accident time I would shut my eyes and instead of visualising me say climbing a mountain in Majorca, I would shut my eyes and think "oh, bloody hell I am thinking of that day, no...

Finally, she spoke about the pervasive nature of her intrusive memories of the tragedy, her repetition of *definitely* giving me an impression of her sense of the permanence and power of the impact of the tragedy upon her. Carol's narrative also implied a sense of her lack of control over the intrusive memories, despite some acknowledged improvement with the passage of time:

I am okay, but I always think of him, always think about him. I don't think there is a day on the bike where I don't think about it. It is definitely, it is definitely, definitely always there

Understandably, compared to Carol's experience most other participants found that their intrusion was more context specific and less distressing. However, there was still a marked effect on performance. For instance, Max also noted that imagery surrounding his accident, in which he was hit by a car, was intruding at times. He tended to encounter difficulties when riding in busy traffic, his thought processes at such times appearing to imply an awareness of the connection between his incident and the intrusions:

Em. I do sometimes, sort of think about near misses and that runs through my head and stuff like that..... you remember every time someone comes a bit close to you

Rachel also spoke of the power of her intrusive memory of her crash on a wet surface when racing, which is triggered in similar circumstances and has a big impact on her performance:

Em, like, it is because the vivid memory I have is that the road surface was damp when I crashed. Em, so I think I will lose control of the bike.

Steve crashed while cornering in the same kind of situation as Rachel and also found that he tended to re-experience the incident in similar circumstances, when there was an indication that the upcoming corner might present a hazard:

coming round corners there would be gravel and someone would shout out “gravel” and I was really, really sort of nervy and when you know there’s a corner coming up and there’s a hazard on it, I was really sort of ooh....I guess it actually went through my mind what had happened previously and, you know, the wipeout and all the road rash and everything.

These examples are suggestive of the respondents’ attempts at meaning making in relation to their difficulties by making connections between characteristics of their index events and their experiencing in specific trigger situations, as well as giving a sense of their lack of control over their experiencing. The descriptions of these intrusions indicate a major challenge for the athlete in that widely available discourses about applications of psychology in sport tell us that we should be engaging as much as possible in strategies of positive visualisation during competition in order to enhance performance. In this sense, the intrusions from the past appear to represent the unwelcome antithesis of best practice for the respondents.

2c Avoidance of Triggers

Avoidance is a classic component of the anxiety response and was evident in the accounts of almost all participants. Most of the triggers involved similar types of road, traffic or race situation to that of the rider’s index event. This sub-theme is concerned with how this avoidance behaviour is described and made sense of as matters of concern by the participants.

Mike personifies an extreme form of avoidance, that of rarely riding his bike at all. He spoke at great length and articulation about this experience, in the context of his assertion that being a cyclist was, until the accident, a key component of his identity. He sums up his dilemma thus:

To me I’m a cyclist and that’s what defines me. It’s not that I spend all my time doing or thinking about it..... it’s a very important part of who I am. And it never occurred to me that I would not get back on a bike

Mike also went into detail in articulating his thought process behind his avoidance. This is a lengthy extract, but its value lies in the detail that Mike supplies in explaining the nature of the displacement activities he engages in after he plans a ride:

So, as I was lying in bed at night or sitting in a chair in the evening I'd be thinking "Ah yeah, it'd be lovely to go out for a ride tomorrow, I could do that ride through this particular route or that journey". And I found that when I couldn't actually ride, like night times and evenings, you know, the times when you physically can't just go out and do it, it was easy to make these plans and the plans would be very, very formulated and I knew that I'd be getting up at nine o'clock and I'm going to do this. But then when the actual time came to do this, when I had the ability to do it – when it was daylight, when it wasn't raining and so on, I would then find myself making excuses to myself, I'd say "oh I must finish that job first". And then when the jobs were done, and obviously I do have to work, so I can't go out all the time, but when it was say weekends I'd then think "oh, that kitchen floor's really dirty, I must do that first, I must get that out of the way then I must do the washing, oh the washing needs hanging up, I must do that first". And then I was fully aware of exactly what I was doing but I couldn't make myself go out on the bike.

The last line of the extract really gets to the essence of the impact; cycling is an activity Mike thoroughly enjoys, it is a major part of his identity, the sun is shining but he finds himself washing the kitchen floor instead and is fully aware of his mental process in making this choice. His words give an impression of powerlessness, loss and frustration and I recall he was tearful at this point in the interview.

For others, the avoidance was of specific environmental settings connected to their index event. Amy asserted, with some emphasis, that:

I just thought, ah no, I can't do any more racing like that ever again. No, I haven't done any more races here (laughs) since then. I haven't, no.

She was referring to doing her particular type of long distance racing on UK roads, since her accident having only competed in such events abroad, where she defines

the road conditions as safer. Similarly, Carol asserted after her incident “*Yeah, and I said to myself I am not going to do dual carriageways this year*”, again with reference to the specific setting where her trauma occurred. Erin notes that following her accident, she avoided the type of “commuter route” upon which she had her accident, preferring quieter environments:

I didn't commute for a few weeks. I didn't fancy it at all. I trained on my own..... I just didn't want to be near cars. I think that was the main thing and the way I commute in is on a main commuter route

Max was also very definite and final in his avoidance of racing on busy main roads, due to general anxiety around speeding traffic. He explains his position thus:

I am conscious of there being.... you know on some of the 'A' roads around here where you cross quite severe point junctions and when you think about it you can be in-between two lanes of traffic doing 70 miles an hour and I have just completely opted out of ever riding of those sorts of courses again.....Yeah, some of the courses on the A1, even if it is a six o'clock start I just won't enter them anymore and that is a conscious and deliberate and I think prudent thing really.....

I formed the impression from these accounts of the respondents doing a form of “mental accounting”, weighing up the risks and benefits of a particular cycling activity and constructing an internal narrative that creates a rationale for its avoidance. The accounts also imply a sense of certainty and permanence, of never engaging in that activity again, acknowledging perhaps a sense that they see themselves as permanently changed by the event.

Rachel was unusual among the participants as her understandable avoidance of the specific site of her accident also extended to more physical reminders of both her accident and cycling in general. She was encouraged by others to revisit the circuit on which her accident occurred and on the approach to the circuit acknowledged:

it was really, it was really difficult and it made me feel sick....as I got closer and closer I didn't really want to be there. Em, and yeah, it was very very difficult. I walked around, saw it and then left but didn't really... it wasn't easy.

She also had a strong reaction to the bike she was riding during the event. As mentioned above, she had not cleaned it following her crash, which was highly unusual for her, but her reaction to the machine went much further:

my bike was in the house still coated in the mud and everything from the accident. It was at that point I totally broke down, absolutely floods of tears..... and I didn't really want to get on that bike or do anything with it.

She also experienced a strong sense of avoidance of any reminders of her more general sporting activity and success by removing them from her sight. These artefacts were clearly powerful reminders for Rachel, and her desire to put them out of sight in such a dismissive manner evokes a sense of their power in bringing back distressing feelings:

I didn't want even any of the... I had, like trophies sitting on a mantelpiece and things. I didn't want to see them anymore and they all got shoved... I wanted to throw them away

Like most of the others, Rachel also changed the nature of her participation in competitive cycling to reflect her avoidance response:

I have not road raced since the accident. I mean, I am talking about two and a half years after.....Because I actually can't even envisage rolling a bike up to the start line of a road race, starting. I mean I think about it and as I think about it I just start thinking no there is no way I can do that

As we would expect, the closer the trigger to the circumstances of the index event, the stronger the instinct for avoidance. In summing up these examples of avoidance of specific settings within the respondent's narratives, it seems to me that there is an implicit sense of compromise between the acknowledged impact of the index event and the desire to continue with some form of competition, albeit in a limited or restricted fashion. What also stands out is that this has become the new "normal", again reflecting the relative permanence of the impact, as though they are fundamentally changed by the impact of the event and engage in a meaning making process to make sense of their adjustment to this new relationship to their sport.

Master theme 3- Physical Injury

This theme tended to occur only briefly in the participants' accounts but is given a separate theme in order to distinguish physical and psychological sequelae of the index event. Most gave a spontaneous description of any injuries, but the respondents were aware that the focus of the research was upon psychological factors, so most did not go into much detail. The theme encompassed concerns expressed regarding injury, identifying content relating to both the physical effects of the accident and to matters regarding physical recovery and rehabilitation.

There was some variety in the experience of physical injury across the participants. Carol was a witness to a serious incident and was not injured at all; Max was not physically injured by his cycling incident but had experienced an earlier accident as a pedestrian that did lead to serious injury. The five remaining participants received injuries on a scale ranging from cuts and grazes (known as "road rash" among cyclists) to torn ligaments and minor fractures.

It is relevant for this part of the analysis to be aware that to competitive cyclists, crashes and injury are to a great extent an unwelcome but accepted part of bike racing. The phrase "road rash" sums up this attitude by diminishing the severity of what can be quite painful injuries. At elite levels of competition, riders, unless they are badly injured, are expected to literally pick themselves up off the floor and continue racing, with any necessary medical attention being administered on the move by the race doctor travelling by car alongside. Dutch professional Jonny Hoogerland is probably the most graphic and memorable icon in this respect, crashing into a barbed wire fence in the 2011 Tour De France after being "wiped out" by a TV vehicle. His racing clothes were shredded and he sustained deep lacerations to his legs requiring 33 stitches. Despite these injuries he finished both the stage and the Tour itself. (Kenny, 2016). This very visible aspect of injury management filters down to all competitors and influences attitudes to injury. This perhaps is to some extent why the participants have struggled more with the psychological impact of their events, which do not fit the recovery template of "get up and get on with it".

Erin's off-hand analysis of her injuries following a collision with a car typifies this attitude to physical injury as something that can almost be "shaken off"; the light hearted language she uses to describe her injuries is almost dismissive of any seriousness:

Pretty much walking wounded.....I got a graze on one elbow.My helmet was cracked. I think the AC joint did pop out because it did a nice big crack when I rolled my arm the next day before I could get it x-rayed. But I had some physio work on that to get that loosened off and stuff because I had quite a limited range of motion but nothing that a couple of paracetamol that night didn't sort out. I was shaken more than I was hurt and my back, I must have landed on my back somehow.....

Steve adopts a similarly dismissive tone in describing the impact of hitting the tarmac in a race:

It was the normal kind of road rash, you get in those kind of things, really.....Nothing broken and yeah the bike with scuffed up pedals and things and my jersey and shorts torn to shreds and just road rash.

The interesting feature implicit in these extracts is that physical injury is regarded as “normal”, tends to be regarded lightly and has clearly defined treatment and recovery protocols. Whereas elsewhere in the narratives, it is evident that psychological injury is given very different meanings, many that are unexpected, and as a consequence has much less clear treatment outcomes. This differential meaning making is likely to have implications for the degree to which engagement with psychological support takes place, as engagement needs to overcome narratives regarding “mental toughness” prevalent within sport.

Master theme 4- Perceptual and Decision-Making processes

This fourth theme brings together participants' accounts of their conscious perceptual and cognitive processing when in cycling situations which tended to evoke reactions that exemplified the changed content of their thinking processes. I was interested to know something about the nature and content of what the participants were aware of perceptually and cognitively following their incident; in terms of what they noticed about their environment and how they came to decisions about action in such circumstances.

Four superordinate themes make up the master theme:

- Cognitive Processes in Decision Making;
- Evaluating Safe and Unsafe Contexts;
- Sensory Awareness of Danger;
- Awareness of Vulnerability.

4a Cognitive Processes in Decision Making

This theme gathered together participants' accounts of their conscious decision making processes in contexts that raised concerns for them relating to their index event. It includes content that identifies the train of thought of which they were aware in specific situations. Nearly the entire sample described such events. The first sub group within the sample, who had experienced traffic related incidents, understandably provided some rich data reflecting the content of their thought processes in post-event situations in which they encountered motorised traffic.

Among the participants Max was the one who most clearly and frequently articulated this aspect of his experience. As noted above, he was predisposed by the nature of his two index incidents (one as a pedestrian) to be very wary and cautious when cycling in traffic:

Yeah, some of the courses on the A1, even if it is a six o'clock start I just won't enter them anymore and that is a conscious and deliberate and I think prudent thing really

He then connects this line of thought with the circumstances of his more recent index event, making clear connections between the nature of the accident and his thought process when in similar situations:

the thing that got me thinking after the second incident because it is relatively unusual, I think, to be run over directly from behind by someone who has just either hasn't seen you or left enough room and there is not really anything you can do about it. I mean it has happened..... I guess in some circumstances I am more or less expecting something like that to happen when I wouldn't normally.

There is more of an implied sense of paradox here, in that Max concedes his index event was unusual but is now expecting a similar event to occur each time he cycles in traffic. The fact that the incident “got him thinking” suggests that the normal, everyday experience is now re-evaluated in the light of the index event, with a marked change in the estimation of the probability of such an event occurring again. In another passage Max described a recent incident in which his anxiety effectively overwhelmed him, in contrast to his sense of himself as a confident and assertive rider before his two incidents:

Yes, that was coming into a roundabout. Again there was quite a heavy flow of traffic quite fast and I just thought I am not going to attempt to ride across this..... I was in a group again so I was hanging back a bit anyway and I saw others get across and I just looked at it and thought I don't even want to try this.... Em, so there was not a lot of thought involved, I just got off and wheeled the bike back up the verge as quickly as possible to cross and then find another route. It was quite a conscious decision. I just looked at it and I thought this doesn't.. I don't feel confident about getting across here.

Again, there seems to be a weighing up, a calculation of risk-taking place which appears to be more clearly articulated within conscious awareness in comparison to what was regarded as “normal”. I gained the impression of poignance within Max’s narrative at this juncture, in that it was possible to sense the weight of the change within him that has led to such uncharacteristic behaviour in a setting that he has previously managed many times before without difficulty. Traumatology theory leads us to expect intrusive rumination after distressing events but what is evident here is the reliance on the content of thought processes as a guide to action, its acceptance and implementation without challenge. I contend that most competitive athletes would actively challenge inhibitory thought processes to do with performance related matters, such as fatigue, regarding such thinking as “the mind playing tricks”. In contrast, thinking related to matters of safety seems to be regarded as valid information by the respondents.

Carol, who witnessed a traffic related fatality, also alludes briefly to the articulation of her thought process when she considers the risk posed when she contemplates her

decision to continue to race in similar situations (on busy dual carriageways) to those described by Max above

... my head is just saying to me... it was like this last time and it could be anyone, it could be you, you know.

Here Carol is ruminating on and re-evaluating the significance of her index event for her own safety, in that the event emphasises the fact that she too is vulnerable because of the random nature of the accident that she witnessed. There is no sense that this information might be unreliable or subject to challenge, indicating the depth and complexity of the psychological impact of critical incidents on performance and wellbeing.

Erin similarly describes her thought process when she encounters cars in situations that resemble her index event. She explained that:

I think a car will do something stupid..... I rein myself inwhen I can't stop if something was to pull out in front of me basically. And that would always be my consideration I think.

Here, by emphasising “*that would always be my consideration*” Erin also demonstrates a change in the content of her conscious thought process compared to her previous functioning. Implicit in her statement is that the possibility of cars pulling out in front of her was not present in her thinking before the event and is clear evidence of structural and permanent change in her thinking.

Amy's narrative gives further insight into the impact of a critical event, indicating a sense of regression to a smaller, childlike, less significant and almost invisible self, which again can be understood in terms of trauma theory, particularly from a psychodynamic perspective:

I just thought, ah no, I can't do any more racing like that ever again..... I just felt little. I felt well nobody can see me really. That's a massive roundabout. I just thought people can't see me. They're going too fast.

Rachel and Steve formed a second sub group, who reported race crashes on traffic-free racing circuits as their index events. Although the context differs from the other

participants, their narratives revealed similar elements of certainty and rigidity in their thinking when returning to race in similar situations:

Because I actually can't even envisage rolling a bike up to the start line of a road race, starting. I mean I think about it and as I think about it I just start thinking no there is no way I can do that..

Rachel also found that her experience of racing was different, exemplified by a change to a more thought-based and calculated, rather than instinctive, style of racing. She notes the contrast and identifies her thought process:

You know, if there is an opportunity that opens up going through a gap and being able to pass through a gap that opens up, taking it, rather than hesitating and then thinking ooh what if I clip that person on the left or right

Steve outlined a similar difficulty when he returned to group circuit racing after his accident. His description of his thought process was not as clear as some of the other examples, but the effect is similar:

I know how far I couldn't corner on my bike and that so nothing had fundamentally changed with the bike or with the tyres. It was just kind in my mind not being able to go for that limit or.....and relax, yeah.

For an elite athlete in any sport with a degree of risk, these changes in the content of thinking when in competitive situations are clearly crucial and make a significant difference to performance. Here we have well-articulated examples of how this happens moment by moment in sporting practice.

4b Evaluating Safe and Unsafe contexts

Most of the participants frequently expressed a sense of categorisation of cycling contexts in terms of the presence or absence of a sense of safety. There was often an evident dichotomy in such classification, further confirming the impression of a more rigid and inflexible thinking style in performance that was prevalent in the sample following trauma.

Amy sums this up succinctly in contrasting an event that she had recently completed abroad with the type of event in which she had experienced intense anxiety, to the point of abandoning a race, in the UK. Her choice of language (*happy, nice*) and the image of the lorry carrying oranges suggested to me a strong sense of emotional security and physical safety in this environment compared to other cycling settings she had described:

Like the race we've just done was a really happy race. Well, the courses because they are on completely different... there's no traffic basically It's like nice roads, you know 40 miles out, 40 miles back and you might have one car or one lorry with oranges or something going past.

She goes on to explain how she similarly categorises her post accident choices of training situations as safe, in this case when she rides solo near to home:

I have got a very safe little circuit outside (home location), 6.8 miles, yeah . That's a safe little circuit there, you see. You can go out there any time of day or night and there's hardly any traffic, see. It is all left hand turns.

She contrasts this with a hint of the sense of danger she experiences in contemplating rides outside of this apparent comfort zone, doubting the wisdom and security of such ventures:

I suppose going a bit farther afield, yes, in case anything happens.

Amy also evidences this dichotomous and rigid thinking style in describing the two main types of group ride that she can join, noting that the more social “club ride” is within her comfort zone: *Yes, club runs are all right* but the more competitive “sports ride” is not; she has avoided the latter since her accident, due I suspect to increased speed, less emphasis on group togetherness and the possibility of being left behind if she is not able to keep up.

Erin similarly reflects this split stance towards situations that mirror her index event, again traffic related. She uses her felt sense of danger to classify the type of road that is unsafe:

I won't go on a road that I think is dangerous or I perceive to be dangerous.

She continued by explaining that she will also factor in how busy she expects the road to be, preferring school and other holiday times when there will be less traffic. Her use of the word *select* evokes a sense of definite, deliberate choice:

I still select traffic weeks which are nicer.

Max was also able to classify different racing and riding settings into a dichotomy of acceptable and less palatable environments, stressing that he would not choose to enter solo time trial races on some courses due to the perceived danger presented by traffic:

There are some time trial courses I won't ride for those sorts of reasons as well

He also outlined the way in which he classified more general riding situations in terms of his perception of their level of safety. He comments both on the roads themselves in terms of traffic flow:

There are some roads I will not ride on.....most of the roads out of (home location) are fairly busy. They are usually the first two, three or four miles of a club run and things like that. I tend to relax a bit more when we get out into the countryside a bit.

and the definitive position within a group he will take when riding on such roads. Again the narrative *never...under any circumstances* is suggestive of a clear distinction in the classification of safe and unsafe environments, without gradations. Max also seems to suggest that anyone else who does not share his perceptions is taking unnecessary risks:

There are some roads in a group, you know, when people will still ride two abreast and I will never ride on the outside under any circumstances.

Rachel gave an account of her selectivity of racing situations. For her, one of the major defining characteristics of the safety of environments was her assessment of the perceived riding ability of the others in her race. After her accident, she tended to confine her racing to velodrome tracks, a banked circuit of either wood (indoors) or tarmac (outdoors) despite riding on fixed wheel track-specific bikes without brakes. She felt safer doing such racing as there were no corners to negotiate, the locus of her index

accident. It is possible, but not necessary, in this specific setting to achieve an accreditation as testimony to a rider's skill in this type of riding, but in races Rachel was keenly aware of the distinction between riders who were and were not accredited. She describes her first experience of such racing following her accident. Listening to the extract at this point, I was aware of the sense of panic in her voice as she described the setting:

that was the first proper bunch race I have done since the accident, but these weren't people and I don't mean anything nasty to my fellow ladies on the cycle track but they don't do the SQT [structured quality training] sessions, they are not accredited and certainly a number of women I know are not. They just weren't following the rules of the track, they weren't signalling how they should signal, they were all over the place, they weren't even looking, they were half wheeling and I was absolutely petrified. I mean my sole consideration for the entire race was to stay at the front, it was only ten miles, stay at the front and cross the line.

Rachel also evidenced a further categorisation consequent upon the nature of her accident- *I don't go out cycling if it is pouring with rain.* Steve continued this theme and spoke about cornering, as opposed to riding along the strait, as a problematic location for him, again mirroring the circumstances of his accident:

and coming round corners there would be gravel and someone would shout out "gravel" and I was really really sort of nervy and when you know there's a corner coming up and there's a hazard on it

Overall, this theme exemplified a kind of simplistic, either/or style of categorisation of cycling settings resulting from the index incidents, which has major implications for performance, enjoyment and engagement. I also wondered whether there is a suggestion in the narratives that other riders are somehow regarded as being foolhardy in not recognising these dangers that are so apparent within the perceptions of the respondents.

4c Sensory experience of danger

Continuing the exploration of the participants' processing of incoming information is a sub theme that appears to capture changes in how they use their senses when in contexts relevant to their index event. I thought that the reports overall create an impression of perceptual senses being heightened and sharper, with more attention being paid to incoming sensory information.

Amy's narrative illustrates this heightened focus, paying attention to both the proximity and speed of the vehicles passing her in a race, during which she eventually abandoned due to her excessive anxiety:

but suddenly I was really nervous and I thought I can't continue, you know, with all the cars whizzing past it was too close They're going too fast I'm more aware of motor noises and things, engine sounds, I think.

Similarly, Carol evokes her sense of being enveloped by sound, really capturing a sense of a "siege mentality" when she was out on the road: *you are still surrounded by that constant noise of traffic* while in contrast for Erin it is her sensory perception of her own speed of movement, not that of other vehicles, which causes her to literally put the brake on her progress: *When I get out of, or I perceive my speed to get out of control I definitely rein myself in a lot more.* In both Ann's and Erin's narrative, I formed the impression of a clear sense of change from a pre-existing state where this information was less actively attended to. Understandably, as both had been involved in index events where they had been struck by moving vehicles; this change in the level of sensory awareness of accident related stimuli is no surprise.

Max also evidences a heightened sense of both proximity and speed in describing his experience when he is cycling out on the road, giving the impression of the precarious nature of his sense of safety:

but I guess all it would take is somebody, you know, somebody coming too close or something like that and that would trigger things again. The other thing actually is people do come a bit too close....., I have noticed, on some, (rides) I get quite tense not just with cars passing in the same direction as me but if people are coming in the opposite direction and they are going quite fast.

Rachel, in contrast to the other respondents who displayed this theme in their narrative, finds danger in other riders rather than traffic, in keeping with the circumstances of her index event. She comments that other riders notice the change in her behaviour in that she appears to have a finely tuned perceptual sense of the degree of proximity of other cyclists, even when they are behind her, when she is riding in a group ride or race:

They say it is my behaviour on the bicycle. I won't hold their wheel as close. Em, and when... if they said I have like a sixth sense, like some kind of spider sense... it's like when they get to within a certain distance of my back wheel, without even looking around and seeing them, if I can feel them there and I will go faster. If someone is behind me, I mean, it's not that I won't be looking behind and being aware either. I mean I know if someone is behind me that, it's my sixth sense if they, it is like they are in a certain distance and within that personal space, if you like.

4d Sense of Vulnerability

Prominent with the narratives of the majority of interviewees were descriptions of situations in which they experienced a very stark reminder of their vulnerability as cyclists, particularly in relation to motorised traffic with which they normally share the road. This is a situation common to all cyclists who ride on the road, but it appeared that among the sample this element of their experience was given a much higher profile. As would be expected, this theme emerged more frequently in the accounts of those who had had traffic related accidents, with the exception of Rachel, who despite having an accident on a traffic free circuit still evidenced a contrast in her sense of vulnerability compared to before her incident.

Amy frequently returned to this theme by explaining how she eventually abandoned a race and decided not to put herself in that situation again. She was, as would frequently be the case for solo time triallists, racing alone on a dual carriageway and speaking particularly about the difficult task of negotiating traffic islands in the midst of motorised traffic:

I was thinking oh no, I'm in the middle of three lanes there. I was thinking, oh no, I'm just on my own going round here. I wasn't protected and I was so.....I felt that I

wasn't protected from behind..... it was because I felt so exposed, Yeah, to go around the roundabout with three lanes, no-one behind you, it felt... suddenly I thought no, too exposed.

Max evokes a similar image to highlight his sense of vulnerability as a lone rider in busy traffic. His comment refers to situations when racing along a dual carriageway and encounters speeding traffic joining the carriageway from a slip road on the left side:

and when you think about it you can be in-between two lanes of traffic doing 70 miles an hour.

He continues to reflect on his sense of vulnerability in traffic, again mirroring the nature of his index events, one as a pedestrian and one as a cyclist:

I guess the thing that got me thinking after the second incident because it is relatively unusual, I think, to be run over directly from behind by someone who has just either hasn't seen you or left enough room and there is not really anything you can do about it. I mean it has happened.

Max goes on to explain how these events have changed the level of awareness of his vulnerability:

I guess in some circumstances I am more or less expecting something like that to happen when I wouldn't normally.

Carol also gives voice to her sense of vulnerability post-incident, noting that the accident she witnessed had a clear impact on the potential serious implications of engaging in her chosen form of sporting participation. As before, she uses a military metaphor in her narrative, saying:

You know, this is.... but I don't want... you know... something like that could happen to anyone or anything like that could happen on a country lane. It is a sense that you might not come back

At the beginning of the extract, her hesitation suggests to me a sense of her statement being something that she really would rather not voice, its weight being almost too

much and too serious to articulate. She contrasts this with an evocative depiction of her prior sense of contrasting invulnerability, but then bursts the bubble by doubting the reality of this previous perception:

when I used to race it was like nothing could stop you, nothing could, it was like you were invincible, it was like you were completely free and really, you know.... you almost felt that you were stronger than the cars and lorries and it was a real false sense of security.

In contrast, Rachel shows how not just traffic related incidents can transform a rider's sense of future vulnerability by outlining how her experience when racing has changed. In her case, she feels vulnerable to the actions of other, less experienced, riders rather than traffic:

Feelings of not necessarily being in control because in a road race it is not just down to you it is down to other people and other people's mistakes and things like that.

It is notable that Rachel's accident was not caused by other riders, but by an interaction of her own speed and slippery road conditions when cornering. However, her focus is now on the level of experience of other riders, something she has commented on in earlier themes. This suggests that it is a matter that has "come on to her radar" but was previously largely invisible to her:

I think prior to the accident I was probably too blasé in so much as I hadn't had an accident

Throughout the narratives, I found that the sense of a psychological "shield" that protected the rider preceded the index event, but was absent, sometimes only in specific situations, afterwards. As before, there are performance implications, which are analysed in the next master theme.

Master Theme 5: impairment of cycling performance

The focus here moves to the specific effect of trauma upon those elements of competitive cycling that embody a sense of engagement, enjoyment and flexibility of forms of participation. Although all of the riders (Mike with some difficulty) had carried

on participating in competition, most were keenly aware that something had been lost as a result of their trauma.

Within this master theme, three distinct themes emerged that seemed to encapsulate those elements of loss and change in performance that respondents experienced:

- Flow, concentration and awareness
- Pleasure, presence and mastery
- Avoidance and safety behaviours

5a flow, concentration and awareness

In any sporting endeavour, there is a mix of elements that contribute to performance. Prominent among these are relatively consistent factors such as level of technical expertise and physical fitness. This theme represents a more variable and fragile element of performance involving the cyclist's moment by moment phenomenological awareness of the relationship between mind, body and machine. At a basic level, the ability to focus and concentrate on the task at hand is of vital importance, with many respondents explaining how concentration was being negatively impacted by the sequelae of their incident.

Examples from the interviewees' narratives cover a variety of racing and riding scenarios. Concentration as an attribute is probably most helpful to the solo time trial racer, as without the distraction of other riders, sudden changes in pace and other factors present in group racing it is effectively just the rider, the bike and the road. However, this quality is also relevant in group racing, where riders often describe a sense of "being in the moment" in that they are aware of a multiplicity of sensory information from both internal and environmental sources. Thus, any distraction from this focus on the task in hand is likely to lead to a reduction in maximal effort and a negative impact on times and performance, an unwelcome intrusion.

Carol explained how intrusive memories for her index event created difficulties for her when racing in the same kind of physical environment:

I was doing well and then there is a long stretch of road and there is kind of a heel and where the heel went the traffic looked like it was slowing up so much...

it was just kind of bottle-necking....probably there was a rider just over the hill and I was thinking the traffic is slowing, why? And then a negative thought and then concentration has been taken a bit.

She goes on to emphasise the negative implications of this type of intrusion for her performance, hinting at the precarious nature of this quality of being at one with internal and external environments:

You just can't allow for anything like that if you want to do well. You have just got to be you and the bike..... The concentration that has killed it definitely. The ability is there, but it is the concentration, it's the negative thoughts I think you've got going on

The impact of unwelcome intrusivity is also encountered by Carol when training, again often interfering with the maximal effort required to make training effective. She speaks about interval training, where short periods of between one and five minutes are carried out at very high levels of intensity, interspersed with periods of recovery. These are often carried out on a stationary trainer or “turbo”, partly because such a mechanism enables 100% concentration on the effort without (ideally) any environmental distractions other than those inside the rider’s mind and body. Optimally, some kind of positive visualisation or similar process is used in such a setting to maintain focus, but here Carol describes the interference from unwanted material from her critical incident. Her frustration at this unwelcome intrusion is evident and again, there is a sense of something “not right” about the experience, a departure from the standard protocol of positive visualisation which also embodies a sense of loss of control and mastery over the mental skills needed to maximise performance:

... I am thinking I am on the turbo here, stop thinking about it, but I just would and it would drive me... and I used to think even then you couldn't give everything in the interval you were doing, because you would be like, well no, hang on when you visualise, you are supposed to think of something that motivates you.

Max spoke about another dimension to the relationship between rider and the physical activity involved in cycling when he used the concept of *flow* to describe an optimal state of being “at one” with the bike. He found this positive experiential state negatively

affected due to the physical tension and anxiety he experienced following his trauma and also exemplifies this continuing theme of a disjoint with previous experience:

well the best way I can describe it actually and it's not consistent but I mean if you are riding well and there is a sort of a sense of flow isn't there and if you are uptight and your hands are on the hoods and you are covering the brakes and stuff then you are not enjoying the.. you know, there isn't that presence of flow at all...

Rachel also noted a similar change for her when racing, making great efforts to find the right words to describe the two polar extremes that sum up her pre-and post-traumatic experience. This lengthy quote warrants inclusion as I believe it captures fully the subtlety of the impact of trauma on performance, potentially making the difference between losing and winning:

It's a difference between riding a track and riding the bike, if that kind of makes sense. If you... if you are not relaxed you are riding the track and you are not riding, you know, you are concentrating so much you are not actually riding the bike and riding the, you know, riding the race if you like..... whereas I find when I, you can be, if you relax into it and totally aware of everyone around you but you are in your like space where you are not thinking about everything that could go wrong, you are thinking about being aware of everyone around you and what moves you want to make..... You know, if there is an opportunity that opens up going through a gap and being able to pass through a gap that opens up, taking it, rather than hesitating and then thinking ooh what if I clip that person on the left or right.

Steve also describes an aspect of the flow experience when he talks about the change in the way he handles the bike physically as a result of the tension and anxiety his accident has brought him:

and that was causing all the problems which was making, it makes the bike hard to handle when you are too tense and gripping the bars too much and not letting the bike sort of flow.

He goes on to elaborate upon the distinction between his previous experience of relaxed, focussed riding and the more anxious and negative style he has adopted more recently:

whereas I find when I, you can be, if you relax into it and totally aware of everyone around you but you are in your like space where you are not thinking about everything that could go wrong, you are thinking about being aware of everyone around you and what moves you want to make.

Erin echoes these sentiments and again, like Steve, makes the distinction between her normal, more instinctive style of riding when there is a suggestion of an almost direct relationship between the physical act of riding and the environment of the road and other riders, and the more cautious and considered version she now practices:

When I have done that fine in a bunch and been confident in a bunch with riders it's just to stay off the brakes and just ride the corner and now I won't even by myself, I will be trying to feather my breaks and stuff like that.

All the above extracts create an impression of riders being aware that some subtle quality of “being in the moment”, of which they were previously perhaps only dimly aware, has changed. They recount an experience that is more calculated and less instinctive. As we have seen before, the end result is a variation in the quality of performance that can have a major negative impact on success in competition.

5b Pleasure presence and mastery

The axis around which this theme revolves concerns the obvious factor of simple enjoyment and pleasure derived from sporting participation, but also captures more subtle elements that make up the sense of satisfaction derived from such activity. These elements include the sense of achievement of sporting success and aspects of mastery of what is often a technically difficult activity. The theme also encompasses a sense of control, presence and mastery, particularly on the road in relation to other traffic. The majority of respondents unsurprisingly talked about change and loss in relation to the quality and frequency of such sentiments, as a result of the changes they had experienced following their trauma.

Interviewees spoke of their struggles as they continued with their cycling, clearly noting that things were not the same as before in important and significant respects.

Carol spoke with a sense of sadness and loss about her dilemma in continuing participation without feeling the sense of success and achievement that she was used to. Implicit in her comments is the notion that the satisfaction gained from taking part is not just about the end result; it is as much about the quality and meaning of the involvement in the experience. She did not express any great sense of optimism nor any impression of change or movement and was clear that something had shifted:

A lot of friends have said why are you putting yourself back in that situation and it is, to hit the nail on the head, it's to try and get the thrills back and that sense, that real sense of achievement and balance back, but, you know, I still get reasonably good results, but after an event I am not, I'm never ever, happy about it which makes me think why am I doing it? Even if it's a good, it's a sense of... it's just not the same.

Erin similarly described the loss of feelings of pleasure and mastery involved in the activity of a fast descent following her accident, neatly contrasting her before and after experiences and giving an insight into the sense of freedom that she previously derived, compared to something more akin to being constrained:

Definitely less abandon than I first did it because where he hit me I was going downhill and I was racing because it's nice and you know, you get a bit of pleasure in beating the cars off the traffic light and going downhill at twenty five miles plus an hour and beating the traffic. I probably wouldn't do that now

Max also expressed his awareness of the link between pleasure and mastery, noting that his reduction in confidence as a cyclist had a consequent impact on his enjoyment, to the extent of questioning, like Carol, his continuing participation in this previously enjoyed and valued activity. He also implies a degree of permanence of this situation and an acknowledgement that the behaviour is now outside his control:

I don't think I am as confident or as assertive in traffic as I would have been before and that obviously, in an odd way makes things worse. . If you spend all your time sort of grovelling in the gutter wishing you were somewhere else

(laughs) em... The thing is if I relaxed a bit more I would enjoy it more..... you know, so I kind of feel as though the pleasure has been sort of diluted, I guess.

Steve continued with the theme of change from previous functioning, again emphasising the alteration in his sense of confidence and mastery when riding following his accident. He echoes other respondents' experience of loss when he describes how his accident when racing affected him afterwards:

it was in the back of my mind thinking...it is a funny kind of thing with the handling and grip and sometimes you feel confident on a bike and you feel confident in the tyres and I just didn't feel confident on the bike..... I think also the sudden change from you are in control, you are cornering, you know what you are doing and then wham the wheels have gone from underneath you and you've hit gravel, or water or moss or something.

5c Avoidance and safety behaviours

Although such issues appear in earlier themes related to anxiety, this superordinate theme speaks of a body of experience that is about specific changes in riding behaviour that somehow diminish the pleasure of riding and racing and contribute to the overall impairment of performance. It is important to remember that departures from the norm of habitual riding is an aberration for the serious rider; these are the ingredients that make up the sense of pleasure, mastery and control gained from this sporting activity and their loss is likely to be keenly felt.

Amy exemplifies the compromise she has made following her accident by avoiding rides that are faster, thus potentially more dangerous and preferring slower and safer riding:

Yes, if it's the club run as opposed to the sports ride, yes. I never go on the sports ride

Erin similarly voices a key change in the direction of safety that has a marked effect upon her competitive edge when racing:

I tend to look much further ahead and anticipate more than I think other people do. And I will sit up before other people do and ease off or touch the brakes rather than strictly stay on the wheel.

Max also finds changes in his riding behaviour that acknowledge safety consciousness and have an impact on the level and intensity of his participation in his group training rides:

I tend to hang around at the back of a group far more than.... I mean I will only, as a group rider, I will only really come through and do my turn and so on when we are on quieter roads really, so the start of our club run is usually the first few miles out of town I will be sort of at the back and on the inside...and I will never ride on the outside under any circumstances.

Later in the interview, he relates how his anxiety and safety behaviour leads to him effectively being “left behind” by his companions when road conditions are not to his liking:

you know roundabouts are another big one. I can get badly dropped and freak out sitting at a roundabout so I tend to hang back when everyone else jumps into the traffic and is gone

He further develops this theme by elaborating upon how several other aspects of his safety behaviour negatively affect his experience of riding. The first is problems when cycling downhill, the second general riding in traffic and the last riding close behind other cyclists:

my descending is terrible now and when I descend on the back of a group, you know, we usually end up with a bit of a gap

.....Well, I guess again looking for ways out really. You know, looking for verges and stuff like that and, you know, I guess back to riding in the gutter again

.....there was quite a big falling off in confidence riding close to wheels and stuff like that.

Rachel's safety behaviour is a direct reflection of her accident, making riding in similar environments quite problematic for her:

Probably I have become more aware of, I know, potential accidents, accidents waiting to happen if you like..... I will be aware if there are puddles or water on the road and I will slow down and be more vigilant, make sure I don't brake when I am going through water, that kind of thing.

Unsurprisingly Steve expressed very similar safety behaviours as Rachel, reflecting the similarity of their accidents which involved slipping over while cornering. In his account, Steve emphasises the desired riding style of "staying close to the wheel", in other words staying as close as possible to the rider in front both for maximum protection from wind and also to prevent gaps opening that will have to be closed after the corner, resulting in wasted effort:

I was overly cautious and on cornering I would lose in places or losing the wheel of the guy in front of me because I could visibly see me going round a corner slower than the guys in front.

Evident in all of the commentary of this nature across the respondents is a sense of ongoing struggle and also of dissatisfaction regarding the spoiling of something that was to a great extent taken for granted prior to the various index events. I also formed the impression that each of the above narratives involves the respondent conceptualising themselves as somehow "set apart" from other riders due to their difficulties. This is significant because so much of the sport of cycling is about shared, collective experience- the overt and unconscious communication between riders in a group about speed, tactics, position on the road, turn taking, responses to hazards and so on. There is a sense that the collective experience of the respondents leaves them as separate, as "outsiders", not quite belonging to the collective as they did before. This potentially has major implications for identity, wellbeing and performance.

Master Theme 6: Coping, adaptation and Growth

The respondents had been grappling with the impact of their trauma for periods of between months and several years, and many had either developed strategies for managing and adapting to this impact or had been able to recover, integrate the

experience, and to some extent become aware of some positive change as a result of their experience. The analysis produced three distinct sub-themes that encompassed their concerns in these areas:

- Adaption and Coping Strategies
- Impact and Recovery
- Growth, integration of experience and positive change

6a: Adaptation and Coping strategies

This theme was evident among most of the interviewees; it spoke to ways in which they tried to overcome or integrate the limitations their critical event had inflicted upon them. These mainly tended to be enabling strategies to either overcome inhibition or to manage challenging situations, although in some cases anxiety was managed by planned avoidance. In many cases, strategies made use of either specific or generalised others, potentially an attempt to contextualise their own difficulties as personal and recognising that the differential perspective of others would act as a contrasting reference point to their own internal perspective.

Carol set herself slightly apart by declaring her own internal strategy for trying to limit the impact of intrusive memories of her trauma, giving the impression of a well-used strategy for dealing with adverse life events and also giving an impression of keeping her difficulties private:

so really you have just got to keep pushing yourself and pushing yourself and get over it and forget it

Mike, on the other hand, tended to use more external sources of motivation to help overcome his reluctance to cycle on the road at all, noting that a friend's encouragement was often sufficient to make the difference between riding and not riding:

She said "oh come on, let's put the bikes on the roof rack, we'll go down to [local town] where it's nice and flat, we'll ride around the lanes there and then go and have a cup of tea somewhere"Because she said "let's do it" I think. And that's really been the motivation

He also used the strategy of making known to others his intention to compete as a form of supportive scaffolding to maximise the likelihood of his intent being transformed into action: *I made it public and I almost then couldn't back down*

Mike also noted that he had entered, along with some other family members, a major long distance cycling event abroad to help overcome his inertia about cycling on the road. He explained that he found the establishment of a major and publicly stated goal helpful in giving him a purpose for each ride he undertook in preparation.

Steve used his evaluation of the abilities of his competitors to support himself in overcoming his anxiety when cornering, in his case by putting his trepidation into a more reality-based perspective. He explained how he would respond to his initial anxious cognition by matching his capabilities with the other riders, as though reminding himself that he is not set apart but has much in common with them:

and I would think ooh and then I would kind of have to remind myself that everybody else is getting round it, so can I.

In contrast, Rachel demonstrates the way in which she has adapted to her anxiety by changing her forms of competition. Her accident took place on an enclosed road circuit in a group race and she explains how she now exhibits her preference for different types of racing: *after the accident I took up time trialling because it's individual.* She also continued to race on the track, significant for her by the absence of corners to negotiate. Instead, the focus of her anxiety is upon the competence of other riders and she explained her choice of races restricted to riders with an attested level of riding competence: *so they're accredited riders only so riders have been through like a test*

However, she also employed the device of using others for support in enabling her to get to the start line in her proposed event, in her case by encouraging her participation but giving herself permission to opt-out if anxiety got the better of her:

and I would just have people saying to me, well just go out and give it a go. Just roll out and if you don't like it sit up and roll your way round. Em, and if you don't want to do it you don't have to do it

6b: Impact: recovery process and time scale

Here we are concerned with how respondents expressed a sense of their understanding of the extent and time scale of the impact of their index event upon them as cyclists, both in terms of their take on how deeply they had been affected and their evaluation of the duration of the impact in relation to their *a priori* expectation. The theme also encompassed material that spoke about the time scale for recovery and the respondents' commentaries on the recovery process. I noticed here perhaps more variation among the respondents, with a continuum existing between optimism and pessimism. I wondered whether these differences were a reflection of pre-existing personal coping resources.

For example, Carol reflected her surprise at the longevity of the continued impact of her accident upon her, and I formed the impression of her initial expectation of a shorter time frame and an awareness of only a slight recovery:

I thought by now I wouldn't be feeling the same, but I am really. Probably not as bad, but..

I noticed that in other parts of her narrative, Carol had largely managed her difficulties by avoidance strategies and I formed the impression of someone who was not particularly psychologically minded. As a result, she seemed less inclined than some of the other respondents to employ mental strategies to overcome her difficulties.

In contrast, Mike gave the impression of being more satisfied with the extent of his recovery, again emphasising the way in which he supported this recovery by giving himself some "scaffolding" strategies and structured goals to work towards. I interviewed him in March in the year following his accident and he had already indicated progress:

I did do three time trials in late August, early September, but I almost class that as riding with other people, even though I was on my own.

He also used the goal of the upcoming events mentioned previously to create a sense of urgency and a specific time scale to plan his recovery:

I have now got this massive motivation that I have got to get fit

As mentioned in an earlier theme, one of the great losses experienced by respondents was their sense of enjoyment gained from their sporting participation. Mike spoke of regaining some of this lost quality through his recovery process:

That's a target anyway, so I've got that to look forward to, yeah.

He also clearly felt the benefit of overcoming his anxiety and actually getting out on the road, and I sensed that the intrinsic reward of this was a powerful motivator to further progress:

But the exhilaration of actually going out on my bike, being out there, was just fantastic

Max also spoke about recovery, but with a note of ambivalence as to its solidity and permanence. In his narrative, he stressed its precarious nature, in that his perception was that despite being able to enjoy his riding when environmental conditions were in his favour there was a strong impression that he felt quite vulnerable to regression if a reminder of his index trauma interceded:

you know we have some really good Sunday rides and stuff like that and, you know, when it is all going well and it is relaxing and you are having a fun time, then the bad stuff recedes into the background, but I guess all it would take is somebody, you know, somebody coming too close or something like that and that would trigger things again.

He noted more optimistically that continued exposure to a feared situation also reduced his anxiety and spoke about favourable environmental conditions assisting his recovery. Again here, there is an impression of an awareness of basic psychological processes of anxiety management:

because we come back on the same roads really towards the end of the ride and I think once I have relaxed and been out for two or three hours that I'm probably a bit more confident and comfortable at the end of a group ride than I am at the beginning.....I think at this time of year visibility is better as well which probably helps.

Rachel was one of a small minority of respondents who had experienced a significant injury as a result of her accident and her perspective on recovery reflected her

concern. She revealed her fears present at the beginning of her recovery when her prognosis was unclear:

I was told initially the chances are I may not get enough movement and control back to really be able to go on a bike again

Thankfully she found this to be an over-pessimistic estimation and she found she was physically able to ride. Her focus thus moved on to her psychological recovery and she spoke of the medical advice she received to take a forward step in managing the psychological trauma of the accident. She also refers to the time scale involved in this aspect of her recovery, giving this element some emphasis in her account:

I was told by my surgeon that I should go back to where the accident wasyou are probably talking about a year after the incident which was the next time I went back there

Having taken the step of revisiting the scene of the accident for the first time, she reflects her pleasure in a milestone reached in her recovery:

and actually just rolled my bike round the course for a couple of laps and I was able to do that

This proved to be a major step forward in her recovery and she began to look forward. Similarly to many other respondents, she utilised the strategy of goal setting in order to motivate her recovery back to physical and psychological fitness and emphasise her desire for a return to her premorbid level of functioning. Rachel seemed to lie around the middle of the recovery continuum mentioned above, in that she appeared to need a “kick start” from an external source to put into place some psychological recovery strategies, but having done so became more self-sufficient:

so one goal I gave myself after the operation was I would get back and ride the National Track Championship.....I can start to get back to how I was

Steve’s analysis of his recovery process began with a vague reference to time scale, suggesting that he began to feel that his anxiety had already persisted for longer than he might have anticipated, but in fact, compared to most of the other respondents his time scale for recovery was relatively short:

after a while I sort of had a bit of a word with myself as such, and just thought, I have just got to relax

However, he reveals his surprise that his anxiety had persisted for even this relatively short time scale:

over a month or two months it slowly came back, but it was funny how long it took to come back after something like that.

He describes his main strategy for recovery from his anxiety and hesitation when cornering in races, demonstrating the application of a basic awareness of principles of graded exposure:

I would go and would push it just that little bit more until I felt that, yeah, I was back riding a bike how I should.....I think I am pretty much back there now, yeah

6c: Growth, integration of experience and positive change

It is not surprising that most respondents did not demonstrate this superordinate theme in their accounts, but its occurrence among a minority is still worthy of mention. It must be remembered that for the majority, their anxiety was a difficulty with which they continued to struggle and which generally had a negative impact on their sporting endeavours. It also reflects the fact that it was very rare for respondents to talk about any impact of their difficulties on anything but their cycling. The exception was Carol, who spoke without prompting about the wider impact upon her of the fatality she witnessed. She acknowledges some positive personal change and adjustments in her value system as a result of the experience:

It has changed me, I think, for a positive way....I don't know, it makes me value everything so much more really.

She goes on to be more specific about this impact, noting a change in her ability to respond positively in similar situations to that of the index event, something unusual in terms of trauma response as situations that resemble the index event tend to produce anxiety:

I think it has made me a stronger person. I think, erm, well for instance we had an accident in Majorca when one of the guys came off and I just felt more... I just felt confident to help.

However, she tempers her account by acknowledging feelings of guilt for experiencing positive change in her wider functioning, despite finding significant negative effects on her performance as a cyclist:

I feel guilty about saying it really because, you know, you kind of think you should be completely traumatised and a wreck

The only other respondent who displayed this theme in their narrative was Steve, who revealed how he had made sense of his index incident in a way that enabled him to allow himself to recover:

It was a very technical mistake and it was also sort of error of judgement. You know, I put myself at risk when I didn't really need to.

My impression here was that by reducing his index incident to a very specific technical matter, it became an isolated event, changing its meaning and reducing its potential impact on his future performance by his attributional style. This is a further example of respondents using some quite sophisticated psychological strategies of self-management to improve performance.

Chapter 5: Discussion

5.1 Overview

My aim in undertaking this research was to uncover the lived experience of competitive cyclists who had noted some impairment of their performance in cycling attributed to a negative critical event while participating in their sport. I interviewed seven respondents who were able to clearly articulate this impact, providing a wealth of rich data in their accounts which was subjected to systematic analysis using IPA. The subsequent analysis uncovered 6 master themes encapsulating this lived experience.

The first of them, Focus upon the Self, revealed something about the nature of the internal conversations or dialogues taking place within the individual's conscious awareness when encountering difficulties in cycling activities they had not experienced prior to their incident. Constituent superordinate themes revealed experiences of critical and explanatory commentary, sense making, internal dialogue and conflict and reflection on previous states of being.

The second, Focus on Anxiety, captured the respondents' experience of common symptoms associated with anxiety such as physical sensations, behavioural avoidance of triggers and intrusive recollections of the incident.

The third, Physical Symptoms, noted concerns among a proportion of the respondents regarding the progress and impact of physical injuries sustained in their index incident.

The fourth, Perceptual and Decision-making Processes, gave rich detail about the moment to moment cognitive processing of respondents when they encountered challenging situations that had become problematic for them as a consequence of their incident. Although such processing was not "live" the respondents' accounts provided a close approximation to their phenomenological experience in specific settings. They were able to describe and articulate aspects of their decision making processes in evaluating the degree of danger inherent in specific situations, often accompanied by experiences of heightened sensory awareness and increased vulnerability.

The penultimate master theme, Impairment of Cycling Performance, captures the respondents' experience of the specific impact of their incident upon their moment by moment engagement with their cycling activity, noting negative disruptions to previously experienced and enjoyed states of flow, presence and mastery and the awareness of engagement in safety and avoidance behaviours.

The final theme, Coping, Adaptation and Growth, was not found universally across participants but for those for whom it did occur, the theme addresses aspects of adjustment to their new situation, including the development of coping strategies, integration of the negative experience as well as noting the possibility of positive growth arising out of the negative event.

5.2: Implications for background theory and research

I will examine first the relationship between the findings and previous research into the nature and impact of critical events. Later, the implications of the findings for existing knowledge regarding attempts to explain the relationship between critical events and their psychological consequences will be discussed.

5.2.1 The nature and impact of critical events

The findings add to the existing body of knowledge regarding the psychological impact of critical or negative incidents. Previous research has noted that traumatic events can have “serious psychological consequences” (Tehrani, 2017) or have adverse effects that have an emotional impact sufficient to overwhelm existing coping skills (Caine, 2003). The findings detail this impact in far greater breadth and depth, and add to the richness of the lived experience of the respondents. Additionally, most previous research into the nature and impact of critical events focuses on events at the more serious end of the spectrum (Burns & Rosenberg, 2001). Thus the present study adds to existing knowledge by including an analysis of the psychological impact of negative, but relatively common, everyday events. Although the incidents related by the respondents all took place in a specific sporting context, the findings reveal the breadth and complexity of the impact of a range of critical events from minor falls producing grazes and bruising, through to more serious collisions with motor vehicles to an encounter with a fatally injured competitor. The findings give a much deeper, broader and more nuanced view of the impact of negative critical events in contrast to more basic notions of “psychological distress” or of a “disorder” accorded a diagnostic category on the basis of an accurate elucidation of observable psychiatric “symptoms”, such as that outlined in the assessment interview approach advocated by Scott (2016). Some of the understandings of the nature and impact of critical incidents within the literature (Caine, 2003; Burns & Rosenberg, 2001; Flannery, 1999) accord with elements of what is revealed by the present study, as the findings show that the respondents’ usual coping resources and sense of control and wellbeing are challenged or overwhelmed by the effects of the incident, even if it is regarded as relatively minor. These features appear most vividly in the master themes Focus on Self and Impairment of Cycling Performance, where the respondents report a sense of contrast with their previous coping abilities and note a clear disruption in their sense of engagement with cycling. The findings also echo research that acknowledges the significance of critical events involving minor injury leading to relatively serious psychological consequences (Shepherd et al., 1990). There is also support in the findings for Serlin & Cannon’s (2004) humanistic view of a traumatic event shaking the foundations of the self, evidenced again in the Focus on Self master theme, where the constituent superordinate themes include elements of conflict, criticism, reflection and

questioning dialogue within the self, often with a palpable sense of bewilderment among the respondents as to how this turn of events has occurred.

What comes across strongly in the analysis of respondents' accounts is that the impact of these various events are *matters of concern* to them as competitive cyclists, with effort being expended in the search for meaning, adjustment and resolution of the perceived impact upon sporting participation. This accords with Burns & Rosenberg's (2001) findings that emphasise the relationship between the meaning given to the event by those involved and the potential for the development of psychological sequelae. Although Burns and Rosenberg's work was in an emergency medical context, the findings of this study concur that the meaning attributed by the respondents to their critical event is of major significance. The themes revealed in the analysis show that the critical events have created a disjoint in their previously integrated experience of participating in competitive cycling and are important enough for each respondent to agree to participate in an interview exploring the nature of the impact upon them.

Research into the psychological benefits of sports participation is beyond the scope of the present study, but there is a vast array of evidence that attests to the importance of engagement with sporting activity as a variable in psycho-social wellbeing (Lyons & Dionigi, 2007). The events reported by the respondents have clearly disrupted this very positive relationship and led to a deterioration in enjoyment and reduced or limited participation, with potential negative psychological consequences. The psychological impact of reduced or prohibited participation by high level competitor is again well documented, with research by Rotella and Heyman (1986) and Leddy, Lambert & Ogles (1994) indicating that physically injured athletes typically experience a period of emotional distress that in some cases may be severe enough to warrant therapeutic intervention.

This impact is noted by the respondents irrespective of any diagnostic label or category that might be given to the collectivity of each individual's set of responses. These findings suggest that existing psychological understandings of critical incidents need to be broadened to include relatively minor and often very *personal* critical events that have significant negative impacts on personal functioning in quite specific contexts. These may be overlooked by traditional psychological and psychiatric approaches that seek to pathologise and categorise cognitive, behavioural and

emotional changes as “disorders” to be treated. The findings also indicate that the psychological impact of critical events is experienced along a far greater variety of dimensions that appear in the major diagnostic categories DSM-5 and ICD-10. The structure of master and superordinate themes revealed by the analysis shows the complexity and nuance of the impact of the event that has implications for psychotherapeutic interventions designed to ameliorate such difficulties. An assessment of the implications of the findings for the various psychological approaches that attempt to explain the connections between critical events and their sequelae follows next.

5.2.2 Explanations of psychological consequences of critical events

The available literature includes research evidence from various theoretical stances that offers both explanations for the existence of psychological phenomena following critical events, together with protocols that guide therapeutic interventions. In the UK at least, interventions involving some variant of CBT are the treatments of choice for what is understood as post-traumatic anxiety (NICE, 2005). Although writers such as Foa (1989) reject simple behavioural or S-R explanations of the more complex post incident reactions such as those present in diagnostic categories like PTSD, an examination of the present findings shows that the behavioural responses of the athletes are highly context specific. There are numerous examples in the respondents' accounts that confirm that a cyclist will ride out happily on a sunny day but be a highly anxious and avoidant rider on the same roads on a wet day, suggesting that therapeutic interventions based on behaviourist principles should not be discounted if found to be appropriate. The specificity of reactions found among the respondents, therefore, does offer support for Watson & Rayner's (1920) research that posits fear and avoidance as learned behaviours, but clearly the present findings also suggest that the impact of the index event is far more complex and involves more numerous psychological mechanisms than is evident in Watson & Rayner's approach.

Moving up a level in terms of complexity, cognitive behavioural understandings of the link between critical events and their sequelae emphasise a change in the processing of information relating to perceptions of danger (Beck & Clark, 1988), something which is evident within the themes revealed in this study's IPA analysis. The nature of the manifestations of physical and cognitive anxiety experienced by many of the

respondents within the master theme Focus on Anxiety, such as feelings of nausea and intrusivity, will be familiar themes to CBT practitioners. Similarly, there is evidence within the master theme Perceptual and decision-making processes of the type of perceptual bias suggested by Beck, involving an overestimation of the degree of threat posed in specific cycling related contexts. There were clear indications in the cyclists' accounts that these changes in information processing related to the assessment of danger were discrete changes attributed to the index critical event, indicating that the event led to this significant change in perception of risk, as opposed to it simply being a learned response.

The findings also lend support to Foa & Kozak's (1986) research on variations in fear structures among post incident anxiety disorders of differing severity, in that the narrower cognitive structures evidenced by my respondents in very specific situations can be distinguished from much wider fear structures present in more complex post trauma disorders. In the latter context, the fear structures are broader and thus violate the sufferer's more basic sense of safety and wellbeing across a much wider spectrum of previously non- threatening situations.

However, what also emerges in the findings is that faulty information processing, although evident and significant, is not the whole story when the overarching experience of the respondents is considered. There appear to be several significant dimensions of experience not explained by an information processing perspective. Primary among these are the constituent themes comprising The Focus on Self master theme, where there is evidence of a significant amount of effortful meaning-making activity involving commentary, criticism and dialogue within the self with respect to the respondents' experiencing of the impact of the incident. These aspects of conscious experience are not considered relevant as part of CBT approaches to anxiety (Borkovec & Ruscio, 2001; Scott & Stradling, 1989) following critical events, where the emphasis is upon accurate diagnosis and manualised therapeutic techniques, but are demonstrably a key element of the experience of the respondents. Similarly, the master theme encompassing the various ways in which the respondents experience impairment of key areas of cycling performance again demonstrates matters of concern and importance not generally considered to be of relevance in CBT approaches that focus on a reduction in more general "anxiety symptoms". This is understandable, as no theoretical approach would claim to address very context-

specific effects, but the findings indicate that the impact of critical events can be multi-dimensional and complex, involving a range of effects across cognitive, affective and self-reflexive aspects of human functioning.

It is also important to consider to what extent the very narrow focus in a specific sporting context relates to the wider applicability of psychological theories of critical events. The question arises as to whether any general theory can usefully explain such a specific phenomenon as the impact on cycling performance following a critical event. These matters have major significance for individuals who commit to regular sporting activity (Scanlan et al., 1993) in that they will generally be highly motivated to overcome obstacles to their participation, such as illness or injury. Individuals who acknowledge a commitment to sporting activity enjoy their participation and experience high rewards and relatively low costs in the course of their engagement (Raedeke, 1997) and the meaning of the critical event for such individuals needs to be contextualised in light of their level of commitment. It is of note here that each of the respondents' level of engagement in cycling is reflected in the actuality of their engagement with the research process. Craig et al. (2016) study reported above has already established a higher level of psychological resilience among injured cyclists compared to other road users, something enshrined in the shape of (only partly) tongue in cheek "The Rules" (Velomenati, 2009), an ad hoc collection of requirements for cyclists in terms of attitude, behaviour, kit and general orientation to the sport. They include exhortations to mental and physical toughness, including overcoming pain, adverse weather and family obstacles to cycling participation. Although many commentators have questioned their legitimacy (Flax, 2017) there is undoubtedly a notion of toughness as part of cycling culture (Rees, 2014).

There are also resonances between the present study's findings and explanations of critical events in terms of psychophysiological changes. Such theories posit that the "faults" that develop in information processing after critical events are underpinned by physiological changes in the brain and nervous system (Rothschild, 2000). There is evidence in the findings that the respondents are experiencing emergency responses (van der Kolk, 1994) in settings that resemble the index event. This is particularly evident within the master themes Focus on Anxiety and Perceptual and Decision Making where physical anxiety symptoms, re-experiencing, avoidance and changes in assessing risk appear in very discrete incident-related contexts rather than in the

generality of the riders' cycling experience. The findings also support the work of Levine (2010) to the extent that many reported physical responses to triggers in the form of "freezing" or physical tension. However, psychophysiological changes are vulnerable to charges of reductionism in ignoring some of the wider and more nuanced aspects of the impact of critical events as evidenced in the findings; as noted above in relation to cognitive behavioural explanations, body-oriented theories fail to capture the changes in self-concept that appear in the first master theme and also take no account of the wider socio-psychological context in which the respondents' critical events occurred; nor do they take account of the subtle impact of the event upon cycling performance, as evidenced in the same master theme.

Humanistic approaches to critical events (Serlin & Cannon, 2004) are focused upon the meaning of the event for the individual in terms of the impact upon self-concept, seeing the notion of threat in more than just physiological or cognitive terms and encompassing a more holistic approach that accords with the findings of this study in relation to the breadth of the impact upon cycling experience and performance. Humanistic approaches also raise the possibility of including developmental aspects in understandings of the impact of critical events. Wolfe (2004) has noted that the subjective experience of anxiety is underpinned by intrapsychic conflicts and negative self-beliefs involving shame or lack of personal value, which can arise from formative social and psychological experiences but are relevant to current functioning.

The present study adds to the already valuable body of research evidence into the psychological impact of road traffic accidents. As Taylor & Koch (1995) have noted, research into critical events leading to less severe but significant psychological consequences had been overlooked. Although the current findings present a challenge to the emphasis on psychiatric diagnostic categories underpinning most research into the impact of RTAs, the present study extends knowledge and understanding in an area of applied psychology that is concerned with the significant emotional distress that everyday events can cause. The only available research specifically into the psychological impact of road traffic accidents on cyclists (Craig et al., 2016) limits participants to those presenting at hospital with more serious physical injuries and includes only quantitative measurement of later psychological distress. The present study adds a valuable qualitative dimension to this area of research as well as including a more representative range of injury and accident scenarios as

opposed to those just involving hospital admission. The findings echo Jeavons' (1991) view that qualitative approaches could be useful in identifying more about the nature and extent of emotional distress following such incidents than can be gleaned from the use of traditional quantitative psychometric instruments.

Although the respondents in the study have reported on matters of great concern for them, their difficulties would not be generally considered to be serious mental health matters. Although not specifically asked (I considered it outside the scope of the investigation), none reported any impact upon their functioning other than in relation to cycling activity. Most of the literature relating to the impact of critical or traumatic events assumes a degree of severity of impact, whether that involves a diagnostic categorisation of psychological disorder or some other significant impairment of everyday functioning. With perhaps the exception of studies into the impact of motor vehicle accidents, which note the existence of relatively mild symptoms such as "travel anxiety" (Mayou et al., 1993), the present study breaks new ground by bringing very specific impacts of events within the realm of psychological investigation and therapeutic endeavour. This makes the work even more important as it begins to challenge pre-existing assumptions about what psychology and psychotherapy are for.

5.3: Implications for Practitioners

The findings have revealed the breadth, depth, complexity and nuance of the experience of cyclists involved in performance-limiting critical incidents and provide a contrast to narrower medical model conceptualisations involving diagnostic categories of anxiety "symptoms" following trauma. The findings suggest implications for counselling psychology and psychotherapy when engaging with competitive cyclists and similar client groups. The involvement of psychologists generally in sport is increasing (Weir, 2018) and the present study adds a further dimension to traditional sports psychology interventions for performance improvement, mental skills training and anxiety management by foregrounding and deconstructing the impact on performance and wellbeing of a critical event.

The findings reveal that the reported difficulties of the respondents, although mild in their overall severity, are matters of concern to them and are having a negative impact on their enjoyment of, and participation in, an arena of great importance to their

identity. It is also apparent that, despite the efforts of the respondents to adapt to and respond to their difficulties, the effects of these critical events are long standing and have become accepted as part of the respondents' experience, evidenced by their meeting the inclusion criteria and the act of their participation in the research. Given that the respondents have not generally been able to overcome these difficulties using their own coping resources, the problems become worthy of psychotherapeutic intervention. Counselling psychology is well positioned to respond to client issues of this nature, in that working from a non-medical ideological position, the discipline presents no obstacles such as diagnostic categories or psychometric criteria standing between the client's acknowledged difficulties and the potential therapeutic environment. This more welcome and less stigmatising environment, with an emphasis upon strengths and wellbeing (Joseph, 2017) will arguably make meaningful engagement with therapeutic interventions more likely, particularly in sporting settings in which it can be difficult to acknowledge personal weakness.

Counselling psychology is characterised by a wide, philosophically informed knowledge base that sees the person in a holistic rather than a medicalised, systemic way (Du Plock, 2017). As practitioners, counselling psychologists are well placed to work with some of the wider issues that emerge from the findings, such as concepts of sporting identity, changes in self-concept and the socio-cultural aspects of sporting engagement. There is evidence (Roberts et al., 2016) that athletes are resistant to seeking psychological support for fear that the therapist will not understand the nature of the client's engagement with sport and will resent any lack of insight on the therapist's part into the socio-cultural aspects of a particular sport. There is also evidence that athletes prefer undertaking therapy with a practitioner with contextual knowledge of their sport (Gavrilova & Donahue, 2018). This is not to imply that counselling psychologists need to arm themselves with knowledge of specific sporting settings (although in my own practice I have found this to be beneficial) but that they need to adopt a manner of curiosity and open enquiry as to the importance of these matters when engaging with clients in sports settings. In contrast to psychotherapeutic approaches that look to processes occurring within the person for the origin of difficulties, counselling psychology acknowledges that social psychological processes contribute to distress and dysfunction. The findings show that this wider perspective,

distinctive of counselling psychology, is likely to be helpful in addressing issues arising in sporting contexts.

In terms of specific therapeutic approaches, I have argued above that the findings suggest that the discrete and formulaic interventions of CBT and EMDR are, although partially useful, both limited in their applicability to this specialised area. The findings suggest that the preferred therapeutic approach to these difficulties should involve a “broad spectrum” of understandings that encapsulate key elements across the master themes identified in the research and should also involve some element of integration of understandings designed to respond to the differing elements within the master themes. Again, counselling psychology as a distinct discipline within the broad realm of psychotherapy offers this breadth of understanding, taking a critical and reflexive stance towards diverse therapeutic approaches occupying differing ontological and epistemological positions (BPS, 2019).

In the broader psychotherapeutic field Hall & Marzillier (2009), although writing from a clinical psychology standpoint, offer a similar integrative framework in response to what they view as the shortcomings of technique-driven therapies within the IAPT programme. Their advocacy of a broader psychological knowledge base underpinning interventions accords with the findings of the present study, arguing that as applied psychologists, irrespective of initial training, we should be able to draw upon a broad psychological knowledge, a range of competencies and flexibility in their practice.

Central to Hall & Marzillier’s approach is the importance of the therapeutic alliance, arguing that successful therapy is based on developing an interpersonal relationship between therapist and client, irrespective of the modality of therapy employed. This resonates with the centrality of the therapeutic relationship within the practice of counselling psychology and emphasises that distinctions between sub disciplines within psychology are not discrete.

In the context of the findings, the master theme Focus on Self is the domain in which an effective therapeutic relationship is likely to have the greatest impact. The theme evidences changes within the self across the respondents as a result of the impact of a critical incident, involving elements of self-criticism, conflict and fragmentation. In this respect, Rogers’ (1957) core condition of communicating an empathic

understanding of the client's internal frame of reference would seem to be crucial in enabling the client to begin a process of self-acceptance and integration.

Another therapeutic approach that would seem apposite with respect to the issues ingrained in the same master theme is the use of two-chair work. Deriving from Gestalt therapy (Perls, Hefferline & Goodman, 1951), the two-chair technique (Greenberg & Rice, 1997) is an effective intervention when the client expresses a split within the self, noted many times by the respondents as a constituent of the Focus on Self master theme. Greenberg hypothesised several types of split, notably a conflict split where there are two selves or "I's" that oppose each other, normally with an element of criticism or shame; a feature frequently evident in the narratives of the respondents. Two chair work brings the elements of the self into contact with each other and for change to result as the client increases self-acceptance and develops new cognitive structures (Wagner-Moore, 2004).

However, in this context, the findings also suggest that a psychoeducative element would be appropriate in addition to an empathic understanding and acceptance of the client's experience. The questioning nature of the respondents' self-references, seemingly asking, "why am I behaving or experiencing in this way?" merits a therapeutic response. The findings suggest that therapeutic interventions formulating an explanation for crucial elements of the client's experiencing based upon simple understandings of how the human organism responds to stress (Selye, 1973) can help acceptance and reintegration within the self. The findings show that within the relevant master theme the four constituent superordinate themes indicate considerable psychic activity involving critical commentary, sense making, conflictual dialogue and reflection on previous states of being. This suggests that addressing these aspects of experience directly using some psychoeducative material (Houghton and Saxon, 2007) would be helpful in promoting integration and self -acceptance among the client population.

Again, there is an emphasis on drawing from the breadth of psychological knowledge and understanding, as Hall & Marzillier suggest. They employ the notion of *formulation* to include the assessment of the client's presenting difficulties, their resources, factors maintaining or contributing towards their difficulties as well as the social context in which the client is situated. If psychological intervention is then deemed appropriate,

this should not be done by assigning a client to a treatment modality on the basis of the presence or severity of particular symptoms but should be based upon the availability of a range of treatment modalities best suited to the individual client.

The notion of placing the client, not the therapy, at the centre of the therapeutic frame is echoed in both the findings and the underpinning methodological and philosophical position of this work. Hall & Marzillier introduce the notion of values-based, rather than evidence-based, psychotherapy and offer evidence that patients will engage better with therapy that is consistent with their own values and beliefs. Values based approaches to mental health, while again specifically addressing issues within public sector provision, have their roots in philosophy rather than psychology (Fulford, 1989) and place the individual client's experience at the centre of the frame. Additionally, proponents, including Fulford (2008) advocate the use of a phenomenological method as part of the therapy process in order to explore that experience.

Acknowledging the tension between interventions aimed at improving performance as opposed to wellbeing, the findings suggest that discrete therapeutic interventions from a variety of perspectives could be effective for improvement in the performance of those affected following critical incidents. In addition to CBT interventions outlined above, evidence from Gracheck's (2011) study suggests that the use of EMDR within an integrated approach to psychotherapy (Royle & Kerr, 2010) is indicated to help with some of the discrete situational issues experienced by the respondents. Gracheck found that her single subject experienced a reduction in physical tension and catastrophic thinking related to descending on the bike, which echoes the experience of many of the respondents who found difficulties in specific areas of their performance, such as cornering and riding near traffic. Gracheck's work demonstrates the importance for therapists of paying dual attention to aspects of performance and overall wellbeing when working with this client population.

In a similar vein, a frequent performance impairment noted by the respondents during training and competition was that of concentration, focus and disruption of the desired "flow experience" (Csikszentmihalyi & Csikszentmihalyi, 1992). Scott-Hamilton, Schutte & Brown (2016) found that among competitive cyclists the incorporation of mindfulness techniques led to improvements in flow and reductions in "sports-related pessimism and anxiety" (p.85). Other research evidence indicates that the application

of mindfulness-based approaches (involving non-judgemental attentional training techniques that advocate acceptance, rather than change, of unhelpful cognitive experiences) among athletes leads to improvements in this area (Gardner & Moore, 2004; Evans et al., 2008; Aherne, Moran & Lonsdale, 2011). Such interventions are generally aimed at those athletes with “nonclinical” levels of anxiety and would potentially be useful interventions from a more generalist sports psychology perspective as well as in clinical settings. Although there is also wide-ranging evidence for the efficacy of mindfulness-based approaches in treating anxiety generally (Orsillo & Roemer, 2007) at present there is no available evidence as to the usefulness of mindfulness training for this specific problem area of post-accident difficulties, which may be a fruitful area of future research.

Among the variety of therapeutic approaches, there has been a relative absence of discussion of psychodynamic approaches within this work. Schottenbaur (2008) acknowledges that psychodynamic psychotherapy for trauma sequelae is “widely used but understudied” (p.13) and is more likely to be effective in situations where there are developmental, interpersonal and intrapersonal factors related to trauma sequelae. Psychodynamic approaches have traditionally been viewed as more appropriate in addressing presentations involving “complex PTSD” (Herman, 1997) where symptoms are not addressed by traditional evidence-based treatments. However, there is a place for both psychodynamic and neurodevelopmental understandings in relation to the present work; Schore (2002) has recognised the potential impact of early developmental trauma on the individual’s capacity to manage stressful encounters in later life, meaning that some exploration of early experience is appropriate when formulating therapeutic approaches with this client population. The implications for counselling psychology are understood by Rizq (2007) and Stern (1983), who both advocate that working at relational depth in therapy carries the potential for healing early neurodevelopmental trauma. Such competence is again within the remit of counselling psychology training and competence and practitioners will be prepared to formulate suitable interventions where appropriate.

5.3.2: Issues of training/integration/eclecticism

I have argued that the strength of counselling psychology in relation to the presenting issues of the respondents lies in the focus upon the relationship and upon expertise in

working in different treatment modalities. The notion of integration in psychotherapy involves looking beyond the boundaries of specific “schools” of therapeutic orientation to incorporate elements from different treatment approaches to best serve the needs of the client and their particular situation (Lambert & Norcross, 2017). Integrative approaches embody Paul’s (1967) question, “what treatment, by whom, is most effective for this individual, with that specific problem and under which set of circumstances?” (p.111). Although Paul was speaking about the goal of outcome research, his dictum has become a mantra to guide therapists seeking to provide treatment best suited to a situated individual client, irrespective of their own favoured theoretical orientation. The findings of the present study indicate an integrative approach to the area of post-accident difficulties for competitive cyclists, involving elements from the diverse therapeutic approaches outlined above. Lambert & Norcross outline several varieties of integration, but the model best suited to this specific area would appear to be a model of “technical eclecticism” (p.152) where a therapist employs procedures or techniques drawn from different therapies without either having to subscribe to the theories from which they originate or having to attempt some type of theoretical integration between the various elements. For example, two chair work could be undertaken in a wider therapeutic context without necessarily subscribing to the guiding principles of gestalt psychology.

In order to practice effectively in an integrative manner, there are implications for training in counselling psychology that involve a critical relationship to theory and a rejection of a single way of understanding the polarities of psychological distress and wellbeing (Gillon, Timulak & Creaner, 2017). The findings here resonate with a pluralistic and integrative approach to psychotherapy (Cooper & McLeod, 2011), whereby practitioners are skilled in the application of a range of therapeutic methods to be employed flexibly, in discussion and negotiation with the client. It is essential that integration is managed thoughtfully and ethically, from a sound knowledge base, without appearing confusing to the client and in the context of a secure therapeutic relationship. Integrative training involves gaining clinical competence in several theories and interventions and presents a challenge for training institutions (Norcross & Halgin, 2005).

However, Joseph (2017) has raised concerns about the use of eclectic and pluralist approaches within counselling psychology, citing the danger of an implicit adherence to medical ideology with the clinician taking an “expert” role in deciding which particular form of therapy might suit a particular client. The various therapeutic schools occupy very different ontological positions and Joseph cautions against this form of eclecticism, instead suggesting that techniques from different approaches may appropriately be used from moment to moment in a therapeutic encounter framed in a truly integrative way (p.29). The present findings align with this concern in that the key concern of the therapist is seen as “being with” the client in their phenomenal world, while being innovative and flexible in moment-to-moment interventions.

Although a range of psychological treatments may be available for the respondents’ reported difficulties, access to such treatments is a different matter. Research within a CBT framework suggests that in general only a small proportion of individuals receive appropriate treatment for psychological difficulties (Ehlers, Gene-Cos & Perrin, 2009) and strategies for improvement in the dissemination of evidence-based treatments are suggested (Shafran et al., 2009). In this specific area, attention can be directed at non-traditional methods of delivery, including self-help and internet-based treatments (Vernmark et al., 2010). This is particularly important in sporting contexts, as often a culture of physical and mental toughness pervades and prevents help-seeking (Breslin et al., 2018). I have found in my own work in elite cycling that athlete engagement can be facilitated by active dissemination of written discourses on mental health and the visible presence of the therapist in the sporting arena. Counselling psychology has an important role to play in sports settings and the present work points the way towards collaboration and integration between disciplines to resolve issues of tension between interventions designed to increase wellbeing and performance.

5.3.3: Conceptions of recovery

As well as highlighting issues around therapeutic approach, the findings also present challenges for accepted notions of recovery in psychotherapy. Following the pioneering work of Jacobson and Truax (1991), indices of clinical (as opposed to statistical) significance have generally been used in outcome research to indicate recovery in therapy (Lambert & Ogles, 2009). This J-T index is based upon a comparison of pre- and post- therapy psychometric measurements and includes the

notion of a clinical cut-off point at which functioning becomes positive rather than negative. However, I have already argued above that the sporting context of the present study requires a radically different conceptualisation of recovery to enable those affected to be able to at least regain their previous level of competitive functioning and engagement. Therapists in sports settings need to hold the tension between outcomes in terms of both wellbeing and performance (Hilton, op. cit.). In a recent paper De Smet et al. (2019) argue that statistical concepts do not account for the nuances in outcome experienced by clients and instead propose a multidimensional model of therapeutic change including qualitative enquiry (McLeod, 2013) grounded in clients' experiences of change. This approach sits well with both the phenomenological methodology of the present study as well as the key requirement that improvement should "represent changes that are actually meaningful for patients in therapy" (p2). It is evident that for the respondents in the present study, outcome is a highly individual matter, related to the nature of the critical event, the totality of the cycling-related impact and the specific demands of competition for that individual cyclist. Therefore, it is important for therapists working in this specific field to be aware of the notion of "clinical meaningfulness" (De Smet et al., 2019 p.3) when considering the issue of recovery. This approach is evident in Gracheck's (2010) single case study of competitive improvement with an adapted EMDR protocol, where both quantitative and qualitative measures of therapeutic change in terms of performance improvement were included that were specific to the rider's performance. The present study, in accord with its qualitative methodology and phenomenological focus, contributes to a growing force that positions clients as central within psychotherapy research, in contrast to a more traditional focus upon therapeutic orientation and therapist qualities (Bohart & Wade, 2013).

5.3.4: Social and Cultural Considerations

As counselling psychologists, a fundamental tenet of our philosophical approach requires taking full cognisance of social and cultural contexts in our formulations and interventions with clients. The medical ideologies dominant within psychiatry, and to a great extent clinical psychology, focus upon processes within the person; whereas the origins of counselling psychology within the humanistic tradition place greater emphasis on social processes and their influence upon experiences of distress and dysfunction (Joseph, 2017). The experiences recounted by the respondents in this

study take place within a relatively narrow sporting context with its own peculiar processes, norms and culture. From a sociological perspective, an ethnographic study into the social world of cycle racing and training (Rees, Gibbons & Dixon, 2014) uses the term *habitus* (Bourdieu, 1990) to describe the network of social relationships within the world of competitive cycling, noting the subtleties of power and dominance within which the “agenda” of cycle racing is created. Part of the normative structure of cycle racing involves attitudes relating to physical pain in general as well as crashes and accidents in particular. From a similar sociological perspective, Albert (1999) collected accounts of cycling accidents to explore how the perception of risk and occurrence of injury are construed as expected and accepted features of engagement in competitive road cycling and form part of the “normative order” (p.157) of the sport and are socially constructed. Many of the respondents in my own study were acutely aware of how their difficulties might be viewed within the wider cycling community, suggesting that their perceptions of the reactions of others must be considered as part of the therapeutic frame when working with such clients.

5.4: Limitations of the Study

I embarked upon this project as a naïve qualitative researcher, and I am aware of potential challenges in terms of sampling, interviewing and analysis that deserve mention. Future work in this area may wish to address these accordingly. My own relationship with the work should also be subject to scrutiny.

The research sample was a group of competitive cyclists who responded to forum posts asking about a perceived impact of a cycling accident on their performance, without any application of criteria regarding severity, time scale or type of accident. Neither did I stipulate any demographic characteristics in terms of age, gender, level of competition or type of road riding, which may be variables that mediate between incidents and riders’ experience of them. I have no way of knowing whether the sample is representative of the wider population of cyclists affected by accidents, but my hope is that by leaving inclusion criteria fairly broad, I have been able to include enough variety of experience to ensure the trustworthiness of the findings. I believe this limitation is outweighed by the richness of the experiential data revealed by the study, but there is potential for further work in examining the impact of differing types of critical incident upon different types of rider; the impact of a critical incident on someone who

racers for a living is potentially different from that of the average “weekend warrior” cyclist.

A degree of reflexivity is essential when carrying out qualitative research (Willig, 2008). I have acknowledged above my own limitations as a novice IPA researcher and interviewer, especially the danger of confluence with my “therapist persona”. I am also conscious of the danger of my own perspectives, both as a competitive cyclist and critical incident “survivor”, influencing the interpretative process and getting in the way of the respondents’ own experiencing. I believe that I have been rigorous in my application of the protocols of IPA, that the respondents have felt free to tell their own “stories” and that to some extent, their knowledge that I was also a cyclist may have made it easier for them to articulate their concerns. I have addressed the issue of trustworthiness in the Methods section above.

Limitations of IPA and implications for researchers

IPA was chosen as a method to gain access to the respondents’ experience, but there are important considerations that limit the extent to which the data can be relied upon. Participants necessarily attempt to convey their experience by means of language, so there is an assumption that they possess the linguistic tools to accurately describe that experience (Willig, 2008). Critics of IPA from a constructionist perspective would argue that language constructs rather than describes our experience; thus, the role of language is problematic rather than simply representing material for analysis. In a similar vein, Willig notes that there are questions as to whether language can truly describe the richness of lived experience to a degree that renders the account valuable. There is a need for respondents to be reasonably articulate and the method is less suitable for those who have difficulty in accessing or articulating their inner world. Using verbal accounts to capture lived experience may be problematic in that both participants and researchers may lack the requisite skills to communicate the essence and nuance of that experience and charges of elitism may be raised about the use of IPA (Tuffour, 2017). My respondents, for the most part, did not have difficulty in that respect, but as a self-selected sample who have put themselves forward to describe their experience, such a group may be atypical. A further question to be raised highlights the largely historical nature of the events being described: is lived experience being captured as opposed to memories or opinions of that experience?

In this sense, the emphasis on cognition within IPA casts doubt on its proponents' claim to be truly phenomenological (Willig, 2008).

Difficulties also surround the interpretive aspect of IPA. The role of the researcher in any qualitative enquiry is to bring to light aspects of the data that might otherwise be hidden, using a stance of suspicious interpretation to develop insights (Willig, 2013). This is especially relevant where respondents may be perplexed or puzzled by their behaviours or experiences, as was the case in many of the respondents' accounts here. However, there is an absence of clear guidance as to how a researcher might best achieve such a stance and be able to accurately uncover latent themes during an analysis. In the present study, my own experience in the world of cycling is a positive attribute in that I have some awareness of the lifeworlds of the respondents, but it may also represent a danger of introducing my own biases and perceptions not based within the respondents' experience. Although within the method, steps can be taken to maximise the trustworthiness of the data, critics from the wider field of phenomenological research question the scientific fidelity of IPA (Georgi, 2011).

Despite these limitations, I would argue that IPA can generate findings of real world utility that would otherwise be difficult to obtain. Information about the concerns of this group of respondents breaks new ground and gives us at least a close approximation to their collective experience in meeting the challenges imposed upon them in a sporting context by a critical event. The method is in line with the philosophical underpinnings of counselling psychology as an applied discipline, in that being able to enter the lifeworld of the client to a significant extent sets the discipline apart from other more medicalised therapeutic approaches. The findings provide useful material for those working in athlete populations of varying kinds, providing a template for the practitioner to shed light on the inner world of the sporting client in relation to their presenting issues.

Any research study using a single method is partial in focus. Future researchers in this field may find utility in a combination of research methods that may bring more diverse aspects of data to the surface. Such pluralistic qualitative research (Dennison, 2019) may add further to knowledge in an area that lies on the boundary between performance and wellbeing in sporting settings.

5.5: Conclusions and suggestions for further research

This study has revealed rich data constituting the lived experience of a group of competitive cyclists who have experienced a degree of impairment of their performance following a negative cycling related incident. I have attempted to draw from the data some suggestions and implications for the practice of counselling psychology and psychotherapy. In my own practice in this field, I have already implemented my learning from the work, and disseminated findings within both academic and sporting communities.

Suggestions for further work in this area would involve an examination of therapeutic practice with the client group, so that a clearer idea could be developed regarding the utility and effectiveness of my suggested formula for therapeutic interventions. It would also be useful to make comparisons across different sports, to determine whether there are commonalities between the experience of athletes from different sports that could be integrated into therapeutic knowledge for interventions in areas other than cycling. Furthermore, it would also be appropriate to determine the factors that might affect athlete engagement in therapeutic interventions for wellbeing issues that impact on performance, particularly the extent to which therapists' contextual awareness of sporting settings affects engagement.

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Appendices

Appendix A: Sample recruitment post

In my other life, I run a private psychology practice. Among the work that comes my way is that which involves helping people overcome anxiety following traumatic incidents such as accidents. Most of this over the years has been about drivers and passengers who suffer travel anxiety/PTSD after accidents, but I have seen the odd sports related incident, including a skier and horse rider as well as a number of cyclists.

As a combination of my two life interests, I am carrying out a research project in which I would like to interview some competitive cyclists who, as a result of an accident/crash/near miss (either as a participant or witness/observer), have found that their involvement, enjoyment or effectiveness in competition has been reduced following this experience. For example, you may find you avoid certain situations/times of day/traffic/weather/types of road or find that your riding is in some way affected when cornering, descending or in a group. It is important you notice a clear change (compared to before) following the event rather than never being good at e.g. descending.

The specific criteria for inclusion in the study are:

- You engage in competitive road cycling, are a member of a recognised club or body and demonstrate a significant time commitment, in the form of training and racing, to the sport.*
- You have experienced an accident or other traumatic experience while competing in, or training for, cycling events.*
- You experience notice an impact following the event that limits or reduces your effectiveness or success in competition.*

The aim of the research is to help me to formulate a treatment approach that takes into account the specific needs of competitive cyclists.

Very simply, if you believe you meet the criteria and would be interested in taking part, please PM me with an email address and I can send you a more detailed information sheet. At this stage, I am just looking for expressions of interest. The interviews are likely to take place over the winter. I am happy to travel but obviously if you are in/near the Midlands, that is a big advantage. I will be doing the interviews myself so anyone personally known to me will be unable to take part.

Appendix B: Biographical details of participants

Name	Age	Gender	Occupation	Cycling Specialism	No Years Competing
Amy	52	F	Retired	Long distance solo races	28
Carol	40	F	Personal Trainer	Road Time trialling	15
Erin	28	F	Sports Scientist	Circuit racing	9
Max	42	M	Schoolteacher	Road Time trialling	11
Mike	56	M	Publishing	Road time trialling	21
Rachel	36	F	Lecturer	Track and Circuit racing	8
Steve	44	M	Commodity Broker	Road racing	14

Appendix C: Interview schedule

My opening question to each participant when moving on to the area of how their performance had been affected by their index event would be something like:

So what did you begin to notice was different for you when riding your bike?

Or:

What do you do differently now?

The interview was then structured to lead the participant through an elaboration of their experience, using prompts such as:

What thoughts went through your mind when that happened?

What if any images did you have in your mind at that point?

What were you aware of in that situation?

What comment did you make about yourself when that occurred?

Where in your body did you notice that response?

What did you do to try to manage that situation?

In what kinds of situation did you experience that response?

Can you say a bit more about how you felt/what you thought then?

Have others commented on your behaviour? What was that like for you?

Can you tell me a bit more about what you notice within yourself?

Appendix E: Interviewee transcript extract with initial notes and emergent codes/themes

Emergent Themes (Codes)	Transcript Extract (Quotes highlighted in alternating colours)	Initial notes
Questioning motivation For competing	<p>IER: So when you are riding, well you're racing on a dual carriageway at present, how are you different compared to before?</p> <p>C: Yeah, I stepped away from it last year because I had to... I attempted to race, having a break through the winter after the accident and what the hell was I doing carrying on racing on dual carriageways. Then the racing season starts again and you think I'll get back on as I want fast times, but too many times last year, the National 50 I didn't finish, the National 100 didn't finish. I just couldn't deal with... erm, oh, just I could not concentrate on me pushing myself to the limit. I was constantly, if you see the traffic ease up I would be thinking "why is it easing up, why's it easing up? something's happened, something's happened, why is it quiet on the other side of the road, something's happened". Erm....</p>	<p>Why did I carry on-questioning self motivation</p> <p>Change of expression-how to describe herself?</p> <p>Thought process-expecting an accident(talking quickly, rushed, urgent tone, reflected in speech)</p>
Negative effect on performance	<p>IER: So, it was a bit of sense of foreboding a lot of the time?</p> <p>C: Yeah, and I said to myself I am not going to do dual carriageways this year, but I fancy doing a twelve hour event and a twelve hour event that is local involves a dual carriageway, so this Saturday I rode the E2 and I do feel better about them, but I thought I felt better about them, but yeah I was signing on on Saturday and as I was signing on I could see my hands were really shaking.</p>	<p>Saying to herself.</p>
Dialogue within self, evaluating danger		<p>Conflict between race goals and safety concerns</p>
Physical anxiety	<p>Physically you were anxious?</p>	<p>Physical anxiety</p>
Dialogue within self	<p>C: Yeah, very very and I kind of... my head is just saying to me... it was like this last time and it could be anyone, it could be you, you know. Even the night before, last year when I was racing Wednesday I would be up for it, Thursday I would start getting nervous,</p>	<p>Conversation with self</p> <p>Vulnerability to danger</p>

<p>Re-experiencing incident</p> <p>Conflict within self</p> <p>Questioning motivation</p>	<p>Friday night. There would be Friday nights, where, especially after the accident, I would be watching Jonathan Ross or something and thinking I better go to bed now and race and I would have.. I would doze off and I would wake up and have my head in my hands and I would be crying again about it. And I would think bloody hell, why am I doing this and then half of me would think no, no, no, no, you have got to... I was kind of thinking of how it used to be, the real kicks.</p>	<p>Getting nervous in anticipation</p> <p>Distress, hesitant in her speech</p> <p>Conflict within self, questioning. Repetition, emphasis</p>
<p>Re-experiencing</p>	<p>IER: Has that experience continued? Is that something you have...</p> <p>C: I wasn't so bad on Saturday, but even just before going to bed, I sort of, my brain would be, I would be seeing xxx lying there definitely. You know, definitely...</p>	<p>Re-experiencing event</p> <p>"Brain" as independent containing images of accident</p>
<p>Separate parts of self</p>	<p>IER: So the picture would be running through your mind?</p>	
<p>Conflict within self</p>	<p>C: I kind of feel like, why am I doing this, why am I doing this to myself? Sort, of when getting into bed I can see Gareth lying on the concrete, you know and I think, oh blimey, why are you doing it to yourself. Erm, whether it is some sort of self defence, I don't know and then driving there. When I am driving down the dual carriageway all of a sudden I would be seeing, what I thought was a bag and then, no, it's Gareth and I think, Claire, why are you racing? You know, this is.... but I don't want... you know... something like that could happen to anyone or anything like that could happen on a country lane.</p>	<p>Questioning self, motivation</p> <p>Different elements of self</p>
<p>Reexperiencing</p>	<p>IER: Sure, so it sounds like you are kind of trying to be rational about it, but you are still finding that these experiences occur for you when...</p>	<p>Flashbacks</p> <p>Decision making about safety of what she does</p>
<p>Decision making process</p>	<p>C: Yeah, and it's like, I'd set off... I was on the start line and I thought, god I am feeling about this than previously. Erm, I was doing well and then there is a long stretch of road and there is kind of a heel and where the heel went the traffic looked like it was slowing up</p>	<p>Randomness, vulnerability</p> <p>Noticing danger signs</p>

Negative impact on elite performance	<p>so much... it was just kind of bottle-necking....probably there was a rider just over the hill and I was thinking the traffic is slowing, why? And then a negative thought and then concentration has been taken a bit.</p>	Impact on concentration
	IER: Has gone, yeah.	
	C: Not as much as it has.	
	<p>IER: If I can just ask Carol, in that situation if you can sort of take yourself back to Saturday when you were racing and you noticed that traffic slowing down ahead. Can you say a bit about what was happening in your body? Were you aware of yourself tensing, slowing down?</p>	
Physical anxiety	<p>C: I felt a bit sick, I must admit. You can feel quite sick when you are racing anyway, but it is a different sickness. It's like, it's your stomach is just like woo. It's just, I guess, the feeling of when I may have seen, you know, what am I going to see in a minute kind of feeling, you know. Is something around that corner?</p>	Having to admit
Anticipatory anxiety, dread		Describing physical anxiety
	IER: It's a real sense of dread.	Anticipating-what will I see?
Impact on performance	<p>C: You just can't allow for anything like that if you want to do well. You have just got to be you and the bike.</p>	Unwanted intrusion affecting concentration
	<p>IER: Sure, sure. So that, that really interferes with the process of 100% concentration?</p>	
Vigilance	<p>C: It does, it does, it definitely does and constantly you know, if I see a rider in front of me and they are a bit wibbly wobbly or a bit too far out and thinking for god sake watch yourself, watch yourself. Erm, you know, if I overtake... every slip road now... when I used to race it was like nothing could stop you, nothing could, it was like you were invincible, it was like you were completely free and really, you know.... you almost felt that you</p>	Constant
		Looking out for other riders
Questions previous sense of power and invulnerability		No sense of vulnerability previously
		Doubting previous sense of security.

Awareness of vulnerability	<p>were stronger than the cars and lorries and it was a real false sense of security.</p>	Stronger than the cars
	<p>IER: Yeah. And that takes us back to what you were saying at the beginning about why you did it in a way.</p>	
	<p>C: Yes.</p>	
	<p>IER: What you got from it?</p>	
	<p>C: Yes, exactly, yes. Erm, so, erm...</p>	
	<p>IER: It sounds like a little bit again that, that you know, you had the sense of yourself of someone who was quite powerful, who was in control...</p>	
	<p>C: Yes.</p>	
	<p>IER: ...who was achieving stuff and that seems to have been broken?</p>	Concentration affected by negative thoughts
Negative effect on performance	<p>C: Yes, definitely. The concentration that has killed it definitely. The ability is there, but it is the concentration, it's the negative thoughts I think you've got going on and you are out, when you are doing a 25 or even a 10, you are in that no man's land well, right you have gone this far and for ten to fifteen miles I may not have had a negative thought but the minute you do you can't... it's not... if you get off which I have done and stand on the side of the road, you are still surrounded by that constant noise of traffic which takes you back to that day standing on the side of the road that you are trapped, so really you have just got to keep pushing yourself and pushing yourself and get over it and forget it, you know.</p>	Stops when racing
Sense of danger in traffic		Triggers, reminders
Coping mechanism		Traffic constant, surrounding, trapped.
	<p>Coping mechanism- push yourself, try to forget</p>	
	<p>IER: But that has been difficult?</p>	
	<p>C: Yeah, yeah.</p>	
	<p>IER: Other than in that specific type of situation Carol where you are racing on a dual carriageway, do you find it affects you in</p>	

<p>Awareness of involuntary reaction</p>	<p>training rides, in races, in other situations or is it very specific to that context?</p> <p>C: Yeah, it did used to affect me on the turbo and on the turbo I used to kind of visualise, not so much now, it has moved on quite a bit from there. I probably have moved on a fair bit, but say last year when I was on the turbo I would try and visualise, there would be music playing, and if it was the music I used to train to around about the accident time I would shut my eyes and instead of visualise me say climbing a mountain in Majorca, I would shut my eyes and think “oh, bloody hell I am thinking of that day, no”. Em, my subconscious was bringing it back.</p>	<p>Triggers</p> <p>Can’t control her mental process</p>
<p>Dialogue within self- 3rd person</p>	<p>IER: Yeah, so the visual image again was very strong?</p>	<p>Parts of self</p>
<p>Interferes with positive mental process</p>	<p>C: Is it me doing it to myself, you know, or... I am thinking I am on the turbo here, stop thinking about it, but I just would and it would drive me... and I used to think even then you couldn’t give everything in the interval you were doing, because you would be like, well no, hang on when you visualise, you are supposed to think of something that motivates you.</p>	<p>Use of third person- “you”</p> <p>Impact on performance- can’t use visualisation to motivate</p>
<p>Intrusivity</p>	<p>IER: Sure.</p> <p>C: ...and brings you on, not that. It was just like, oh.</p> <p>IER: So it interfered with that process as well? What about general road training rides if you’re battling along country lanes. Does it ever come to you then?</p>	<p>Constant, always there</p>
<p>Intrusivity</p>	<p>C: I am okay, but I always think of him, always think about him. I don’t think there is a day on the bike where I don’t think about it. It is definitely, it is definitely, definitely always there. Him more so. I mean, I knew xxxxx, I don’t know if you know about cycling, but xxxxx got hit and my friend, Chris xxxx, a road cyclist in our club. He got hit around a country lane</p>	<p>Danger points</p>

	<p>head on so I am always, you know, both of those people weren't killed racing, but for some reason I think, well I know for some reason I was more involved with the actual accident I guess with Gareth, but not a day goes by and sometimes I can turn that around into a positive, well, I am the lucky one....</p> <p>IER: That is interesting Carol, because I was going to ask you in a way, if we go back to that situation you described on the turbo where the image of xxxx comes in and you don't want it to.</p> <p>C: Yeah.</p>	<p>Personal involvement</p> <p>I survived</p>
<p>Ways of coping</p>	<p>IER: What is your way of trying to deal with that, to respond to that? What do you do to try and make that different? Do you stop it happening, do you switch on to something else?</p> <p>C: Yeah, I do try and I try and think what do I switch on to. I just try and push it out. I just try and carry on. It is just there and it comes and it goes. Maybe I am just used to it.</p> <p>IER: So that phrase you use, you used, sort of, try to carry on, it seems to sum up the whole thing.</p> <p>IER: Yeah, the whole thing for you.</p>	<p>Coping mechanisms</p>
<p>Loss of enjoyment</p>	<p>C: A lot of friends have said why are you putting yourself back in that situation and it is, to hit the nail on the head, it's to try and get the thrills back and that sense, that real sense of achievement and balance back, but, you know, I still get reasonably good results, but after an event I am not, I'm never ever, happy about it which makes me think why am I doing it? Even if it's a good, it's a sense of... it's just not the same.</p> <p>IER: There is something lost there, certainly?</p>	<p>Others question her motivation</p> <p>Her response, reasoning</p> <p>Not happy with performance</p> <p>Why do I do it?</p> <p>Not the same, something lost</p>

<p>Post incident growth</p>	<p>C: Yeah, which....</p> <p>IER: Is it possible to say Carol, because of the way that you have had these experiences. You have had the image coming back to you and it has affected you in racing on dual carriageways, what do you say about yourself because this has happened? Has it changed the way that you think about yourself? Are you angry with yourself? Or disappointed with yourself, or what?</p> <p>C: It has changed me, I think, for a positive way which I feel a bit guilty about because it was a horrific experience and I can get upset about it still, but, you know, all the... I don't know, it makes me value everything so much more really.</p>	<p>Positive impact, change in values</p> <p>Guilty about this</p> <p>Changed by the event</p>
<p>Change in value system</p>	<p>IER: OK, yeah, yeah. I understand.</p> <p>C: So, it makes me value that I have got the ability.... no, it makes me value everything.</p> <p>IER: You see the importance in things?</p> <p>C: Yeah, eh, yeah.</p> <p>IER: But the fact that, for example, you go back to Saturday, the fact that you lose your concentration, what do you think about yourself for that? Is that something... are you doing that because you are not strong enough..?</p>	<p>Reflecting on herself</p>
<p>Time scale for recovery</p>	<p>C: Yeah, yeah.</p> <p>IER: ...because you lack the ability to control it?</p> <p>C: Yeah, I am disappointed in my head. I wish, you know, there was a way round it. I thought by now I wouldn't be feeling the same, but I am really. Probably not as bad, but....</p> <p>IER: So a bit of reduction in intensity but it's still there? Yeah.</p>	<p>Time scale, disappointed it has gone on so long</p>

Appendix F: Distribution of themes across interviews

Table of distribution of themes among interviewees

Master theme	Interviewees						
	Rachel	Steve	Carol	Max	Mike	Amy	Erin
1. Focus on Self Sub-themes:							
Making sense of self: commentary, analysis, explanation.	X	X	X	X	X	X	X
Intrapsychic dialogue and conflict.	X	X	X	X	X	0	X
Reflection and contrast with previous self/others	X	X	X	X	X	X	X
Negative/critical commentary on self.	X	X	0	X	X	X	0
2. Focus on Anxiety							
Physical anxiety symptoms	X	X	X	X	X	x	0
Intrusivity/re-experiencing	X	X	X	X	0	0	0
Avoidance of accident related triggers	X	0	X	X	X	X	X
3. Physical Injury							
Physical effects of accident	X	X	0	X	X	x	X

Physical recovery	X	0	0	X	X	0	0
4. Perceptual and Decision-making processes							
Cognitive Process in decision making	X	X	X	X	X	X	X
Evaluating safe/unsafe contexts	X	X	0	X	0	X	X
Sensory experience of danger	X	0	X	X	0	X	X
Sense of vulnerability	X	0	X	X	0	X	X
5. Impairment of cycling performance							
Flow, concentration, focus and awareness	X	X	X	X	0	0	X
Pleasure, presence and mastery	X	X	X	X	X	0	X
Avoidance and safety behaviours	X	X	0	X	X	X	X
6. Coping, adaptation and growth							
Adaptation and Coping strategies	X	X	X	X	X	0	0

Impact and recovery	X	X	X	X	X	0	0
Growth, integration of experience and positive change	0	X	X	0	0	0	0

X indicates a theme was present within that interviewee's transcript, and 0 indicates that a theme was absent from the interviewee's transcript.