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A Qualitative Exploration of Mentally Tough Behaviour in Australian Football

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Abstract

The primary aim of this research was to generate insight into observable mentally tough behaviours, or MTb, across different contexts (e.g., training and competition) in an Australian football (AF) environment. A second aim of this research was to explore the utility of MTb as a distinct concept, and identify common behavioural qualities associated with MTb that separate it from other similar constructs. In total, 10 experienced full-time football operations staff were interviewed using a semi-structured interview guide, with inductive thematic analysis employed to analyse the data. Five main themes relating to MTb were identified: adaptive development, consistent training conduct, composed performance actions, responsible and accountable, and team supportive. Overall, the findings of the research provided preliminary support for the proposition that there exists a collection of MTb that are displayed more frequently by athletes considered to possess high levels of mental toughness compared to athletes who are perceived to have low levels of this psychological capacity. A collection of necessary and sufficient behavioural qualities and a working definition of MTb is proposed to further our understanding of potential strategies to develop MT.

Keywords: mental toughness, person-environment interaction, elite athlete, development, concept definition.

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Despite advancements in theory and research over the past 20 years, the collective knowledge base of mental toughness has been described as "theoretically murky" (Gucciardi & Hanton, 2016, p. 441). If we consider the circumstances in which the term mental toughness (MT) is applied by coaches, media, and sport administrators alike, it is often when athletes have displayed an act or series of acts that are reflective of high performance during critical moments where there is pressure to perform or enduring periods that are characterised by high degrees of stress or adversity. Such anecdotal reports depict the centrality of behaviour for discussions regarding the conceptualisation of MT, yet little work has been devoted to clarifying these behavioural features. Preliminary research (e.g., Bell, Hardy, & Beattie, 2013; Diment, 2014) and theoretical discussions (e.g., Gucciardi & Hanton, 2016; Mahoney, Ntoumanis, Mallett, & Gucciardi, 2014) have offered initial insight into the potential value of clarifying our understanding of mentally tough behaviour (MTb) for the conceptual evolution of MT. As such, there remains a need for additional research to shed light on the observable displays or actions that characterise MTb.

Mental Toughness: A Brief Insight

The modus operandi of early MT research was to explore the perspectives of athletes (Bull, Shambrook, James, & Brooks, 2005), coaches (Driska, Kamphoff, & Armentrout, 2012), or a combination of these stakeholders (e.g., Connaughton, Hanton, & Jones, 2010). This methodological approach is also apparent in recent work that has sampled referees (Slack, Butt, Maynard, & Olusoga, 2014) and sport psychologists (Weinberg, Freysinger, Mellano, & Brookhouse, 2016). Researchers aimed primarily to understand what constitutes MT, or what collection of attributes individuals with high levels of MT possess. This foundational knowledge underpinned researchers' efforts to define MT within and across environments using inductive (e.g., from observations, experiences of athletes and coaches; Bull et al., 2005; Driska et al., 2012) and abductive processes (e.g., integrating established

theory with applied knowledge of practitioners; Clough, Earle, & Sewell, 2002). As might be expected from a body of work underpinned by diverse conceptual perspectives and methodological approaches, disagreements exist between scholars with regard to the definition of MT, particularly in terms of the traitness and dimensionality of the concept (e.g., Gucciardi, Hanton, Gordon, Mallett, & Temby, 2015; Jones, Hanton, & Connaughton, 2007; Lin, Mutz, Clough, & Papageorgiou, 2017). Nevertheless, a core theme among this early work was the conceptualisation of MT as an individual difference variable that characterises one's psychological potential for action (Gucciardi, 2017). However, this early work led to the generation of an almost endless list of candidate attributes and characteristics, leading some scholars to question the scientific legitimacy of MT (Andersen, 2011).

In an attempt to synthesise past work, Gucciardi (2017) proposed an updated definition that incorporates aspects considered both fundamental and common across the literature, and which drew from recommendations for the generation of clear concept definitions (Podsakoff, MacKenzie, & Podsakoff, 2016). Specifically, MT can be defined as "…a state-like psychological resource that is purposeful, flexible, and efficient in nature for the enactment and maintenance of goal-directed pursuits" (Gucciardi, 2017, p. 18). This updated definition of MT represents an important expansion because it clarifies the necessary and sufficient conditions of the concept. First, the overarching property is one that encapsulates a psychological resource that characterises one's potential for action, that is, something of value with regard to goal-directed endeavours (e.g., performance, health and well-being). Second, the term 'state-like' characterises mental toughness as something that is enduring in nature yet situationally or temporally salient, the degree to which differs between individuals depending on the magnitude of this capacity. Third, as a psychological resource, MT can be distinguished from related concepts because it is a unidimensional concept that encompasses common psychological dimensions that incorporate purpose, adaptability, and efficiency. For example, mental toughness is often employed synonymously with resilience,

yet there are important distinctions between these two concepts. Perhaps most salient, resilience reflects an emergent outcome that characterises a system's (e.g., individual, team) trajectory of functioning in terms of sustaining healthy levels or bouncing back quickly to homeostasis following adversity exposure (Gucciardi et al., 2018; Kalisch et al., 2017), whereas mental toughness is concerned solely with a psychological capacity of individuals or resource (which has the potential to foster resilience outcomes, e.g., protective factor).

Scholars have diversified their conceptual and methodological repertoires in recent years via sociocultural perspectives (Eubank, Nesti, & Littlewood, 2017; Tibbert, Andersen, & Morris, 2015), organisational culture frameworks (Coulter, Mallett, & Singer, 2016), and personality domain analyses (Coulter, Mallett, & Singer, 2018). In contrast to the dominant view of MT as an individual difference factor, the key emphasis in this work leverages the idea that MT cannot be understood in isolation from the sociocultural contexts in which performers are situated. Of particular relevance are the cultural values and ideals that give precedence to certain qualities or standards of behaviour, which largely resemble an idealised form of masculinity (e.g., strength, push through pain, infallibility, selflessness; Coulter et al., 2016; Tibbert et al., 2015). This conceptualisation of MT as a socially and culturally accepted form of idealised masculinity in sport has caused concern for scholars because it has the potential to promote unhealthy and unethical practices in the pursuit of mentally athletes (e.g., Andersen, 2011; Caddick & Ryall, 2012; for a brief discussion, see Gucciardi, Hanton, & Fleming, 2017).

The conceptualisations of MT as a psychological resource and socially constructed ideal need not be mutually exclusive. 'Value' is central to both conceptualisations; one perspective emphasises the self in driving perceptions of what is personally important (Gucciardi, 2017), whereas the other underscores the social context (e.g., Coulter et al., 2016; Tibbert et al., 2015). Aligned with view that knowledge of MT is scattered across multiple layers (Coulter et al., 2018; Gucciardi, Jackson, Hanton, & Reid, 2015), we can understand

this type of psychological individuality equally in terms of people's traits (i.e., typical expressions of individuality across situations and over time), characteristic adaptations (i.e., contextualised variations of individuality), and narrative identities (i.e., integrative stories for meaning-making; McAdams & Pals, 2006; for a review in sport and exercise psychology, see Coulter, Mallett, Singer, & Gucciardi, 2016). However, the ways by which people express these layers of their MT ultimately depends on the social contexts or cultures in which they are embedded (McAdams & Pals, 2006; Roberts, 2009). It follows that behaviour provides an important vehicle by which to understand the intersection of psychological individuality and sociocultural contexts because it represents people's expressions of internal dispositions within the confines of socially valued norms and standards.

Conceptualising Mentally Tough Behaviour

As the key criticism of scholarly work on MT to date (Andersen, 2011; Caddick & Ryall, 2012), the importance of a clear concept definition is an essential step for scientific progress (Podsakoff et al., 2016). Although preliminary research has started the process of exploring what represents MTb from a psychological (e.g., Hardy, Bell, & Beattie, 2014; Gucciardi, Jackson et al., 2015) or socially constructed perspective (e.g., Coulter et al., 2016; Tibbert et al., 2015), little work has been directed towards specifying a concept definition that summarises current thinking and evidence. Scholars have suggested that MTb can be assessed through "actual goal achievement in the face of pressure or adversity" (Hardy et al., 2014, p. 70) or "the consistent demonstration of salient behaviours across various situations or time points" (Gucciardi, Jackson et al., 2015, p. 68), yet these statements provide little clarification regarding the conceptual nature of MTb. Therefore, an important first step is to consider how MTb can be defined in an attempt to clarify our understanding and guide future work.

Guided by recommendations for high-quality construct definitions (Podsakoff et al., 2016), we consider several factors that are essential for the conceptualisation of MTb. First,

as the core feature of MTb, behaviour can be defined as a specific action in response to a specific stimulus that can be qualified or specified through being seen, heard, or quantified (Gucciardi & Hanton, 2016; Kahng, Ingvarsson, Quigg, Seckinger, & Teichman, 2011). The emphasis is placed on the behavioural response; the things that someone does, or those observable displays, when responding to an external (e.g., performance feedback) or internal (e.g., planning process) stimulus. In a performance context, such behaviours would be those responses that maximise the likelihood of achieving one's desired level of performance. In a training or development context, the necessary behaviours would be those that foster continued skill development to achieve and maintain one's desired level of performance. Second, past work on MTb includes links with coach assessments of goal-directed behaviour in relation to performance in a competitive environment (Beattie, Alqallaf, & Hardy, 2017; Hardy et al., 2014), objective indices of competitive performance (Beattie et al., 2017; Beattie, Alqallaf, Hardy, & Ntoumanis, 2019), high standards/effort (Coulter et al., 2016), consistency and salience (Gucciardi, Jackson, et al., 2015), and personal strengths (Gordon & Gucciardi, 2011). This information provides a useful starting point for a working definition of MTb pertaining to behaviour that is most likely consistently displayed, maintains high personal standards and has an effect on subjective and/or objective goal achievement. However, clear conceptualisation requires preliminary research with subject matter experts to clarify the core set of attributes, or what qualities a behaviour must have, that will differentiate MTb from other concepts (MacKenzie, Podsakoff, & Podsakoff, 2011).

Further exploration of a behavioural approach offers the opportunity to investigate these qualities via 'signature' mentally tough behaviour. Diment (2014) developed a systematic observation checklist of MTb by viewing competitive soccer matches that included Danish female athletes playing in either the under-18 national and senior national teams, and Danish male athletes playing in either the national or European (UEFA) competition. In total, 28 behaviour categories (e.g., 'quick recovery after an error'), category

descriptions (e.g., “quick and productive reaction immediately after an error or loss of possession”), and behaviour descriptions (e.g., “chasing ball; making a 2nd effort or getting quickly into position after an error, being tackled, fouling or losing the ball…”) were identified and subsequently rated by a group of coaches and sport psychologists as to what degree they represented MT. As Diment (2014) acknowledged, this study likely encompassed observations of players with varying degrees of MT, as there was no direct assessment of the players’ levels of MT. The checklist may therefore be limited in the extent to which it provides a reflection of behaviours displayed by athletes considered to possess high levels of mental toughness. Furthermore, with a focus on behaviours in a competitive match, other contexts such as training were not discussed, which could provide a more complete perspective on MTb (Beattie et al., 2019).

In their research with cricketers, Hardy et al. (2014) identified that their inventory was narrowly conceptualised on the premise that MT related primarily to maintaining a high level of performance during competition when confronted with a broad range of stressors. The items of their informant-rated tool were structured to assess how regularly an athlete was able to maintain a high level of performance under certain conditions (e.g., aggressive tactics by the opposition, a close match), as opposed to what the athlete is observed to do to achieve a high level of performance (e.g., maintain a high run rate regardless of playing conditions). As high performance is determined by the complex interactions of psychological, physical, technical, and tactical skills, equating one’s capacity to achieve a “high level of personal performance in competitive matches” (Hardy et al., 2014, p. 71) to their MT is problematic because it does not clarify the necessary and sufficient attributes of the concept. In other words, their definition and operationalisation conflates the concept with the outcome, and excludes clarity on the behavioural attributes that are characteristic of *all* exemplars of MTb and which are *unique* to exemplars of MTb. As such, their tool is also limited to an overall snapshot of performance in competitive situations that requires quantification against

objective performance metrics (e.g., runs scored), with no evaluation of desirable behaviours in other contexts that may provide useful information for the development of MTb. For these reasons, there is a need to consider the behavioural processes (e.g., proactively seeks out information from sport science staff) that underpin high performance (e.g., attain a desired race time) across a broad range of contexts.

Although previous research has provided valuable contributions to our understanding of MTb, there has been minimal discussion regarding the different contexts (e.g., training, competition) that afford athletes the opportunity to develop and display these behaviours, which has the potential to shed light on the necessary and sufficient qualities of MTb. For example, behaviours displayed by athletes with high levels of mental toughness outside of competition, such as during training (e.g., time spent on specific skill development), or in general (e.g., seeking performance reviews with a coach), represent an opportunity to advance our understanding on the content domain, as well as the developmental processes that contribute to those "on-field" displays. The importance of such person-context interactions is central to conceptual frameworks of human development (Bronfenbrenner & Morris, 2006) and is consistent with past qualitative work on the development of MT (Anthony, Gucciardi, & Gordon, 2016). That is, each individual's personal capacity to display certain behaviours is influenced by a range of interdependent person-context factors over time[1]. In most achievement-oriented environments, it is likely that the behaviours a performer wants to develop and frequently display across contexts are those desirable behaviours that lead to goal attainment. As a result, seeking to identify and define behavioural representations associated with MT, or *what* MTb looks like, and in *what* contexts they are displayed represents an important next step for the conceptual evolution of MT.

[1] When discussing contexts in this research, we use Bronfenbrenner and Morris's (2006) conceptualisation, which focuses on the effects of the different physical and social situations occurring within the one environment that can influence one's development.

Overview of the Present Research

The primary aim of this research was to explore social agents' (e.g., coaches, sport scientists) perspectives on observable behaviours, or MTb, displayed by athletes characterised by high levels of mental toughness across training and competition contexts in an Australian football (AF) environment. In so doing, the ultimate goal was to generate a *provisional definition* of MTb that characterises the nature of this concept, and which could be the subject of subsequent investigation in future research. To achieve this goal, we conducted a qualitative investigation designed to enhance the breadth and depth of information pertaining to MTb, drawing on recommendations to include perspectives of a range of roles (i.e., sport scientists, administrators, coaches) within a sporting organisation (e.g., Cook, Crust, Littlewood, Nesti, & Allen-Collinson, 2014; Coulter et al., 2016). An AF environment was chosen because of a professional club's interest in exploring MT development as a means to improve individual and team performance. Given the observational nature of behaviour, we prioritised our efforts to explore informants' observations of elite athletes within high performance environments, targeting only what can be seen, not inferred, and identifying those behaviours displayed by performers considered to have a high degree of MT. We employed semi-structured interviews, with the interview guides based on Kelly's (1955/1991) Personal Construct Theory, which has informed past work on MT (Anthony et al., 2016). Against this theoretical backdrop, our methodological approach provided participants with the opportunity to identify and define, in their own terms, the behaviours they consider to be (un)important to MT (or what MTb looks like).

Method

Philosophical Standpoint

A critical realist approach informed this study in which we subscribed to the belief that there exists an observable, universal truth of MTb, but that we can only explain the nature of this reality imperfectly and provisionally (Sayer, 1992; Maxwell, 2012). This

ontological position emphasises a search for casual explanations that can be examined via mechanisms and contextual influences. For the purposes of this current study, each participants' perspectives of actual events represents a unique version of the reality of MTb, yet it is the commonalities in the interpretations among a group of individuals that provides insight into nature of this universal truth. Recognising the theory-laded and fallible nature of knowledge (Sayer, 1992; Maxwell, 2012), we implemented several steps throughout the research process to minimise potential bias (e.g., multiple perspectives of social agents and analysts, combination of workbooks and interview methods, common definition of mental toughness as the stimulus for discussion). With respect to comparing the analysts' interpretations of the data, it is important to acknowledge that our team brought a diverse range of experiences and perspectives to the table, most notably applied work as psychologists in sport, organisational (AA and BB[2]), and military settings (AA), and pre-existing beliefs regarding the concept of mental toughness from our previous research (AA, BB, and CC).

Sampling and Participants

Participants were purposefully sampled using criterion-based procedures such that they: (i) were aged 18 years and above; (ii) had at least 10 years of full-time experience in high performance settings as a coach, sport scientist, or administrator (e.g., football manager, recruitment); and (iii) observed and interacted frequently with athletes before, during, and after training sessions and games (Freeman, 2014). These criteria were guided by the notion of information power (Malterud, Siersma, & Guassora, 2015), in which an adequate sample for qualitative research is informed by the relevance of participants for the study (e.g., aims, quality of dialogue). Guided by concepts regarding data saturation (O'Reilly & Parker, 2013), the decision to cease interviews was made when little new information arose in terms

[2] We used AA, BB, and CC instead of the actual acronyms of the author names to maintain anonymity during the review process. We will update these initials accordingly if the paper is accepted for publication.

of breadth or specificity of existing themes. In total, 10 male experienced informants participated (M_{age} = 45.4, SD = 7.77), each with a minimum of 15 years of full-time experience engaged at the elite AF level (M_{exp} = 19.9 years, SD = 6.12). Of the 10 participants, seven participants had previous experience working for at least one other club (M_{exp} = 7.13 years, SD = 3.29), six of whom had worked at two other clubs and two had worked at three other clubs. At the time of involvement, participants were employed by a professional AF club in football operations related roles, including coaching (n = 4), sport science (n = 3), and football administration (n = 3), where they had worked for between 1 and 25 years (M = 10.2 years, SD = 8.23).

Data Collection

Following institutional ethical approval, the club's High Performance Manager was provided with details of the participant inclusion criteria; he identified a list of 11 suitable candidates. The first author contacted each prospective participant via phone, email, or face-to-face. Ten candidates agreed to participate, with all interviews conducted face-to-face and audio recorded by the lead author in either the participant's office or a club meeting room. Participants were provided with a verbal brief of the research project, an information sheet and consent form, and workbook that was used as a framework to guide the interview process[3] (see online supplementary material). The first part of the data collection session involved the participant completing the workbook individually (though the interviewer was available for questions on the content and process if required), which was designed to facilitate the open discussion in the second part of the session; this aspect of the interview was not audio recorded because the participant made notes on the workbook. The interviews in the second part of the session followed a semi-structured format to allow for flexibility and convenience in gathering information (Patton, 2002). Questions were framed to be open-

[3] The MTb workbook was developed through pilot work with 42 undergraduate students in exercise and sport science to maximise comprehension and ensure the data gathered was contextually relevant.

ended (e.g., "What do you see athlete X doing during training sessions that makes you think he is mentally tough[4]?"), with a range of probing techniques (i.e., clarification, elaboration, and contrasting; e.g., "How do the actions of athlete X differ from athlete Y following a mistake during a game?") in an attempt to elicit detailed and rich information regarding MTb. The interviews, which excluded time dedicated to completing the workbooks, lasted between 23 and 37 minutes (M = 31 minutes, SD = 3.86 minutes) and yielded 111 pages of single spaced text (i.e., transcribe verbatim). The interview duration was relatively short in duration compared with past qualitative research involving athlete support personnel, as the content of participants' workbooks guided and enhanced the 'richness' of the discussion.

Data Analysis

Interview data were analysed using inductive thematic analysis, drawing on Braun and Clarke's (2006) recursive and reflexive process as a means by which to identify, analyse, and report patterns within a qualitative data set (for methodological guidance, see Braun & Clarke, 2012). This analytical approach was preferred, given the limited research into MTb, and the desire to identify themes in terms of observable behaviours in athletes considered mentally tough. The first author familiarised himself with the data through the transcription process, listened to the audio recordings to check accuracy of the transcripts, and then reviewed the transcripts a second time. The second component involved a first review of the transcripts to identify provisional labels, including interesting features and quotes within the data, which were progressively compiled in an excel spreadsheet. Third, the data was collated into broad themes using an iterative process amongst the three collaborating authors. Adhering to a type of consensual generation of themes (e.g., Marcus, Westra, Angus, & Kertes, 2011), the first author interpreted and reported themes, with feedback and further

[4] We used the term 'mentally tough' in the interviews and description of the methods and findings here to represent individuals who were considered as possessing high levels of this psychological resource as per the guiding definition of mental toughness (Gucciardi, 2017). In other words, coaches were asked to keep in mind athletes who in their opinion possessed large degrees of psychological purposefulness, flexibility, and efficiency, rather than an "all or nothing" perspective of mental toughness (i.e., you have it or you don't).

refinement of ideas sought from the collaborating authors. This interactive approach was used to facilitate the development and challenging of ideas as opposed to a more structured process (e.g., authors' coding chunks of text independently). Aligned with our critical realist standpoint, we considered a theme meaningful when it was characterised by primary data (i.e., quotes) from at least 80% of participants. The fourth phase involved checks of the themes against the coded extracts and the whole data set, with ongoing discussion and refinement amongst the collaborating authors allowing for the generation of a provisional thematic map. Fifth, in a similar iterative fashion amongst the three analysts, the themes were defined and labelled in an attempt to represent the data. The sixth phase involved the selection of representative extracts for each of the themes to relate the analysis back to the research question.

Methodological Rigour

As a key factor when evaluating the rigor of qualitative research (Rubin & Babbie, 2008), the quality of this project was augmented through the adoption of several strategies to achieve sensitivity to context, transparency and coherence, commitment and rigour, and impact and importance (Yardley, 2000). Prior to undertaking data collection, the MTb workbook was piloted to ensure that it was appropriate for the purposes of the study, and the data gathered would be contextually relevant, rich, and useful (Tracy, 2010). To foster transparency and coherence, we employed (i) three analysts during the latter phases of the analysis to consider different perspectives on how themes could be collated and defined, (ii) regular discourse, debate, and collaboration during research meetings, and (iii) open discussions about individual thoughts, biases, and reactions to the data during meetings. In terms of sensitivity to context, (i) interviewer consistency, (ii) pilot interviewing, and (iii) the interviewer's immersion within the club for a six-month period fostered rapport building and contextual understanding. Commitment and rigour were addressed through purposive sampling and consideration of information power regarding the sample size. Finally, in the

discussion we place the results of this study within the context of past research and theory, elaborate on important sociocultural considerations, and identify key practical implications. It is also important to acknowledge the concept of generalisation within the context of qualitative research differs from the probabilistic assumptions that underpin post-positivist quantitative work (Smith, 2018). Thus, although this study was conducted with one group of people from one sport and the same team, we present the methods, results, and discussion sections in a way that can enable readers to assess elements that underpin two types of generalisation (Smith, 2018): sufficient detail on participants' perspectives and our interpretations to connect personally with the findings (naturalistic), and proposal of a working definition of MTb that inform future work (analytical).

Results

Following are the five main themes that were identified with regard to observable behaviours in athletes considered mentally tough. In line with Personal Construct Psychology (PCP; Kelly, 1955/1991), the themes included descriptions of what MTb looks like, or those behavioural qualities frequently displayed by athletes considered mentally tough, as well as contrasting descriptions of behavioural qualities that were displayed by athletes considered less mentally tough. Descriptions, behavioural qualities, and representative quotations of each of these themes are detailed in Table 1, with supporting information provided in the following sections.

Adaptive Development

Participants described a range of observations that related to athletes facilitating ongoing progression and development of skills, and adaptability to sustain growth. The initial behaviours relate primarily to the processing of experiences through language and engagement with others, which provided the foundations for change in on-field actions. When discussing the importance of being able to process information for development effectively, for example, one administrator identified how an athlete considered mentally

tough would work through a learning situation: first identify, then discuss the learning points, and subsequently implement those learning points as a part of his future behaviour:

> You can see the players that do it well; they will make a mistake – say give away a serious penalty when defending due to poor position – and seek out the information from other players and coaches to avoid doing it again, and you rarely see that same mistake twice. You will see that good player working on it at training without prompting, he will enlist the help of coaches. But those players that don't do it well, you watch them give away those same penalties in defence multiple times. And these players require continued encouragement at training to work on it, to get it right.

Another example, when describing an athlete's adaptive approach to adversity, one coach identified how a mentally tough athlete is able to perform well consistently, acknowledging that he can do what is required in light of setbacks. The athlete used positive language to orient himself to performing to his best, whereas the other player considered less mentally tough had a tendency to communicate with a more negative orientation:

> He used to say: "Well if I'm running out I'm playing to the best of my ability." He can perform at his peak when he's not maybe 100%, because he's returning from injury. He had the ability to perform his role, even when he's not playing at 100% of his capacity. That other player needs significant support to get over that hurdle to feel like they're capable of playing and even when you get them over that hurdle they're almost playing with a sticker on their back going, "I'm coming back from injury. Don't expect me to do great things today."

At first glance, one might interpret this quote as reflecting a superhuman version of mental toughness (Andersen, 2011) or sociocultural pressures (Coulter et al., 2016). However, it is important to acknowledge that players in an AF environment are managed carefully and approved to play by a multidisciplinary team of doctors, physiotherapists, strength and conditioning coaches, dieticians, and psychologists. Thus, the instance referred to by the coach in this quote reflects a situation where players have been medically cleared to play.

Consistent Training Conduct

Participants provided a range of different examples that captured the importance of athletes demonstrating effort and energy during training in a consistent manner, regardless of recent individual or team results. On the demonstration of effort, one sport scientist

described the apparent differences in application between an athlete considered mentally tough and one he considered less mentally tough following poor performances:

> That mentally tough player, regardless of what happened on the weekend, he'd come to training prepared, ready, seemingly with a single-minded purpose to be better than he was. You'd see him pushing himself in each drill, out the front in fitness sessions, there at every optional session, loud and constructive voice, on the training track, in the weights room, in team meetings. The other bloke, when the going gets tough he'd almost stop. He'd roll up later, miss optional sessions that he needed. He was good when his performance was up, and did the same things the mentally tough player did, but he'd go into his shell, and he'd be out the back in running drills, not talking, in the weights room he'd be last in and first to leave.

Another example provided by a sport scientist related closely to the motivation process and the resultant maintenance of energy during training, that is, how a mentally tough athlete set goals and challenged himself:

> You'd see him enjoying the challenge almost all the time… Seemed to genuinely enjoy, if there was a challenge between him and anyone else in a training drill, like a marking contest, or even a loose ball, he'd throw himself into it to try and show that he was better at it than someone else. The less mentally tough player, well his application to training would drop off when he was up against someone better, and he'd get beaten; it's as if he was saying: "I've been challenged here, he's a better player, so I'm not going to worry about it."

Composed Performance Actions

Participants identified the importance of athletes' ability to perform under pressure, with examples provided relating to players considered mentally tough displaying composure under pressure on a more regular basis than other performers. Behavioural qualities focussed on greater consistency in skill execution in performance situations. One administrator referred to observations of a collection of players whom he believed were mentally tough, as well as contrasting observations:

> These guys perform under all sorts of circumstances … consistently execute what they needed to do when it was necessary; the appropriate skills for that situation. Not get distracted, not blow up, not let self-doubts affect their performance… The opposite, well you see them get bedazzled [stunned] or panicked, they lacked consistency of performance when under pressure – they would fumble and take longer to dispose of the football, not follow the game plan.

A description by a coach highlights the importance of relying on well developed, or "base" skills to display composure when under pressure:

> No matter what the situation, I don't think you ever see them get angry, or show any outward frustration. Even when things are turning to shit, so to speak, it's, "OK. Back to my starting point. Go over my base skills again. Put in the same level of effort as I did just then." It shows that they're going to maintain their effort. They're going to maintain performance.

The contrasting observations of a less mentally tough athlete provided a different perspective, with one mistake regularly leading to more: "They drop their bundle altogether, and the next time the ball comes down, it's [the mistake] just all going to happen again."

Responsible and Accountable

Participants identified the tendency for athletes considered mentally tough to communicate in ways that indicated they accepted responsibility for their performances, and that they had the capacity to make changes. The language they use and the actions they choose on and off-field represent their acceptance of personal responsibility, maturity, and assertiveness. On language highlighting an athlete's acceptance of personal responsibility, one coach described his interactions with a footballer following a poor performance:

> He would come into his reviews and say: "I had a bad game, and it's not like me. I'll turn it around. My best and worst is not what I'm showing. My best is here. My worst is there. I'm currently here. I've got a lot of upside" It wasn't arrogant, or inaccurate, just his positive self-talk.

When asked for an example of a contrasting athlete, the coach identified:

> The other bloke, well you could hear it in his chat, he'd doubt himself: "Well that's me. I regularly drop those sorts of marks. I always miss shots on goal from that pocket [field position]."

A number of participants identified that athletes considered mentally tough would conduct themselves in a mature and assertive manner during difficult conversations. On discussing athletes who demonstrate this behaviour well and those who do not, one coach highlighted:

> They [the mentally tough players] would enquire why and they would still reason through, they would still discuss, they would still maybe put their point of view but, at the end of the day, say, "Well OK, I'm going back to [the reserve team] and I'm going to do the best I can." The other guys, they voice their disapproval [about being relegated] and say "Oh, bugger this", and play poorly in [the reserve team].

Another type of behaviour pertaining to this theme relates to the importance of acting responsibly during on-field decision making, specifically with regard to considering

individual strengths and limitations in skill execution. On describing examples of a player displaying responsible actions, and the contrasting example, one sport scientist stated:

> He's not a great long kick, but what he can do, and he knows he can do, is hit those 20-30 metre [targets with his] kicks every time. But if you ask him "why didn't you kick it 40 metres over a bloke's head to one of our guys who is clear?", he'll say "that was outside the [team guidelines], and I didn't take the kick initially because I know my limitations and that was too high risk". Instead he'll look for other options that play to his strengths first.
> The other player, he'll take that high risk option – blaze away and then blame someone else when it doesn't come off – "It's someone else's fault. It's not my fault. It's … the coaches for not working with me enough".

Team Supportive

A number of examples of actions that suggested athletes considered mentally tough place the team needs before their individual needs in an AF environment were provided. Both the way they communicate and their actions across contexts in this environment portray a selfless approach that represents the espoused organisational values. One example conveyed by a coach, relating to performance specific team needs, was as follows:

> Straight after a game he wants to know, "What have we got to improve on?" His focus is on the team and his teammates before he'll worry about himself. The selfish guy, he's purely worried about his own game; no consideration for anyone else but himself. This guy will sit there in the game reviews and not engage, not offer opinions or ask questions, especially when he may have played well, regardless of team performance.

When discussing organisational values-related behaviours, there was regular discourse about those athletes considered mentally tough being able to adapt more quickly to cultural change. On explaining behaviour that represented alignment with changing team values and the contrasting behaviour, one administrator highlighted:

> He wasn't afraid to speak up and say, "This is now what is expected of us. This is now what we should be doing. This is now how we should behave." Once he understood the change, he could easily explain to others what was needed, as well as do those things himself. He'd be the one saying "Come on let's go. It's time to hit the sack [go to bed]". The opposite, well that player is focused on himself. When he's asked to sacrifice something for the good of the team, he'll rarely do it. He knows what the team standard is, but he's got other mates going, "Oh, you don't need to do that. You know, you're OK as it is – you never used to have to do that", and he does what he wants, what he's always done.

A sport scientist also provided support for the contrasting perspective:

> They don't buy into the club culture; the values and everything that the players had set up. "My mate said come out for a beer so I'll go for a beer" when they know they've got training the next day.

Discussion

The purpose of this study was to explore social agents' (e.g., coaches, sport scientists) perspectives of MTb within an AF environment, with the view to generate a provisional definition of the key characteristics of this concept. Although previous MT research has referenced the importance of exploring behaviours to refine our understanding of MT (e.g., Diment, 2014; Gucciardi, Jackson, et al., 2015; Hardy et al., 2014), little work has directly targeted these observable behaviours across training and competition with the view to shed light on the necessary and sufficient attributes of MTb. The findings provide support for the proposition that athletes who are considered to possess high levels of mental toughness display certain desirable behaviours more frequently than athletes who are believed to possess low levels of psychological purposefulness, flexibility, and efficiency. Five broad categories of MTb were identified to form a collection of MTb across different contexts within an AF environment, namely adaptive development, consistent training conduct, composed performance actions, responsible and accountable, and team supportive. Several of these themes (e.g., handling pressure), and particularly the importance of considering behaviours across multiple contexts (e.g., training and competition), are consistent with aspects of early work on MT (e.g., Jones et al., 2007).

The findings of this study indicated that, collectively, the administrators, sport scientists, and coaches discussed similar desirable behaviours in athletes they considered mentally tough, and similar less desirable behaviours in athletes they considered less mentally tough. As previously suggested (e.g., Coulter et al., 2016; Tibbert et al., 2015), the results of the study must be considered in light of the sociocultural influences that this particular AF environment may have on the participants' observations and experiences. Notably, in light of these cultural considerations, there was also a tendency for coaches to use

'all-or-nothing' language when referring to what it was that mentally tough athletes actually do (e.g., "He *always* trains harder than his teammates", or "He'd *never* get beaten in a contest"), which has been cited as an ongoing problem with the conceptualisation of MT (e.g., Andersen, 2011). This terminology was prevalent despite our efforts in the contextualisation of the study to describe mental toughness as differing in degrees of psychological purposefulness, flexibility, and efficiency, rather than something one either has or does not. As a result, there was a consistent requirement to probe participants for further information to qualify and specify the actions demonstrated by the athlete when he is training harder than his teammates (e.g., "What actions did they display to make you think they trained harder than his teammates?"), as opposed to their subjective interpretations. From a practical standpoint, sport psychologists at the coalface might need to challenge such statements and terminology to help social agents appreciate the ethical considerations of such 'all-or-nothing' language (e.g., does he really display such behaviours all of the time, or is it the case that he does so *most but not all* of the time?).

These findings also draw attention to the limited specificity regarding the conceptualisation of MT by experienced stakeholders. In their research with experienced AF coaches, Gucciardi, Gordon, and Dimmock (2008) identified that mentally tough athletes were often seen as exemplars of doing *everything* right. Several years later, it appears this all or nothing perception of MT remains in a similar cohort, which is supported by recent research in an AF environment (Coulter et al., 2016). As an alternative view to MT as a culture-specific construct that is less changeable due to broad historical or cultural influences (acknowledging that culture has an influence on what might be considered valuable; i.e., 'team-supportive'), it may be that we are yet to commit the time to understand adequately what MT looks like and how it can be developed in elite environments. Elite athletes will adopt different physical skill training programs for different reasons (e.g., according to career stage) compared with their closest rivals, yet both types of athletes can achieve success

(Halson, 2014; Kraemer, Duncan, & Volek, 1998), suggesting that physical skills and high performance are not developed solely by doing *everything* right. The process of psychological skill development should be considered no different to physical skill development. Practitioners have highlighted the importance of tailoring psychological skills training programs to suit individual needs and career stage (e.g., Gould & Maynard, 2009). Therefore, discouraging this categorical perspective by promoting discussion about what we observe mentally tough athletes doing and when they are doing it, allows an opportunity to deconstruct MT, and makes the prospect of understanding and developing this resource and other psychological skills a more achievable process in the eyes of stakeholders.

We proposed that MTb pertains to behaviour that is likely consistently displayed, maintains high personal standards, has an effect on subjective and/or objective goal achievement, and performance. Incorporating the findings of the current research with recommendations for clear concept definitions (MacKenzie et al., 2011; Podsakoff et al., 2016), we propose a working definition of MTb as a purposeful yet adaptable verbal or physical act that aligns positively with self-referenced objectives or goals. As another important step in the concept development process, the conceptual themes, or the qualities that are necessary to describe the concept of MTb (Podsakoff et al., 2016), should be considered to assist in identifying whether or not a behaviour is an exemplar of MTb. As a result, we propose several necessary (i.e., "all exemplars of the concept must possess) and sufficient (i.e., "things that only exemplars of the concept possess") qualities of MTb derived from the results of this study (Podsakoff et al., 2016, p. 181; see Table 2). For example, a footballer who cognitively plans a strategy to deal with a specific stressor in a match (e.g., use controlled breathing to manage arousal when taking a set shot for goal when under time pressure) would not be considered an exemplar of MTb (perhaps MT as a psychological resource) because it is a thought and there is no evidence of voluntary behaviour (A1), and it cannot be seen or quantified by an observer (A2/A3). Instead, it is the enactment of that plan

through overt behaviour that would reflect MTb, which meets the minimum requirements of A1 to A7 listed in Table 2; for example, testing and adjusting the controlled breathing strategy in practice, as well as perhaps working with coaches and/or support staff to refine it, until a positive effect on performance is achieved.

It is important to consider two important conclusions that can be gleaned from this research. First, the analysis and identification of MTb has the potential to shed light on the mechanisms by which MT influences goal strivings and performance. Although previous research has identified a link between MT and performance (e.g., Bell et al., 2013), there has been limited clarity regarding the *what*, *how*, and *when* of MT that contributed to high performance and how it can be operationalised (Gucciardi & Hanton, 2016). We believe that the behaviours identified here, the working concept definition, and necessary and sufficient qualities of MTb provide an important first step in clarifying the behaviours displayed by mentally tough athletes. These athletes are considered mentally tough because they are more consistently doing *what* is required (e.g., stopping their direct opponent scoring from marks because of excellent positioning), *how* it is required (e.g., by playing tight defence, arm in contact with opponent's body, and attempting to spoil in each contest), and *when* it is required (e.g., each time play enters their zone in the next five minutes of a match). It is expected that the display or execution of MTb on a regular basis provides the foundation for an athlete's ability to achieve and maintain a high level of performance; this hypothesis requires testing in future research.

Second, the five categories of MTb offer an alternative understanding of potential targets for the development of MT, and suggest that there are opportunities to target and develop specific behaviours associated with MT incrementally at different times and across multiple contexts. These categories encompass the range of inter-related contexts (e.g., performing, training, reviews, and meetings) that athletes experience within modern day sporting environments. Similarly, these MTb categories do not exist in isolation, with some

overlap and interdependence evident (e.g., composed performance actions often results from consistent training conduct). This finding is unsurprising if one subscribes to the conceptualisation of MT as a psychological resource that characterises one's potential for action towards something of value within the context of goal-directed endeavours (Gucciardi, 2017). It is commonplace in elite sport and many areas of life (e.g., work, education) for individuals to pursue multiple goals (Neal, Ballard, & Vancouver, 2017). Broadly speaking, multiple goal striving and progress can be independent in nature and pursued simultaneously (e.g., work on two tasks concurrently) or not (e.g., work on two tasks at different times), sequentially interdependent (e.g., goal A must be achieved before goal B), or reciprocally interdependent (e.g., goal A fosters the attainment of goal B which in turn can help achieve goal A) (Sun & Frese, 2013). In each case the behaviours required to maximise goal attainment will likely aggregate or converge over time as a resource caravan rather than exist in a piecemeal fashion (Hobfoll, 2002).

Limitations and Future Directions

There are limitations of the current study that warrant further discussion. First, the relatively short duration of the interviews may raise concerns for some readers regarding the depth or richness of the discussions. The participants wrote extensive notes in their workbooks, which meant that the verbal discussions honed in on key aspects of their written reflections that were unclear to the interviewer. The deep immersion of the lead author in the football club the 6 months prior to the interviews meant that he had reasonable 'corporate knowledge' of the club and their operations. As such, he focused on probing the participants about comments that were unclear to him. Nevertheless, we acknowledge that the information reported during the formal interview may have only scratched at the surface.

Second, the sample was drawn from one AF environment and therefore the findings may reflect commonalities in perceptions that are underpinned primarily by the sociocultural characteristics of this organisation (though the majority of participants had previous

experience within at least one other club). Future work is required to pay attention to the different types of generalisation that are characteristic of qualitative research (e.g., naturalistic, analytical; Smith, 2018). In light of recent research into the sociocultural factors of MT in AF (Coulter et al., 2016), and the potential "dark-side" of MT (Caddick & Ryall, 2012), we acknowledge that some of the findings relating to MTb in the current paper could be coded in a different manner had one adopted an alternative philosophical standpoint. Consistent with our critical realist approach, we focused on identifying commonalities in perceptions of behaviours that aligned with the characteristics that formed part of our definition and were beneficial to the individual within the environment (e.g., *contributes positively* to an individual's performance, aids in the attainment and progression of *self-referenced objectives*). Noting that there were some similarities in identified behaviours between our findings and research in other performance environments (e.g., Diment, 2014), additional research is required to explore these similarities and/or differences across environments, as well as the influence of sociocultural factors.

Third, although we asked our participants to draw on observations of athletes they considered to have high and low levels of MT, the information is nevertheless retrospective and may be subject to recall bias that is considered problematic in retrospective reporting (Ross, 1989). It is important to use this information to assist in developing alternative methods to minimise the subjective nature of previous scales. This foundation can be used to develop and examine validity evidence for a systematic observation checklist that can assist with the behavioural analysis of MT, and compare it against other measures of MT, as well as objective performance measures. Doing so will aid in the progression of our understanding of MT and how it is incrementally developed, as well as enhance measurement and utility in performance environments.

The findings of the current study provide a starting point for furthering our understanding regarding how the concept of MT can be developed by considering a

behavioural approach. One direction for future research could involve the identification of strategies that can be used to develop the MTb that have the most influence over performance. This process could be achieved through further qualitative or observational research in training and development settings, developing and piloting interventions that target either specific MTb categories, or MTb as a whole, as a means to identify those approaches that may be most effective (e.g., Anthony, Gordon, Gucciardi, & Dawson, 2018). Notably, previous research into MT development has employed established psychological models to assess their utility. Mahoney, Ntoumanis, Gucciardi, Mallett, and Stebbings (2016) developed a program using self-determination theory (SDT, Deci & Ryan, 1985), and Bell et al. (2013) based their program on the tenets of revised reinforcement sensitivity theory (rRST, Gray & McNaughton, 2000). Although results were varied, the application of established psychological models (e.g., behaviourism) may offer pathways to developing those specific MTb described herein.

Conclusion

This research is among the first to define and explore MTb explicitly across different contexts within a particular environment. The findings provide preliminary support for our proposition that there exists a collection of MTb that are more frequently displayed by athletes considered mentally tough compared to athletes considered less mentally tough, and a provisional definition of MTb that may be evaluated in future research. It has also provided an opportunity to consider an alternative perspective for the MT development process, although there is value in further investigating how we develop certain MTb from an interdependent person-context perspective. Overall, continuing to explore the identified MTb herein – those behaviours that can be implemented, increased, or moderated across different contexts over time – has the potential to further the collective understanding of the concept of MT and its development, and potentially remove some of that ‘theoretical murkiness’ in the existing knowledge base. It also provides increased opportunities to create a substantive link

between MT and performance by exploring those factors that may mediate this effect via the measurement of those desirable and observable behaviours. As a result, there is potential to align what can be considered an incremental MT development process with other physical skill development processes (e.g., refining kicking technique, increasing leg strength, or improving defending skills), which can also lead to clarification of what MT means for stakeholders in performance environments.

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Table 1. *MTb categories, descriptions, and behavioural qualities, with representative and contrasting quotes.*

Category label	Description	Behavioural Qualities	Representative quotes	Contrasting quotes
Adaptive Development	Displays ongoing progression in the maintenance of strengths and refinement of development areas, and adapts to changing situations to sustain growth and performance.	Exhibited in training contexts (e.g., growth). Exhibited in competition contexts (e.g., performance). Valued by individual, teammates, and organisation. Voluntary and observable.	Coach: They will say, “no give me more…” without being silly about it. They know themselves well enough to be able to say, “give me more”, or “I need more”, or “it’s time – I’ve got to stop”.	They don't follow the best advice that's been given to them. They consistently do what they want and not what others advise them to do with the expertise.
Consistent Training Conduct	Effort and energy levels, and valued behaviours during training remain consistent regardless of situation.	Exhibited in training and rehab contexts. Valued by individual, teammates, and organisation. Voluntary and observable. Enhances likelihood of individual goal achievement.	Coach: It's about training to a standard, and not the standard of the training you're at, but the standard that you set yourself, that standard expected by the coaches.	Will do the training and tick the box and go, "Yeah, I ran three 1 kr’s [1km time trial]." All right, "Did you run them in three minutes 30 like we're supposed to?" "Oh, nearly."
Composed Performance Actions	Displays and/or verbalises positive behaviours, and acts decisively in pressure situations.	Valued by individual, teammates, and organisation. Exhibited in competition contexts. Can be quantified by observer. Enhances likelihood of individual goal achievement. Enhances the likelihood of collective goal achievement.	Coach: These blokes will work hard to get a kick. These blokes will work just as hard to stop someone getting a kick, regardless of the scoreboard. They apply their skills consistently, when most things are thrown at them, they can cope with it and still maintain their performance.	When the opposition's got the ball and he's jogging back to defend and he looks absolutely rooted [physically stuffed]. We mark it and then he's off like the clappers [rapidly] so within a space like that the intensity goes from here to here [nothing to maximal] because now we've got the ball.

Category label	Description	Behavioural Qualities	Representative quotes	Contrasting quotes
Responsible & Accountable	Acknowledges role in mistakes and performance, and asks questions to understand what needs to change.	Voluntary and observable. Can be quantified by observer. Valued by individual, teammates, and organisation. Exhibited during reviews, meetings, and lectures. Enhances likelihood of individual goal achievement.	Administrator: Don't look for excuses: sometimes you just met a better opponent, sometimes you played poorly, or sometimes you had an off day. That happens.	Not being able to admit that he stuffed that up; always someone else's fault, or there's a laying of blame. They make up excuses, the way they speak. When it's a hot day it'll be that, or "My toe is sore".
Team Supportive	Acts in ways that benefit the team, asks questions to ensure he can best perform his role to benefit the team, and takes collective approach to performance.	Valued by individual, teammates and organisation. Exhibited during training, reviews, meetings, and lectures. Enhances the likelihood of collective goal achievement.	Sport Scientist: If he feels that the outcome is based around what the group colludes together to do, he'll fit into the group to get that outcome even at the expense of himself.	Opting out or complaining. So they will voice their displeasure at being put in a particular group or position. They might feign injury, illness, whatever to avoid the participation and/or just moan and complain.

Table 2. *Comparing necessary and sufficient qualities for MTb compared to MT.*

Qualities (Attributes)	**MTb**	**MT**	**Conclusions**
A1: Voluntary behaviour	Present	Absent	Necessary but not sufficient
A2: Can be seen or heard by an observer	Present	Absent	Necessary but not sufficient
A3: Can be quantified by observer (e.g., frequency, intensity, duration)	Present	Absent	Necessary but not sufficient
A4: Valued by the individual	Present	Present	Necessary but not sufficient
A5: Enhances likelihood of individual goal achievement	Present	Present	Necessary but not sufficient
A6: Valued by colleagues/ teammates	Present	Present	Necessary but not sufficient
A7: Valued by the organisation	Present	Present	Necessary but not sufficient
A8: Goal-directed behaviour exhibited during training contexts	Present	Absent	Sufficient but not necessary
A9: Goal-directed behaviour exhibited during other development contexts (e.g., reviews, meetings, lectures)	Present	Absent	Sufficient but not necessary
A10: Goal-directed behaviour exhibited in competition context	Present	Absent	Sufficient but not necessary
A11: Behaviour exhibited during injury rehabilitation	Present	Absent	Sufficient but not necessary
A12: Enhances the likelihood of collective goal achievement	Present	Present	Sufficient but not necessary
A13: A1 to A7	Present	Absent	Necessary and jointly sufficient

Supplementary Material

Mentally Tough Behaviour Workbook

Section 1 – INSTRUCTIONS: On the next page, you will find a blank worksheet containing different sections. Your task is to complete the worksheet in the following manner:

1. There are three lines at the top left of the page with the heading "**Mentally Tough Athlete/s**". Write down at least one athlete and their primary sport who has high degrees of mental toughness as per the working definition: "a state-like psychological resource that is purposeful, flexible, and efficient in nature for the enactment and maintenance of goal-directed pursuits". Feel free to list additional athletes, preferably from the same sport, which may make the process easier as you proceed. If you can identify athletes you don't believe fit the definitions, write them at the top right of the page.
2. Starting at the top of the table in the "**Behaviour (MTb)**" column second from the left, provide a short label for what you consider to be an *observable Mentally Tough Behaviour* displayed by your identified athlete that relates to high performance.
3. After you have labelled a mentally tough behaviour for your athlete/s, please provide a short description of what you might observe the athlete doing or look for to identify such behaviour under the "What do you observe?" column.
4. Repeat Steps 2 & 3 until you cannot think of any more *observable Mentally Tough Behaviours* your athlete exhibits. Don't worry if you can't identify 10 observable behaviours, the aim is to describe as many as possible.
5. Your next task is to identify the opposites of each of your listed Mentally Tough Behaviours under the "**Opposite behaviour**" column. It may be helpful to consider the following question in eliciting this contrast pole: "Someone who does not display [*MTb*] would display behaviour such as…?"
6. After you have labelled the Opposite Behaviours of the Mentally Tough Behaviour for your athlete/s, please provide a short description of what observable actions might indicate that an athlete is displaying this opposite behaviour under the "What do you observe (i.e. what do you see the athlete doing)?" column to the right of the Opposite Behaviour column.
7. Repeat Steps 5 & 6 to identify the Opposite Behaviour for all of your listed Mentally Tough Behaviours.
8. After developing your list of observable Mentally Tough Behaviours and Opposite Behaviours, your next task is to provide an indication of which behaviours you consider to be the most important for the athlete/s high performance in their sport. Under the "**Order of Importance**" column on the far left of the worksheet, assign a 1 to what you believe the most important Mentally Tough Behaviour for performance, through to 10 (or however many you identified) for the least important behaviour for high performance.
9. The final step is to list the importance of these Mentally Tough Behaviours across sport performance more generally. Under the "**Importance to Sport Performance Generally**" column on the far right of the worksheet, provide a ranking by considering the following question for each of the behaviours you identified: "How important is each of these behaviours to mental toughness in sport more generally on a scale of 1 (not important at all) to 10 (of crucial importance)."

*Section 1 is completed once you have progressed through Steps 1 to 9 described above.

Mentally Tough Athlete/s	**Sport (if other than AF)**	**Less Mentally Tough Athlete/s**	**Sport (if other than AF)**

Order of Importance	**Behaviour (MTb)**	What do you observe (i.e. what do you see the athlete doing)?	**Opposite Behaviour** "Someone who does not display [*MTb*] would display behaviour such as…?"	What do you observe (i.e. what do you see the athlete doing)?	**Importance to Sport Performance Generally**

Note: Rank order of importance includes 1 = most important and 10 = least important; General importance to sport performance ratings include 1 = not important at all and 10 = of crucial importance.

Section 2 – INSTRUCTIONS: On the next page, you will find a blank worksheet containing different sections. Your task is to complete the worksheet in the following manner:

1. Using your response sheet from Section 1, please enter each of your "**Behaviour (MTb)**" and "**Opposite Behaviour**" constructs in the boxes provided on the outer borders of the page (above the label "***[Behaviour (MTb)] vs [Opposite Behaviour]***").
2. Your second task is to generate a list of situations/circumstances/events that you believe demand some degree of mentally tough behaviour. These situations may demand one, some or many mentally tough behaviours. Please identify as many situations – both during and outside of a game or competition – and record each of them into a separate box in the table in the centre of the page. You may or may not fill the entire Table – don't worry if you don't but please try to jot down at least 7 situations.
3. Starting with one of your bipolar constructs, draw a connecting line between this behaviour and all the situations you believe the behaviour is useful in dealing with. Note that the behaviours may be useful for more than one of situations you have listed. Once you have connected this first bipolar construct with those situations it is considered useful for, repeat this same step with each of your remaining bipolar constructs.

*Section 2 is completed once you have progressed through Steps 1 to 3 described above.

Situations/Circumstances/Events requiring Mentally Tough Behaviour

[Behaviour (MTb)] vs [Opposite Behaviour]		*[Behaviour (MTb)] vs [Opposite Behaviour]*
[Behaviour (MTb)] vs [Opposite Behaviour]		*[Behaviour (MTb)] vs [Opposite Behaviour]*
[Behaviour (MTb)] vs [Opposite Behaviour]		*[Behaviour (MTb)] vs [Opposite Behaviour]*
[Behaviour (MTb)] vs [Opposite Behaviour]		*[Behaviour (MTb)] vs [Opposite Behaviour]*
[Behaviour (MTb)] vs [Opposite Behaviour]		*[Behaviour (MTb)] vs [Opposite Behaviour]*