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PERCEPTIONS OF MENTAL ILL HEALTH IN ELITE ATHLETES

Abstract

Research suggests elite athletes have an equal, or in some circumstances possibly higher, probability of developing mental ill health as the general population, however understanding of these issues amongst athletes and coaches remains largely unknown. The perceptions of mental health problems amongst 19 elite athletes and 16 coaches were explored using two concurrent, three round Delphi surveys and the responses compared. Athletes and coaches expressed different opinions and experiences of mental ill health amongst elite athletes. However, both felt the pressure athletes place upon themselves is a significant contributing factor and that obsessional compulsive tendencies and anxiety may be particularly prevalent. Whilst associated stigma was thought to be a barrier to support seeking, both groups felt sport and clinical psychologists would provide the most appropriate support, with coaches playing an important signposting role. Implications for athletes, coaches, clinical and sport psychologists are explored and suggestions for future research are presented.

Keywords: elite, athlete, coach, mental ill health, Delphi.

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An Investigation of Athletes' and Coaches' Perceptions of Mental Ill Health in Elite Athletes

It is accepted that those competing in sport at the highest level may be vulnerable to physical injury resulting from pushing their bodies to extremes of endurance and risk; however, the strain put on the psychological welfare of such athletes is less well acknowledged and managed (Rice, et al. 2016). The elite athlete, (i.e. those capable of competing at an Olympic/Paralympic level or professionally, see Swann, Moran, & Piggott, 2015) in particular may be exposed to a number of risk factors that may make them vulnerable to experiencing symptoms associated with mental ill health (i.e. compromised psychological well-being impacting on functioning)¹. Both the status of being an elite athlete and the journey to gaining that identity can be risk factors. To become an elite athlete demands personal attributes such as perfectionism, extreme focus and commitment, as well as involving high level unique life stressors including; pressure to consistently perform (Flett & Hewitt, 2014; Hanton, Fletcher, & Coughlan, 2005) and the possibility of over investment in the single identity of 'athlete' (Martin, Fogarty & Albion, 2014). Research suggests that holding multiple positive identities (i.e. investing in more than one positive role, such as being a successful professional, parent, and/or friend) is a common protective factor against mental ill health (Thoits, 1991). The fewer identities the person possesses, and the greater investment in these identities, the greater the threat to mental health should one of these identities be compromised (Hoetler, 1983). For the elite athlete, whose lifestyle may limit the range of support mechanisms, and/or whose identity as a top athlete is compromised by either

¹ It is also worth noting that the terminology denoting compromised psychological health has been cited as part of the problem in terms of investigating this issue, both adding to the stigma and the confusion about the topic (Uphill, Sly and Swain, 2016). For clarity we use the term 'mental ill-health' throughout this paper which seems to be one of the most accepted terms.

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injury or lack of performance, this can lead to psychological vulnerability. Recent high profile cases within the sporting world have led to mental health charities and medical organisations such as MIND (MIND, 2014) and the Royal College of Psychiatrists (Hughes & Leavey, 2012) in the UK, to highlight the high psychological stress placed on top athletes and the need for further investigation.

MIND, the leading mental health charity in the UK commissioned a report into how sports' governing bodies and players' organisations respond to, manage, and prevent mental ill health amongst athletes, and to make recommendations for future practice. Three particular points across an athlete's career were recognised as times of vulnerability; leaving the sport due to injury or lack of performance, retirement and struggling on in silence (MIND, 2014). Within the report it is recognised that stigma and fear of the impact on careers are attached to the non-disclosure of mental ill health, silencing those who are struggling and adding to the lack of concrete evidence about prevalence rates, causality and appropriate interventions. In terms of recommendations, MIND clearly identifies the need for protective systems to be put in place allowing the athlete to both seek help effectively whilst protecting their future career. It also identified the significant role played by coaches and the need for them to receive education and support to intervene early. This present study seeks to further investigate the role of the coach and athletes in the context of mental ill health and explore some of the challenges to promoting these recommendations.

Prevalence of Mental Health Issues in Elite Athletes

Research into this area is challenging due to the stigma and other barriers surrounding it leading to athletes and coaches being unwilling to speak out (Gulliver, Griffiths & Christensen, 2012), however, a fragmented body of research, specific to elite athletes, is emerging. This research suggests that despite having protective factors such as good health,

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employment, support networks and the benefits of exercise (Scully, Kremer, Meade, Graham, & Dudgeon, 1998), elite athletes are just as likely as the general population to develop mental ill health, and for some groups there may be an elevated risk (Wolanin, Hong, Marks, Panchoo & Gross, 2016; Rice, et al., 2016; Gulliver, Griffiths, Mackinnon, Batterham & Stanimirovic 2015; Schaal et al., 2011). In Rice et al.'s (2016) systematic review they identified 60 studies looking at this area. However, in their analysis of the quality of the studies only two met all the quality criteria and only one quarter were deemed of good quality. The quality criteria used an accepted methodology, included five standards covering study participants, selection, participation, measures and ethics, and each study was rated to have met or not met the standard.

In terms of overall prevalence of general psychological distress and common mental disorders, the most comprehensive study to date is that carried out by Gulliver, Griffiths, Mackinnon, Batterham & Stanimirovic (2015) on 224 elite athletes studying at the Australian Institute of Sport. Prevalence rates for meeting clinical cut off points across the five common mental health disorders measured was 46.6%, similar to the results found in the Australian Health Survey, except for young female athletes who had a higher incidence. However, prevalence may vary across the different sports. For example, eating disorders are the most extensively researched specific mental health disorder amongst elite athletes and it has been shown that prevalence rates differ between sports depending upon the emphasis given to body shape (Joy, Kussman & Nattiv, 2016). Several studies report no significant difference between the prevalence of eating pathology amongst the general population and elite athletes competing in sports which do not emphasise the importance of a lean body e.g. basketball, (Michou & Costarelli, 2011; Gomes, Martins, & Silva, 2011; Hausenblas & McNally, 2004; Toro et al., 2005). However, when elite athlete samples only include those from sports which emphasise a lean body for success such as gymnastics and figure skating,

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the prevalence of eating pathology appears to be significantly higher than that reported in the general population. For example, Sundgot-Borgen and Tortveit (2004) found a prevalence rate of eating disorders of 18% amongst 522 elite female athletes compared to 5% in 448 non-athlete controls, and this increased to 25% in aesthetic sports compared to 12% in other sports. In a review of the area Bretland-Sanda and Sundgot-Borgen (2013) concluded that prevalence rates ranged from 0–19% in male athletes and 6–45% in female athletes, citing the need for clinical assessment rather than self-report to reduce such variance, and that sports which emphasise leanness may be a risk factor

Reports of the prevalence of other types of mental disorders vary considerably. For example, amongst German professional athletes. Nixdorf, Frank, Hautzinger, and Beckmann (2013) reported a prevalence rate of Major Depressive Disorder (MDD) of 15%, which is within the range (6-17%) of the mainstream German population. In contrast, Hammond, Gialloredo, Kubas, and Davis (2013) found that 68% of elite Canadian swimmers met the criteria for MDD in the previous 36 months, vastly greater than that expected in the rest of the population. In Australia Gulliver et al. (2015) reported 23.6% of males and 30.5% of females from their sample of elite athletes had a possible depressive disorder, similar to levels of depression within the college population. An increase in depressive symptomology was also found in relation to injury. Although findings vary, these investigations suggest that depressive disorders are at least as prevalent amongst elite athletes as amongst the general population, and may in fact be overrepresented for some groups in this population.

Regarding anxiety, Gulliver et al. (2015) also found that 7.1% of their sample of Australian elite athletes met the criteria for Generalised Anxiety Disorder (GAD) and 4.5% for panic disorder. One in ten athletes reported having had a panic attack in the previous week. Again prevalence rates are thought to be similar to the general population, but despite

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anxiety and panic being the most common forms of mental ill-health found in the general population there remains little research investigating the prevalence of anxiety disorders amongst the elite population. The reasons for this apparent gap in the literature are unclear.

In the ten general prevalence studies evaluated by Rice et al. (2016) it was noted that lack of social support was a risk factor in addition to environmental stressors, included the coaching environment and coach expectations, which reduced coping strategies within the athletes. The importance of the coach-athlete relationship in managing mental health was acknowledged by Rice et al. (2016) who suggest that ‘coaches are critical to setting the organisational climate—in turn, impacting on the level of stress experienced by athletes’ (p16). Others have suggested that the athlete-coach relationship significantly influences the athlete’s development not just as a performer but also as a person (Jowett, 2005) and unsurprisingly this relationship has been proposed as a positive way to promote appropriate help seeking behaviour in athletes (Bapat, Jorm, & Lawrence, 2009; Pierce, Liaw, Dobell, & Anderson, 2010). However, research suggests that some coaches of elite athletes may minimise the prevalence of mental health issues within their sport (Nowicka, Eli, Ng, Apitzsch, & Sundgot-Borgen, 2013), whilst others do not feel competent to identify an athlete experiencing mental ill health (Vaughan, King, & Cottrell, 2004). It seems that the coach athlete relationship may be pivotal in ensuring that mental health issues in elite athletes are recognised and appropriate interventions follow.

Present Study

Mazzer and Rickwood (2015) have suggested coaches as the gatekeepers to referral to mental health professionals, however, the factors influencing the development and identification of mental ill-health issues among elite athletes and coaches remain largely unexplored. Both Gulliver et al. (2012) and Roberts, Faull and Tod (2016) have set out the barriers to athletes

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raising mental health issues, including public, organisational and self-stigmatizing attitudes; lack of knowledge and awareness; negative past experiences; lifestyle characteristics (e.g. time, money, confidentiality); and the possible downplaying of the extent of these problems by sports governing bodies. Yet little research has focussed on athletes and coaches own beliefs about mental ill health. Given the significance of the relationship between elite athlete and coach (Jowett & Cockerill, 2003), and the impact of poor athlete mental health on the careers of both this is an important omission. The purpose of this study was to investigate elite athlete and coaches' perceptions of these issues and the agreement and discrepancy between the two groups. Specifically, the study explored what elite athletes' and coaches' perceptions are of the prevalence and types of mental ill health amongst elite athletes; the causal factors; the support elite athletes may need and the barriers to accessing this, and the role they perceive coaches' and psychologists play or could play in working with elite athletes with mental health needs.

Method

Participants

The Delphi technique is a series of sequential questionnaires, interspersed with feedback that seeks to gain the consensus of a group of experts. In this study the experts were athletes and coaches involved in elite sport. Delphi studies have involved expert panels ranging from 10 to many hundreds (Powell, 2003). It is recommended that the more disparate the expert group the larger the sample required, whereas a homogenous sample of 10-15 experts would likely yield sufficient results (Skulmoski, Hartman, & Krahn, 2007). Whilst more participants might increase the reliability of composite judgment there is little empirical evidence to prove this (Murphy et al., 1998,p37), more it is the quality of the expert panel that is important. The panel should have a balance of heterogeneity, to allow for the consideration of multiple

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perspectives, and clearly defined expert criteria reflecting current knowledge, but relative impartiality (Powell, 2003). For these reasons, and due to the expected divergence of views and experiences between elite athletes and elite coaches on the topic of mental health amongst elite athletes, it was felt that two separate groups of experts, completing concurrent Delphi methods would elicit more meaningful results than one larger sample combining the two expert groups. across a range of sports, and for the panel not to have explicitly experienced mental health problems

The expert inclusion criteria were: able bodied athletes who had represented the United Kingdom (UK) or Great Britain (GB) in their sporting event at some point in the past two years from the start of data collection; coaches who had worked in the UK with a UK level 2 or above coaching qualification and who had coached an athlete who had represented the UK or GB in the past 2 years. The aim was to recruit a medium size sample of 15-20 participants in each group. Participants were recruited through contacting national sport governing bodies and regional sports clubs, adverts on athlete and coaching website forum pages and blogs. The social media site Twitter was used to contact potential athlete and coach participants, directing them to an online participant information sheet containing the researcher's contact details. The researchers' personal contacts and snowball sampling were also used to recruit participants. Participants were allocated an individual participant code which allowed them to participate anonymously, 35 participants were recruited who met the entry criteria and are described in Table 1.

Table 1: Elite athlete and coach participant demographic information

Characteristic	Athlete (N = 19)	Coach (N = 16)
Age in years: Mean	31.8	43.1
Range	22-59	27- 61
Gender: Male	9	12
Female	10	4

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Type of sport: Individual	13	2
Team	6	4
Both	-	9
Sports: Athletics	-	3
Basketball	-	5
Cycling	3	-
Lacrosse	-	2
Running	4	-
Target shooting	4	2
Touch Rugby	4	-
Triathlon	7	-
Other	4	8
Years of international experience: Mean	5.7	10.75
Range	<1- 30	1- 20

Note. Participants were asked to select all responses that applied to them resulting in more responses per category than participants per group.

Design

The study utilised a three round Delphi method. Through rounds of anonymous questionnaires, the Delphi method is widely used to clarify opinion about a particular topic using the real-world knowledge of experts (Hsu & Sandford, 2007). Ideas, ratings or qualitative comments made in the initial round are fed back to participants through the second round questionnaire. After analysis of group collective opinion, the responses from this round are used to formulate the third questionnaire, which aims to further clarify consensus and divergence of opinion within the expert group (Hasson, Keeney, & McKenna, 2000).

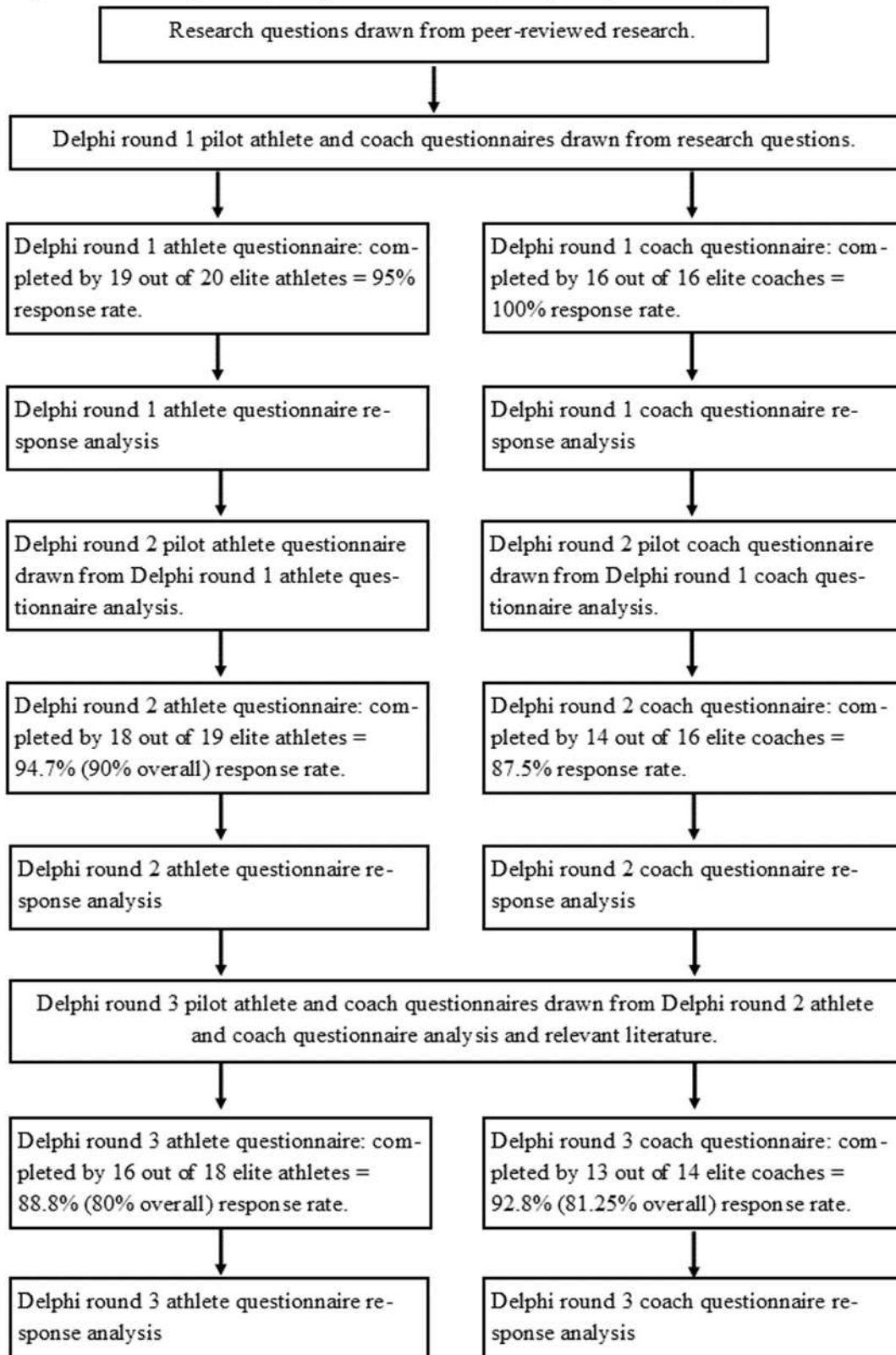
A diagram depicting the study's design is presented in Figure 1. An online Delphi methodology was chosen due participants residing across a large geographical area and due to the sensitive nature of topic being discussed, which may have inhibited participation in face-to-face interactions (Eun-ok & Wonshik, 2012). The study received University ethics

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panel clearance.

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Figure 1. Flow diagram depicting the 2 concurrent, 3 stage Delphi method procedure.



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Procedure

Online survey software was used to develop and administer the questionnaires used in this investigation, each taking less than 30 minutes to complete. The first round of questionnaires for athletes and coaches were identical, with minor alterations to the wording of items to make them applicable to each group and included a definition of mental health problems. These questionnaires included relevant demographic questions and broad open-ended items based on the research questions intended to open the topic area. Participants were sent an electronic link to the online survey which they were asked to complete at their convenience within two weeks. Weekly reminders were emailed to participants, however, if they did not complete the questionnaire within five weeks of the deadline it was assumed that they no longer wished to participate in the investigation and were not included in subsequent rounds. Attrition rates are shown in Figure 1, but overall retention was high with 16/19 athletes and 13/16 coaches completing all three rounds.

Significant themes drawn from each groups' qualitative responses to the first round questionnaire were fed back through each groups' second round questionnaire. Further details of the development of the second and third Delphi rounds are described in the results section. Participants rated their agreement with, or ranked the importance of, significant themes from the initial round with the aim of generating some consensus on issues within groups. The final round questionnaire brought together issues raised from the previous two rounds and related literature, with the aim of further clarifying expert group opinion on these issues. The groups' responses to the third questionnaire were analysed separately to identify significant themes as well as agreement and divergence of opinion within and between groups.

Quantitative data was analysed using basic descriptive statistics and qualitative data was analysed using thematic analysis (Braun & Clarke, 2006). Significant themes were

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determined by either a high number of responses relating to the theme or the theme's relationship with the literature.

Results

Presentation of results is structured by the three rounds of the Delphi survey. A summary of results from each Delphi round and how these led to the development of the subsequent Delphi round questionnaire is included at each stage.

Delphi Round One

To contextualise the panels in relation to their personal experience of mental ill health amongst elite athletes, athletes were asked to describe any personal experience they had had of mental ill health, and coaches if they had witnessed any such experiences in this population (see Table 2). They were then asked to rate in their opinion if they thought elite athletes were more, less or neither likely to experience mental ill health compared to the average population. They were then asked to provide a written rationale for their opinion that was analysed thematically. The questions were deliberately posed in a neutral way to elicit a full range of opinion and rationale, dependent on respondent's experiences.

Table 2: *Athletes' and coaches' experiences and beliefs regarding mental ill health amongst elite athletes*

Athletes' personal experiences of mental ill health		
N= 19	Yes 73.7% (n= 14)	No 26.3% (n= 5)
Coaches' experiences of witnessing mental ill health amongst athletes		
N = 16	Yes 37.5% (n= 6)	No 62.5% (n= 10)
Likelihood elite athletes will develop mental ill health compared to the general population		
	Athletes	Coaches
More likely	47.4% (n= 9)	25% (n= 4)
Neither more nor less likely	42.1% (n= 8)	62.5% (n= 10)
Less likely	10.5% (n= 2)	12.5% (n= 2)

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Athletes and coaches highlighted several factors which they felt may contribute to mental ill health amongst elite athletes as well as some protective factors and perceptions why elite athletes are no more at risk than general population (Table 3).

Table 3: Factors perceived to relate to the development of mental ill health in elite athletes

Athletes and coaches	Athletes	Coaches
Contributing factor: Elite athletes put pressure on themselves (Athletes n= 11; Coaches n= 5)	Contributing factor: Elite athletes being overly focussed on an 'athletic lifestyle' (n= 5)	Contributing factor: The end of an elite athlete's career (n= 7)
Contributing factor: Elite athletes experience concerns over weight, diet and body image (Athletes n= 11; Coaches n= 4)	Neutral factor: Everyone experiences life-stress (n= 5)	Contributing factor: Elite athletes' being single minded/ selfish (n= 3)
Contributing factor: Elite athletes perceive pressure from those around them (Athletes n= 18; Coaches n= 15)	Protective factor: Elite athletes have resilient personalities (n= 4)	Contributing factor: Elite athletes having a fear of failure (n= 3)
Contributing factor: Pressure to perform in training and competition (Athletes n= 11; Coaches n= 7)		Contributing factor: Perfectionistic and obsessive/compulsive traits may be make elite athletes successful (n= 1)
Protective factor: Exercise is beneficial for mental well-being (Athletes n= 4; Coaches n= 4)		Neutral factor: Mental ill health can effect anyone (n= 8)

The significant themes identified within both athletes' and coaches' responses relating to barriers elite athletes face when accessing support for mental ill health were; elite athletes believing admitting to mental ill health is a sign of weakness, stigma associated with mental

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ill health and a lack of knowledge and understanding of mental ill health. In response to how elite athletes with mental ill health might be best supported, both athletes and coaches suggested elite athletes who have experienced mental ill health coming forward to discuss how they managed this and the need for an increase in knowledge of mental ill health and how to access support. Both athletes and coaches suggested elite athletes being supported by sport psychologists, coaches mentioned support from members of the elite athlete's wider support team (n= 6) and athletes suggested coaches may offer support (n= 4). Coaches did not suggest that they would be best placed to support athletes experiencing mental ill health. However, when asked what role coaches are perceived to play in supporting these athletes, both athletes and coaches stated that coaches have an important role, including; being able to recognise the signs and symptoms of mental ill health and sign-posting elite athletes to appropriate support.

In summary, from round one athletes and coaches differed in their personal experiences of mental ill health amongst elite athletes and in their beliefs about the vulnerabilities of this group to such issues, with the athletes believing there to be a higher vulnerability and prevalence. Both athletes and coaches reported several factors they thought may contribute to the development of mental ill health amongst elite athletes, many they agreed on, as well as protective factors and reasons elite athletes have the same level of risk as the general population. To clarify consensus and divergence of opinion within and between groups, and provide further depth of understanding, in the second Delphi round participants were asked to rate their agreement to statements around the likelihood of elite athletes developing mental ill health using a 5-point Likert scale and rank the contributing factors in order of significance, similar to Delphi methods outlined by Schmidt (1997).

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The theme derived from the coaches' that perfectionistic and obsessive/ compulsive traits may contribute to elite athletes' success (see Table 3) was of interest as there is a lack of literature around obsessive compulsive tendencies amongst elite athletes and mixed literature around the value of the trait of perfectionism in an athlete (Stoeber, Stoll, Pescheck, & Otto, 2008; Flett & Hewitt, 2005). To establish whether this view was shared amongst other coaches in the group they were asked to rate their agreement and offer their opinion on questions relating to this issue in the second round Delphi questionnaire. Athletes and coaches suggested several barriers to accessing support and agreed that coaches play an important role in supporting elite athletes, although there seemed to be different opinions between coaches and athletes about coaches offering direct support. To clarify consensus and divergence of opinion between groups, participants were fed back these views in the second Delphi round.

Delphi Round Two

To determine the degree of consensus and divergence of opinion between and within groups', percentage calculations were carried out on data from Likert scale ratings. In line with other studies of this kind (Hackett, Masson, & Phillips, 2006), the 5-point scales were collapsed into 3 bands (1-2, 3, 4-5) indicating the strength of agreement to each statement. Bands 1-2 indicated 'agreement' and bands 4-5 indicated 'disagreement'. As described by Vosmer, Hackett and Callanan (2009) consensus was defined in three levels; 'high consensus' was $\geq 80\%$ (N=14+ athletes, 11+ coaches) of participants responding to statements with 'agreement' or 'disagreement' (Green, Jones, Hughes, & Williams, 1999), 'medium consensus' was 65-79% (N=11-13 athletes, 9-10 coaches) and 'low consensus' was $\geq 51-64\%$ (N=0-9 athletes, 0-7 coaches) .

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In order to determine some level of consensus based on expert groups' responses to questions requiring them to rank factors in order of significance, the methodology proposed by Kendall and Gibbons (1990) was used. To allow for the fact that respondents could choose not to rank some listed factors, each rank position was weighted with a numerical value (e.g. 1st rank position = 3, 2nd rank position = 2, 3rd rank position = 1), allowing the researcher to combine respondents' individual ranks to form rank totals. These were then ranked to determine the best estimate of true ranking in order of significance of these factors within groups. Consensus and divergence of opinion within the two groups relating to factors they believed as responsible for the development of mental ill health amongst elite athletes are presented in Table 4.

Table 4: *Consensus of athletes' and coaches' opinion on factors responsible for the development of mental ill health amongst elite athletes*

	Athletes	Coaches
Elite athletes are more likely than the general population to experience mental ill health due to being under a high level of pressure from multiple factors	Medium consensus agreement (72.2%, n= 13)	No consensus agreement (35.7%, n= 5) or disagreement (14.3%, n= 2)
Elite athletes are more likely than the general population to experience mental ill health due to traits such as perfectionism or obsessive compulsive tendencies which may actually contribute to elite athletes' success	N/A	Low consensus agreement (64.3%, n= 9)
Elite athletes are just as likely as the general population to experience mental	No consensus agreement (22.3%, n=	No consensus agreement (50%, n= 7)

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ill health due to life stressors/ individual differences experienced by everyone	4) or disagreement (44.4%, n= 8)	or disagreement (14.3%; n= 2)
Elite athletes are less likely than the general population to experience mental ill health due to sport being beneficial to elite athletes' mental well-being	No consensus agreement (44.4%, n= 7) or disagreement (38.9%, n= 8)	Low consensus disagreement (57.1%, n= 8)

Note: Not applicable (N/A) depicts where the statement was not used in the expert groups' Delphi questionnaire due to it not being generated from the previous round in this group.

From the data generated in round one the participants were asked to rank the factors which may contribute to elite athletes developing mental ill health. The three most relevant factors as ranked by athletes and coaches are presented in Table 5.

Table 5: Most relevant factors which may contribute to elite athletes developing mental ill health

Athletes	Coaches
1. Pressure elite athletes put upon themselves	1. Pressure elite athletes put upon themselves
2. Fear of failing in their aims	2. Performing below expectations
3. Injury	3. Being concerned with letting others down

The barriers the two groups ranked as the top three largest challenges to elite athletes experiencing mental ill health from accessing support are displayed in Table 6 and those

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professionals ranked most highly to provide support in Table 7. The supportive roles athletes and coaches see these professionals playing are shown in Table 8.

Table 6: Most challenging barriers to elite athletes experiencing mental ill health accessing support as ranked by athletes and coaches

Athletes	Coaches
<ol style="list-style-type: none"> 1. Not wishing to admit to experiencing mental ill health due to stigma attached to it 2. Not wanting others to know they are experiencing mental ill health 3. Fearing it is a sign of weakness to experience mental ill health 	<ol style="list-style-type: none"> 1. The stigma surrounding mental ill health 2. Elite athletes' lack of knowledge about mental ill health 3. Elite athletes finding it difficult to admit they are experiencing mental ill health

Table 7: Most appropriate professionals to support elite athletes experiencing mental ill health as ranked by athletes and coaches

	Athletes	Coaches
Professional	<ol style="list-style-type: none"> 1. Sports psychologists 2. Clinical psychologists 3. Sports coaches 	<ol style="list-style-type: none"> 1. Sport psychologist 2. Clinical psychologist 3. Counsellor

Table 8: Most appropriate ways coaches do (or could) support elite athletes experiencing mental ill health as ranked by athletes and coaches

Athletes	Coaches
<ol style="list-style-type: none"> 1. To be approachable and communicate openly with elite athletes 	<ol style="list-style-type: none"> 1. To be someone the elite athlete feels they can talk to honestly and in confidence

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2. To recognise the signs and symptoms of mental ill health in an elite athlete
3. To direct the elite athlete with mental ill health to appropriate support
2. To take a holistic approach to elite athlete development
3. To recognise the signs and symptoms of mental ill health in elite athletes

Through the third round questionnaire, the researcher was interested in the level of consensus or divergence of opinion between and within groups on which common mental disorder elite athletes may be most likely to develop, including whether obsessive compulsive tendencies might be over represented in this population. Both athletes and coaches ranked the stigma of mental ill health as the biggest challenge to elite athletes seeking support and suggested athletes coming forward to discuss their experiences of mental ill health as a helpful way of supporting elite athletes. These points led the researchers to question how the expert groups felt stigma could be reduced in sporting communities.

Given that both expert groups ranked sport psychologists as the most appropriate professional to support elite athletes experiencing mental ill health, followed by clinical psychologists, the researchers were interested in establishing the expert groups' understanding of these professions' roles and how they believed they would best support an elite athlete experiencing mental ill health. Both groups also ranked being able to recognise the signs and symptoms of mental ill health amongst the most appropriate roles coaches play in supporting elite athletes with mental ill health. The third Delphi round included questions regarding how confident each group felt that coaches could recognise the signs and symptoms of mental ill health amongst elite athletes and what resources might coaches need to support elite athletes experiencing mental ill health.

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Delphi Round Three

Quantitative and qualitative responses to the third Delphi round questionnaire were analysed as within previous rounds. Participants were asked to rate a typical elite athlete and a typical member of the general population on a 10-point scale with 1 corresponding to “No obsessional thoughts or ritualised/ compulsive behaviours” and 10 corresponding to “Time consuming and/or distressing obsessional thoughts and ritualised/ compulsive behaviours suggestive of an Obsessive Compulsive Disorder (OCD)”. OCD was chosen as it was raised by the coaches in round two as being a predictor of mental ill health. OCD is the fourth most prevalent common mental disorder in the UK and has rates of co-morbidity with other types of anxiety disorders and depression (McManus, Bebbington, Jenkins & Brugha, 2016; Lochner, et al., 2014). In addition, within the clinical field the relationship between perfectionism and vulnerability to OCD has been long recognised (Hood & Antony, 2016) However, while perfectionism in elite athletes has attracted much research there is little research on OCD within this population. Indeed, within Rice et al.’s (2016) comprehensive review of the mental health of elite athletes OCD is not mentioned. Hence, we used the iterative process of the Delphi technique to explore this issue further and validate how much of a concern OCD was for athletes and coaches and if this truly represented a gap in the research literature.

Median scores and interquartile ranges were calculated based on participants’ ratings. The level of consensus based on expert groups’ responses to a questions requiring them to rank items was established as in previous rounds. The top five common mental disorders which the two groups felt would be most prevalent amongst the elite athlete population are presented in Table 9.

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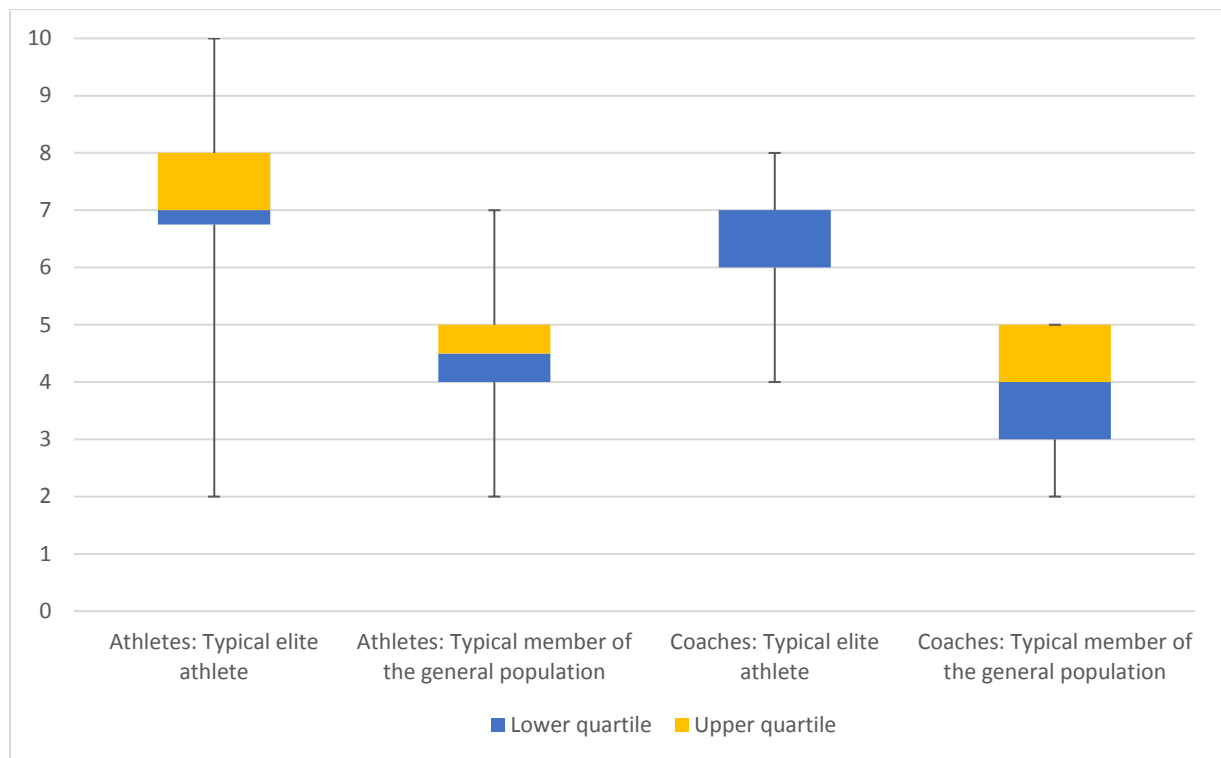
Table 9: Most prevalent common mental disorders amongst elite athletes as ranked by athletes and coaches

Athletes	Coaches
1. Anxiety	1. Anxiety
2. OCD	2. Mixed anxiety and depression
3. Mixed anxiety and depression	3. Panic disorder
4. Eating disorders	4. OCD
5. Depression	5. Depression

Groups' ratings of obsessive compulsive tendencies on a ten-point scale displayed by a typical elite athlete and typical member of the general population are presented in Figure 2. This shows that both coaches and athletes believed there to be a higher tendency towards obsessive compulsive behaviour in elite athletes compared to the general population, but compared to the coaches the majority of athletes rated this trait to be greater.

Figure 2: *Box and whisker chart displaying athletes' and coaches' ratings of a typical elite athlete and typical member of the general population on a 10-point scale of OCD tendencies including minimum, maximum, lower quartile and upper quartiles values*

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Athletes and coaches agreed that stigma surrounding mental ill health amongst sporting communities could be reduced by athletes coming forward to discuss their experiences of mental ill health, more open discussion and more awareness around mental ill health.

Coaches also suggested education for elite athletes and coaches about mental ill health (n=4).

In the third round expert groups were asked under what circumstances support from sport psychologists or clinical psychologists would be more appropriate than the other. Significant themes generated by both groups were that sport psychologists would have a better understanding of the experiences of an elite athlete than clinical psychologists, however, they cannot support elite athletes to address mental ill health. Both groups agreed that because clinical psychologists specialise in mental health they would be more appropriate in supporting elite athletes experiencing mental ill health than sport psychologists. They also agreed that clinical psychology support would be more appropriate if the mental health issue impacted on the elite athlete's life outside of sport and that they

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would have a different approach to supporting the elite athlete than sport psychologists. However, some athletes (n= 4) did suggest that if the mental health issue related specifically to sport, support from sport psychologists would be more appropriate than clinical psychologists. Some coaches (n= 3) also suggested that, in supporting elite athletes experiencing mental ill health with their sport performance, sport psychologists would be more appropriate than clinical psychologists.

When asked how confident athletes felt that coaches would be able to recognise the signs and symptoms of mental ill health amongst elite athletes, and how confident coaches themselves felt in doing this, divergence in opinion between group members meant that neither group reached consensus on this matter. However, regarding the resources needed by coaches to support elite athletes with mental ill health there was consensus in both groups that training and education for coaches around mental ill health was required (Athlete n= 12, Coach n= 8). Also some athletes felt there should be more accessible information (n=3) and some coaches felt education on this topic should be included in coaching qualifications (n=3).

Discussion

The results from this study demonstrate that concerns exist for both athletes and coaches with regard to the identification, development and management of mental health issues in elite athletes. It has also demonstrated that there are some significant differences between the two groups in terms of beliefs about prevalence, but general consensus that stigma and other dynamics collude to create barriers to access support.

Athletes and coaches had different perspectives about the prevalence of mental ill health amongst elite athletes, with athletes agreeing that there is a higher prevalence than

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amongst the general population and coaches failing to reach consensus. It may be the case that both groups of participants have been attracted to the study because of personal experience or strong beliefs about the topic and so introduced some response bias. However, despite this existing for both groups, the results show a disparity between the views of coaches and athletes, with the athletes themselves seeing it as a more serious issue than the coaches. Athletes reported having personally experienced mental ill health at a higher rate than coaches' reported having witnessed it amongst athletes. This finding may reflect the minimisation of these issues by coaches as discussed by Nowicka et al. (2013), a lack of understanding by coaches, and/or the unwillingness of disclosure on the part of the athlete (Glick et al, 2012). Such findings may indicate an underestimate of psychopathology within this population, but may also represent differences within the sampling of the two groups. However, given the proven benefits of enhancing the 'empowerment climate' between coach and athlete (Appleton and Dida, 2016) further research is warranted.

Both groups agreed that the most significant factor contributing to the development of mental ill health amongst elite athletes is the pressure the athletes place upon themselves. They also rated elite athletes as having higher obsessive-compulsive tendencies than the general population and ranked anxiety and OCD as two of the most prevalent mental disorders amongst elite athletes. Although there is a gap in the literature around anxiety disorders, including obsessive compulsive behaviour, amongst elite athletes, there is considerable research around perfectionism amongst athletes being both adaptive and maladaptive (Stoeber et al., 2008; Flett & Hewitt, 2005)..

It is hypothesised that the lack of research around OCD amongst elite athletes is due to a culture which does not recognise these behaviours as problematic. Indeed, the use of pre-competition routines in sport is a common strategy by which athletes reduce the variability

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associated with the competitive environment, in an effort to achieve greater consistency in performance (Hanton, Neil & Mellalieu, 2008). Similar to the suggestion by Tan et al. (2012) that within an elite sports environment the pursuit of thinness may be normalised or viewed positively. Perfectionistic tendencies amongst athletes, alongside the use of consistent routines, may not be considered as maladaptive due to the perceived advantages they hold towards athletic achievement and escalation of these behaviours into more OCD tendencies may be viewed similarly. This has been termed the 'perfectionism paradox' by Flett and Hewitt (2005), who describe the negative, self-defeating outcome of constantly pursuing perfection, which can then lead to unhealthy patterns of behaviour. Given the link between perfectionism and the development of OCD, the clinical importance of OCD, the co-morbidity with other anxiety disorders and depression in the mainstream population, combined with the findings from this study of the perceived importance of the problem from both athletes and coach perspective, it is suggested that this is a gap in the research which requires further attention.

In the present study, athletes and coaches agreed that stigma surrounding mental ill health is the biggest barrier to athletes seeking support. These results are consistent with the findings of Gulliver, Griffiths and Christensen (2012). Suggestions on how to reduce stigma included more open discussion and awareness about the issue. Athletes and coaches felt that support from sport psychologists and clinical psychologists would be most appropriate, however, both groups also suggested that sport psychologists would not be able to support elite athletes experiencing mental ill health, and clinical psychologists would be limited by their lack of understanding of elite sport. This suggests that professionals dually training in both aspects of psychology would be particularly valuable.

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Whilst athletes rated coaches as one of the most appropriate professionals to support elite athletes experiencing mental ill health, coaches did not. However, both groups agreed that coaches have an important role to play, which includes being able to recognise the signs and symptoms of mental ill health, but rather than providing direct support coaches saw themselves as gatekeepers to other sources of support. This possibly points to some role confusion and potential unmet expectations between coaches and athletes, which warrants further research. Nevertheless, reflecting previous research (e.g. Mazzer & Rickwood, 2015), all participants felt more education and information around mental health was required.

The finding of a need, identified by both athletes and coaches, for more knowledge and understanding of mental ill health within sporting communities, as well as more open discussion about these issues to reduce associated stigma echo those of the MIND (2014) report. Mental health awareness training for coaches is now being offered by UK charities such as RETHINK and MIND, in collaboration with sporting organisations including the Football Association (MIND, 2011). However, these courses appear to be aimed at reducing stigma surrounding mental health and encouraging those with mental ill health issues to get involved in sport, rather than training coaches about the unique pressures faced by elite athletes and how to recognise or manage these issues. Training courses, developed in collaboration with mental health services, have been used with coaches of elite athletes, and even short interventions have been found to be effective (Sebbens, Hassmén, Crisp, & Wensley, 2016). An interesting suggestion was also made by some coaches in the study to include mental health as part of the syllabus in coaching qualifications. It is clear that there is a need for more focused formal training and the development of clear referral pathways to support athletes in ways which also help them to maintain their sporting careers.

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The findings highlighted some uncertainty amongst athletes and coaches around the best placed psychological professional to support elite athletes experiencing mental ill health. It would appear that many athletes and coaches believe sport psychologists in the UK have the expertise to treat mental ill health amongst athletes. This suggests a possible mismatch between trained professional competencies and client expectations which may be worthy of further exploration. Additionally, it is important that clinical psychologists working with elite athletes have a well-informed understanding of their unique situation in order to formulate the complexity of their difficulties. Opportunities for clinical psychologists to work collaboratively with sport psychologists and coaches, to share their knowledge and understanding of the issues, in order to provide the most appropriate psychological support for athletes should be taken and professionals trained in both aspects of psychology may be of particular value.

The methodological approach taken in this study had strengths and also some limitations. Utilising a Delphi methodology held several advantages in allowing group communication and generation of ideas around a complex problem, in an efficient way (Linstone & Turoff, 2002). The iterative nature of the Delphi method has been found to be interesting and informative for participants (McKenna, 1994), which was also reported by these participants in voluntary feedback to the authors at the conclusion of this investigation. One limitation is that this investigation included a range of participants from technical, ball game and endurance sports, however, the sample contained no participants from aesthetic sports such as figure skating, gymnastics and ballet where prevalence rates of psychopathology, including eating disorder symptoms, have been reported as more prevalent than in non-athletes. (Krentz & Warschburger, 2011). Had participants from aesthetic sports been included in this investigation, their opinions potentially may have influenced the current findings, particularly in terms of the significance of eating disorders.

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Delphi studies by their nature employ experts with knowledge of the topic being examined and the commitment of participants to take part may be related to interest in the question being investigated (Hasson, 2000). Participants in this investigation were self-selecting, and may have been motivated to take part by pre-existing interests or experiences with mental ill health, and hence there is potential for the results to be subject to bias due to participants inflating the significance of the issues under discussion. The potential of utilising researcher contacts as part of the recruitment strategy in influencing participation or biasing responses is an additional consideration. However, although potential participants known to the researchers were contacted, none chose to participate in this investigation.

The sample size could be considered problematic insofar as the consensus derived from this sample may not be representative of a broader sport population. Nevertheless, the opportunity sampling approach employed had the advantage of accessing a sometimes hard to reach population, and employed a sample that is commonly regarded as “expert” (see Swann et al., 2015). Although there is little evidence that employing larger sample sizes adds to the validity or generalisability of the conclusions of a Delphi approach, the use of two expert panels (i.e., athletes and coaches) also arguably strengthens the credibility of the results in comparison to an approach reliant on a single stakeholder group alone.

In terms of future research, the participants suggested perceiving higher rates of OCD tendencies amongst elite athletes than the general population and that these may add to both athletes’ success and problems. Further research might investigate the prevalence of these characteristics amongst elite athletes and the role they are perceived to play in both enhancing and detracting from elite sporting performance. It is also clear that true estimates of the prevalence of a variety of mental health issues across an athlete’s career and within different sports are lacking, and those available may be heavily influenced by fears of disclosure, both

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by the athlete and the secondary source of the coach. Hence, future research needs to consider how to reduce the stigma and increase the motivation for athletes to come forward and disclose accurately, then seek support for these difficulties without fear of it affecting their career prospects.

Conclusion

Research suggests that elite athletes are just as likely as the general population, if not more, to develop symptoms of mental ill health. This investigation, aimed to discover elite athletes' and coaches' perceptions of this issue, and found differences in beliefs about prevalence. However, it would appear that internal attributes, including pressure athletes put on themselves may contribute to the development of symptoms mental ill health amongst elite athletes. Coaches have an important role in supporting these athletes, however, further training and information is required, as is more open communication in order to reduce the stigma surrounding mental ill health. Such findings have implications for sport and clinical psychologists in defining their roles in supporting elite athletes with symptoms of mental ill health.

References

Appleton, P. R., & Duda, J. L. (2016). Examining the interactive effects of coach-created empowering and disempowering climate dimensions on athletes' health and functioning. *Psychology of Sport and Exercise*, 26, 61-70.
doi.org/10.1016/j.psychsport.2016.06.007.

PERCEPTIONS OF MENTAL ILL HEALTH IN ELITE ATHLETES

- Bapat, S., Jorm, A., & Lawrence, K. (2009). Evaluation of a mental health literacy training program for junior sporting clubs. *Australian Psychiatry*, 17, 475-479.
doi:10.1080/10398560902964586.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101. doi:10.1191/1478088706qp063oa
- Bratland-Sanda, S., & Sundgot-Borgen, J. (2013). Eating disorders in athletes: overview of prevalence, risk factors and recommendations for prevention and treatment. *European journal of sport science*, 13, 499-508. doi.org/10.1080/17461391.2012.740504
- Eun-ok, I., & Wonshik, C. (2012). Practical guidelines for qualitative research using online forums. *Computers, Informatics, Nursing*, 30, 604-611.
- Flett, G. L., & Hewitt, P. L. (2005). The perils of perfectionism in sports and exercise. *Current Directions in Psychological Science*, 14, 14-18. doi:10.1111/j.0963-7214.2005.00326.x
- Flett, G. L., & Hewitt, P. L. (2014). The perils of perfectionism in sports” revisited: Toward a broader understanding of the pressure to be perfect and its impact on athletes and dancers. *International Journal of Sport Psychology*, 45, 395-407. doi: 10.7352/IJSP 2014.45.395
- Glick, I. D., Stillman, M. A., Reardon, C. L., & Ritvo, E. C. (2012). Managing psychiatric issues in elite athletes. *Journal of Clinical Psychiatry*, 73, 640-644.
doi:10.4088/JCP.11r07381
- Gomes, A. R., Martins, C. M., & Silva, L. (2011). Eating disordered behaviours in Portuguese athletes: The influence of personal, sport, and psychological variables. *European Eating Disorders Review*, 19, 190-200. doi:10.1002/erv.1113

PERCEPTIONS OF MENTAL ILL HEALTH IN ELITE ATHLETES

- Green, B., Jones, M., Hughes, D., & Williams, A. (1999). Applying the Delphi technique in a study of GPs' information requirements. *Health and Social Care in the Community*, 7, 198-205.
- Gulliver, A., Griffiths, K. M., & Christensen, H. (2012). Barriers and facilitators to mental health help-seeking for young elite athletes: A qualitative study. *BMC Psychiatry*, 12, 157-171. doi:10.1186/1471-244X-12-157
- Gulliver, A., Griffiths, K. M., Mackinnon, A., Batterham, P.J., & Stanimirovic, R. (2015). The mental health of Australian elite athletes. *Journal of Science and Medicine in Sport*, 18, 255-261. doi:10.1016/j.jsams.2014.04.006
- Hackett, S., Masson, H., & Phillips, A. (2006). Exploring consensus in practice with youth who are sexually abusive: Findings from a Delphi study of practitioner views in the United Kingdom and the Republic of Ireland. *Child Maltreatment*, 11, 146-156. doi:10.1177/1077559505285744.
- Hanton, S., Neil, R., & Mellalieu, S. D. (2008). Recent developments in competitive 13 anxiety direction and competition stress research. *International Review of Sport and Exercise Psychology*, 1, 45-57. doi 10.1080/17509840701827445.
- Hammond, T., Gialloreto, C., Kubas, H., & Davis, H. (2013). The prevalence of failure-based depression among elite athletes. *Clinical Journal of Sports Medicine*, 23, 273-277. doi:10.1097/JSM.0b013e318287b870
- Hanton, S., Fletcher, D., & Coughlan, G. (2005). Stress in elite sport performers: A comparative study of competitive and organizational stressors. *Journal of Sports Sciences*, 23, 1129-1141. doi:10.1080/02640410500131480

PERCEPTIONS OF MENTAL ILL HEALTH IN ELITE ATHLETES

Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing*, 32, 1008-1015. doi:10.1046/j.1365-2648.2000.t01-1-01567.x .

Hausenblas, H. A., & McNally, K. D. (2004). Eating disorder prevalence and symptoms for track and field athletes and nonathletes. *Journal of Applied Sport Psychology*, 16, 274-286. doi:10.1080/10413200490485630

Hoelter, J. W. (1983). The effects of role evaluation and commitment on identity salience. *Social Psychology Quarterly*, 46, 140-147. doi:10.2307/3033850.

Hood, H. K., & Antony, M. M. (2016). Treatment of Perfectionism-Related Obsessive-Compulsive Disorder. In *Clinical Handbook of Obsessive-Compulsive and Related Disorders* (pp. 85-97). Springer International Publishing.

Hsu, C. C., & Sandford, B. A. (2007). The Delphi technique: Making sense of consensus. *Practical Assessment Research & Evaluation*, 12, 1-8.

Hughes, L. & Leavey, G. (2012). Setting the bar: athletes and vulnerability to mental illness. *The British Journal of Psychiatry*, 200, 95-96; doi: 10.1192/bjp.bp.111.095976

Ingram, R. E., & Luxton, D. D. (2005). Vulnerability-stress models. In B.L. Hankin & J.R.Z. Abela (Eds.), *Development of psychopathology: A vulnerability-stress perspective* (pp. 32- 46). London, England: Sage Publications, Inc.

Jowett, S. (2005). The coach-athlete partnership. *The Psychologist*, 18, 412- 415.

Jowett, S., & Cockerill, I. M. (2003). Olympic medallists perspectives on the coach-athlete relationship. *Psychology of Sport and Exercise*, 4, 313-331.

PERCEPTIONS OF MENTAL ILL HEALTH IN ELITE ATHLETES

- Joy, E., Kussman, A., & Nattiv, A. (2016). 2016 update on eating disorders in athletes: A comprehensive narrative review with a focus on clinical assessment and management. *British journal of sports medicine*, 50, 154-162. doi:10.1136/bjsports-2015-095735
- Kendall, M., & Gibbons, J. D. (1990). *Rank correlation methods* (5th ed.). London, England: Edward Arnold.
- Kong, P., & Harris, L. M. (2015). The sporting body: Body image and eating disorder symptomatology among female athletes from leanness focused and nonleanness focused sports. *The Journal of Psychology*, 149, 141-160. doi:10.1080/00223980.2013.846291
- Krentz, E. M., & Warschburger, P. (2011). Sports-related correlates of disorders eating in aesthetic sports. *Psychology of Sport and Exercise*, 12, 375-382. doi:10.1016/j.psychsport.2011.03.004
- Linstone, H. A., & Turoff, M. (2002). *The Delphi method: Techniques and applications*. Retrieved from <http://is.njit.edu/pubs/delphibook/delphibook.pdf> (Original work published 1975).
- Lochner, C., Fineberg, N. A., Zohar, J., Van Ameringen, M., Juven-Wetzler, A., Altamura, A. C., ... & Dell'Osso, B. (2014). Comorbidity in obsessive-compulsive disorder (OCD): A report from the International College of Obsessive-Compulsive Spectrum Disorders (ICOCS). *Comprehensive psychiatry*, 55, 1513-1519. doi:10.1016/j.comppsy.2014.05.020.
- Martin, L. A., Fogarty, G. F. & Albion, M. J. (2014). Changes in Athletic Identity and Life Satisfaction of Elite Athletes as a Function of Retirement Status. *Journal of Applied Sport Psychology*, 26, 96-110, doi: 10.1080/10413200.2013.798371

PERCEPTIONS OF MENTAL ILL HEALTH IN ELITE ATHLETES

- Mazzer, K. R., & Rickwood, D. J. (2015). Mental health in sport: Coaches' views of their role and efficacy in supporting young people's mental health. *International Journal of Health Promotion and Education*, 53,102-114. doi:10.1080/14635240.2014.965841
- McKenna, H. P. (1994). The Delphi technique: A worthwhile research approach for nursing? *Journal of Advanced Nursing*, 19, 1221-1225. doi:10.1111/j.1365-2648.1994.tb01207.x
- McManus, S., Bebbington, P., Jenkins, R., & Brugha, T. (eds.) (2016). *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014*. NHS Digital, Leeds.
- Michou, M., & Costarelli, V. (2011) Disordered eating attitudes in relation to anxiety levels, self-esteem and body image in female basketball players. *Journal of Exercise Science and Fitness*, 9, 109-115. doi:10.1016/S1728-869X(12)60006-9
- MIND. (2011). *Mental Health Awareness in Sport: An introductory course for sports coaches: The Football Association in collaboration with Time to Change*. Retrieved from <http://www.thefa.com/football-rules-governance/policies/equality/mental-health>.
- MIND. (2014). *Performance matters: Mental health in elite sport*. Retrieved from <http://www.mind.org.uk/media/1085139/Mental-Health-and-Elite-Sport.pdf>.
- Murphy, M. K., Black, N. A., Lamping, D. L., McKee, C. M., Sanderson, C. F., Askham, J., & Marteau, T. (1998). Consensus development methods, and their use in clinical guideline development. *Health technology assessment (Winchester, England)*, 2, i-88.
- Nixdorf, I., Frank, R., Hautzinger, M., & Beckmann, J. (2013). Prevalence of depressive symptoms and correlating variables among German elite athletes. *Journal of Clinical Sport Psychology*, 7, 313-326.
- Nowicka, P., Eli, K., Ng, J., Apitzsch, E., & Sundgot-Borgen, J. (2013). Moving from knowledge to action: A qualitative study of elite coaches' capacity for early

PERCEPTIONS OF MENTAL ILL HEALTH IN ELITE ATHLETES

- intervention in cases of eating disorders. *International Journal of Sports Science & Coaching*, 8, 343- 355.
- Pierce, D., Liaw, S., Dobell, J., & Anderson, R. (2010). Australian rural football club leaders as mental health advocates: An investigation of the impact of the Coach the Coach project. *International Journal of Mental Health Systems*, 4, 10-18. doi:10.1186/1752-4458-4-10 doi.org/10.1186/1752-4458-4-10.
- Powell, C. (2003), The Delphi technique: myths and realities. *Journal of Advanced Nursing*, 41, 376–382. doi:10.1046/j.1365-2648.2003.02537.x
- Rice, S. M., Purcell, R., Silva, S., Mawren, D., McGorry, P. D., & Parker, A. G. (2016). The Mental Health of Elite Athletes: A Narrative Systematic Review. *Sports Medicine*, 1-21. doi: 10.1007/s40279-016-0492-2.
- Roberts, C. M., Faull, A. L., & Tod, D. (2016). Blurred lines: performance enhancement, common mental disorders and referral in the UK Athletic Population. *Frontiers in Psychology*, 7. Published online 2016 Jul 13. doi: 10.3389/fpsyg.2016.01067
- Sebbens, J., Hassmén, P., Crisp, D., & Wensley, K. (2016). Mental Health in Sport (MHS): Improving the early intervention knowledge and confidence of elite sport staff. *Frontiers in Psychology*, 7, 911. doi:10.3389/fpsyg.2016.00911.
- Schaal, K., Tafflet, M., Nassif, H., Thibault, V., Pichard, C., Alcott, M., ... Toussaint, J. (2011). Psychological balance in high level athletes: Gender based differences and sport-specific patterns. *Plos One*, 6, e19007. doi:10.1371/journal.pone.0019007
- Schmidt, R. C. (1997). Managing Delphi surveys using nonparametric statistical techniques*. *Decision Sciences*, 28, 763- 774. doi:10.1111/j.1540-5915.1997.tb01330.x

PERCEPTIONS OF MENTAL ILL HEALTH IN ELITE ATHLETES

Scully, D., Kremer, J., Meade, M. M., Graham, R., & Dudgeon, K. (1998). Physical exercise and psychological well-being: A critical review. *British Journal of Sports Medicine*, 32, 111-120. doi:10.1136/bjism.32.2.111

Skulmoski, G. J., Hartman, F. T., & Krahn, J. (2007). The Delphi method for graduate research. *Journal of Information Technology Education*, 6, 1-21.

Stoeber, J., Stoll, O., Pescheck, E., & Otto, K. (2008). Perfectionism and achievement goals in athletes: Relations with approach and avoidance orientations in mastery and performance goals. *Psychology of Sport and Exercise*, 9, 102- 121. doi:10.1016/j.psychsport.2007.02.002.

Sundgot-Borgen, J. and Torstveit, M. K. 2004. Prevalence of eating disorders in elite athletes is higher than in the general population. *Clinical Journal of Sports Medicine*, 14, 25–32. doi:10.1097/00042752-200401000-00005

Swann, C., Moran, A., & Piggott, D. (2015). Defining elite athletes: Issues in the study of expert performance in sport psychology. *Psychology of Sport and Exercise*, 16, 3-14.

Thoits, P. A. (1991). On merging identity theory and stress research. *Social Psychology Quarterly*, 54, 101-112. doi:10.2307/2786929

Toro, J., Galilea, B., Martinez-Mallén, E., Samero, M., Cadevilla, L., Mari, J., ... Toro, E. (2005). Eating disorders in Spanish female athletes. *International Journal of Sports Medicine*, 26, 693-700. doi:10.1055/s-2004-830378

Uphill, M., Sly, D. & Swain, J. (2016). From Mental Health to Mental Wealth in Athletes: Looking Back and Moving Forward. *Frontiers in Psychology*, 7, 935. <http://dx.doi.org/10.3389/fpsyg.2016.00935>

PERCEPTIONS OF MENTAL ILL HEALTH IN ELITE ATHLETES

Vaughan, J. L., King, K. A., & Cottrell, R. R. (2004). Collegiate athletic trainers' confidence in helping female athletes with eating disorders. *Journal of athletic training*, 39, 71.

Vosmer, S., Hackett, S., & Callanan, M. (2009). "Normal" and "inappropriate" childhood sexual behaviours: Findings from a Delphi study of professionals in the United Kingdom. *Journal of Sexual Aggression*, 15, 275-288.

Wolanin, A., Hong, E., Marks, D., Panchoo, K., & Gross, M. (2016). Prevalence of clinically elevated depressive symptoms in college athletes and differences by gender and sport. *British journal of sports medicine*, 50, 167-171. doi:10.1136/bjsports-2015-095756