

The Development and Implementation of a Mental Toughness Training Programme for Cricketers

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Abstract

The professional turn in sports has prompted the search for explanations beyond the physical when discussing quality of performance. Mental Toughness has been recognised as one of the most important psychological attributes in achieving performance excellence across multiple sport settings. Yet, despite this, little research has been conducted into mental toughness development. This research seeks to answer the question: What insights can the development and implementation of a mental toughness programme for a semi-professional South African cricket team provide regarding Mental Toughness development? Based on a theoretical framework of mental toughness in cricket, a programme was developed in collaboration with the Border Cricket Team and Coaches. Incorporating elements that focussed on education, environment, awareness and mental skills, the programme was implemented in both individual and group settings during the off- and pre-seasons. An analysis of the participants' experiences identified the need for a theoretical understanding of mental toughness within teams, facilitating the design of interventions that integrate the team and the individual. Future programmes should include measures of mastery, and individually customised approaches to mental toughness enhancement that acknowledge the potential contextual and individual variation in mental toughness.

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1. The development and implementation of a mental toughness training programme for cricketers

With the burgeoning growth in discourse surrounding mental toughness and sport, this research aims to shed new light on the understandings of mental toughness in South African cricket. With constant question marks around the Proteas ability to perform in the pressure moments of big tournaments, the idea of a mentally tough South African national side (at least in limited over formats) seems quite far off (ESPNcricinfo, 2013). Regardless of whether the national team are performing well, gaining a better understanding of how to design and implement mental toughness training, remains important. Using an action research approach to document the development and implementation a mental toughness programme, this research hopes to find more effective ways of developing programmes for South African cricketers.

Building on the research of McInerney (2010), this study has taken the stance that investigations into interventions targeting mental toughness development can provide valuable insight into both the existing models of mental toughness development, and best practice for mental toughness training. While McInerney (2010) focussed on mental toughness in young cricketers, working with a school cricket side of 14 and 15 year old boys, the present research aims to augment those findings using a sample of semi-professional cricketers.

The following sections will review the developments in the conceptualisation and measurement of mental toughness and the implications of recent research into mental toughness interventions. The sections of this dissertation are structured around the action reflection cycle of the organisational development process (ODP) model (McLean, 2005). Each section, from *Entry and Start-up* to *Adoption and Separation*, will describe the methodology and implementation of that phase of the research. The section entitled *Evaluation* describes the phase of the ODP model examining the participants' perceptions of the training. The significant findings of the research will be discussed in this section.

In accordance with emphasis in qualitative research on acknowledging the role of the researcher in the construction of knowledge, I have written from a first person perspective to highlight the reflexive stance that has been consistently employed throughout this research (Reason & Bradbury, 2008).

The following review of the literature will outline the development of our understanding of the concept of mental toughness. I will demonstrate how it has developed from the initial body of work by James Loehr and other early researchers in the 1980's, through a number of attempts to define and measure it, into working models of mental toughness development. This body of

literature lays a foundation for the development of our understanding of mental toughness through the applied work of a mental toughness intervention.

1.1 Sports Psychology

Despite sport psychology only recently developing a significant presence as an applied practice, researchers have been interested in the psychology of sport for over a century (Gardner & Moore, 2006). As early as the 1890s Norman Triplett was working with competitive cyclists, investigating why cyclists rode faster when cycling with others, than when they cycled on their own (Weinberg & Gould, 2011). In the 1920's Coleman Griffith the 'father of American Sport Psychology' (Kroll & Lewis, 2007) published books on the *Psychology of Coaching* and the *Psychology of Athletics* and opened the first sport psychology laboratory. Meanwhile Russian researcher Akvsenty Puni was breaking new ground, developing a conceptual understanding of the role of the vital concepts of arousal, self-regulation, distractibility, and goal setting, in psychological preparation for competition (Weinberg & Gould, 2011).

Prior to the 1960's there was a strong focus in the field, on understanding and enhancing the development of motor learning, and researchers were often found in departments of physical education and exercise science (Gardner & Moore, 2006). During this time some of the first applied work in sport psychology was conducted by Dorothy Yates. She developed the relaxation-set method, a combination of relaxation and positive affirmation designed to enhance performance in boxers (Weinberg & Gould, 2011).

With the rise of the cognitive and behavioural movements, the psychological landscape shifted and sport psychology began investigating the role of cognitive, affective and behavioural strategies in performance and performance enhancement (Gardner & Moore, 2006).

In tandem with the turn towards professionalism in sport, the field of sport psychology has developed and evolved. In the late 21st century the demands of professional sport, motivated the field of sport psychology to begin investigating how to enhance performance (Sheard, 2009). With more and more people investing increasing resources, time, money and emotional interest in the business of sport, sport psychology grew as an applied field of psychology focussed on providing athletes with the skills and tools to improve their performance (Weinberg & Gould, 2011). It is in this context that our understanding of mental toughness has developed.

1.2 Mental Toughness

Mental Toughness is becoming an increasingly ubiquitous term. Heard in the press, on television, in the newspaper, on the radio, and mentioned in dressing rooms and pre-match talks;

it is becoming an increasingly important concept (Sheard, 2009; Crust, 2007). Associated with peak performance and consistency it is a concept that has recently garnered increasing research attention. This review of the mental toughness research will briefly outline the research produced as a result of this attention in the last three decades. It will use the work of Jones, Hanton and Connaughton (2002) as the focus of a discussion around attempts to establish a definition of the construct. There is also strong emphasis on the work of Bull, Shambrook, James and Brooks (2005). Due to their focus on mental toughness development in cricket it is of particular importance in relation to this research.

In the 1980's James Loehr was one of the first to investigate and begin discussing the concept of mental toughness and its role in sporting performance. In his writing Loehr stated,

Mentally tough athletes have learned, or developed, two important skills: first the ability to increase their flow of positive energy when faced with adversity or crisis; and second, to think in ways that promote the right attitudes to solve problems or to deal with pressure, mistakes, or competition. (Cited in Crust, 2007, p. 278)

His understanding of the concept was a starting point for a research interest that was slow to take off but has increased dramatically over the last decade.

Initial research into mental toughness by authors such as Loehr, Gould, Hodge, Williams and Goldberg has been criticised by a number of sources, as being based on anecdotal evidence and personal opinion, and lacking precision and scientific rigour (Connaughton & Hanton, 2009; Crust, 2007; Crust, 2008). A number of research groups appear to be attempting to remedy this and advance our understanding of mental toughness through a variety of approaches.

In 2001 Fourie and Potgieter were among the first to research the components of mental toughness through a qualitative questionnaire study in a South African sample of 291 athletes and coaches. They identified twelve characteristics of mental toughness including, in rank order: (1) motivational level; (2) coping skills; (3) confidence; (4) cognitive skill; (5) discipline and goal directedness; (6) competitiveness; (7) possession of prerequisite physical and mental requirements; (8) team unity; (9) preparation skills; (10) psychological hardiness; (11) religious convictions; and (12) ethics.

Fourie and Potgieter's (2001) findings identified strong similarities with Loehr's work. These similarities have continued to appear throughout the attempts to conceptualise and define mental toughness. Fourie and Potgieter's (2001) study heralded a surge of research interest into this area of sport psychology.

A year later one of the more influential studies was published by Jones et al. (2002) and it has infused the literature around mental toughness. Although there are a number of criticisms of their work (as outlined below) no research can ignore their contribution, as their definition has been widely referenced and presents a strong conceptualisation of the construct (Bull et al., 2005; Crust, 2007; Crust, 2008; Connaughton & Hanton, 2009; Middleton, Marsh, Martin, Richards, & Perry, 2004a; Thelwell, Weston and Greenlees, 2005).

1.3 Mental Toughness and Performance

Jones et al. (2002) conducted a comprehensive qualitative study to define and identify key attributes of mental toughness. They used a sample of elite athletes based on the argument that using elite performers as participants builds on the established link between performance achievement and mental toughness, where “the almost negligible physical and technical skill level differences in most elite athletes... implies that the true test of mental toughness at the elite level is achieving success” (Jones et al., 2002, p. 214). This assumption raised a number of very important questions that are still being debated within the field.

Critics such as Crust (2007, 2008,) and others pointed out that the sampling method used by Jones and his colleagues (2002) assumed that there was a direct link between mental toughness and success. The claim is that the assumption was faulty on the grounds that success may be influenced by a wide variety of factors, and that there has not been an objective evaluation of the relationship between mental toughness and “performance, cognitions or cognitive strategies, behavioural tendencies or affective states” (Crust & Azadi, 2010, p. 44). Nicholls, Polman, Levy and Backhouse (2009, p. 74) presented findings that supported earlier conclusions by Golby, Sheard and Van Wersch (2007) that “physical attributes, technical skill, or different psychological factors predict achievement level more accurately” than mental toughness.

Connaughton and Hanton (2009) emphasised that because elite sport highlights the slightest of advantages it implies that a sample of the most successful athletes will include a large number of mentally tough performers. Using elite athletes is therefore an adequate sampling strategy for a foray into the conceptualisation of mental toughness (Connaughton & Hanton, 2009).

Perhaps the key to this debate is that there was at the time (and perhaps still now) no reliable psychometric measure to identify a representative sample. Although this provides some justification for the use of elite athletes in identifying the mentally tough, it should not suggest

that all elite athletes are mentally tough, or even that only elite athletes can be mentally tough (McInerney 2010).

Recently further research has helped to highlight the complexity of this debate and presently the evidence appears to suggest that level of competition may not be a great predictor of level of mental toughness, but that years of experience (and age) are more accurate indicators (Gucciardi, 2010; Nichols et al., 2009).

1.4 Defining Mental Toughness

Despite the debate about the sampling strategy Jones et al.'s (2002) research was extremely significant in beginning the generation of a sound understanding of mental toughness. Jones et al. (2002) began with a focus group of three elite athletes that established a working definition, and a list of attributes of mentally tough performers. Concerns were raised regarding the small size of this focus group, casting some doubt on the initial phase of the research, although the use of seven further athlete interviews to evaluate and build on the findings of the focus group may have helped overcome any problems (Crust, 2007). Jones et al. (2002) then reviewed the material of the interviews and focus group and developed a definition and a list of twelve attributes. These were then presented back to the participants, who were asked to evaluate the definition and rank the attributes.

The attributes were justified with quotes from the interviews and focus group. Four key areas emerged from these attributes, namely, *focus*, *self-belief*, *dealing with pressure* and *motivation/resilience*. The attributes were ranked as follows: (1) having an unshakeable self-belief in your ability; (2) having an unshakeable belief that you possess unique qualities and abilities; (3) having an insatiable desire and internalised motives to succeed; (4) bouncing back from performance setbacks; (5) thriving on the pressure of competition; (6) accepting that competition anxiety is inevitable; (7) not being adversely affected by others' performances; (8) remaining fully-focused on the task at hand in the face of personal life distractions; (9) switching a sport focus on and off as required; (10) remaining fully-focused on the task at hand in the face of competition-specific distractions; (11) pushing back the boundaries of physical and emotional pain; and (12) regaining psychological control following unexpected, uncontrollable events (Jones et al., 2002).

According to Jones et al. (2002) the empirical and rigorous nature of their research allowed distinct definitions of each component and produced a specific outline of how mental toughness is achieved. They defined mental toughness as,

Having the natural or developed psychological edge that enables you to: Generally cope better than your opponents with the many demands (competition, training, lifestyle) that

sport places on a performer; and specifically, be more consistent and better than your opponents in remaining determined, focused, confident, and in control under pressure. (Jones et al., 2002, p. 209)

Middleton et al. (2004a, p. 1) criticised the above definition for describing “what mental toughness allows one to do, rather than defining mental toughness itself”. In their research, Middleton et al. (2004a) attempted to define mental toughness using qualitative interview data drawn from a sample of 33 elite athletes, coaches, sports psychologists and managers. They identified 12 characteristics of mental toughness including: (1) self-efficacy; (2) mental self-concept; (3) potential (beliefs about future); (4) task specific attention; (5) personal beliefs; (6) task value; (7) positive comparisons (positive perception of self); (8) stress minimisation; (9) positivity; (10) personal bests; (11) goal commitment; and (12) perseverance (Middleton et al., 2004a).

Their definition of mental toughness as “an unshakeable perseverance and conviction towards some goal despite pressure or adversity” (Middleton et al., 2004a, p. 6), was criticised by Crust (2007), despite its strong understanding of the theoretical underpinnings of mental toughness, for defining it in relation to adversity. This emphasis does not leave room for an understanding of mental toughness that includes consistent striving for improvement outside of adversity or how to maintain high standards of performance when pressure is off an athlete (Crust, 2007). The implication was that the authors made too strong an association with hardiness, which while it may be an important element of mental toughness, is not sufficient to describe it (Gucciardi, 2010).

1.5 Sport Specific Definitions

Research into the construction of a sport specific definition in cricket (Bull et al., 2005) and soccer (Thelwell et al., 2005) has drawn strongly on the research of Jones et al. (2002). Thelwell et al.’s (2005) research produced a list of attributes very similar to that of Jones et al. (2002, p.), and their definition was identical except for an emphasis on “*always* coping better than your opponents” rather than “*generally* coping better”. Although the similarities provide good evidence for the validity of Jones et al.’s (2002) research, changing the emphasis from “generally” to “always” is problematic if one considers how athletes are expected to go through performance slumps and are considered mentally tough through the manner in which they deal with these slumps (McInerney, 2010).

Bull et al. (2005), aiming to define mental toughness in cricket and understand how it is developed, noted the possible variations in mental toughness across sports, stating that sports

like cricket, baseball and basketball would be more likely to require a “chronic” mental toughness to deal with competing week in, week out, and raising performance as the season demands. Whereas athletes training for the Olympic Games would require a more “acute” version in order to peak at the required time in a four-year cycle (Bull et al., 2005). Even within these groups there might be varying types of mental toughness, like “final-putt” mental toughness (maintaining self-control and focus at a critical moment), or “endurance” toughness (handling high volumes of training at the absolute limit), or in cricket, “a mental toughness which is required to willingly enter into the high intensity confrontation between batter and bowler, and actually revel in the situation” (Bull et al., 2005, p. 211). The possibility of individual mental toughness profiles that facilitate how an athlete tackles the challenges of a certain sport seems a strong possibility and would benefit from further research. Crust (2008) has also highlighted how an improved understanding of this area would benefit applied work that requires psychologists to have insight into the demands of a particular sport.

A particular strength of the Bull et al. (2005) research was that in order to avoid classifying successful, or elite athletes by default as mentally tough - the criticism faced by Jones et al., (2002) - Bull et al. (2005) identified the 15 most mentally tough England cricketers from the 80’s and 90’s, using 101 cricket coaches to rank their personal top-ten. Interview data from 12 of the 15 players highlighted global themes and dimensions that show clear similarities to the attributes identified by Jones et al. (2002). However, Connaughton and Hanton (2009) have criticised the various references to success or a “winning mind” (which were part of the interview schedule and appeared in much of the supportive quotation and descriptions) rather than mental toughness. They state that success and mental toughness are not equivalent, because, although mentally tough performers may be successful, the opposite is not necessarily true. While this is an important point, it would be inaccurate to make this criticism of Bull et al. (2005) where explicit effort was made to distinguish successful cricketers from the mentally tough, through the sampling strategy. Rather than referring to the mind of a winning athlete, “winning mind” refers to a winning mind-set where the athlete constantly strives to perform to their best, whether they are successful or not. In this light the term would be intricately linked with an understanding of mental toughness.

This brief review highlights the strong similarities in the concepts identified in the research of Jones et al. (2002) and the body of literature that has developed around it. It seems clear from this research that the components (crystallise in Table 1), *self-awareness*, *motivation*, *self-belief*, *focus*, and *handling adversity*, form the core areas of mental toughness (Bull et al., 2005; Fourie

& Potgieter, 2001; Jones et al., 2002; Jones, Hanton, & Connaughton, 2007; Middleton et al., 2004a).

Table 1

Mental toughness components – (Bull et al., 2005; Fourie & Potgieter, 2001; Jones et al., 2002; Jones et al., 2007; Middleton et al., 2004)

Self-awareness	Motivation	Self-belief	Focus	Handling adversity
awareness and control of thoughts and feelings, self-reflection, maintain self-focus, honest self-appraisal	motivational level, an insatiable desire and internalized motives to succeed, long-term goals as the source of motivation, goal commitment, perseverance, needing to earn success, determination to make the most of ability, discipline & goal directedness, pushing yourself to the limit, personal bests	self-belief, confidence, self-efficacy, resilient confidence, robust self-confidence, overcoming self-doubts, positivity, positive comparisons (positive perception of self), potential (beliefs about the future) mental self-concept	cognitive skill, focus, task specific attention, good decision-making, thinking clearly,	coping skills, psychological hardiness, thrive on pressure, deal with anxiety, handling failure, stress minimisation, thrive on competition, surviving early setbacks

1.6 The Second Wave

In terms of a definition however, there are still a number of issues to be ironed out. Some advances have been made with the work of Gucciardi and Gordon (Gordon, 2005; Gucciardi, Gordon, & Dimmock, 2009a) who have moved away from defining the specific make up of mental toughness, in terms of attributes and characteristics, towards a process model of mental toughness based on the principles of Kelly’s 1955 personal construct theory (PCT).

Using the PCT framework and previous research, Gucciardi et al. (2009a, p. 69) defined mental toughness as,

A collection of experientially developed and inherent sport-general and sport-specific values, attitudes, cognitions, and emotions that influence the way in which an individual approaches, responds to, and appraises both negatively and positively construed pressures, challenges, and adversities to consistently achieve his or her goals.

These definitions (outlined in Table 2) represent the most rigorous and empirical research into the concept of mental toughness (Connaughton & Hanton, 2009). Despite this there is still no consensus regarding a definition of mental toughness (Bull et al., 2005). While there have been similarities across the literature, new definitions and critiques of existing definitions are continuing to emerge. Recently Fawcett (2011, p. 9) has argued against rushing to a general conceptual consensus, at the cost of diversity, as he describes,

Put simply, different people explain mental toughness differently depending on their personal experience and interactions within their own social world. Thus the term 'mental toughness' may mean something different to different people (depending on age, groups, gender, cultures) and is arguably interpreted differently within different situational circumstances.

Perhaps the current stand point in mental toughness research is one that acknowledges the variance in the conceptualisation of mental toughness and that mental toughness is multifaceted and made up of multiple key components (i.e. Table 1).

Table 2
Mental toughness definitions

Authors	Definitions
Jones et al. (2002)	Mental toughness is having the natural or developed psychological edge that enables you to - Generally cope better than your opponents with the many demands (competition, training, lifestyle) that sport places on a performer - Specifically, be more consistent and better than your opponents in remaining determined, focused, confident, and in control under pressure
Middleton et al. (2004a)	Mental toughness is an unshakeable perseverance and conviction towards some goal despite pressure or adversity
Thelwell et al. (2005)	Mental toughness is <i>always</i> coping better than your opponents
Gucciardi et al. (2009a)	Mental toughness is a collection of experientially developed and inherent sport-general and sport-specific values, attitudes, cognitions, and emotions that influence the way in which an individual approaches, responds to, and appraises both negatively and positively construed pressures, challenges, and adversities to consistently achieve his or her goals

1.7 Measuring Mental Toughness

With the difficulty of defining mental toughness apparent there have been similar struggles in attempts to develop an appropriate measure, something that is extremely important for both applied work and future research. As early as 1986, Loehr developed the Psychological

Performance Inventory (PPI). The PPI was based on anecdotal evidence from his work with athletes and not on empirical research findings, and has since then been strongly criticised for having weak psychometric properties and lacking adequate conceptual grounding (Connaughton & Hanton, 2009; Crust, 2007; Crust, 2008; Gucciardi & Gordon, 2009a; Middleton, Marsh, Martin, Richards & Perry, 2004b). In the face of strong criticism the measure has been revised and the PPI-1A is a 14-item self-report inventory that is an adaptation of the original Psychological Performance Inventory (Golby, Sheard, & Van Wersch, 2007). Despite seemingly positive psychometric properties, conceptual and methodological concerns continue to shed doubt on the PPI-A as a measure of mental toughness (Gucciardi, 2012).

Since then a number of measures have been developed building on different models of mental toughness; the Sports Mental Toughness Questionnaire (SMTQ – Sheard & Van Wersch, 2009); the Mental Toughness Questionnaire 48, developed by Clough et al. (2002 cited in Crust, 2007) based on their 4C's model; Middleton et al.'s (2004b) Mental Toughness Inventory (MTI); and sport specific measures, such as Gucciardi, Gordon and Dimmock's (2009b) Australian football inventory and Gucciardi and Gordon's (2009a) cricket mental toughness inventory (CMTI).

There is still a substantial amount of work to be done to clearly establish reliable and valid measures, but the most recent developments have included large steps forward (Connaughton & Hanton, 2009). The process of establishing reliability and validity is a lengthy one, and research in this area continues to ask new questions (Gucciardi, 2012). Despite large improvements in the quality of research attempting to adequately conceptualise mental toughness, as well as the various studies which have made progress in the area of mental toughness measurement, there is still some conceptual confusion and no commonly agreed upon measure of mental toughness. This poses some difficulties for researchers as the lack of valid quantitative measures makes various research questions difficult to answer. Research into mental toughness has continued using many of the measures, but the deficiencies of the measures only serve to sow doubt in the findings of these studies. With the status quo of mental toughness research as it is, the concept will, in the words of Fawcett (2011, p. 28), “continue to confound academics and practitioners in years to come”.

1.8 Mental Toughness Development

Early research into the area of mental toughness development has posed the question: Is mental toughness caught or taught (Crust, 2008; Gordon, 2005)? Jones et al. (2002) reject the dichotomous view of mental toughness by acknowledging that athletes may possess natural or inherited characteristics, but will be able to learn new skills associated with mental toughness.

Recent research in mental toughness development has highlighted that certain environmental factors may be more appropriate during a specific stage of development and may have a greater impact on the development of one attribute rather than another (Bull et al., 2005; Connaughton, Wadey, Hanton, & Jones, 2007).

Research into the area of mental toughness development in general, across a variety of sporting fields, has been explored briefly, while a few studies have looked at the development of mental toughness in sport-specific contexts (Bull et al., 2005; Connaughton et al., 2007; Gucciardi, Gordon, & Dimmock, 2009c).

1.8.1 A model of mental toughness in cricket.

One of the strengths of the research by Bull et al. (2005) was their identification of factors influencing mental toughness development. Their interview data was used to construct a model of mental toughness in cricket that highlighted the importance of environmental influence on the development of three categories of mental toughness. **Tough character** refers to enduring characteristics that are seen as essential components in mental toughness. The following components made up this category: *Independence, Self-reflection, Competitiveness with Self as Well as Others*, and *Resilient Confidence*.

Tough attitudes are less stable and more readily acquired. They interact with and allow for effective exploitation of Tough Character. According to Bull et al. (2005), providing players with Tough Attitudes will not be as effective without the elements of Tough Character. Important elements of Tough Attitudes identified by Bull et al. (2005) were: *Exploit Learning Opportunities, Belief in Quality Preparation, Self-Set Challenging Target, "Never Say Die" Mindset, "Go The Extra Mile" Mindset, Determination to Make the Most of Ability, Belief in Making the Difference, Thrive on Competition, Willing to Take Risks*.

The **Tough Thinking** category refers to thought patterns associated with the competition demands of the moment. For Bull and colleagues (2005, p. 223) the "robustness of the thought patterns will be determined by the presence and stability of the categories below". The category of Tough Thinking was closely related the idea of 'self-awareness' (Bull et al., 2005). The category had two main focuses. **Robust Self Confidence** was strongly influenced by the presence of the element of Tough Character and involved *overcoming self-doubts, feeding-off physical condition, and maintaining self-focus*. **Thinking Clearly** involved an awareness of thoughts, understanding of what to think, and the ability to maintain control of their thoughts. It included, *good decision-making, keeping perspective and honest self-appraisal*.

These categories were modelled in the fashion of a pyramid of mental toughness, with the environment as the base on which character is built, Tough Attitudes are manifestations of these characteristics, and tough thinking is the pinnacle of the pyramid and “represents the key psychological properties of a ‘mentally tough’ mind” (Bull et al., 2005, p. 225). The importance of environment on mental toughness can be demonstrated in the manner in which a broader (impact of environment on player) and deeper (range of experience) base would provide a more stable foundation for the development of character, attitudes and thinking, and would make each element stronger in the face of pressure and adversity (Bull et al., 2005). For Bull and colleagues (2005) consistency of performance would arise from the strength of the foundational categories in the model.

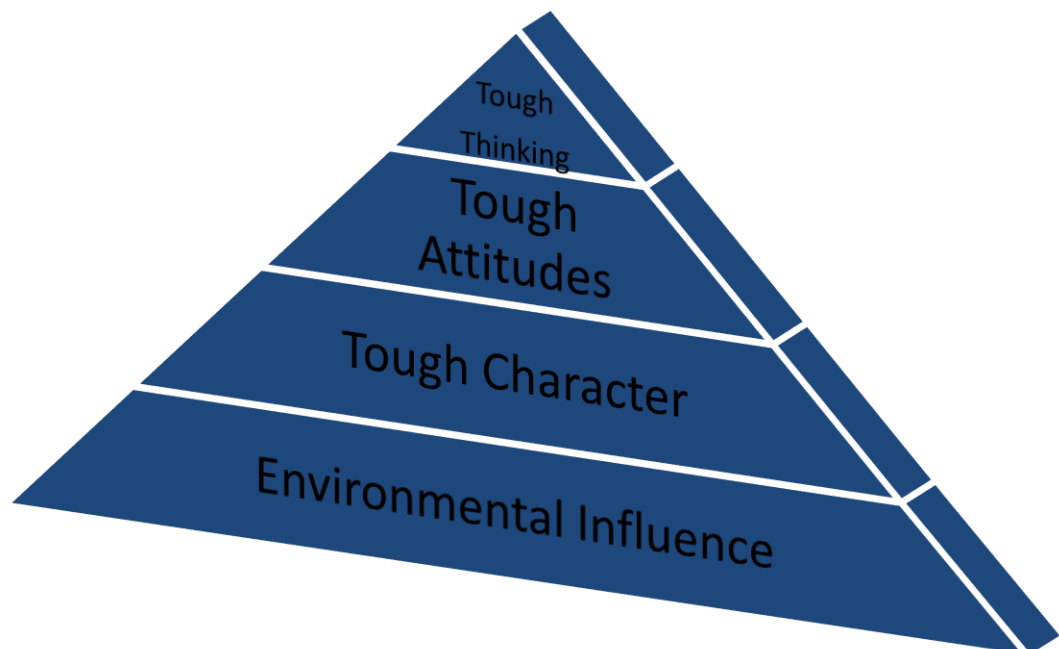


Figure 3. - Bull et al. (2005) Model of Mental Toughness

This model represents an understanding of mental toughness that is congruent with Crust and Azadi's (2010, p. 49) more recent suggestion that mental toughness is “more than just a set of context specific psychological strategies”. Bull and colleagues (2005) also highlighted the similarities of their findings with previous descriptions of the attributes of mental toughness. The advantage of their approach may be in applied work, where the attributes have been divided between characteristics, attitudes and thinking, with each area requiring a different approach to intervention.

Bull et al. (2005) suggested that because of its importance in developing mental toughness, the environment is the most appropriate area to focus resources, and interventions.

However there is a need to clarify the role of environmental factors on the development of mental toughness (Connaughton et al., 2007). Crust (2007) also questioned whether it might be possible to take a top-down approach to mental toughness development, where in Bull et al.'s (2005) framework, tough thinking would influence the development of Tough Attitudes, which could impact on the development of tough character. Crust (2007) also stresses the need to put the developmental model to further empirical testing.

1.8.2 The mechanisms of mental toughness development.

Connaughton et al. (2007) used seven participants from their earlier research on defining mental toughness (Jones et al., 2002), with the specific purpose of investigating the mechanisms of mental toughness development and whether it needs to be maintained. The research findings were grouped into three sections; early years (mean age 8.3 years, $s = 1.7$), middle years (11.1 years, $s = 1.9$) and later years (13.7 years, $s = 2.1$), based on Bloom's (1985), three career phases, as cited by Connaughton et al., (2007).

1.8.2.1 The early years.

The early years incorporated the foundation phase of mental toughness development, where important attributes like self-belief in ability to achieve, and self-belief in personal skills and strengths, as well as having an insatiable desire and internalised motives to succeed were promoted (Connaughton et al., 2007). The authors suggested that the mechanisms involved in this development included: mastery of skills; modelling of superior, more experienced athletes; and enjoyment and encouragement. The mechanisms involved in developing mental toughness in the early years, appeared to work in combination with each other, rather than independently, and helped develop a motivational climate that was challenging, rewarding and enjoyable (Connaughton et al., 2007).

Bull et al., (2005) highlighted a number of factors during the players' formative years that played a role in developing a suitable environment for the development of mental toughness. These were the players' approach to cricket, as well as more general attitudinal influences. "Childhood background" was another level through which environmental influence was found to operate, particularly in the way in which it influenced the players' ability to endure setbacks. This "background" may be similar to Connaughton et al.'s (2007) concept of a social support network that provides support, encouragement, knowledge and inspiration. To this collection, Connaughton et al.'s (2007) research added the impact of coaches and their leadership skills.

Another important factor that contributed to the development of mental toughness in this phase of development was overcoming critical incidents (Connaughton et al., 2007) or

setbacks (Bull et al., 2005). These were valuable in providing the players with positive learning experiences and a realisation that success was “earned” and required hard work (Bull et al., 2005). The challenge as researchers is to identify the role of these setbacks and incidents in providing players with the required skills and abilities, and develop ways of developing these skills without having to go through those experiences, perhaps through the use of techniques like simulation, role play and imagery.

1.8.2.2 The middle years.

The middle years were instrumental in developing six further attributes: experiencing performance setbacks; pushing the boundaries of physical and emotional pain; coping with competitive anxiety; thriving on the pressure of competition; and regaining control following uncontrollable events (Connaughton et al., 2007). The three attributes developed in the early years (self-belief in ability, personal skills and insatiable desire and motivation) were enhanced further during this stage and were in themselves, instrumental in developing the new attributes, with the original mechanisms continuing to play an important role as well as the appearance of additional mechanisms (competitive rivalry and sibling rivalry). Rivalry and social support were shown to assist in the development of motivational properties which facilitated the recovery from performance setbacks (Connaughton et al., 2007). The increasingly competitive nature of this stage of development meant learning to deal with pressure and anxiety and having a heightened determination to succeed. A group of people from which to learn, allowed the performers to appropriate and develop the skills required to deal with this more competitive environment (Connaughton et al., 2007).

1.8.2.3 The later years.

The later years continued to cultivate the attributes already in place, as reflection allowed performers to draw on successful experiences and increased exposure to competition allowed them to feel more comfortable in competitive environments. Attributes regarding the development of focus, and eliminating distractions, appeared in this stage, facilitated by increasingly competitive experiences and the application of psychological strategies and skills in combination with improved physical preparation (Connaughton et al., 2007).

1.8.2.4 Maintaining mental toughness.

Connaughton et al. (2007) suggested that mental toughness would peak three years after exposure to competition at the highest level. The implications being that the increased exposure, experience and maturity that are associated with competition at the highest level, contribute to this peaking of mental toughness. McInerney (2010) questioned whether competition at the

highest level was necessary to achieve this point of mental toughness or whether a recreational athlete may be as, or more, mentally tough than any elite athlete, despite the absence of competition at the highest level.

Connaughton et al. (2007) stated, that in order to avoid decreases in the level of mental toughness, maintenance would be required. They mentioned three factors that appeared to play important roles in maintaining high levels of mental toughness. An insatiable desire and internalised motivation to succeed meant that the boundaries were constantly being pushed, and slowdowns were avoided. Social support networks inside and outside of sport helped to maintain mental toughness both directly and indirectly. Mental skills were also shown to maintain mental toughness. Using techniques like self-talk, imagery, cognitive reconstruction, pre-performance and pre-race routines, and goal-setting, impacted on levels of confidence and anxiety, and it was noted that without continued practice the effectiveness of these skills and mental toughness in general, could decline (Connaughton et al., 2007; Connaughton & Hanton, 2009).

It seems clear that Connaughton et al.'s (2007) emphasis on understanding the processes involved in how these factors operate on a player's environment is an important area for future research. Their findings are graphically represented in figure 2 below. Along with setbacks and critical incidents what does the competitive environment offer the individual and what do they learn from that experience that allows them develop or maintain their mental toughness?

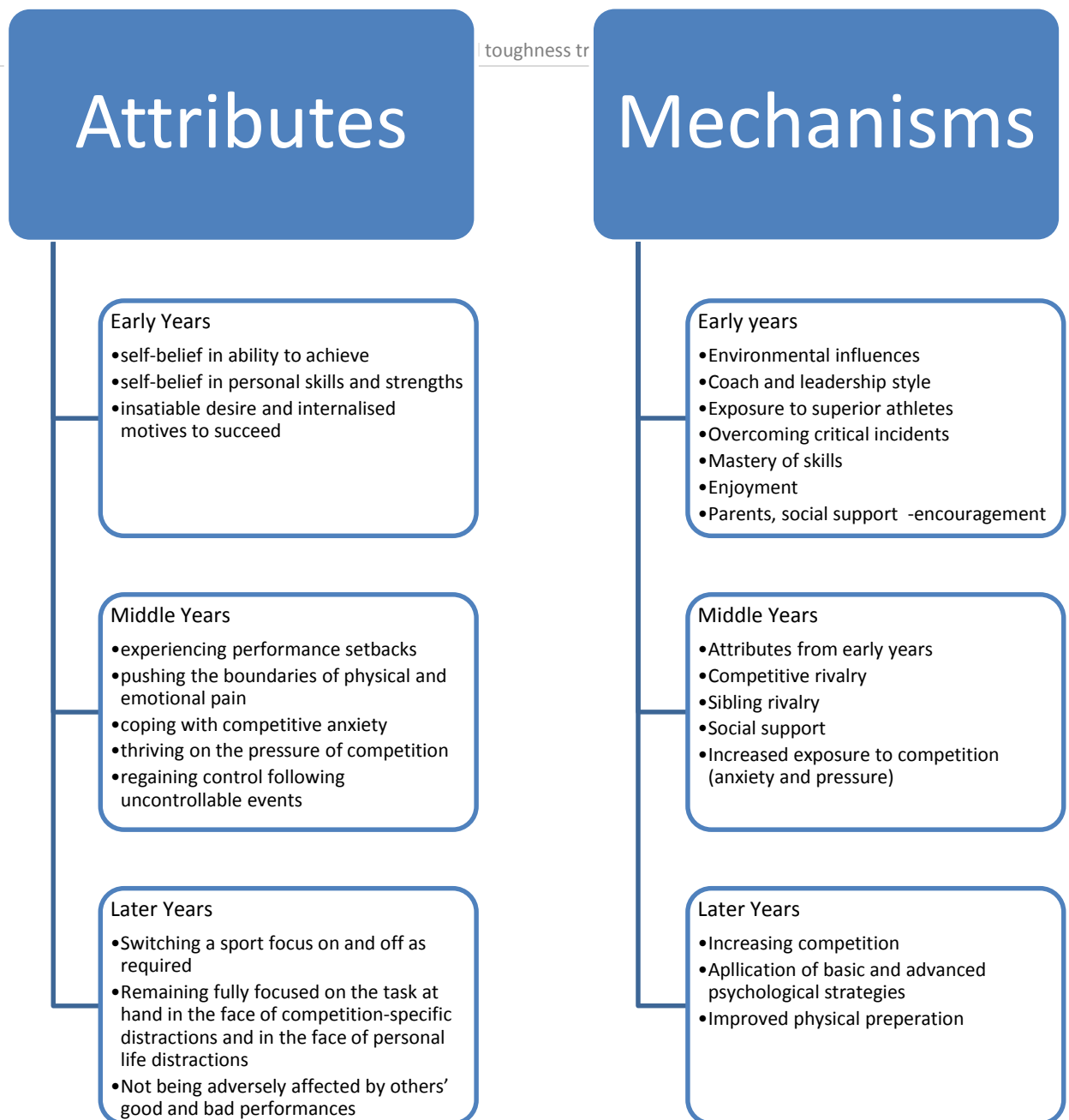


Figure 4. Connaughton et al. (2007) Mental toughness development

McInerney (2010) questioned whether the rigid age categories were appropriate across all contexts and recently Gucciardi's (2010) findings challenged the assumption that chronological age is a more significant factor in mental toughness development than years of experience. Connaughton and colleagues' (2007) research is situated firmly within an elite sporting population. In other contexts, contributing mechanisms may be entirely absent, or may not contribute to a player's development until they are significantly older. This might be particularly true in a South African setting, where athletes' development may begin later in life and under different circumstances. McInerney (2010) suggested that the interaction of the factors highlighted by both Bull et al. (2005) and Connaughton et al. (2007) be investigated further. The

linear progression based on chronological age implied by both models of development may not reflect what is possibly a more iterative and complex process.

1.9 Mental Skills Training

Sport psychology interventions generally take the form mental skills training (MST), otherwise known as psychological skills training (PST) (Vealey, 2007; Weinberg & Gould, 2011). These programmes are founded on the assumption that the physiological processes involved in sporting skills are mediated by a variety of psychological processes (Behncke, 2004), “Primarily mental skills training has developed from the necessity of the athlete to learn more about their individual life to allow a degree of control in coordinating effective movement through various psychological states of performance” (Behncke, 2004, p. 1). MST attempts to develop these psychological processes.

Sheard and Golby’s (2006) use of a PST programme with swimmers revealed a significant impact on components of mental toughness. Crust and Azadi’s (2010) research also indicated a significant relationship between mental toughness and the use of performance strategies in both practice and competition.

1.9.1 Is mental skills training effective?

Mental skills training has been used extensively over the last three decades in order to develop the mental skills required to improve performance and increase personal well-being, and reviews of the literature have shown support for the effectiveness of these programmes (Vealey, 2007). Weinberg and Williams (2006) stated how reviews of the literature conducted in the early nineties examined a total of 45 studies of which 38 (85%) demonstrated positive performance effects. Myers, Whelan and Murphy (1996) have done the most comprehensive review to date, conducting a meta-analysis of 90 psychological interventions designed to enhance sport performance and found moderate to large positive effects (cited in Weinberg & Williams, 2006).

1.9.2 Vealey’s (2007) MST model.

The model of mental skills put forward by Vealey (2007), has divided mental skills training into three areas: foundation skills, performance skills and personal development skills.

1.9.2.1 Foundation skills.

The foundation skills are the basic intrapersonal resources necessary to achieve success. These are: achievement drive; self-awareness; productive thinking; and self-confidence. These skills have obvious parallels to the kinds of attributes and characteristics required for mental toughness. **Achievement drive** is concerned with internal motivation and desire (Weinberg & Williams, 2006). **Self-awareness** involves development of an understanding of when and where

performance deteriorates and what thoughts and feelings are associated with that deterioration. **Productive thinking** requires effective thought management, staying optimistic and maintaining task-relevant thoughts in the face of distraction (Vealey, 2007). **Self-confidence** is consistently seen as a key skill for a successful performer (Vealey, 2007).

1.9.2.2 Performance skills.

The performance skills, which include perceptual-cognitive skills, attentional focus and energy management, are those abilities critical for the execution of the required sporting operation (Vealey, 2007). **Perceptual-cognitive skills** are related to the processing of perceptual and strategic information to facilitate clear thinking and decision making. Vealey (2007) describes **attentional focus** as the ability to vary the direction and scope of focus appropriately in the face of distractions. He also underlines the importance of managing mental and physical arousal at an optimum level through the ability of **energy management** seen in elite athletes (Vealey, 2007).

1.9.2.3 Personal development skills.

Personal development skills are a category of skills “that represent significant maturational markers of personal development and that allow for high-level psychological functioning through clarity of self-concept, feelings of well-being, and a sense of relatedness to others” (Vealey, 2007, p. 290). Two skills are particularly important in this category, **identity development** (long-term process involving feelings of self-worth and psychological well-being), and **interpersonal competence** (important in terms of providing and using social support) (Vealey, 2007).

1.9.2.4 Team skills.

Team skills, relating to the team environment are another factor that contributes to performance success. The particular areas in this category are **team confidence, cohesion, communication and leadership**.

1.9.3 When and who.

The consensus on when to implement a mental skills training programme is outside of the athlete’s competitive season, when players can learn and come to grips with skills and techniques prior to incorporating them in competitive events (Weinberg & Gould, 2011; Weinberg & Williams, 2006). Tied to this is an understanding of the effort and practice involved in acquiring mental skills, that it “often takes a certain degree of patience and trust in their application because results may not come immediately, and are often qualitative and difficult to separate from significant increases in physiological performance” (Behncke, 2004, p. 2). This needs to be

appreciated both by the players involved in the programme, as well as the practitioner (Connaughton et al., 2007).

In contrast to common assumptions mental skills training is not only beneficial to 'elite' athletes and that the application of MST programmes should have a positive impact on young, inexperienced or recreational athletes, who would be likely to improve and develop more rapidly if given access to these interventions (Weinberg & Gould, 2011; Weinberg & Williams, 2006).

Mental skills training has also been shown to have an impact beyond improved sports performance, on well-being and positive psychological development (Sheard & Golby, 2006; Gucciardi, Gordon & Dimmock, 2009d). The implication is that the MST programmes provide an opportunity to provide important skills that can be applied in a number of contexts, becoming important life skills (Edwards & Steyn, 2008). These findings emphasise the positive psychological impact mental skills interventions can have above and beyond improving sporting performance (Sheard, 2009).

1.10 Mental Toughness Programmes

Research on specific interventions designed to develop mental toughness, rather than general psychological/mental skills is sparse. There are a number of questions surrounding what form interventions aimed at mental toughness development might take. The early research into the development of mental toughness has indicated the importance of environmental factors, while there seem to be clear links between the components of mental toughness and established mental skills designed to enhance these areas.

An exploratory investigation into mental toughness in an Indian cricket team by Gordon and Sridhar (2005), suggests that mental toughness interventions can be effective. A seven workshop programme covering components associated with mental toughness was implemented with an experimental group of 30 national under-22 cricketers. Significant improvements were seen in the positive perfectionism, focus, and handling pressure categories.

A study by Gucciardi et al. (2009c) was, in contrast to Gordon and Sridhar (2005), solidly grounded in established mental toughness theory. They demonstrated the effectiveness of two interventions (one traditional MST programme, the other a mental toughness training intervention) in developing mental toughness in youth Australian footballers, using a sport specific measure of mental toughness (Gucciardi et al., 2009c). This was complimented in a follow up study where a qualitative approach identified improvements in; type of preparation, team cohesion, response to criticism, work ethic, and tough attitudes, the benefits of which extended to other areas of the players' lives (Gucciardi et al., 2009d).

Gucciardi et al. (2009d) argued that increased self-awareness, self-monitoring, and a strong idea of what mental toughness was, helped the participants to enhance their own mental toughness. Self-regulation promoted an increase in the players' awareness of their thoughts and emotions, and allowed them to regulate them and manage negative cognitive and emotional states (Gucciardi et al., 2009d). Providing more information to the coaches and parents regarding their role in the development of their child's mental toughness, as well as providing general education on mental toughness, could help improve the intervention by providing consistency in expectations, and working on the role the social support network (Gucciardi et al., 2009d).

McInerney (2010) completed a mental toughness training programme with a school team of young South African cricketers. As in Gucciardi et al.'s (2009d) research self-awareness was a prominent factor, as the players' development of this dimension facilitated the self-reported development of self-belief, motivation and concentration. In this research mental skills training was a prominent aspect of a programme that attempted to combine environmental interventions with MST. Certain mental skills including goal-setting, self-talk and pre-performance routines were identified as important contributors to the participants reported improvements (McInerney, 2010).

1.11 The Implications of Established Literature, for the Design of Mental Toughness Interventions

The literature on mental toughness has raised a number of important issues that feed into the foundations of this research. These areas are particularly important when considering the design and implementation of a mental toughness training programme.

1.11.1 Defining mental toughness.

While there is still debate about the definition and conceptualisation of mental toughness it seems that there is agreement that mental toughness is a multidimensional construct (Crust & Keegan, 2010; Gucciardi, 2010). The similarities in the components, attributes and characteristics identified by research attempting to define mental toughness provide a foundation for the development of an intervention. The five common and consistent areas of mental toughness (see Table 1): self-awareness, motivation, self-belief, focus, and handling adversity, provide an outline of the starting point for a mental toughness programme.

Although there is not yet a consensual definition for the concept, research implementing mental toughness programmes may provide insight into possible areas of improvement. Following the lead of Bull et al. (2005, p. 211) I have opted to take a pragmatic stance and accept

the conceptual ambiguities which, “are bound to exist when trying to establish all encompassing definitions of sport”.

1.11.2 Development of mental toughness.

Research into the development of mental toughness, has highlighted the need to incorporate mental skills training strategies into a programme that also acknowledges the importance of environmental factors in the acquisition of mental toughness attributes (Bull et al., 2005; Connaughton et al., 2007; Crust, 2008; Gucciardi et al., 2009c). In order to try and foster the right environment and to incorporate elements outside traditional mental skills training techniques, interventions need to include significant role players (parents, coaches, teammates) and provide them with an understanding of the importance of their role in the process of mental toughness development and in general well-being, in creating the right motivational training climate, encouraging friendly rivalry and developing appropriate leadership skills (Connaughton et al., 2007; Edwards & Steyn, 2008; Gordon & Sridhar, 2005).

The potential impact of mental toughness training extends beyond the benefits on performance and mental toughness ability, as the attributes which characterise mentally tough individuals are likely to play a beneficial role in life outside of sport, and could be developed as life-skills and promote personal development (Connaughton et al., 2007; Edwards & Steyn, 2008, Gucciardi et al., 2009d).

1.11.3 Lessons from mental skills training.

While it is clear that developing mental toughness involves more than just mental skills training, the similarities between the targets of mental skills training and the key areas of mental toughness (see Vealey’s (2007) foundation and performance skills and the key areas of mental toughness in Table 1) are too significant to ignore. In designing a mental toughness programme mental skills training will be a vital aspect, as it provides an established method of developing the key attributes of mental toughness. It is also important to note that successful MST programmes are sensitive to contextual and environmental factors, and do not operate without addressing environmental factors (Vealey, 2007; Weinberg & Gould, 2011). Applying the concepts of mental skills training will therefore be important. As McInerney (2010) and Crust (2007) have both pointed out, by using MST to intervene at the top of Bull’s pyramid (Tough Thinking) a top down effect on the players’ Tough Attitudes and Character may also be generated.

1.11.4 The lack of research on mental toughness training.

There is a need for research to examine the use of mental toughness training programmes. As Gucciardi et al. (2009d) and McInerney (2010) demonstrated this research can

begin to identify the processes and mechanisms at work in the development of mental toughness. Variation in the context examined (South African semi-professional cricketers), will help to underline the impact of environmental factors, and provide a broader understanding of the mental toughness construct. My research seeks to address this gap in the research by using Bull et al.'s (2005) model of mental toughness in cricket to guide the development of an intervention designed for a semi-professional cricket team.

2. Research Approach

2.1 Research Aims

This research seeks to answer the question: What insights can the development and implementation of a mental toughness programme for a semi-professional South African cricket team provide, regarding mental toughness development? The research has the following aims:

- 1 – Assess the participants' understanding and perceptions of mental toughness and where they feel they need to improve.
- 2 – Integrate the findings of the assessment with recent theory to design a mental toughness development programme.
- 3 – Implement the programme.
- 4 – Document the process of developing and implementing a mental toughness programme and use focus group and interview data to provide insight into the participants' perceptions of the programme, thereby enhancing the body of literature on mental toughness development in an applied setting.

2.2 Research Paradigm

Reason and Bradbury (2008, p. 1) describe action research as “not so much a methodology as an orientation to enquiry” and it is this orientation to enquiry that will guide this study. Action research provides a set of tools that allows for the development of theories of practice, through the evaluation of interventions, (McNiff & Whitehead, 2006). The reflection on processes aimed at practical outcomes provides an opportunity to contribute to new forms of understanding and build on the existing knowledge base. In sport psychology this approach has numerous advantages as it focuses on making positive changes in the lives of groups and individuals while simultaneously contributing to the body of literature. The aim of tying together action and reflection, theory and practice, in a participatory framework that co-constructs solutions, is ideally suited to this research project (Reason & Bradbury, 2008). This approach is even more valuable in

an area of psychology that has little research focussing on applied work, and will provide an opportunity to reflect on the processes of application that highlight important issues for practitioners (Crust, 2008).

The epistemological and ontological approach to this research draws from the tradition of critical realism. This incorporates the assumption of an objective reality, our knowledge of which is mediated by our subjectivity, and as such is contextually bound (Coghlan & Brannick, 2004). This approach to knowledge relies upon a systematic reflexivity that examines the relationship between the researcher and the research (Coghlan & Brannick, 2004). This examination requires acknowledging the theoretical and methodological assumptions that influence the researchers approach. As Riordan (1995; cited in Coghlan & Brannick, 2004, p. 8) describes action research requires “a practitioner of science who is not only an engaged participant, but also incorporates the perspective of the critical analytical observer, not as a validating instance, but as integral to the practice”.

Specifically the Action Research approach taken bears some resemblance to that of Clinical Inquiry where trained helpers work professionally with human systems (Coghlan & Brannick, 2004). Here the researcher aims to facilitate: in-depth observations of learning and change processes, emphasise the effectiveness of interventions, focus on deviations from a mentally tough system and mentally tough functioning, and build theory and empirical knowledge through developing concepts which capture the real dynamics of systems (Coghlan & Brannick, 2004).

The intervention will follow the steps of the action reflection cycle that guides action research, specifically using the organisation development process (ODP) model (McLean, 2005). The ODP model is a version of action research developed, in line with its name, for organisations. The term organisation can be used quite loosely. McLean (2005, p.2) described it as “any situation in which two or more persons are involved in a common pursuit or objective”, which fits the arrangement of a sports team. In the context of this research the model provides a number of advantages, primarily around the flexibility of the approach that enables the restrictions of the study (in terms of time and resources) to guide the depth of application at each phase of the project. The emphasis on the interactive and cyclical nature of the phases is another key advantage.

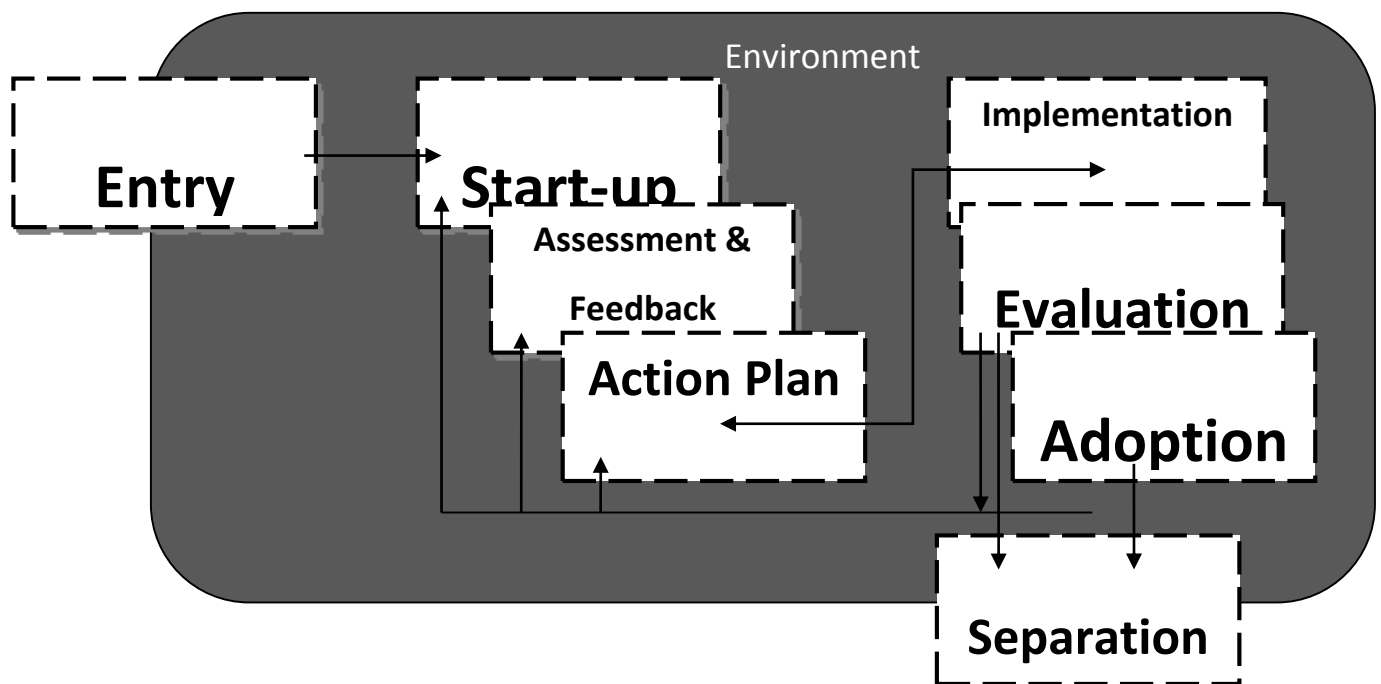


Figure 3. Organisation Development Process Model (Mclean, 2005).

The ODP model provides a concrete framework for the construction of action research centred around 8 phases. The first phase, *Entry*, involves meeting with a representation of the organisation to establish the relationship between researcher and participants, and clarify expectations. The second phase, *Start Up*, involves the formalisation of the details and structure of the research, broadly mapping out the phases of the intervention. The third phase, *Assessment and Feedback*, begins the collaborative work of identifying the areas of focus for the intervention, in this research that involved a team focus group and interview with the coach. Building on the outcomes of the previous step, the fourth phase, *Action Plan*, involves the development of a programme tailored to the needs of the group. The fifth phase, *Implementation*, begins the actual intervention and the programme that has been developed is carried out. The sixth phase, *Evaluation*, looks at the impact of the intervention, for this research this involved another focus group with the players and interview with the coach to examine the participants' perceptions of the strengths and weaknesses of the programme and unpack its impact on the organisation. The seventh phase, *Adoption*, adopts findings from the evaluation and positive changes are formally implemented, while weaknesses are identified and if objectives have not been met the process continues. *Separation*, the final phase, involves negotiating the researcher's departure from the group and initiating steps to ensure the sustainability of the positive changes. The phases of this methodology are implemented in a iterative and reflexive manner that demands constant critique of the progress and demands of the intervention. The process emphasises dynamic engagement

with planning and implementation at each phase, allowing the shifting context and needs of the organisation (the environment) to drive the intervention (McNiff & Whitehead, 2006).

3. Entry and Start-up

This research project formed part of a larger examination of mental toughness, including Doctoral Research by the supervisor of this research, Gary Steele. The Doctoral research aims to examine the development of mental toughness with cricketers, including an examination of the psychometric properties of various measures of mental toughness and the development of norms for these measures. This research project arose directly out of a research completed in 2010 that looked at the development of mental toughness in school cricketers (McInerney, 2010). Ethical approval for this study was obtained from the university.

Entry was negotiated with Border Cricket, access was granted by the gatekeepers of the organisation as part of a larger collaborative relationship with Rhodes University and the Psychology Department. The arrangement to provide skills and workshops with cricketers ranging from the academy side to senior team, in return for participation in research projects was negotiated with Border Cricket. They requested that their name be used in any publications resulting from the research. This raised an ethical issue regarding the anonymity and confidentiality of the participants, in using their words in extracts from focus groups and interviews. Although pseudonyms are used throughout this paper in order to protect the anonymity and confidentiality of the participants, there is still a risk that they are identified through their membership of the team. Consent to use specific material that could identify participants was obtained from the individuals. Using an approach taken from McInerney (2010) we placed an emphasis on confidentiality, ensuring that any sensitive information was not included, rather the focus was on the positive and constructive approach inherent in the research.

The sampling strategy used in this study was purposive sampling; where the participants were selected for certain characteristics that would best allow me to answer the research question. Unlike in quantitative research the purpose of this research was not to generalise from the results of this sample to a broader population, and as such probability sampling was not required. In this study, typical case sampling (a type of purposive sampling) required the use of judgement in selecting a sample that could be illustrative of other similar samples, as well as meet the criteria required for this study, a senior cricket team.

The participants in this study were drawn from Border Senior Cricket Team. The team had an established group of core-players and management staff. New players had been introduced from outside the provincial set-up as well as coming through the ranks from age-group and

academy teams. The team picked to play from game to game varied through the season with players coming down to the side from franchise level, while others moved up. Negotiating the shifting group of players through the intervention became a point of focus. As a whole the team operated as a semi-professional unit, with players ranging in age from 18 to 32, with seven players on contract to Border Cricket. A large portion of the team was based in Alice in the Eastern Cape and studying full time at Fort Hare, 130km from East London. This group of players trained predominately at Fort Hare as part of the Fort Hare Academy. The remainder of the team was based in East London, and training was conducted at Buffalo Park. Most of the players based in East London had some form of employment, as salesmen, professionals, coaches and teachers. Some individuals were on the fringes of the Eastern Cape franchise team, *The Warriors*, moving between Port Elizabeth (Warriors' home ground) and East London for matches and training.

In the start-up phase a meeting with the players and coach of the team was held where the aims and outline of the study were discussed. Our relationship with the team and coaching staff was explained and we continued to clarify expectations along the process. The course of the research was outlined and it was explained that the research would begin with a team focus group and interviews with the coach and various players as part of an assessment phase, in order to begin the process of developing a mental toughness programme tailored to suit the team and its particular context. The coach and players received consent forms (Appendix A) at this meeting that included a detailed description of the research. The voluntary nature of the study was stressed and the participants were made aware that they could withdraw from the study at any stage. At the conclusion of this discussion the players themselves agreed to participate in the programme making the number of participants 14, including the coach.

4. Assessment

The assessment phase of the research involved gathering sufficient information to identify the objectives of the intervention (McLean, 2005). The participative orientation in action research stresses the importance of developing communication where all those involved can contribute to the design, implementation and evaluation of the intervention (Reason & Bradbury, 2008). This is the reason for the briefing in the entry and start-up phase and acts as a guiding principle for the entire research project.

4.1 Focus Group

A semi-structured focus group was conducted during the off-season with 13 players and the head coach. Focus groups are controlled group discussions notable for gathering data as a result of interaction between participants (Smithson, 2000). In a phase of the research requiring

insight into the team's perceptions of their team mental toughness the focus group provides the perfect method for gathering information. Guidelines for facilitation were followed, with a focus on prompting discussion and facilitating detailed understandings of the players' experiences (Kitzinger, 1995; Sim, 1997; Smithson, 2000).

The aim of the focus group was to briefly provide information about the nature of mental toughness; understand the team's perceived strengths and weaknesses; and identify where they believed they could benefit from a mental toughness programme. Identifying goals for the individuals and the team as a whole provides a collaborative foundation for the design of the mental toughness training programme, and helps generate an environment where the players can buy into the intervention, through a personal investment in the process (Weinberg & Williams, 2006).

In line with Fawcett's (2011) research on the idiographic nature of mental toughness this research privileges the participants understandings of mental toughness by focusing on their version of mental toughness during the assessment phase and using it as a foundation for the intervention design. In line with this approach the focus group was combined with a performance profile, a method of assessment used in a number of applied studies (Gucciardi & Gordon, 2009b). "The performance profile encourages researchers and practitioners to regard an individual's perception or meaning of his or her performance as an essential source of information for identifying and understanding areas requiring improvement and maintenance" (Gucciardi & Gordon, 2009b, p. 93). This process can be valuable in increasing the self-awareness and intrinsic motivation of athletes. When used in groups the process of group profiling can enhance communication and interaction within teams and between players and the coach (Gucciardi & Gordon, 2009b).

The performance profile was conducted at the start of the focus group. The players were asked to come up with a list of attributes they believed were vital aspects of the team's mental performance. This set of factors (goal setting, visualisation, resilience, preparation, self-belief and confidence, domination, and concentration) was then used to construct the performance profile and the group was asked to rate the team in each of these areas, on a scale of 0 (not at all) to 10 (very much). The results are represented in Figure 4.

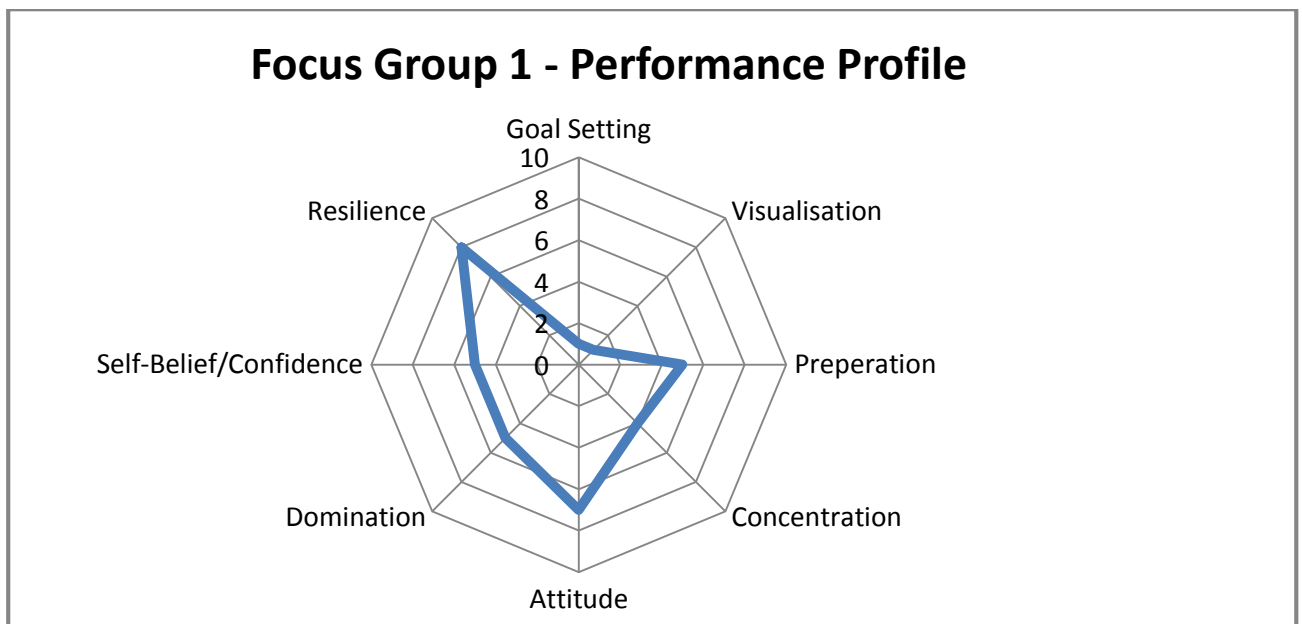


Figure 4. Results of the first performance profile conducted during the first focus group

This exercise also provided an opportunity to collaboratively develop the groups' awareness of their relative strengths and weaknesses in the mental aspects of their performance, something that had previously not been a formal area of discussion within the team.

Although the focus group schedule (Appendix B) was designed to guide the discussion the conversations that arose out of the performance profile spontaneously addressed the areas that had been included in the schedule. The schedule had been constructed to draw on the groups view of their performance in Bull's (2005) key areas of mental toughness including turnaround toughness (ability to bounce back from adversity and setbacks), critical moment toughness (the ability to execute a performance at a specific time under pressure), endurance toughness (staying physically strong and mentally focussed) and risk management toughness (taking tough decisions and maximising performance gains), as well as a general discussion around other areas of possible improvement.

4.2 Interview with Coach

The assessment phase also incorporated interviews with individual players and the head coach. Guided by the need for a collaborative platform the interview with the coach provided an opportunity to involve him in the construction of the programme, something that was believed to be particularly important considering the emphasis in recent literature of the role of the coach in mental toughness development (Connaughton et al., 2007). In line with Bull et al.'s (2005) recommendations emphasis was placed on how important his role in the development of the players' mental toughness is. The interview began the process of providing him with access to

skills that can help identify and develop mental toughness once the intervention ends. The interview aimed to identify important areas of focus for the training programme and was based on a schedule very similar to the one used in the focus group. By gathering data from both the team and the coach a more complete picture of the team's mental performance was achieved (Weinberg & Williams, 2006). Both the interview (44 minutes) and the focus group (34 minutes) were recorded, and ethical procedures to acquire informed consent for the recording of the session were followed.

4.3 Player Interviews

More informal interviews (semi-structured) were conducted with the 13 players over a period of three weeks. They were provided with questionnaires (Appendix C) to prompt them to begin developing their levels of self-awareness, while also providing an opportunity to gather information on the individuals in the team and build rapport. These interviews had a number of aims:

- To gather important background and contextual information on the individuals in the team.
- To develop rapport and trust with core members of the team, creating relationships that would help facilitate an effective intervention.
- To begin a process of enhancing the self-awareness of the individual's mental game.
- To gather insight into the expectations individuals had for their own performance, and for the contribution of the programme.

These interviews were conducted with 13 of the players, and their questionnaires were collated and used to guide the programme design.

Another element of the assessment phase was unstructured observation. Weinberg and Gould (2011) have described the importance of informal interaction with participants of MST programmes as a way of building rapport and enhancing the intervention. Three training sessions were observed (two indoor net sessions, one outdoor fitness session) during this period, as I continued to focus on building rapport with the players and coaching staff, and observed the behaviour of the group and individuals, as well as the systems in place within the organisation. An important element of this process was to develop my role as a participant within the organisation, to familiarise myself with the implicit knowledges within the team.

4.4 Transcription and Analysis

The data from the assessment was collated. The focus group, interview with the coach and player questionnaires were transcribed and analysed. The recordings of the focus group and interview with the coach were transcribed verbatim and coded to facilitate a thematic analysis

following the guidelines specified by Braun and Clarke (2006). Thematic analysis provided a method of organising and describing the key patterns and themes that emerged from the assessment data, where emerging themes can become categories of analysis and interpretation (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006). This method of analysis allowed for a flexible approach guided by a rigorous and detailed analysis that was coherent with an action research approach (Braun & Clarke, 2006). It was also understood that despite an emphasis on gathering data that gave voice to the team and the coach, that my role as researcher would have an impact on the themes that 'emerged' and that the analysis would not be value free, but I would have an active role in constructing the data (through the facilitation of interview and focus group) and the analysis (through the process of selection and coding) (Braun & Clarke, 2006).

The use of questionnaire data allowed for the analysis to incorporate the voice of marginalised and divergent opinions (Sims, 1995; Smithson, 1998). At the same time thematic analysis is not associated with a particular theoretical framework and this allowed the analysis to be guided by the purpose of the research rather than a particular epistemological approach to knowledge; as Braun and Clarke (2006, p. 5) describe, "Through its theoretical freedom, thematic content analysis provides a flexible and useful research tool, which can potentially provide a rich and detailed, yet complex account of data". Within this research this method of analysis was implemented within a framework holding the assumptions of an objective ontology and subjective epistemology as described above.

This research attempts to combine a bottom-up (inductive) analysis with a top-down (theoretical or deductive) analysis (Braun & Clarke, 2006). While the participants' perspectives and experiences were privileged, the data needed to answer certain questions that would guide the design of an action plan. While the analysis did not incorporate a theoretical interpretation, the next phase (action plan) combined the findings of the analysis (the participant's experiences) with a theoretical framework built on the understandings of mental toughness and its development. The process of analysis entailed six phases summarised in Table 3 below.

Table 3
 Phases of Thematic Content Analysis (Braun & Clarke, 2006)

Phases of a Thematic Content Analysis (Braun & Clarke, 2006)	
Phase 1	Familiarising yourself with your data
Phase 2	Generating initial codes
Phase 3	Searching for themes
Phase 4	Reviewing themes
Phase 5	Defining and naming themes
Phase 6	Producing the report

The recordings of the interview and focus group were transcribed verbatim and checked for accuracy and consistency (Braun & Clarke, 2006). I familiarised myself with the transcripts, reading and re-reading both transcripts and checking for accuracy against the original recordings until I felt I had sufficiently immersed myself in the data, and had a strong impression of the central ideas emerging from the transcripts. Initial coding then began by highlighting prominent segments of data in both transcripts and within the questionnaires. At this point of the analysis, I identified some of the similarities between the data coming from the players and coach. The various extracts that had been selected and coded from the transcripts and questionnaires were then organised and grouped into a number of themes.

Braun and Clarke stress the importance of using a consistent approach to identifying prevalence of a theme within an analysis (Braun & Clarke, 2006). In this case if the theme consisted of a large number of coded extracts, or if it was stressed as important in the context of the transcript by players or coach, this indicated an important theme. This decision was also made in relation to the assessment question (Braun & Clarke, 2006).

During the 'reworking' phase the themes were grouped into 8 overarching themes, closely linked to the performance profile categories the participants had developed. Many of the larger themes appeared as subthemes within another category. This was a prominent feature of the analysis, with many of the larger themes relating to certain of the others. The final thematic map (Table 4) was supported by the information gathered during the informal interviews and observation. This research borrows from Braun and Clarke's (2006) idea of using a rich description of the content of the data set, rather than a detailed nuanced account of a particular theme. This is consistent with the goals of the assessment. Each of the overarching themes is discussed below.

Table 4
Table of themes from the first focus group, assessment phase

Self-Belief & Confidence	Pressure & Resilience	Goal Setting & Motivation	Preparation & Practice	Inconsistency	Concentration	Attitude	Team Cohesion & Communication
Doubt	Confidence	Performance Slump	Confidence	Attitude	Inconsistency	Domination	Honesty
Pressure	Within Matches	Attitude	Goal Setting	Resilience	Physical Preparation	Motivation	Mentorship
Resilience	Between Matches	Preparation & Practice	Mental Preparation	Self-belief			
	Inconsistency		Physical Preparation	Concentration			
	BMT			Preparation			

4.4.1 Self-belief and confidence.

For both the coach and the players self-belief and confidence were key areas. This theme was addressed specifically in relation to *doubt*, *pressure* and *resilience*. The idea of self-belief for the participants seemed to be something that was evasive and inconsistent which was particularly vulnerable during moments of struggle. During the discussion of the performance profile one of the players described his perspective of the team's overall confidence:

As a group I don't think we're that confident, you know, cause it's something you walk around with every day, if you know what I'm saying, cause as a group, as a side, I'd say we're a five if we're honest. (Focus Group 1, lines 427-428)

During this discussion another player highlighted the role of doubt and the fragility of their confidence while reflecting on a low point in a particular match, "I think we had no chance because mentally we were just doubting ourselves or doubting everything that was given to us there" (Focus Group 1, lines 474-476). It was clear that the team and individuals performed well when their confidence was high, but that confidence could quickly disappear.

The questionnaires also highlighted the concept of self-confidence as important for the participants, with some discussing this area as one of their strength and others demonstrating a desire to improve in this area. One player wrote that "to believe in [his] skills and ability and forget about any negative talk" (Assessment Phase Questionnaire) would improve his mental toughness and performance. Another player described the need for a more resilient self-belief as he acknowledged a need to be mentally stronger "particularly during tough times" (Assessment Phase Questionnaire).

4.4.2 Resilience and pressure.

The need for greater resilience was a significant theme that emerged from the assessment phase, and it became quite evident that it was closely related to the team's fragile confidence. One of the players identified a need to be able to address situations when they encounter setbacks during a game, recalling, "I can actually think of lots of situations, if there was a drop catch or something, that actually cost us the game for example, how does the team come back from that?" (Focus Group 1, lines 214-216). This seemed to reflect a particular difficulty the team had with resilience within matches.

Whereas between matches the team indicated that their levels of resilience were high an aspect of resilience that was prominent in their decision to give themselves a performance profile rating of 8. One of the players explained this, referring to bouncing back from losses in the three

day competition to win against the same opposition in the limited over formats, “resilience wise I think we did quite well because the three day we would maybe lose and then we would come back, so resilience is also [good]” (Focus Group 1, lines 216-217). An interpretation of this area of their resilience was provided by one of the participants remarking on their inconsistency leaving them with opportunities to display resilience that they might not otherwise have had, “maybe that’s why we’re so resilient, we like, ‘hey oh shit there’s trouble here’ so we have to rise up” (Focus Group 1, line 435).

As a related area there was a lot of talk from players individually and the coach about dealing with pressure and ‘getting over the line’ and as one player said, “performing during big matches” (Assessment Phase Questionnaire). One of the players wrote that, “learning to deal with pressure and being able to perform when the team needs me” was a primary goal for the upcoming season (Assessment Phase Questionnaire).

Developing the ability to play as one would in practice during a pressure moment, or to “have a net when the game is big or on the line”, was another example of the talk that touched on the theme of big match temperament (BMT). The importance for the players to manage pressure effectively also arose during the focus group discussion as one player described some of their performances,

Against Free State and Gauteng we scored a big first innings score and then in the second innings we crumbled. They were tight games, they were nice and intense, but I think they were games we should have won, that we actually sort of gifted to the opposition because of our mental tiredness and fatigue or whatever it might be. (Focus Group 1, lines 615-618)

This area of the participants’ performance seemed to clearly require some development, despite their high performance profile rating. Again there seems to be inconsistency in this area, with some codes reflecting the presence of resilience and others the lack of it.

4.4.3 Motivation and goal setting.

One of the major talking points for the participants was goal setting. It was the first element of mental toughness identified by the group during the focus group and appeared in a number of the individual interviews and questionnaires. I have included it as part of the larger theme of motivation as it was often used by participants to refer to a need for improved levels of motivation as indicated when this participant was asked to elaborate on the meaning of goal setting,

I think first things for as a team we understand why we do what we do, why we come to practice? Why we run 5, ten k's or whatever it might be, why we go to gym, why we bowl 6 overs at practice. So it's having that picture in your mind saying okay that's the goal and that's what we're all going there for, and also as an individual the same thing I think as well. (Focus Group 1, lines 33-36)

One of the participants indicated what appeared to be a common problem amongst the players, when he described the areas he would like to improve on as, "Goal setting. I get a bit 'stale' as the season goes on and I think it's as a result of me forgetting my goals in the midst of many distractions" (Assessment Phase Questionnaire).

For the coach this was also an area of concern as he spoke about a performance slump during the second half of the season saying,

With the latter half of the season, I think like this year, they looked at the log position, they're playing for nothing and I think that was a major contributing factor in terms of how the last three games went. (Coach Interview 1, lines 9-11)

The players also reflected on a lack of motivation, in particular they remarked on it in reference to a game towards the end of the season.

And I think they were just more motivated than us. You could see by the way they were doing everything, they were much more intense than us, because at that stage we were playing for nothing, just to get through the season I think, and they were playing for, well to win all the trophies available so they had a goal in all their minds where they wanted to win the three day competition and the one day competition, whereas we were just there. (Focus Group 1, lines 477 481)

This theme identifies a significant weakness for the team, captured in the team's performance profile rating of 1. The lack of consistent motivation appeared to have a severe impact on the teams' attitude in the second half of the season, especially in competition. In training the players also identified a need to have greater motivation and drive that would allow them to get more out of their preparation.

4.4.4 Preparation and practice

In line with this, another major theme that emerged from the assessment phase was the need for quality preparation and practice, an area they'd given themselves a rating of 5 in the performance profile. The participants spoke about preparation and practice as something that influences all areas of performance, as one player put it, "it's just that practice influences

everything” (Focus Group 1, lines 331-332). This was a common acknowledgement from the players about the interaction between these concepts.

As the players debated which of the concepts they had identified might be the most important, one of them highlighted the significance of preparation and practice.

I just think with if you don't prepare well enough or practice, you won't have confidence and self-belief. You'll walk out there and think oh well what am I doing here, you won't even... You can say it, that you'll be dominating , but you won't, you'll walk out there and you'll doubt yourself, and then your attitude will be crap as well your concentration. It will be this guy's not backing himself, and you'll visualise yourself crapping yourself. [laughter] That's about it. (Focus Group 1, lines 314 -318)

The players indicated that they were aware of the relational aspects of these concepts, and spoke about the need to utilise reflection and analysis in their approach to goal setting, which would in turn lead to better quality practice. In fact the debate around which of these concepts was more important highlighted the priority of good planning and preparation for the team.

Many of the individual players indicated a need for improved mental preparation prior to matches, in their interviews and questionnaires. One player, in response to a question concerning goals for the up-coming season, responded succinctly, “To be prepared and ready for every game. Prepared and ready, mentally, physically, emotionally” (Assessment Phase Questionnaire). As a team the idea of preparing for games went beyond individual preparation and included analysing conditions and the opposition; another area in which they were hoping to improve.

There was also an emphasis on the idea of improving levels of physical conditioning. As the coach pointed out in his interview,

In preparation, lots of focus is placed on batting and bowling, especially in season. If you look at the time frames in terms of your games, is that, say for example you play an away game, you leave on the Wednesday and then you only come back on the Monday, and then you start your next game on the Thursday if it's a home game, if it's another away game, you fly out again on the Wednesday. So a lot of focus is placed on batting and bowling, fielding drills. The maintenance of the fitness levels is always a problem. (Coach Interview 1, lines 62-67)

The need for improved fitness levels was confirmed in the individual interviews and questionnaires as a number of players mentioned the need to lose weight, or improve their fitness.

4.4.5 Concentration.

The data from the assessment phase consistently highlighted difficulties players had concentrating (performance profile rating of 5). Overall the participants' concentration seemed to be unreliable. The nature of the long periods of time involved in cricket means that players are especially susceptible to distractions. This could be while fielding, at the start of a batsman's innings when various factors may be playing on their mind, or the longer the innings progresses, as fatigue sets in (physical or mental) and the pressure changes.

The extent of this was reflected in quotes from players who spoke about fatigue, "When fatigued and tired I tend to lose concentration" (Assessment Phase Questionnaire). It was also evident in players who had difficulty on the opposite end of the spectrum, specifically in, "Getting my concentration levels high from the start" (Assessment Phase Questionnaire).

Poor concentration came up frequently when players spoke about difficulties converting 'starts into big scores' and indicates a common problem in the teams' batting performance. Although difficulties with concentration appeared in relation to batting more often than at any other time, some players did indicate poor concentration levels while fielding.

For some of them it appeared that improved mental preparation would potentially enhance their levels of focus and concentration, as one player described needing to "prepare to be more focussed for the challenges that [he would] face in matches" (Assessment Phase Questionnaire).

This extract from the focus group highlights the demands that cricket places on players powers of concentration, and suggests that concentration is an important area of focus for the participants.

I think also with concentration, cause of the nature of cricket, I think what we need to identify is distractions; what takes our mind off of what we need to focus on, you know it can be out team mates, it can be our opposition it can be the umpire, weather, you know whatever it might be. And I think that's important for us as a team. Cause I know from, we played thirteen games last year and in amongst those thirteen games I've been distracted while I've been batting and facing a ball not thinking a hundred per cent about the ball. I've probably been thinking about something else as well and I got married too as well so... (laughter). (Team Focus Group 1, lines 154 – 160)

4.4.6 Attitude.

One of the prominent themes centred on the players' talk of attitude. While their performance profile rating in this area was a 7, they also referred to the concept of domination

on which they gave themselves a rating of 5. This idea of domination was described as a ruthless dominant attitude in competition. One player gave his opinion of how they often didn't display that domination, "I think it's just a state of we did well in the first innings and then we go out with the attitude that it should be easy type of thing and we throw it away" (Focus Group 1, lines 625-627).

The idea of having a determined, focused frame of mind was an important one for the players. One of the participants of the focus group described it in this extract. This talk often occurred when players were referring to their frame of mind, regarding practices and matches, as one player described during the focus group,

What we need to get as a unit when we're playing, when we're fielding, when we're batting (I think we don't understand it yet and I think we're blasé about it, we just go through it) is that every moment in cricket is important, especially in three day cricket, because even when nothing's happening that's an important moment, because something is happening for the opposition. For us it might seem like okay nothing is happening for quite a while now, something's happening for them and we need to do something! I think if all of us could have that attitude that every moment is important, cause in cricket it just goes on, it seems like uh, nothing happens and then suddenly we lose the game and we have a fright and we think 'how can we have lost the game'? But I think it's important for each and every one of us as a team to know that every moment is important and it's difficult and that's why cricket is a tough game. (Focus Group 1, lines 647-656)

This quote seems to reflect a state-of-mind, an understanding that is at the foundation of the kind of attitude the players are looking for. This kind of attitude and domination would be important elements of a cricket team's approach.

4.4.7 Inconsistency.

Inconsistency cropped up consistently in the data from the assessment phase. The players and coach reflected on their frustration at inconsistent performances, both individually and from the team as a whole. One player mentioned explicitly in his questionnaire the desire to "perform on a consistent basis to earn a warriors game" (Assessment Phase Questionnaire), while another referred to wanting to attain a greater consistency in his bowling specifically.

This theme was intricately linked to the other prominent themes, as players reflected on the need for a better attitude, more resilient self-belief, improved concentration, and better preparation. The data suggested that improvement in the areas highlighted by the team might result in improved consistency – as one player remarked looking at the results of the very

inconsistent performance profile (see Figure 4) “I’m trying to think back over the past couple of seasons, and that’s exactly how our performance has been. It’s been up and down, up and down, highly skewed as well” (Focus Group 1, lines 430-432).

There was also some discussion of the inconsistency between performances in the three day competition (poorer) and the limited over competitions (improved). There were indications that there was a need for better preparation for the three day format in net sessions, as much of the focus was on mastering skills that were more useful in the limited over formats. One player mentioned in his questionnaire, “in practices we practice like we are going to play one day games only” (Assessment Phase Questionnaire).

The coach also spoke of problems with consistency in his interview, on this occasion specifically regarding the difficulties of team selection, “Also in terms of consistency in selection, sometimes it’s a problem, as some of the players might have difficulty getting off from work you know, two consecutive weeks” (Coach Interview 1, 76-78).

The idea of consistency was a common thread throughout the assessment. While there were some direct references to a lack of consistency it was a theme that was frequently referred to in relation to other categories. The overall image was that the participants felt the lack of consistency as both a contributor to their mental toughness (e.g. inconsistent self-confidence) and the result of a weakness in mental toughness (inconsistent performance).

4.4.8 Team cohesion and communication.

One of the themes that appeared in both the interview with the coach and the focus group was around the strength of the team as a unit. A number of elements were highlighted relating to this area, including communication. The coach specifically mentioned this in his interview.

The one thing I enjoy is the honesty of the players. I normally place a lot of emphasis on that that they need to be honest with me, because that’s my policy, that’s the top of my agenda, is honesty. (Coach Interview 1, 36-38)

This was reflected in the manner in which the players interacted during the focus group, although it was evident that some players were more comfortable sharing their views than others.

One of the players raised another element of the team dynamics during the focus group. He described a positive relationship with the senior players who were forthcoming with advice and instruction, something he indicated was useful for him and a strength of the team’s.

I think personally, I’m a young player in the team, one of the strengths is that there’s always senior players, whether I’m batting bowling or fielding or even in the mental side,

there's lots of guys who even come to talk to me and motivate me, so I think, ah, what's the word, motivation towards the younger players. I think that's cause I've been here a year and a half, and that's been a lot of motivation towards me. (Team Focus Group 1, lines 541-545)

Although most of the discussion in this area was positive, there were indications from both the players and the coach that the team cohesion had dissipated slightly over the course of the season. For the coach this was linked to the poor performances at the tail-end of the season.

The start of the season, we started off as a unit. What I mean by we started off as a unit, is everything we did, especially on away games, we did it as a team. Where if we decide we were going for supper, the whole team will be going for supper. And as the season went on we actually broke up into small groups. And I think that was also a contributing factor in how we played toward the latter part of the season. (Coach Interview 1, lines 29-33)

The players also raised this in the focus group indicating a desire to return to the cohesive unit they had been at the start of the previous season.

When we started off, we started off as a nice unit, where we just backed each other... We sort of just went off the boil a little bit, towards the end of the season, so I don't know whether it was mental or physical... I don't know, it's just, I think if we can improve on that, if we can start off like we did last season, as a team, we'll do much better. (Focus Group 1, lines 560-564)

5. Feedback

The feedback phase involves presenting the information gathered during the assessment phase back to the participants. This iterative and reflexive process is congruent with understandings of the qualitative research approach and this particular aspect emulates the kind of member checking often used to ensure rigor (Fereday & Muir-Cochrane, 2005). This is done in a fashion that encourages a collaborative engagement with the material.

The analysis and the performance profile indicated that the team were struggling in the components they identified as important contributors to mental toughness. Only two of their scores in the performance profile were above five. The importance of the areas identified by the participants in mental toughness and mental skills training literature (Bull et al., 2005, Connaughton et al., 2007), suggested that addressing these areas would most effectively tackle the needs of the team.

6. Action Plan

The findings of the assessment were combined with a theoretical framework of mental toughness development to develop an action plan for the Border Cricket Team. This plan was collaboratively developed to address the prominent areas that were highlighted during the assessment phase. The collaborative design of the programme didn't occur in a single meeting. A tentative action plan was developed and shared with the participants prior to initiating the intervention. Feedback, informal observations and interview data was incorporated into the action plan and guided the shape of the intervention. This was only the start of sustained efforts at a collaborative venture. Throughout the intervention there was a constant effort to provide opportunities for feedback and to shift the form of the intervention as required by contextual changes. This is elaborated on during the section outlining the implementation phase.

The theoretical framework used for the design of the action plan draws heavily on Bull et al.'s model of mental toughness in cricket. This model was chosen because of its appropriateness in a cricketing context. It also provides a description of three levels of mental toughness, as Tough Character, Tough Attitudes and Tough Thinking. This indicates areas that are more open to intervention, and may respond fairly quickly to mental toughness training (Tough Thinking). Tough Character and Attitudes would be expected to develop more slowly and be less accessible in a mental toughness programme. Bull et al.'s (2005) model also highlights the role of the environment in mental toughness development, indicating an important area of intervention. These factors indicate that the model may provide a useful framework for an applied mental toughness intervention in cricket. This research will also provide an opportunity to examine the linear interaction and process of development described by both Bull et al.'s (2005) model and Connaughton et al. (2007).

The contribution of Connaughton and colleagues (2007) work on the development of mental toughness is also important in the theoretical framework of this intervention. The mechanisms of mental toughness development identified by Connaughton et al. (2007) provide important entry points for the design of a mental toughness training programme, and as such their addition to Bull et al.'s (2005) model for this purpose are justified.

Figure 5 summarises the elements of Bull and colleagues (2005) model of mental toughness in cricket. Due to the participants falling within 'the later years' and 'maintenance phase' of mental toughness development, the mechanisms that contribute to mental toughness during these periods identified by Connaughton et al. (2007) have been added to this model (Included in Figure 5 in bold). Connaughton et al.'s (2007) research identified a number of

similarities to Bull et al.'s (2005) work and broadened the scope. While Bull et al.'s (2005) model describes mental toughness, Connaughton and colleagues (2007) identified mechanisms of mental toughness development that included, but went beyond the environmental influences of Bull et al. (2005).

The mechanisms do not fit perfectly in the structural categories as defined by Bull et al. (2005) as three of the categories describe what mental toughness is, while the mechanisms allow those processes to develop. For-example, where Bull et al. (2005) talk of *maintaining self-focus* and *good decision-making* they are describing the content of the tough thinking; whereas reflection, self-talk, and imagery (mechanisms) could be described as the processes of tough thinking. However in the category of Environmental Influence everything, including Bull et al.'s (2005) elements, develops mental toughness rather than describes it. Therefore the mechanisms fit appropriately in this category (i.e. coach's leadership, competitive experience). Here physical preparation and hobbies also make more sense. Simulation training has been included as it is here as it is not part of Tough Character, Tough Attitudes, or Tough Thinking, but would play a role in the athlete's training environment. There is also some overlap in this and other categories. For example Connaughton et al.'s (2007) *parents focus* is very similar to Bull et al.'s (2005) *parental influence*.

With regards to *insatiable desire and internalised motives to succeed* it is hard to decide whether to place this within character or attitudes. These two categories are very closely linked, with Bull et al. (2005) identifying the major discriminating factor as attitudes being less stable and more readily acquirable. In this case insatiable desire and internalised motives to succeed appears to fit more readily within Tough Character as an element of mental toughness that is more enduring.

Mastery, a focus on developing advanced skills (Connaughton et al., 2007), is similar to *determination to make the most of ability* (Bull et al., 2005) and was placed in Tough Attitudes as *was enjoyment*.

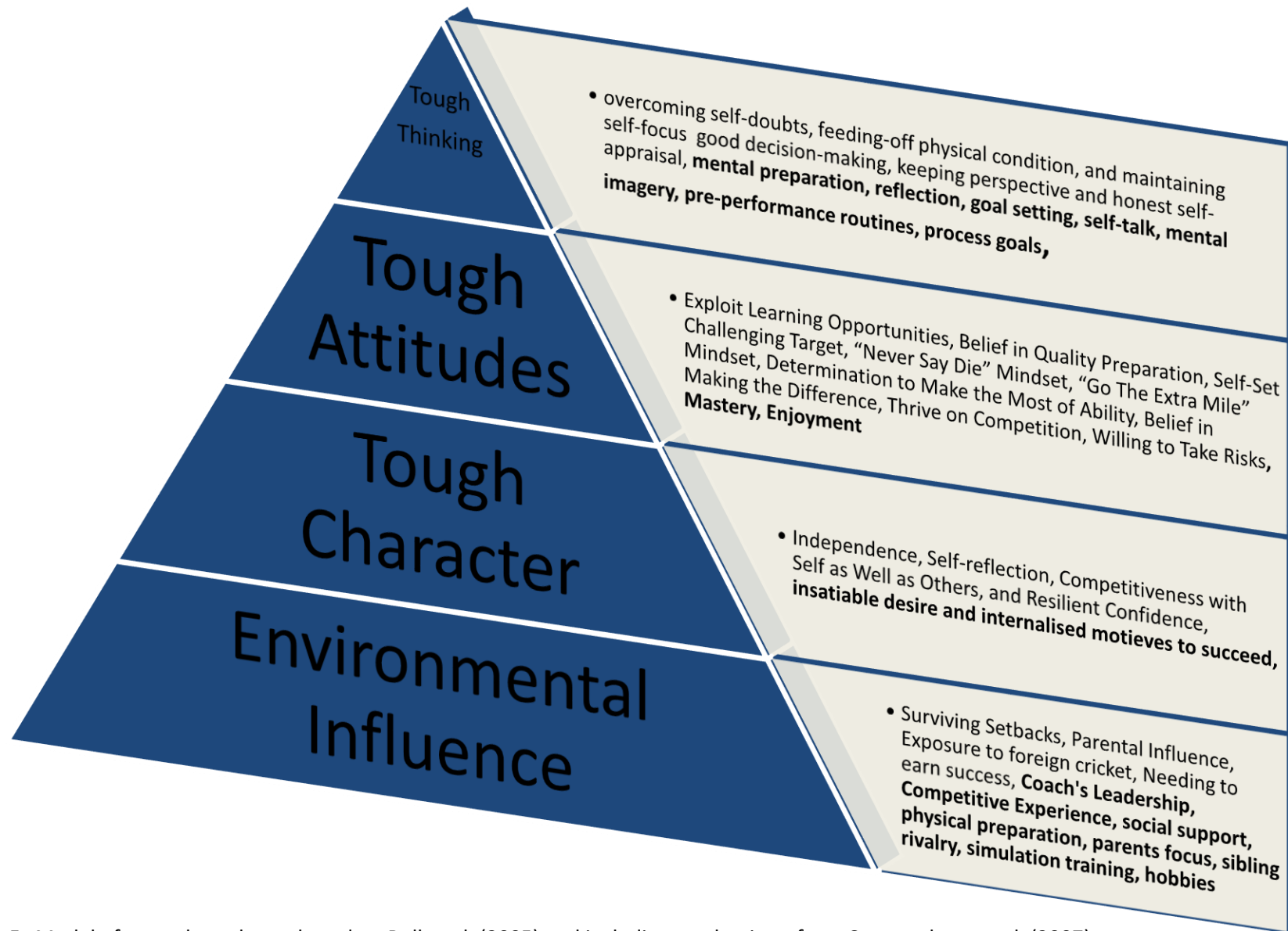


Figure 5. Model of mental toughness based on Bull et al. (2005) and including mechanisms from Connaughton et al. (2007)

The interaction between the three levels is something that Bull et al. (2005) have indicated. They have discussed the impact that environmental influences can have on tough character, tough character on tough attitudes, and tough attitudes on tough thinking. A specific example might be, *opportunities to survive early setbacks*, impacting on *resilient confidence*, impacting on *“never say die” mindset*, impacting on *overcoming self-doubts*.

The findings of the assessment phase were mapped onto the mental toughness model where appropriate. The themes were paired with elements or mechanisms from the model which that would be closely associated with that area. The definitions and descriptions for each element or mechanism given by Bull et al. (2005) and Connaughton et al. (2007) were used to determine the appropriateness of the pairing. Six of the key themes were addressed by two or more elements and mechanisms of the model. ‘Inconsistency’ was not addressed specifically by the model, however the analysis had indicated that this area was closely linked to other key themes. As such addressing the rest of the key themes should have an impact on ‘Inconsistency’. The final key theme ‘Team Cohesion and Communication’ was not addressed by the model as it has been developed exclusively to describe mental toughness in individuals. The results of the combination can be seen in Figure 6.

Because of the interaction between the themes many of the elements and mechanisms are associated with more than one of the key themes. This is not reflected in Figure 6 but is acknowledged as an important aspect of the model. For example *resilient confidence* and *exposure to foreign cricket* would be associated with both ‘Resilience and Pressure’ and ‘Self-belief and Confidence’. This underlines the interactive behaviour of the model in addressing multiple areas.

The following sections of the dissertation outline how each of the key themes links to this model of mental toughness, as well as other literature on mental toughness and mental skills training. The theoretical and applied understanding of these areas was vital in the construction of an appropriate action plan.

Key Assessment Themes

Self-Belief & Confidence

Pressure and Resilience

Goal Setting & Motivation

Preparation & Practice

Concentration

Attitude

Inconsistency

Team Cohesion & Communication

Mental Skills training

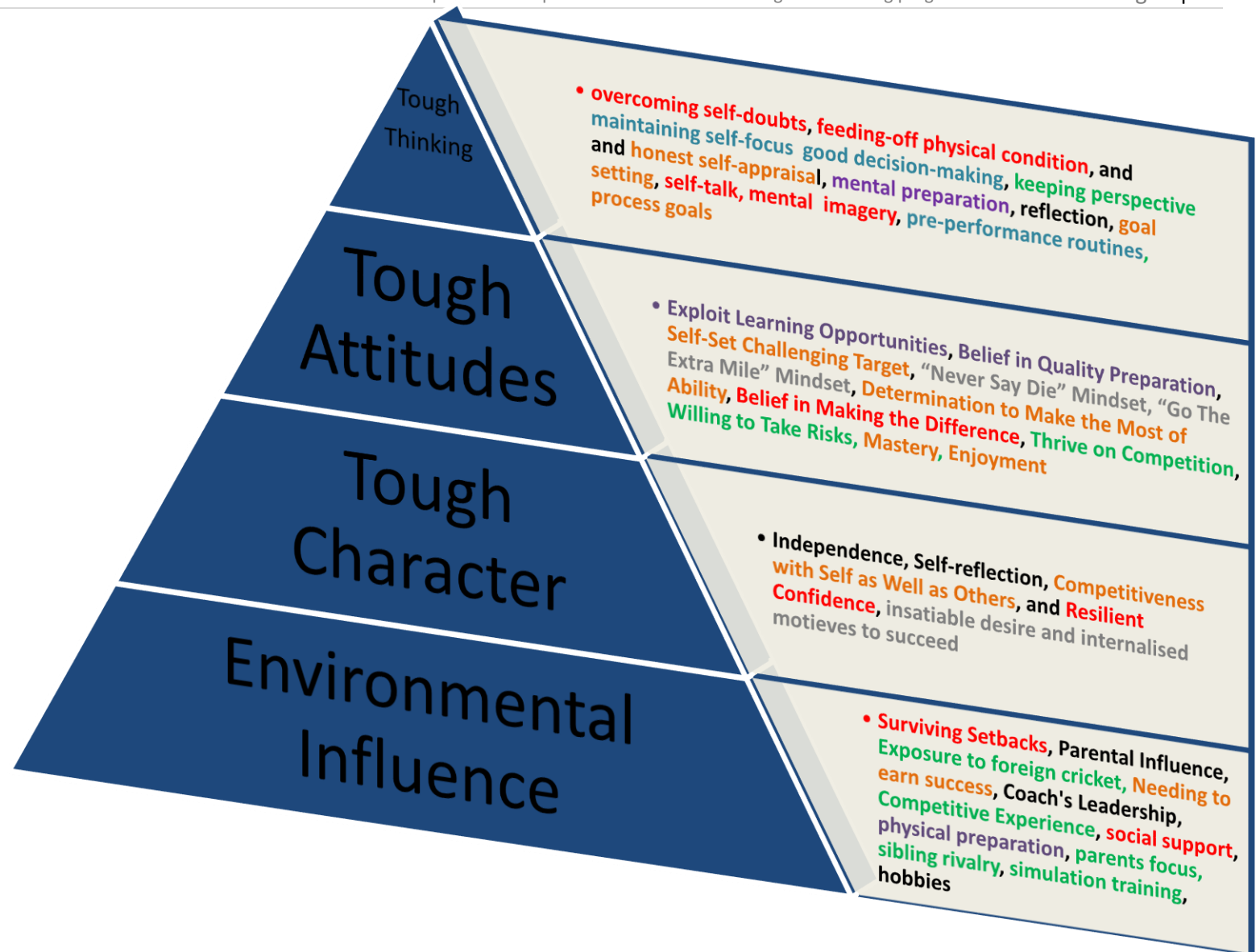


Figure 6 – Model of mental toughness with associated themes from the assessment phase (Bull et al., 2005; Connaughton et al., 2007)

6.1 Self-Belief and Confidence

One of Vealey's (2007) foundation skills, establishing a resilient self-belief is a vital aspect of mental toughness and had been recognised by both team and coach as an area of focus. In Bull et al.'s (2005) model of mental toughness self-confidence is an element of Tough Attitudes (Belief in making the difference), Tough Character (*resilient confidence*) and Tough Thinking (*overcoming self-doubts, feeding off physical condition*). The mechanisms that Connaughton et al. (2007) introduced include *social support, self-talk, mental imagery*. Both groups of researchers have highlighted the importance of surviving setbacks on the development of this attribute (Bull et al., 2005; Connaughton et al., 2007). Self-belief has also been described as an important attribute of mental toughness in other research (Fourie & Potgieter, 2001; Jones et al., 2007).

Not all the elements and mechanisms from the model have been included in the action plan. Those that were more difficult to address (i.e. *surviving setbacks*) have been left out of the intervention. The mechanisms of *social support, mental imagery* and *self-talk* have been included in the action plan. These mechanisms impact on multiple themes including 'Focus', 'Pressure and Resilience'. In order to avoid conveying the message that these mechanisms work in isolation, they have been addressed throughout the programme.

6.2 Pressure and Resilience

Research into mental toughness has suggested that the most important aspect of confidence is not how high it should be, but rather how stable, or resilient it is (Bull et al., 2005). The relationship between these two key themes is strong and 'Pressure and Resilience' was strongly associated with various area of the model related to 'Self-belief and Confidence'. *Keeping perspective, thriving on competition, willing to take risks, exposure to foreign cricket, competitive experience, parents focus, sibling rivalry* and *simulation training* were also associated with this theme. Mental skills literature and practice has used the area of arousal and emotion regulation as a way of addressing pressure scenarios and the impact it can have on performance. This particular skill (addressed in Session 7 below) combined with the mechanism of *simulation training*, was incorporated into the action plan in an effort to address this key theme and the associated elements of the model, specifically *keeping perspective* and *thriving on competition*.

6.3 Goal Setting & Motivation

The research into developing mental toughness has underlined the importance of "having an insatiable desire and internalised motives to succeed" (Jones et al., 2007; Connaughton et al., 2007). Having a strong to desire to achieve can help push boundaries of physical and emotional pain needed in training and competition, set and achieve the challenging targets that drive an

athlete's career, and deal with inevitable setbacks that any performer is bound to face (Connaughton et al., 2007). Gucciardi's (2010, p. 623) research on motivation and mental toughness has also described the importance of "achievement goals and sport motivation for an understanding of mental toughness and its development".

This key theme was associated with a various aspects of the mental toughness model. The areas that the action plan was designed to intervene on centred on Connaughton et al.'s (2007) mechanism of *goal-setting* and *process goals* (Session 2). It was decided that these processes may have a positive impact on other areas of the model especially *honest self-appraisal*, as well as Tough Attitudes (*self-set challenging targets, determination to make the most of ability, mastery and enjoyment*) and Tough Character (*competitiveness with self and others*).

6.4 Preparation and Practice

The key theme of 'Preparation and Practice' was one that was especially significant for the participants. They underlined the widespread impact it could have on the other themes. It is also associated with two mechanisms of the mental toughness model, specifically *physical preparation* and *mental preparation*. Both of these mechanisms were identified by the participants as areas they needed to improve in. The idea of *physical preparation* is important in addressing the attribute of self-belief, specifically the area of Tough Thinking, *feeding off physical condition* (Bull et al., 2005).

The relationship between quality practice and confidence is a well-documented one in the mental skills training literature and may have other benefits including a positive impact on concentration (Harmison, 2011; Vast, Young & Thomas, 2010). The theme was also associated with two Tough Attitudes in *exploiting learning opportunities* and *belief in quality preparation*, both of which would be indirectly addressed through the action plan.

6.5 Concentration

The key theme of concentration was associated with four areas of Tough Thinking, *maintaining self-focus, good decision making, self-talk* and *pre-performance routines*. The focus group demonstrated that this area was considered weak by the team, with a performance profile rating of four, and was seen as an area in need of improvement by the team and individual players. Developing strategies to improve focus, control of thoughts and concentration, is a vital element of mental toughness and tough thinking in particular (Bull et al., 2005; Connaughton et al., 2007; Jones et al., 2007). Improving concentration by attending to appropriate stimuli and screening out distractions will improve performance under pressure (a vital aspect of being mentally tough) and make for better decision making in general (Vast et al, 2010).

The assessment phase indicated that players struggled with focus when fatigued. Fatigue can have an adverse effect on levels of concentration as control of attention becomes more difficult and players are more vulnerable to distractions (Moran, 2010). This highlights an important point on the relationship between physical and mental development. Enhancing the participants' physical and technical preparation would have knock on effects in their levels of mental toughness. In relation to focus and concentration in particular a greater focus on pre-season fitness and conditioning would provide the players with the stamina to endure higher levels of fatigue before demonstrating any decrease in their concentration levels. The importance of working holistically to enhance the mental toughness of the participants is evident in this sphere, but is not restricted to concentration and attention.

6.6 Attitude

While the attribute and mechanism, *insatiable desire and internalised motives to succeed*, was strongly associated with the theme of 'Goal-Setting and Motivation', it has a strong connection to the idea of attitude and domination that the participants raised. The concept of the appropriate frame of mind was also prevalent in this theme and is closely associated with two Tough Attitudes, *"never say die" mindset* and *"go the extra mile" mindset*. Bull et al. (2005) have described both these elements as being related to a long-term motivation to achieve. It is also an area referred to in relation to Achievement Drive, one of Vealey's (2007) foundation skills.

6.7 Team Cohesion and Communication

This key theme was not associated with specific areas of the model of mental toughness as it related only to individual mental toughness. It is however, something that Vealey (2007) refers to as a strong component of sport psychology interventions with sporting teams. It was also a significant theme for the participants who indicated a desire to return to a more cohesive unit. The importance of communication in a team environment cannot be underestimated and, in developing mental toughness in a team setting, the way the team communicates is a vital element in producing a successful unit (Burke, 2010). This is an area of a team intervention that McInerney (2010) had incorporated with some success.

6.8 Inconsistency

This theme was prominent in the analysis but does not relate to any specific element of mental toughness and as such is not associated with any aspect of the model of mental toughness. However, the strong association between this theme and the other key themes indicates that improving mental toughness overall may have a positive impact on consistency as a by-product. This is something that has been implied in mental toughness literature, with consistency being an

important aspect of Jones et al. (2002) definition of mental toughness allowing better and more consistent determination, focus, confidence and control under pressure. Bull et al. (2005, p. 225) also spoke of a “greater consistency of achievement” as a result of well-developed pyramid (model of mental toughness). The mental skills literature has also referred to performing successfully more consistently as a result of improved mental strength (Stuart, 2010, cited in Pattison, 2011).

6.9 The Programme

The importance of using the assessment phase and action plan to develop a context specific understanding of the participants mental toughness is supported by both Fawcett (2011) and Crust (2008). While there is some consensus about the conceptualisation of mental toughness and its core attributes, applied work requires that the practitioner is ‘cognisant of both the needs of the athlete [team] and the demands of the particular sport’ (Crust, 2008, p. 578). Based on the integration of the assessment findings with the theoretical framework, the action plan describes a programme that aimed to address the following:

Initiate processes aimed at improving confidence, resilience, motivation, preparation, concentration and team cohesion, thereby developing overall mental toughness in the Border Cricket Team.

With ‘Attitude’ being strongly associated with motivation, it was assumed that work on goal-setting and motivation would have a positive impact on this area. As such this was not an explicit focus of the programme. This principle was assumed across the entire programme, meaning that each area would not be addressed in isolation but work on one concept would have an impact on other areas. As a result, and because of the close association between consistency and the mental toughness model, it was intended that improved consistency be an indirect outcome of the programme. The following description of the programme will elaborate on how the individual elements and mechanisms of the mental toughness model were addressed.

Following the approach developed by McInerney (2010) the construction of the programme focussed on combining techniques and an accessible approach to theory that would help this particular group of cricketers develop their mental toughness, both through strategies that educated them on the concepts and attributes closely linked to mental toughness, and through methods of developing the most integral mental toughness skills. The programme was designed to work on a number of levels:

6.9.1 Environmental.

By incorporating a mentor system, and working as much as possible with the coach, environmental factors that have been shown to be so vital for the development of mental toughness, were incorporated (Bull et al., 2005; Connaughton et al., 2007). Specifically the environmental aspects of the action plan were:

6.9.1.1 Mentor system.

The mentor system introduced in McInerney (2010) is designed to address the role of environmental factors - particularly *social support*- in the development of mental toughness (Connaughton et al., 2007; Bull et al., 2005). The coach and researcher would pair off senior players with younger players to establish relationships which would be beneficial to the mental toughness development of each individual. The pairs would be encouraged to connect during or after practice to discuss the mental elements of their performance and begin integrating the mental skills into their training. Not only does this try to increase the players' awareness of the effect of their mind on their performance, but also to integrate the mental toughness training with physical training, allowing the players to take the theory and apply it to their own performance (this would be further enhanced with the use of the score-card system). The integration of the mental toughness training and physical training is particularly important for the programme to be effective (Weinberg & Williams, 2006). Senior players would have the opportunity to share experience with younger players, and reinforce existing skills. Younger players would learn from their mentors, and get opportunities to model adaptive behaviours. This system would also enhance the support networks for the individual players, an area that has been highlighted as a significant factor in mental toughness development (Connaughton et al., 2007).

6.9.1.2 Working with the coach.

A number of strategies were designed to enhance the player coach relationship. Incorporating the coach in goal setting and self-rating systems for practices was intended to stimulate the communication between the players and coach at a one-on-one level, while also enhancing the self-awareness of the players and focussing their practice (Connaughton et al., 2007).

A further aim was to collaborate with the coach in creating an appropriate environment for mental toughness development, as well as providing recommendations regarding the integration of mental skills into the overall training programme (Bull et al., 2005).

6.9.1.3 Responsibility groups.

During the pre-season various groups were established within the team that would be in charge of assessing areas of performance for the up-coming match. A **pitch inspection group** would inspect the pitch and field conditions and report back to the team on their assessment. A **bowling group** would make recommendations on the bowlers approach to the match, and particular sessions, and provide information on the approach for certain opposition players. A **batting group** would do the same for the batsmen. The purpose of these groups was to enhance the sense of empowerment individual players felt about their ability to provide input to the team and the strategy and approach for each match. The discussions would also clearly identify performance responsibilities, clarifying the players' roles (Bull et al., 2005). The composition of the groups was designed to change from match to match, combining younger players with senior players.

6.9.2 Educational.

McInerney (2010) and Weinberg & Gould (2011) describe the need for an educational component that would allow the players to develop an understanding of the concepts under discussion and an awareness of their role in mental toughness and improved performance. Gucciardi (2010) has also described the research supporting the use of psycho-educational programmes for developing mental toughness. In this programme this element of the intervention was aimed at addressing the Tough Attitudes identified in the mental toughness model (Bull et al., 2005; Connaughton et al., 2007). The educational content would be supported by the use of a programme booklet.

6.9.2.1 Booklet.

The players would receive a booklet (Appendix D) at session one with information pertinent to the discussion topics as well as the material necessary for the exercises included. At each session, the players would be given a new section to add to the booklet. This way the material discussed and skills learnt in each session could be accessed at later stages both during and after the conclusion of the programme. The last page of each section would be a 'notes' page. The players were asked to use this page, provided with the material for each session, as a space to reflect and make notes about their thoughts and reactions to the material in the session and between sessions. As the programme progressed the players would be encouraged to develop their writing into a form of performance journal. This would be introduced in the session on preparation and practice. This was based on the idea of a journal that has been used consistently in MST training programmes and other mental toughness programmes (Gucciardi et al., 2009d).

6.9.3 Self-awareness.

The importance of self-awareness in mentally tough athletes is well-established. McInerney (2010) highlighted the importance of this concept, while Gucciardi et al. (2009d) demonstrated the role a mental toughness development programme can play in enhancing this process. Bull et al. (2005) also made a strong association between **Tough Thinking** and self-awareness, and **Tough Character** included the element of *self-reflection*. Although the key themes of the assessment did not highlight these areas, they were incorporated into the programme based on the significance this area has been given in other research (Bull et al., 2005; McInerney, 2010; Vealey, 2007).

McInerney (2010) raised the concern that many young athletes are psychologically 'illiterate', as the discourses of the mind and psychology within sport are only recently starting to grow. In the South African context at a player development level, although there is a developing acknowledgement of the significance of the mind and the mental processes operating during performance, many players do not make use of adequate psychological preparation. In fact recent research indicated that more than a quarter of sampled young provincial-level South African netball players indicated average, below average, or poor psychological preparation for competitions (Van den Heever, Grobbelaar & Potgieter, 2007).

One of the priorities of the programme was to intervene specifically in this area and this section in the sessions was designed to provide that opportunity. A focus of this programme was in developing within the players a more conscious awareness of the psychological processes occurring at various stages of their performance and training (Bull et al., 2005; Connaughton et al., 2007; Gucciardi et al., 2009d). This type of awareness would be expected to enhance the effectiveness of mental skills training (McInerney, 2010). Self-awareness was developed through the use of reflective exercises and by encouraging the use of notes, a journal or a diary to record experiences and thoughts (Gucciardi, et al., 2009d; Weinberg & Williams, 2006). The implementation of the scorecard system also addresses this area, more specifically Bull et al.'s (2005) element of tough thinking, *honest self-appraisal*.

6.9.4 Mental skills training.

Mental skills have been shown to be important factors in developing and maintaining mental toughness (Connaughton et al., 2007). Gucciardi et al. (2009d) recently demonstrated improvements in self-reported mental toughness following both a psychological skills training programme and a mental toughness training programme. The incorporation of exercises and

techniques to develop appropriate mental skills was a priority of the programme. Specific mental skills and techniques are expanded upon within the outline of each session.

6.9.5 Overview.

Combining these different dimensions the programmes aim to improve confidence, resilience, motivation, preparation, concentration and team cohesion, was represented an eight session pre-season programme, which was adjusted to seven sessions prior to the start of the intervention. The sessions were titled:

Session 1 - Introduction, Power of the Mind, Overall Plan

Session 2 - Goal Setting

Session 3 - Concentration

Session 4 - Preparation & Practice

Session 5 – Imagery

Session 6 – Communication

Session 7 – Self-Confidence

Session 8 – Dealing with Pressure

6.9.6 Session one: Introduction.

Session one was an introductory session, framing the programme by outlining the upcoming sessions and using a number of exercises and group activities to emphasise the importance of the mind, and specific mental skills in sporting performance, in line with recommendations by Weinberg and Williams (2006). The priorities for this session were to be transparent and collaborative in outlining the programme; to demonstrate the importance of the mind and mental toughness in performance, and thereby justify the programme and the required commitment from the participants. Establishing confidence in the programme's potential and addressing some of the common misconceptions about the lack of usefulness, or conversely the 'quick-fix' nature of this work was important (Weinberg & Gould, 2011). This element, *buy-in*, was a vital aspect of the early stage of the intervention.

An outline of the programme was provided and discussed with the players and they had an opportunity to make changes or additions. The links between the action plan and the results of the assessment phase were demonstrated, using quotes from the focus group to indicate the larger themes. These focus group responses were included to enhance buy-in, demonstrating how each session focussed on an area highlighted as important by the players themselves.

A particular focus of the first session was to emphasise the role of mental skills training in the players' approach to cricket. It is vital that the players understand that mental skills are just

as important as physical skills in improving their cricket. At the same time they need to be cognisant of the fact that improving their mental game is going to take hard work, just like it would to improve the physical aspects of their game (Connaughton et al., 2007; Weinberg & Gould, 2011). This was something highlighted by Connaughton et al. (2007) in their discussion of the role of mental skills in the maintenance of mental toughness. This idea was approached through the use of metaphors that compared learning a new mental skill to learning a new physical skill, as if you were doing things with your weaker hand.

The programme as a whole and session one in particular, aimed to begin the process of providing the players with a deeper level of self-awareness. The results from the team performance profile were included in the booklet, and the players were asked to fill out an individual performance profile, using the areas that had been identified by the team. The aim was to help highlight for players where their strengths and weaknesses might be, and provide baseline information they could use to begin developing goals with during session two (Gucciardi & Gordon, 2009b).

Session one included an exercise used to good effect in McInerney (2010), designed to highlight the power of the mind, called *the paper clip exercise* (Janssen, 2000). Through the use of visualisation and thought control, the exercise involved moving a paper clip attached to a string across a specific path, while consciously keeping your fingers and hand still (this exercise is based on the ideomotor effect and psychoneuromuscular theory, one of the theories explaining the operations of imagery (Weinberg & Gould, 2011)).

Associations between imagery, superior sport performance, and positive psychological attributes have been suggested, along with an impact on attributes like self-confidence, self-efficacy and decreased anxiety, particularly if used in conjunction with relaxation strategies that are designed to match the particular presentation of the anxiety response (Sheard & Golby, 2006). Imagery ability can also predict performance and has been shown to improve significantly with practice and to significantly correlate with motor-skill performance (Blakeslee & Goff, 2007). The incorporation of the paper clip exercise was expected to have a direct impact on the players' perception of the applications of visualisation.

Another goal for the session was to start tapping into the motivation of the players and developing their self-awareness. Questions taken from Cooper and Goodenough (2005) were used to structure a reflective exercise that required the participants to reflect on their motives for playing cricket, and attempted to describe the importance of cricket within their life. The commitment that would be required of the players, to the mental toughness programme as well

as to their cricket in general, relies upon their willingness to make difficult sacrifices (in time, relationships and other areas of their life). This set of questions aimed to begin providing the players with a sense of what they were working towards, and what they were sacrificing for. These questions tapped into both intrinsic and extrinsic motivation, both of which are important contributors to sustained effort (Weinberg & Gould, 2011). The assessment phase had indicated that goal setting and preparation were areas of concern for the participants, and improvements in motivation would be expected to be beneficial in both these domains.

The discussion of these exercises was aimed at stimulating the development of self-awareness and helping the players to understand the impact that psychological processes have on their performance. A high level of self-awareness is an important attribute found in mentally tough performers and is a key element specifically with regard to the development of tough thinking and robust self-confidence (Connaughton et al., 2007; Weinberg & Williams, 2006).

6.9.7 Session two: Goal Setting.

The second session was aimed at providing the participants with an educational component (Weinberg & Gould, 2011) on the value of goal setting, outlining research on the efficacy of goal setting as a performance enhancement technique. The bulk of the session was designed to focus on the idea of using goals to improve motivation (Weinberg & Williams, 2006). An unsatisfactory level of motivation was highlighted in the interview and focus group with reference to the team going 'stale' towards the latter end of the season, and the low performance profile rating of one for goal setting indicated an important area of intervention. With the emphasis on motivation, *self-set challenging targets, goal setting, process goals*, this is considered a vital area of focus (Bull et al., 2005; Connaughton et al., 2007). Vealey (2007) describes motivation as a key foundation skill and as such it was decided that initiating the programme with this focus area would be appropriate.

Sheard and Golby (2006) have suggested that goal setting is a 'robust-performance enhancement strategy', when process goals, providing greater control, are combined with outcome goals, providing greater motivation. Outcome and process goals are tied to two goal perspectives, with the outcome goals involving normatively referenced and comparatively oriented strategies, and process goals as self-reference and mastery focused (Duda, 2007).

Integrating short-term and long term-goals and developing appropriate goal-achievement strategies was identified as an important element of a discussion around goal setting. Connaughton et al. (2007) have indicated that goal setting contributes to the development of mental toughness particularly during the late teens, and has been linked specifically with the

development of desire and internalised motives to succeed. Literature on goal setting and motivation has strongly supported using a combination of mastery and performance goals and this evidence guided the construction of the session (Barron & Harackiewicz, 2001; Duda, 2007).

The initial part of the session was constructed to revolve around a discussion of motivation and how it can be improved or appropriately directed, building on ideas of competitiveness, motivation intensity and the effects of too little, or too much intensity (Weinberg & Gould, 2011). This discussion should help develop the players' understanding of the concept, tapping into the educational component of the session.

To begin with participants were taken through theory on goal setting and the best manner in which to set goals, explaining the distinction between outcome, performance and process goals. The concept of goals SMARTS as a way to develop appropriate and achievable goals based on the SMARTS approach (specific, measurable, action oriented, realistic, timely, self-determined) was introduced (Weinberg & Gould, 2011).

The session then focused on the development of a team goal, using the tools developed in the previous discussions and based on the ideas of establishing short-term goals as part of a long-term strategy. All team members were included in the construction of goals and the development of strategies to monitor and assess progress towards those goals (Weinberg & Gould, 2011). The players were provided with pages in the booklet on which to record and monitor their individual and team goals for the upcoming season.

In this session the use of a practice score card will also be introduced. Players will be encouraged to identify goals at the beginning of each practice (using both process and performance goals) and record them on a scorecard. The players will then rate themselves on a scale of 1 – 10 on two general categories of *effort* put in, and *quality* of practice. The players will then rate their performance in each of the goals they identified (up to three). This scorecard can then be used to discuss the practice with either the coach and/or the player's partner/mentor, with space on the scorecard for both these individuals to record their ratings, and observations.

This element of the programme would attempt to construct an environment that encourages a mastery orientation to motivation, with the focus on task-involved goals inspiring maximum motivation from the players (Connaughton et al., 2007; Duda, 2007). Although in the team environment the ego orientations are common based on the interpersonal competition (for places within the team) and public evaluation, this element of the programme is designed to place an emphasis on the learning process, participation and individualised skills mastery. This environment will hopefully influence how the participants interpret and respond to achievement

events. As Duda (2007, p. 79) points out “it is suggested that an individual’s goal perspective will affect self-evaluations of demonstrated ability, expended effort and attributions for success and failure. In turn these cognitions are assumed to impact achievement-related affect, strategies, and subsequent behaviours such as performance, task choice and persistence”.

6.9.8 Session three: Concentration.

The focus of the third session was concentration. A task oriented focus of concentration, and concentration on somatic responses, heartbeat and breathing have been shown to help improve performance, and therefore these methods were incorporated into the programme (Sheard & Golby, 2006).

To develop concentration skills, the focus was on dealing with distractions, the main cause of breaks in concentration (Weinberg & Gould, 2011). To start the session the players were asked to use the concentration grid (a table of numbers from 1 to 100 arranged in a random sequence) provided in their booklets to identify as many numbers as they could from “1” onwards, in the space of two minutes (Harris & Harris, 1984 cited in Greenlees, Thelwell & Holder, 2006). Although this exercise has been used as a concentration training exercise, recent research has indicated a lack of evidence demonstrating its effectiveness (Greenlees et al., 2006). Informed by this literature the exercise was used to prompt a short discussion on the difficulties of concentration, the possible distractions and the mental strategies required in order to fulfil the task.

This exercise opens up the space for a discussion of the prominent model of concentration as a dimension of attention (Moran, 2010). Presenting the concept of concentration as a spotlight of conscious attention on certain stimuli in the environment provides the participants with insight into the control they have over their attention. The automated nature of skilled athletes’ well-practiced movements means they have extra cognitive capacity for concurrent tasks, but also makes them vulnerable to distractions (Moran, 2010). The correlations between peak performance experiences and an immersion in the present moment, links to experiences of flow and being in the zone, and highlights concentration as an important key to peak performance (Harmison 2011). The participants were encouraged to reflect and share times when they may have experienced this state of flow and discuss the differences between the quality of their attention in these moments and others.

Vast et al. (2010) have highlighted the impact of emotion on concentration, and described how the anxiety associated with pressure scenarios can lead to the phenomenon of ‘choking’, where attention shifts from appropriate cues to internal (thoughts and feelings) and external

(crowd, scoreboard) distractions. These moments can also provoke conscious efforts to control those highly automated physical tasks, degrading their performance (Vast et al., 2010).

One of the ways in which to enhance concentration and refocus after distractions is using concentration techniques. These refer to those strategies, like performance routines and the use of self-talk and key words, which assist in establishing, maintaining and regaining appropriate concentration (Greenlees et al., 2006). Developing defences against distractions begins with developing performance cues that can trigger a player to focus. The need to identify and integrate these cues in to routines was discussed. The 3 R's technique (recognise, regroup, refocus) was outlined in order to demonstrate ways in which to handle distractions (Weinberg & Gould, 2011). Verbal, mental, physical and visual cues were presented as useful tools for triggering concentration and opening up a route to an immersion in the present moment (Moran, 2010).

Individually the session required players to assess their level of focus in a cricket match, in varying scenarios, in order to develop a picture of their levels of concentration across a match. From here the division between internal and external distractions was examined and discussed, with the understanding that distractions are inevitable, and that in order to deal productively with them one needs to be able to quickly identify potential distractions.

Leaving the session the players would have a grasp of their own strengths and weaknesses in concentrating and have identified where routines and cues can play a role for them, both as individuals and as a team.

6.9.9 Session four: Preparation & Practice.

The importance of effective practice and preparation, acknowledged in both the sport psychology literature (Harmison, 2011) and the assessment phase of this programme, guided the design of the fourth session. The team had given themselves a performance profile rating of five for this element of performance, and during the focus group discussion they had emphasised the value they placed on this area. As an area of focus for the intervention, the session drew heavily on the understanding that quality preparation and practice have a significant impact on a number of dimensions of mental toughness. One of the ways of enhancing self-belief and confidence is through quality preparation (Vealey & Vernau, 2010; Weinberg & Gould, 2011). Preparing both physically and mentally can enhance the levels of concentration and improve the players' ability to enter a state of flow while performing. Overlearning the physical movements required for specific batting strokes or bowling allow the actions to become encoded in the motor cortices of the brain, and free up cognitive processing for attending to other stimuli, like the position or

movement of the batsman, or the pace and bounce of a delivery (Vast et al., 2010; Weinberg & Gould, 2011). These processes can have an impact on levels of concentration.

The session introduced the concept of *simulation training* (Connaughton et al., 2007). Discussion with the coach had identified this as a new strategy to develop the players' ability in certain key areas of the match. Jones and Hardy (1990) have described how the use of simulation training can assist athletes to develop the skills and mind-set required for pressure scenarios (cited in Weinberg & Gould, 2011). Preparing for difficult situations allows players to build confidence in their ability to perform under those conditions (Vealey & Vernau, 2010). This understanding of the value of practice and preparation was shared with the players to help motivate for the importance of structured and focussed practice.

The players were asked to think of important moments in the match where they would like to improve the performance. They were asked to describe in detail what the conditions of that scenario were, and then discuss how they could recreate them in practice. Both the physical and psychological conditions were addressed in order to enhance the players' mental and physical skills in those scenarios.

The session also covered the area of mental preparation and competition plans to support the maintenance of attentional focus (Weinberg & Gould, 2011). Players were asked to reflect on their mental preparation, how and when they set and evaluated goals, their use of self-talk and visualisation, reflection and planning. They were encouraged to identify in detail their preparation for a match, including how they train, what they do the night before, or on the morning of the match, what things help them to get a greater sense of focus and how they stay relaxed.

6.9.10 Session five: Imagery.

The fifth session was on imagery. Having included visualisation (which is a common term for the use of imagery (Vealey, 2007)) as an important element of their mental toughness and given themselves a rating of one out of ten in this area, the team clearly needed to improve in this area.

Imagery is defined in the following manner:

Imagery, in the context of sport, may be considered as the creation or re-creation of an experience generated from memorial information, involving quasi-sensorial, quasi-perceptual, and quasi-affective characteristics, that is under the volitional control of the imager and which occur in the absence of the real stimulus antecedents normally associated with the actual experience. (Morris, 2010, p. 482)

The use of imagery is cited as an important mental skill in the development of components like confidence, arousal regulation and motivation, in addition to positively influencing performance enhancement (Morris, 2010; Weinberg & Gould, 2011). Connaughton and his colleagues (2007) identified the use of imagery, as well as other mental skills as important in the maintenance of mental toughness. Specifically imagery was described as useful in coping with competitive anxiety and in preparing for competition (Connaughton et. al, 2007). Previous sessions had introduced the use of skills like self-talk, performance routines and goal setting, and a session focussing on visualisation was included in accordance with the emphasis placed on it by the participants during the assessment phase.

The initial part of the session was aimed at providing the participants with knowledge about the how and why of visualisation. There is no definitive model of imagery, although a number of theories have been developed including the psychoneuromuscular theory, the symbolic learning theory, and the bioinformational theory (Morris, 2010; Weinberg & Gould, 2011). Anecdotal evidence from a large number of athletes has provided indication of the value of visualisation in terms of performance, especially at an elite level (Weinberg & Gould, 2011). There is also research to suggest that imagery is effective in learning, performance, enhancing confidence, improving motivation, reducing stress and anxiety, and facilitating recovery from injury (Morris, 2010). A number of these areas are key components of mental toughness and as such visualisation may be an appropriate technique for enhancing mental toughness.

The participants were asked to assess their beliefs and attitudes regarding visualisation in order to stimulate their awareness of their pre-conceptions. The session also included a imagery exercise to provide an opportunity to experience the type of processes that imagery training involve. The players were then encouraged to identify where when and how these techniques might enhance their training and performance. In order to begin utilising these techniques in specific areas of their training, the participants were provided with guidelines for practicing the skill. It was stressed that the skill can be difficult to master, and takes disciplined practice and attention to take advantage of (Connaughton et al., 2007; Morris, 2010; Weinberg & Gould, 2011).

6.9.11 Session six: Communication.

The sixth session revolved around confidence and self-belief. The educational component was designed to get the players thinking about their levels of confidence, and provoke discussion around what factors affect self-belief, both detrimentally and positively. Using quotes from famous athletes as stimuli for discussion, ideas and questions around the impact of confidence on performance were raised. This session intended to assist the players to understand how

confidence has a direct effect on arousal, concentration, momentum, strategy, effort and success (Weinberg & Gould, 2011).

Understanding how the cycle of success works and the relationship between a lack of confidence and a slump in performance, was a requirement for a team who struggled with low levels of motivation and self-belief following a poor start to their previous season. The session also highlighted how confidence can be impacted both positively and negatively by people in the social network, and how important this can be in a team environment (Vealey & Vernau, 2010); this was addressed later on in the session as the impact of communication was discussed, both intrapersonally as self-talk and interpersonally.

In line with the structure of the programme the session focused on developing skills to build and sustain self-confidence; including the importance of acting confidently (body language), thinking confidently (attitude), and building on and emphasising performance accomplishments (Bull et al., 2005; Connaughton et al., 2007; Weinberg & Gould, 2011). This led into a discussion of the application of goal setting (as discussed in session 2), the use and importance of proper preparation, and incorporating, imagery, thought-stopping and positive self-talk to ward off doubt in the face of mistakes and other triggers (Bull et al., 2005; Connaughton et al., 2007). Sheard and Golby (2006) demonstrate that incorporating techniques like thought stopping, which prevent negative thoughts from affecting, feelings and behaviours, has a positive effect on performance outcomes. These techniques were familiar to the players from earlier sessions, and provided an opportunity to both check in on their progress and elaborate on their application.

The session's section on self-reflection asked the players to examine their levels of confidence, to identify their doubts and their responses to challenge and pressure. This was another example of the emphasis in the programme on the development of self-awareness.

Dealing with doubt was a particularly important aspect for the players to focus on individually. They should have taken from this session a concrete idea of the situations that may have negative effects on their confidence levels, and used the 'notes' page to start compiling a list of these situations. Once this self-awareness was developed, they could begin implementing strategies (using the techniques of imagery and self-talk provided) to handle them in a positive fashion (Vealey & Vernau, 2010). Following on from the method used in McInerney (2010) the idea of a performance log-book or a success journal was introduced, building on the idea of the 'notes' page already discussed. Positive experiences with the 'notes' page should make the players more amenable to the idea of a journal or log-book.

6.9.12 Session seven: Self-confidence.

Session seven was designed to tackle communication. Building on the self-reflection element of the self-belief session, the communication section began with a listening skills test, taken from Weinberg and Gould (2007). The self-report questionnaire provided the players with a score based on their responses on a four point rating scale of never, seldom, sometimes and often. The test was included to provide the players with some insight into their approach to listening and to highlight where they may have weaknesses and encourage a shift to active listening (Weinberg & Gould, 2011). The scores are designed to provide a personal indication of where a player may lie on a spectrum and were not for public discussion but rather, private reflection.

After completing the questionnaire the players completed an exercise successfully used in McInerney (2010). This *Back to Back Communication* exercise taken from Janssen (2000) was used in order to try and stress the importance of good communication skills in an applied setting. The exercise involved pairs working together to copy a certain image, with one partner communicating the image to the other who had to draw it. The central concepts that the players were required to engage with included an understanding of empathy, the importance of active listening and the dangers of misinterpretation.

The group exercise provided an opening for the educational and discussion component of the session which was designed to outline the negative impact inappropriate communication can have on motivation and self-belief, the two concepts discussed in earlier sessions. A brief exercise was adapted from the exercise *Back to Back Communication* (Janssen, 2000), in order to try and stress the importance of good communication skills in an applied setting.

An additional element of the session was the incorporation of techniques to provide constructive criticism, centring on the sandwich approach (Weinberg & Gould, 2011). This technique emphasises the need to be aware of the impact that criticism has, and the need to structure criticism with a compliment, future-oriented instructions and a positive statement, in order to prevent the recipient from tuning-out, and increase the chance that the criticism is productive.

The final part of the session is a more focussed emphasis on intrapersonal communication, self-talk (building on earlier sessions that had introduced the concept of self-talk, specifically cue words) and how to recognise and control the impact of the thoughts we address to ourselves by focussing on the positive rather than the negative (Van Raalte, 2010). Again the idea of a

performance log-book was suggested, in an attempt to provide the players with a tool to develop mental discipline and build self-awareness.

6.9.13 Session eight: Pressure.

The final group session of the programme was on the subject of dealing with pressure. While a number of mechanisms relating to resilience and dealing with pressure have already been introduced (e.g. *simulation training*), the session also offered an opportunity to address the mental skills of arousal and emotion regulation, skills which have been linked to improvements in domains of mental toughness including concentration and confidence (Weinberg & Gould, 2011). These skills may also address the Tough Attitude of *thriving on competition* and Tough Thinking of *keeping perspective* (Bull et al., 2005).

Arousal regulation was introduced simply as the use of breath control strategies, as outlined by (Weinberg, 2010). These strategies are simple routes techniques that allow for powerful change. Sharing with the participants the ideas underpinning Hanin's (1997, cited in Weinberg, 2010) Zone of Optimal Functioning theory of arousal, provides some grounding in the concepts that discuss the connections between physical, cognitive and emotional arousal. The negative impact of anxiety and the accompanying tension would presumably be familiar to the participants. These effects are particularly pronounced in skills that place more emphasis on fine motor control, which cricket often does. Breath control strategies provide a useful way to address both the physical and cognitive elements of arousal (Weinberg, 2010). By providing the mind with something to focus on they quieten the mind, providing an alternative focus of attention to the internal dialogue that often accompanies pressure moments. The act of controlling (slowing in this case) breath also has an impact on the level of physical arousal engaging the parasympathetic nervous system, slowing heart rate and lowering blood pressure. (Weinberg & Gould, 2011).

As the final session it would also be an important time to recap and consolidate the areas already covered. A session ostensibly on dealing with pressure would allow for revision of mental skills including self-talk, pre-performance routines, performance cues, simulation training, and imagery. All of these skills can be beneficial in assisting players to deal with pressure more effectively.

7. Implementation

The training programme was implemented during the players' off-season, following guidelines in the literature (Weinberg & Williams, 2006). The eight sessions outlined in the Action Plan were changed to seven sessions due to scheduling problems. This resulted in the combination of session six and seven into a session addressing self-confidence, attitude and

communication. The sessions were one to two hours and were implemented once-a-week with a two week break between session four and five. The sessions were scheduled either prior to or following a practice. Those that were scheduled following a practice were often delayed and players found it difficult to focus after taxing physical sessions.

Attendance at a warm-up match and the team's first home game provided opportunities to engage with the players informally and provide insight into the players' mental toughness in competitive scenarios. These opportunities highlighted the relational elements of the team, as well as revealing more about the personality of the individuals. These matches also allowed for the systemic and environmental strategies to be implemented and observed. Responsibility groups were implemented as was team discussions on both goal setting (prior to the match and individual sessions) and reflection (post-match). The matches also provided an opportunity to work closely with the coach and to continue efforts at guiding the development of a coach-mediated learning environment (Gucciardi & Mallet, 2010). Discussions about the programme were held with coach on a weekly basis and the coach also participated in a number of the sessions.

Efforts were made to gather feedback from the participants from session to session. This resulted in the acknowledgement of a difficulty within the team concerning the players' awareness of the strategic value each period of the game. In response to this a pressure barometer was introduced to the change room that required individual players to mark where they felt the level of pressure was at various points during the game.

This feedback also resulted in the addition of further sessions during the first half of the season. These were supplementary to the programme and attempted to consolidate the skills and material already covered.

The organisational idiosyncrasies of the team, with a number of players studying and training remotely and a number of others traveling from a distance, made the practicalities of the intervention challenging. A number of players were often unable to make the group sessions. This meant that small informal group sessions were run during the warm-up match, to 'catch-up' players who had missed a number of sessions.

8. Evaluation

Action research places a large emphasis on the participatory nature of interpretive research and by adopting a 'bottom-up' approach to knowledge production it challenges the assumption of the 'expert' researcher (Reason & Bradbury, 2008). The implications of the researcher as a constructor of knowledge involve a closer examination of the role of the

researcher within the research process. Building on the approach taken in McInerney (2010) an important source of data in this research was my own reflection on the process, especially during the implementation phase. This data has been combined with the participants' reflections from the evaluation phase in order to contribute to a discussion on the implementation of a mental toughness training programme.

The evaluation phase included a number of data gathering methods, including a second focus group with the team, an interview with the coach, and evaluation questionnaires (Appendix E) given to the players. Based on these methods, there were a number of opportunities for the key role players and coach to present feedback on their experiences of the intervention. This data, along with my research documentation, provided valuable insight into the operation of the programme and established the strengths and weaknesses of the approach used in this research.

By drawing on data from multiple sources, a focus group, interview and my reflections, the validity of the findings has been strengthened through a process of triangulation (Golafshani, 2003). Checking and contrasting across data sources allowed for greater accuracy in the formation of themes.

Although three separate data collection methods were used, I was cognisant of my role in the construction of the data through the interview schedules and questionnaires, and my presence and contributions in both the interview and focus group. While understanding that my presence would affect the data produced no matter what I attempted, I made a concerted effort to reflect on my assumptions and be aware of my influence on the knowledge produced prior to, and during, the focus group and interview (Coghlan & Brannick, 2004).

8.1 Team Focus Group

The focus group was held during the middle of the season, nearly 4 months after the conclusion of the initial programme. Weinberg and Gould (2011) suggest that participants' first exposure to psychological skills training should last at least 6 months, and this assessment point provided a balance between the importance of having the programme fresh in the players' minds, and providing them with enough time to begin applying the training in competition. The focus group was conducted with 14 players and the head coach. Although the composition of the team had varied during the season, there was a core group of 10 players involved throughout the programme. These core players were present in the focus group, as well four who had been involved temporarily. This phase of the ODP model provided an opportunity for a forum, in which the players could share their experiences of the entire programme for them as a team and as individuals. A schedule (Appendix E) was constructed to guide the players' reflection. Based on

the recommendations of Martin and Hrycaiko (1983) and used by and cited in Gucciardi et al. (2009d) the schedule covered three sections: thoughts about the goals of the intervention, the procedures implemented, and the results of the intervention, with specific questions on individual sessions, and their values, weaknesses and impact.

With the potential that the nature of the focus group might prevent individuals from providing their own perspectives on the programme, the players were provided with the schedule prior to the focus group, in the form of a questionnaire. The players were encouraged to bring their responses to the focus group and share their reflections. There was a poor response from the participants in this regard and only one questionnaire was used in the analysis. With only one response this data is limited in its usefulness, but is incorporated into the analysis with the understanding that it represents only one voice.

The focus group discussion was not structured strictly according to the schedule and I encouraged an organic flow of conversation. The priority was for the players to convey their perceptions of the approach, the content and general implementation of the programme, while also reflecting on the level of effort they put into the programme and my role as facilitator.

The focus group began with the construction of a second performance profile. The players were asked to rate themselves on the eight components that they had identified as important aspects of the team's mental performance when they constructed their first profile during the assessment phase. The players had not been exposed to the profile since constructing it approximately 6 months before. It is important to mention that the use of the profiles was not intended to provide a quantitative evaluation of the programme's effectiveness, but rather to provide an ancillary point of reference for the qualitative analysis. The scores the players assigned themselves in both profiles can be seen in Figure 7 below.

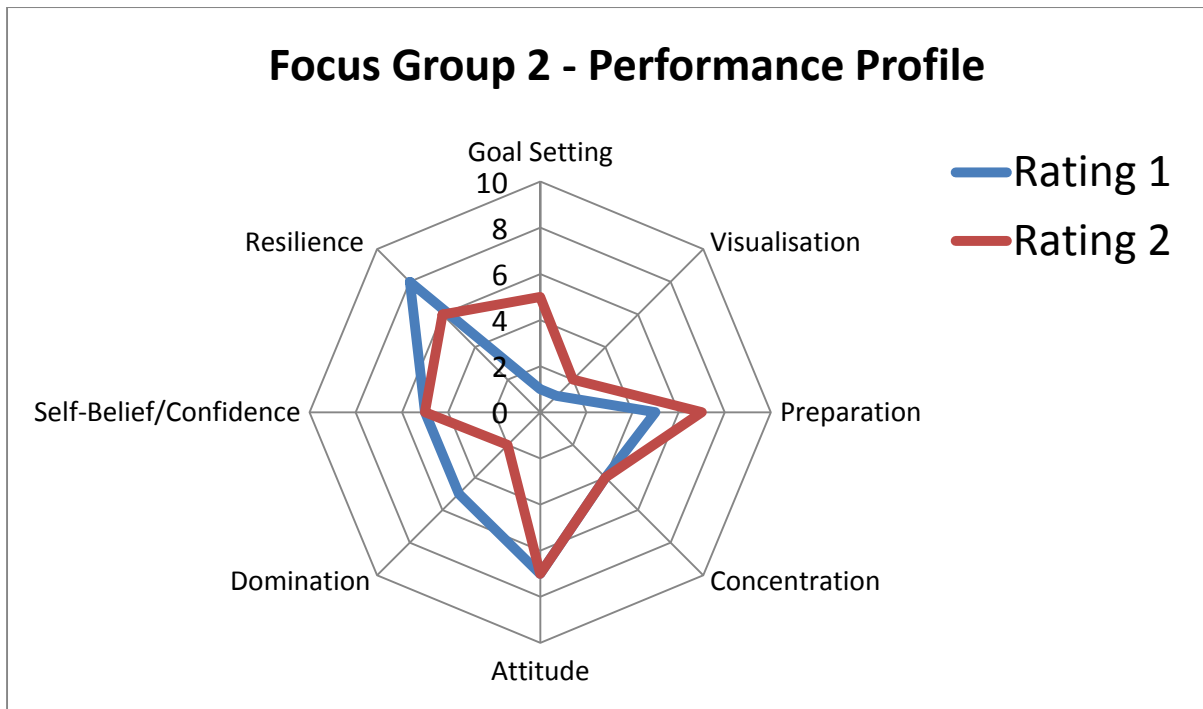


Figure 7. Results of performance profile conducted during the second focus group

The team's self-ratings reflected improvement in three areas, remained the same in three areas, and decreased in two. Both areas with very low initial ratings, goal setting and visualisation, showed some improvement, with goal setting increasing by four points (1 – 5) and visualisation by 1 points (1 – 2). Preparation was an area that the team had placed significant emphasis on during the initial assessment, and it showed a two point rise, from 5 – 7. Ratings on concentration (4), attitude (7), and self-belief (5) remained the same. Ratings for resilience (8 – 6) and domination (5 – 2) both decreased.

The team's record for the season, at the time of the focus group, provides an important context for the interpretation of the performance profile as well as the analysis of the focus group as a whole. The team were competing in three provincial competitions, a Cricket South Africa (CSA) Provincial 3-day competition that ran from October 2011 to March 2012, a CSA Provincial Pro20 which was completed in the first half of the season, and a CSA Provincial 1-day competition which ran during the second half of the 2011/12 season. Their performance up until the focus group had been significantly below their expectations. The Pro20 competition had been completed, and out of the five matches the team played, they won one and lost the remaining four. At this point it was also the half-way stage in the 3-day competition and the team had not managed to win a match, losing three and drawing two. At that time the team's highest innings score was 235 runs, a fact that reflected a significant weakness with their batting.

8.2 Interview with Coach

The interview conducted with the coach as part of the evaluation initially took place on the same day in January as the focus group. However the sound quality on the recording was too poor for the production of an accurate transcription and the interview was conducted for a second time on 14 July 2012. Although not initially planned this way, having data collection at a later date provided an opportunity for the analysis to examine the intervention from two time points. This was especially valuable as during the second half of the season the team had completed the 3-day competition and in their remaining 8 matches they lost only one match, won four and drew three. They also managed three innings scores of over 400, a significant improvement on their batting performances from the first half of the season. With these performances they managed to pull themselves up to 6th position on the overall log of 14 teams. The team also performed adequately in the 1-day competition, winning four out of seven matches and finishing in the top half of the table. The contrasting context for the interview with the coach in comparison to the earlier focus group provided a rich alternative perspective from which to reflect on the programme. The data from the interview acted as a useful counterpoint and corroboration of the themes that emerged from the earlier data collection.

The aim of the interview was for the coach to provide feedback on his experiences of the programme; this was considered an important aspect of the intervention in line with the action research approach (Reason & Bradbury, 2008). A semi-structured interview schedule (Appendix F) was used to guide the interview, which incorporated an informal approach to place the coach at ease. The conversation attempted to target four main areas; how the coach felt the programme had impacted on him, how he believed it had affected the players, what weaknesses and strengths did the programme have, and his opinion of my role as facilitator. The interview was recorded and lasted for 29 minutes. Both the coach's interview and the focus group (65 minutes) were recorded following ethical guidelines of informed consent.

8.3 Transcription and Analysis

The focus group and interview were transcribed, and together with the questionnaire were thematically analysed following the method and guidelines specified and implemented in the Assessment and Feedback phase (Braun & Clarke, 2006).

The transcripts were checked against the original recordings for accuracy, following which the generation of codes was initiated (Braun & Clarke, 2006). Codes from the coach's interview, the team focus group and the evaluation questionnaire were then integrated into common themes and subthemes. The themes that were identified in the analysis were grouped into three

main categories. The use of the performance profile as stimulus for the Focus Group provided data in one area, namely *Mental Toughness Performance*. The second category of themes deal with overall *Programme Design* and the third category examines *Programme Reception*. The themes and categories are summarised in Table 5 below.

Table 5
Categories and themes – Analysis in the evaluation phase

Mental Toughness Performance	Programme Design	Programme Reception
Self-Belief	Trust	Adherence/Buy-in
Goal Setting	Environmental Elements	Scepticism
Preparation		Credibility Quotes
Resilience		Impact of results
Visualisation		Too Much
Concentration		Responsibility/ Contact Time
Attitude		Focus on the Individual
Domination		
Overall Reflection, Consistency & Cohesion		

8.3.1 Mental toughness performance.

A number of caveats need to be made prior to discussing this area of the analysis. A quantitative analysis of the increases in mental toughness or mental toughness components, in either the individual participants or the team, was not part of the scope of this research. Instead the aims of this phase of the research were to use the data to contribute to the development of appropriate approaches to mental toughness development. This qualitative data is not intended to indicate the extent to which the programme was effective, but rather reveal information about the experiences of the participants and the processes at work during the intervention (Gucciardi et al, 2009d).

Often, levels of mental toughness and performance results are mistakenly amalgamated. The lack of simple objective measures of mental toughness tends to leave people searching for another measure, and performance outcomes seem to fill that gap. Even within some research into mental toughness, high levels of performance have been used as criteria for identifying samples of mentally tough athletes (Jones et al., 2002). Unfortunately there are multiple elements that contribute to outcomes and levels of performance, including playing conditions, level of

opponents, quality of umpires, physical and mental conditioning, skill levels and execution. This makes the use of performance as an indicator of mental toughness misleading. However, if interpreted with caution, the relationship between mental toughness and performance outcomes mean that context of performance is useful in interpreting levels of mental toughness. Rather than short-sightedly ignoring the team's performance data, it can be used to sensitively interpret the qualitative information presented by the participants.

In the following discussion, the components of the team's performance profile are examined. The data from the focus group, questionnaire and interview have been used to interpret the ratings in each area.

8.3.1.1 Self-belief.

Self-belief was identified as one of, if not the, most important areas for the participants during both focus groups. The team's second rating on the performance profile for self-belief was 5, the same value they had given themselves during the initial assessment. One of the players described the team's level of confidence during the focus group, reflecting on the disparity in their performances between batting and bowling, "In our bowling I think we've got a lot of confidence. I think we back ourselves to bowl any team out, but I think we've been lacking a lot of confidence in the batting department" (Team Focus Group 2, lines 48 – 50).

It is expected that the results would have an impact on the participants' levels of self-belief; this is well documented (Weinberg & Gould, 2011). Yet despite being unable to win a match their confidence levels were in the mid-range and had not dropped from their initial assessment. Just how resilient self-belief should be in the face of failure, in order for it to be an indication of mental toughness is not known, however mental toughness is often associated with recovering from setbacks and with the ability to persevere in the face of struggle (Bull et al., 2005; Connaughton et al., 2007). In this regard the team's performance in the second half of the season may be encouraging, as the coach described in his interview at the conclusion of the season,

If you look at the whole programme, and the certain aspects where we excelled, in terms of self-belief, if I look at how we won games it was through sheer self-belief. I think that was a major improvement, where in a similar situation in the past we would have just chucked it away. (Coach Interview 2, lines 196 – 204)

This quote reflects the coach's belief that the team showed improvement in self-belief, the attribute consistently identified as the most important in the mental toughness literature (Bull, et al, 2005; Connaughton et al., 2007; Gucciardi et al., 2009a). This was an important comment, particularly in comparison to their performances during the previous season, where they lost

direction and belief during the second half of the season. It does suggest improvement in the first key theme 'Self-belief and Confidence' identified during the assessment phase.

8.3.1.2 Goal setting.

The feedback on goal setting covered both team goals and individual goals. The team gave goal setting a 5 point rating on the performance profile, raising it from 1 at the initial assessment. Their comments during the focus group indicated that team goal setting had met with mixed results with one player saying "I just don't think everyone knew exactly what our goals were all the time" (Team Focus Group 2, line 15). The rating of 5 definitely suggests space for improvement in this area, but it also indicates progress. It appears positive, that after the end of the season the coach reflected positively on this element of the intervention, saying, "I think we did very well. It's just reflecting on what we did in the first half of the season, and then trying to improve on those things, and then being goal specific as well" (Coach Interview 2, lines 43 - 48).

This process of goal setting appears to be a key process in the turn around the team saw during the second half of the season. The importance of re-evaluating and adjusting goals had been emphasised during the work on goal setting, and it was something the team implemented during the midseason break, as the coach describes in this quote, "I think as a team we sat down and we strategized, to say this is what we want to achieve this half of the season" (Coach Interview 2, lines 38 – 39). This was particularly important as the team had experienced what a loss of motivation can do during their fade out in the second half of the last season.

The element of reflection within goal setting also seemed to be especially important, "I think what we did well, is that even though things went well we still reflected on our performances, that is key, even when things are going well you still need to reflect" (Coach Interview 2, lines 69 – 70). This idea of reflection is consistent with a number of elements in the theoretical model used during the action plan, including *reflection* in **Tough Thinking** and *self-reflection* in **Tough Character**.

The coach also commented on various elements of the programme that had been introduced during the interaction with the team at their matches. There had been a strong emphasis on the team collaboratively discussing plans and establishing small goals for each session. The value of this was underlined by the coach during his interview, "In the second half, when we did our game strategy, in terms of setting small goals for sessions, it actually panned out very well, it was important" (Coach Interview 2, lines 17 – 19).

For the individual participants individual goal setting seemed to be worthwhile for some, but not for others. One player indicated its importance for him, "Training goals, and performance

goals helped with motivation and having a purpose! Feels like I'm doing things deliberately" (Questionnaire page 1). While the coach indicated that he thought approximately 80% of the group were using goal setting, the focus group data suggested that some players had difficulty implementing the strategy, "I don't know, even if I do achieve them, even if I know I did get one right, I'll never go back to them, I don't know why..." (Team Focus Group 2, lines 291 – 292). These difficulties hint at the importance of including more individual contact in a mental toughness programme, something discussed in length later in this analysis.

8.3.1.3 Preparation.

The participants improved their rating on preparation from 5 to 7, an improvement that was reflected in their comments in the focus group, "We prepared well, it's just that the results don't show that" (Team Focus Group 2, line 30). Their preparation had also improved from the previous seasons with one of the players remarking, "It's the first time we've really worked that hard" (Team Focus Group 2 line 31). There was also an indication that various mental skills relating to preparation, specifically routines and the use of the scorecard system to guide and evaluate practices, were paying off, "Yes it was good to see an outcome at practice!! It also helped improvement and awareness of my own game in terms of what I can and can't do" (Questionnaire page 3).

8.3.1.4 Resilience.

There was some debate over the rating the players gave themselves for resilience. An area that had been their strongest during the assessment phase was rated two points lower at 6. One player, reflecting on their ability to perform under pressure recalled, "When we've really had to grind it out, guys let's be honest here, all the games when we've really had to grind innings we've come out second" (Team Focus Group 2, lines 61 – 62). While for others, their performances in the first half of the season were not those of a side capitulating,

There are games, like even against South Western Districts, it was a game where oaks got stuck in, okay the pitch got messy, but we got stuck in and tried to work it, it might just be a skill thing, but there was definitely resilience there. (Team Focus Group 2, lines 65 – 69)

During the focus group the coach expressed his opinion on the resilience of the side, saying "I think in every game we put up a fight, except the western province game where we folded" (Team Focus Group 2, line 72)

Reflecting after the season, the coach spoke about the difficulty faced by the team after their loss in the first game. They had begun the season with high expectations, based on the work they were doing in a number of areas, including working on their mental toughness,

I think the disappointment from that game actually spilled over into the other games that followed. And I think that break we had we had time to reflect (over December) and we actually came back refreshed in the second half of the season. (Coach Interview 2, lines 30 – 33)

Mental toughness is often associated with a raise in performance after setbacks or in athletes' ability to handle failure (Fourie & Potgieter, 2001; Jones et al., 2002). It is one of the aspects that characterises athletes described as mentally tough (Bull et al., 2005; Connaughton et al., 2007). The participants' performance in the second half of the season would be one indicative of the kind of 'come back' that might characterise a resilient side. This theme is a particularly important reflection on the areas of the action plan that aimed to address the initial assessment theme of 'Resilience and Pressure'.

8.3.1.5 Visualisation.

The players' responses to the visualisation were mixed. Overall the performance profile rating was 2, an improvement on their first rating but still very low. A few of the players indicated positive engagement with this technique, "Visualisation has helped with my belief and also helped me with technical and skill development!" (Questionnaire page 2). For some it was the technique they relied on most heavily, "I agree with Geoff, visualisation is probably the tool I used the most" (Team Focus Group 2, line 554). However the low team rating indicated that a large percentage of the players did not feel comfortable using visualisation.

The discussion around this theme appeared to indicate that those individuals with previous positive experiences of visualisation or imagery were far more likely to make use of the technique and integrate it into their training. For most of the team however, the one session on imagery was not sufficient to give the confidence to begin practicing and using the technique regularly. This is reflected in the low performance profile rating and highlights on of the significant problems the programme faced, of getting the participants to buy into and adhere to the training.

8.3.1.6 Concentration.

The players rating of their concentration remained the same as the initial performance profile (4). Their comments indicated that they had made some errors during the first half of the season that they attributed to losses of concentration.

I think when it comes to concentration, the guys would agree with me, we've had opportunities to actually take the game away and then we just slipped up and I think it was due to concentration. So I think if you look at the catches that we dropped and the run outs that we missed, those kinds of things, we're actually lacking in that department. (Team Focus Group 2, lines 82 – 85)

Once again comments about the quality of their preparation, on this occasion their focus during practice, was positive. "I think Mike, at practice, oaks are always focused and stuff, from what I see, it's just in games that, you know, we slip up at crucial times" (Team Focus Group 2, lines 90 – 91). Whether the team's concentration was at fault in their difficulties putting together a good score in the batting domain, is unclear. However their scores in the second half of the season suggest a more than adequate level of concentration, especially in those innings where they scored over 400 runs.

8.3.1.7 Attitude.

The players rating in this area remained the same as their previous rating, at 7. This appeared fairly positive, especially considering the context and the poor run of results the team had had at that point. The coach mentioned this during the focus group,

Can I comment on that? I think it's been very positive. Irrespective of the situation in the game. There might be a few little things that are disturbing, but in general I would give it a 7. That's my opinion. That's my opinion of the players that I'm working with (Team Focus Group 2, Lines 102 – 104)

This element of the team's mental toughness seems to be particularly important when the systemic elements of the group come to the fore. Although there is little research into mental toughness as a team characteristic, the team environment is likely to have an important role to play, and within that, the team's overall attitude would be quite important. This would make a comment like the following one, in the middle of a season that is going very poorly, hold quite a lot of value, "Oaks are always bubbly. In general we're quite stable in that department" (Team Focus Group Line 106).

The participants' reflections in this theme indicate a slightly different understanding compared to the analysis in the assessment phase. While in the first analysis the key theme 'Attitude' reflected strong associations with the ideas of a "dominant attitude" and having a "determined, focused frame of mind", this theme was more strongly associated with positivity and an upbeat attitude. Both themes were strongly related to the theme of motivation, and it is encouraging that this theme reflects high levels of motivation "irrespective of the situation". This

may have been an important factor in the team's performance during the second half of the season.

8.3.1.8 Domination.

The final element identified by the participants as important to their mental toughness was something they had named domination. In this area their second performance profile rating went from 5 to 1. This area was one they acknowledged as being rather poor, as their laughter in response to my question "Do you have that killer instinct?" indicated, "haha, yeah we don't have it. Bowling wise, yes, bowling wise ten," (Team Focus Group 2, line 111). The lack of this ruthless attitude was most prominent in their batting performance, "We've had two or three, 3-day games where if we just batted properly, we didn't even have to do anything, we just had to bat properly" (Team Focus Group 2, lines 114 – 115).

This idea of being able to take advantage of important moments or opportunities in the game does intuitively fit with the concept of mental toughness. If a team with 'domination' is seen as one that does not appear to feel the pressure that comes with a winning opportunity (often associated with choking), nor do they drop their performance when the challenge eases, then this would quite closely describe the kind of mental toughness in the literature (Jones et al., 2007). The team's rating in this area suggests that they felt they were quite some way from achieving 'domination' and by association, mental toughness.

This sentiment stands in sharp contrast to the one expressed almost five months later by the coach when he said, "If I look at how we won games it was through sheer self-belief. I think that was a major improvement, where in a similar situation in the past, we would have just chucked it away" (Coach Interview 2, lines 201 – 204). The implication is that there was a marked improvement in the mental approach demonstrated by the team.

What these contrasting quotes indicate, is the fluid nature of these components. It suggests that accurate measurement of mental toughness and its components would require a longitudinal approach. One that acknowledged the long-term processes involved in mental toughness development. An evaluation of an effective mental toughness training programme would expect to record a gradual improvement in the components over time. There would be an expectation that at specific time-points, performance in one or more of the dimensions of mental toughness may rise or fall away from the expected curve, due to contextual factors like performance outcomes. As the individual, or team, became increasingly mentally tough, the frequency of descents in the graph would become less frequent and would have a shorter duration.

8.3.1.9 Overall reflection, consistency and cohesion.

Reflections on the overall impact of the programme were positive. Bearing in mind that the programme had been designed to address the team's inconsistency as a by-product of the intervention, the following comment from the coach was encouraging,

I think in the consistency in both forms of the game, there was a huge improvement. In the past we normally ended towards the bottom of the log in the three day competition, and in the one day competition we normally competed really well. But I think, if you compare what happened this season, we were very consistent in both forms of the game. (Coach Interview 2, lines 112 – 117)

Asked whether he felt the team was more mentally tough he replied, "Yes, absolutely. I think we can compete with anybody. If you look at who we beat in the second half, it's all the teams that finished in the top half of the log" (Coach Interview 2, lines 209 – 210). Although these reflections do not demonstrate the effectiveness of the programme in developing mental toughness or any impact on the team's performance they do indicate the coach's perceptions of improvement in this area, and are encouraging for the design and implementation of mental toughness training programmes. How much, if anything at all, the programme had to do with that improvement is not known. The coach's response to a question inviting his opinion on whether the programme impacted on the team, he responded,

I think so yeah. I think so. Especially if you look at the exercise where we drew the performance profile; I think if we had to re-evaluate that, there would be a huge difference now, even the small little things there's definitely improvement. In terms of the way players approach the nets in terms of, small goals, goals set for nets, carrying that forward into the game. (Coach Interview 2, lines 175 – 177)

Although comments the theme of cohesion was not a prevalent one in the evaluation, it was considered an important point to reflect on considering the emphasis it had been given in both the assessment and action plan.

Just the team cohesion and the team spirit, especially when you get onto a winning streak, you can see the difference as well, compared to the first half of the season; where people will always try to find fault when things are not going well. (Coach Interview 2, lines 61 – 64)

The coach's comments here describe another area where the players struggled in the first half of the season and showed improvement in the second half. This is a consistent finding across

the goals of the intervention, and makes interpreting the impact of the programme difficult. What it clearly outlines is how much of a strong force performance results can be in a team setting. This is something that deserves more attention in future research.

What these responses do indicate is that there is value in future research that does attempt to quantitatively study the effectiveness of mental toughness training, especially in a sport like cricket.

8.3.2 Programme reception.

8.3.2.1 Adherence and buy-in.

One of the most apparent themes to emerge from the focus group was around the players' attitudes to the programme, their adherence to the training and their buy-in to the programme. There were individual differences between players responses to the programme and its various components, but it had become apparent during the intervention that there were a number of participants who were struggling to adhere to the programme and had not fully bought into the process we were engaging in. As one player reflected, it was not evident in the group sessions themselves, but rather in how the players adopted the programme between sessions, "Yeah I also had that experience, cause when we were here I did everything, but then when I went back home I didn't do anything" (Team Focus Group 2, lines 380 – 381).

As Connaughton et al. (2007) have pointed out, the adoption and continued practice of mental skills is crucial in their successful implementation, and the impact they may have on mental toughness. Overcoming this barrier in programmes aiming to develop mental toughness would be crucial.

A number of factors appear to play a role in issues with participants' adherence, some of which are expanded on below. These two quotes both indicate the importance of contextual factors such as performance, competing commitments, and the lack of extra supervision or guidance, "In the beginning I was very, very happy, but now because I'm struggling I'm not scoring runs, so I'm not practicing anything" (Team Focus Group 2, lines 462 – 463). "And Mike it's also tough if we do this once a week, like we saw you once a week, cause it's something you need to do constantly, you need to be doing it all the time, and sometimes it's tough when you get home, and maybe you're tired and stuff, and maybe you go and sleep or whatever..." (Team Focus Group 2, lines 485 – 487)

8.3.2.2 Scepticism.

One of the important obstacles to engaging the participants and overcoming adherence problems revolved around scepticism. The participants indicated varying levels of belief in the concepts the programme was based on, as a comment in the focus group highlighted,

I just think that some guys believe that it doesn't work for them and so they just put it away, because that's what most guys believe, I know they do, even though they won't say it here but I know that's what they believe. So I think that's the main reason. (Team Focus Group 2, lines 387 – 390)

A lack of conviction can be a common problem in sport psychology interventions and this finding confirms the type of obstacle this can be to an effective intervention (Donahue et al., 2004; Weinberg & Gould, 2011). Despite a strong focus on establishing buy-in during the early stages of the intervention this finding demonstrates the difficulty of this process in a group setting, where the individual doubts and concerns of players are less likely to be addressed.

The participants' scepticism seemed to be mediated by a variety of factors, one of which was previous experience with sport psychology principles, a factor acknowledged by Donahue et al. (2004). The coach highlighted this factor during his interview, describing how he had noticed a much higher value placed on mental toughness training by the more senior players, many of whom had been exposed to this kind of training before. One of the players described how his previous exposure to these principles and techniques had impacted on his scepticism in some areas, while in others he remained dubious,

I think from my side, you know I've worked with psychologists in previous years, and I think that experience with goal setting has obviously impacted on this, you know when you first came I actually had this feeling this scepticism to actually use goal setting, whereas other tools like visualisation I'm very big on visualisation, I'm more keen on that, so it's always like you said that mental block on that specific tool. (Team Focus Group 2, lines 363 – 367)

8.3.2.3 Credibility.

One of the tactics that seemed to successfully address the issue of scepticism in the players was the use of quotes. The booklet the players had received included a number of quotes from athletes on the mental elements of their performance, and these appeared to have a big impact on the participants. A number of them identified this strategy as important for them. On elaborating on why the quotes were significant it became clear that the credibility of an expert

advocating for the mental approach was crucial in motivating the participants to make use of the strategies and techniques,

I think if I understand the question correctly, what you said to Thando, I'm in the same bracket as Jake here, I'm big on quotes, if I can hear a celebrity or someone, say something, then it actually sticks with me, it gives me that extra bit of confidence, if I can get stuff where I can read, where guys are actually saying stuff like Sachin didn't hit a cover drive for 200, or this guy did that, and to see that name at the end of quote, of a guy who obviously accomplished something, that actually builds me up a bit. (Team Focus Group 2, Lines 407 – 411)

Using an 'expert' to advocate the importance of psychological skills is also advocated in Weinberg and Gould's (2011) seminal text on psychological skills training. This is even more vital in the South African context where the sport psychology field is very much in its infancy, and the incorporation of psychological training into sport and performance is only just beginning to be taken seriously (Van den Heever et al., 2007). The discourses of physical training as a route to physical competence are well established within the sporting culture. Although the recent discourse on the importance of mental toughness is growing, it is yet to translate into action.

The importance of this credibility helps to overcome the scepticism that may arise from a young practitioner (the researcher) presenting a new approach to training. In this scenario the use of quotes can be very important, as one player acknowledges, "I think it's because the guy has actually made it, I think in your mind you know that that guy has been there, and so you look up to him. That's how I see it" (Team Focus Group 2, lines 415 – 416).

8.3.2.4 Impact of results.

The importance of positive feedback in the form of positive outcomes seemed to also have some impact on the players' response to the programme. In an area where it is difficult to measure tangible improvement, participants seemed to use the outcomes of their matches as indicators of the value of the mental toughness training. Despite emphasising the long-term nature of mental toughness development and the importance of consistent practice before seeing results, the players retained a strong association between the effectiveness of the training and the outcome of the matches. The coach placed an emphasis on the impact of the loss in the first game on the players' attitude and self-belief, and one of the players summed up its impact on the team's adherence to the programme, "I think so, well most of us expected everything to happen cause of what we were doing working with you and after that first game that loss to Boland, everyone thought this thing doesn't work, just put it away" (Team Focus Group 2, lines 267 – 269).

It is important to appreciate the kind of impact failure can have on attempts to introduce new approaches. Providing participants with a measure of their development other than performance outcomes may provide them with evidence of their improvement, building their motivation and enhancing their commitment. This highlights the importance of the development of psychometrically sound measures of mental toughness that are available for practitioners and researchers. Integrating this evaluation into mental toughness programmes would assist in shifting focus away from performance outcomes, towards a mastery orientation favoured in mentally tough athletes (Gucciardi, 2010).

8.3.2.5 Contact time/responsibility.

I just felt like from where we started to where we are now, that first couple of session was very exciting for me, the use of the tools and stuff like that, but as the season went on and the less we worked with you, in all honesty the less I started working with the tools and stuff the more it found itself towards the back of the cupboard, the booklet. I know where it is now, but I haven't taken it out in while, since I've been working with you, so in all honesty... (Team Focus Group 2, lines 238 – 242)

This quote highlights another factor that may have contributed towards the problems some participants had in adhering to the programme. The importance of the contact time with the participants was evident in the evaluation of the intervention. There was a tension between the need for more contact with the participants, and for the participants to begin taking responsibility for their own mental training. During the initial coding process, a number of quotes from me during the focus group, had centred on the importance of the participants taking on board the areas we had covered,

In the end you guys have to take over, and in order for it to be sustainable you as a team have to keep going with the mental toughness training if you want to improve in that area. So the responsibility falls more and more on you as players and on your coaching staff to address this area. (Team Focus Group, Line 218 – 221)

As this data was something I had raised I initially did not see it as significant. In an attempt to ensure that my role in the construction of this data was not ignored I returned to this theme later on. It is obvious from listening to the recording of this session, and perhaps from the quote above that I was extremely passionate about making sure the participants heard this point. There are two things it may speak to – the one is the idea of buy-in. As discussed above, in order for the participants to improve they need to take on the ideas, buy into them and drive their development. Although this was something I stressed from the start of the intervention, I think

my comments during the focus group were motivated by my feelings of concern that this was not occurring at the required level.

The other motivating factor for this sense of urgency was the time limited nature of the intervention. I definitely felt that there was a need for greater contact time with the players and team, over a longer duration. And this 'speech' was an attempt to get them to play that role for me. It was encouraging that the analysis highlighted that this concern was not just something unique to me as a researcher, but was indicated by players as well.

How would you be very effective? That's if you are around on a constant basis, say you playing a game and we've just bowled and you take the bowlers; you know, you go to a bowler, and you say to him, "what were you thinking?". And you've got to unpack when you're doing well kind of, you know you have batter that gets out on 100, and you maybe say to him, "so what was on your mind first up, how were you feeling, what was your game plan"? You know, when you start talking about it you remember what you were doing when you're doing it well, but what I think happens here, is we just bat, bat, it's over and then we come out and we have a chat, and we just drift, there's no, we don't have any mental notes about what we actually did right. (Team Focus Group 2, lines 490 – 497)

This quote summarises, quite nicely, the importance of in-situ contact time with the players and team. This is something that Bull et al. (2005) have advocated for, describing programmes that are delivered less formally and integrated in practical sessions more frequently. Although this had been introduced during the programme (attendance at two matches and 3 practices) there appeared to be a greater need for this kind of interaction. This sentiment is summarised nicely in the following quote, "[The programme] was very good introducing us to the skills, but we need more hands-on, cricket specific, daily involvement" (Questionnaire page 3). This finding suggests the importance of breaking new ground in the way in which programmes are implemented for mental toughness development.

8.3.2.6 Individual focus.

The previous theme touched on the importance of a greater individual focus. The quotes suggest that one of the advantages of more contact time, outside of scheduled sessions is the opportunity for individual contact time, and a more personalised intervention. During the second match I attended I had the opportunity to provide just this kind of support. A player approached me and initiated a conversation about a specific confidence difficulty he was having with his batting. I was able to help to address this, and provided him with some reading material. He

reflected on this during the focus group, highlighting how the more specific individualised material was far more valuable than the general overview provided by the group sessions,

I didn't use much of your stuff, but, those books you gave me, I read through them and then I felt more confident while I was batting, cause you know I told you I was less confident in my batting than I was in my bowling, and I felt more confident and I've actually been scoring runs at club level, everywhere just scoring runs, so that actually worked for me those books I read from you, anything else, I didn't use anything else. (Team Focus Group 2, lines 269 – 273)

The importance of incorporating a strong individual dimension in a team intervention seems to be particularly evident here. The advantage of identifying and addressing specific weaknesses or problem areas, with individually tailored material seems evident. This confirms the point made by Bull and his colleagues (2005, p. 226), "the recognition of the individuality component provides an important additional directive for the effective implementation of the findings". Sheard (2009) has also acknowledged the importance of this area, describing how the relevance of mental toughness attributes will depend on the combination of personal, organisational, and competitive stressors that are situationally bound. This requires a deliberate focus on establishing rapport with players where they can share the areas in which they need assistance and acknowledge the strategies that work and those that don't. An approach that builds on Bull et al.'s (2005) recommendations and helps players to learn the psychological lessons, while developing individually contextualised approaches would maximise the impact of the training. As one player summed up, "I think guys need to honest about what works for them, like I said I enjoy quotes and so if I work a lot with quotes that would keep me involved, and interested and stuff" (Team Focus Group 2, lines 513 – 514).

8.3.2.7 Too much.

Researcher: Okay so can you tell me what the difference was then between what we were doing as a team, and what we looked at individually with you, why did that stuff work and the other stuff didn't?

Player: Because I focused on one thing. I think that's why, I focused on one thing. (Team Focus Group 2 Lines 274 – 276)

A further factor that may have been involved in the difficulties the participants had was the scope of the programme being too broad. The assessment phase had identified a number of areas deemed important by the participants, and the programme had been designed to address

them using one group session to focus on a key area, with mental skills and strategies introduced and consolidated throughout as necessary. The focus group raised the concern that perhaps this approach had overloaded the participants and had failed to provide them with enough time and practice to really grasp and effectively implement what was covered,

Maybe there was just too much to think about? Instead, maybe just working on one thing and doing that well and then moving on to the next thing and then fitting them into a cycle, whereas maybe we had just too much stuff at the beginning, and then because there was just too much it didn't really work, it was just bits and pieces of everything. (Team Focus Group lines 257 – 260)

Weinberg and Gould (2011) have indicated the importance of prioritising objectives and focusing on a limited area, rather than attempting to provide a catch-all intervention. The findings of this research support that recommendation.

The idea of increased individual attention perhaps provides an avenue to address the problem of focusing on 'too much'. While a team intervention requires a general overview of key principles in order to communicate it effectively to all the participants, a strong individual component may allow players to select the strategies and techniques that address their personal needs, and leave them with sufficient attention and time to learn and implement these strategies,

Then it would have been easier for someone to believe in that thing, cause we would know a lot more about it, and we would have done a lot more practicing of that ... I think if we split it up and focus on one or two things over a longer period of time then people might bite. (Team Focus Group 2, lines 480 – 484)

8.3.3 Programme design.

8.3.3.1 Trust.

One of the intriguing things that came out of the evaluation data was a theme that seemed really important to the participants, but that I, as the researcher, unconsciously avoided. In fact I coded the theme and then completely ignored it in the rest of my analysis. It was only in revisiting the data that I stopped to think about how quickly I had rejected this theme as insignificant. The conversation around this topic began during the focus group when one of the players, reflecting on their completed performance profile, asked me what the most important dimension of mental toughness is. After identifying the significance of self-belief in mental toughness, the participants' energy took on a new level as the discussion moved towards the importance of trust within the team.

Like, it's difficult to... Say you're hitting high catches and the guy drops every single catch, and now you must back him in the match to catch that catch, but when it goes up, you know he's going to drop it. That's what I'm saying - I'm not saying he's crap, it's just that trust, or that... (Team Focus Group 2, lines 183 – 186)

This concept seems to be important in any team setting. In cricket, players have fairly discreet responsibilities. When they are performing they have to trust each other to execute effectively in their own areas. The batsmen have to trust the bowlers to do their job, and *vice versa*, while the bowlers also have to trust their team mates to catch and field well, to take advantage of their good work. They need to have confidence in the players around them. This kind of confidence, this trust, allows the individual to focus on their own responsibilities and to execute the task at hand. This would precipitate a **Tough Thinking** very similar to element of mental toughness Bull et al. (2005) described as *maintaining self-focus*. One can imagine how a batsman may play differently in a team he does not trust or how bowlers might shift the way in which they bowl when they believe they cannot rely on the others to take wickets. In those instances self-focus is lost.

The players' energy and passion indicated the importance they placed on this topic. They spoke about the difficulties not only of having confidence in themselves, but of having confidence in each other. Listening to the recording again I realised how thrown I was when I was asked about this element of their team's psychology,

Participant: How do you try and build them [the other player] up, or how do you get more confidence in that person.

Researcher: Okay... um, I don't want to answer all these questions... not... I just want to see what other guys have got to say, okay? (Team Focus Group 2, lines 154 – 157)

My discomfort indicated how, despite months of planning, research and assessment, I had failed to acknowledge the importance of the group dynamic of the team, in the team's mental toughness.

On reflection I realised that I had overlooked this theme in the analysis because it did not fit in with the information I was looking for, which was themes that spoke to the implementation of the programme and the areas we had covered. I had unconsciously assumed that I (the expert) would be able to identify what had been left out, or overlooked and was taken by surprise when it was the participants who highlighted an absence that I had not expected. On reflection, it became evident that the participants were highlighting an immensely important element of an

intervention designed to develop mental toughness within a team, which had been almost entirely neglected in the programme design and implementation.

The approach that had been taken in designing the mental toughness programme had relied heavily on theory that attempted to define and explain mental toughness within the individual (Bull et al., 2005; Connaughton et al., 2007). In this research the unit of analysis was the group of participants, but in many ways the available research and theory were applicable only to individuals. Despite an approach that required a focus on the team, the programme that I had designed was in many ways, biased towards the individual. Many of the concepts were conceptualised with the individual at the centre, with additions to address the group element, such as team goal setting, responsibility groups, communication exercises and theory, the use of a mentor system, and some preparation suggestions. Instead it seems that interventions with teams as their focus need to be guided by theory and practice that is centred on the uniquely relational elements of the group, which reflects in a conceptualisation of self-belief within a team as trust, understands the importance of organisational structures and systems, and the value of communication.

The organisational elements of the team take on greater significance, as the conceptualisation of who or what the target of the intervention is, shifts. Moving outward from the individual, the importance of the coaching, management and administrative staff, and the organisation as a whole become important. The coach indicated this during the focus group as he spoke about the role the selectors play in the team dynamic and on the concept of trust,

Can I just comment from a selection point of view in terms of trust? If you look at our season - and you guys need to sit down and look at your season as individuals - do you think there's trust in your ability from a selection point of view? Look at your seasons. I think so. Because the selectors are backing you guys. And I think that should actually spill over into you as an individual as well. (Team Focus Group 2, lines 194 – 198)

An example of how this kind of trust can play out emerged from the interview with the coach. He described a story about the team captain and his reaction to the team's performance in the first half of the season,

Just to share something with you; at one stage he had a meeting and he actually tended his resignation when we weren't doing well. Then we spoke to him and we assured him of our support. Because he felt that he was letting them team down, "it's been so many games and we haven't won a game", and he feels it is pressure on him as well. (Coach Interview 2, lines 142 – 145)

Following this meeting the team began to perform significantly better, beginning a winning streak that was characterised by the performances of its captain, who scored a career high score of 116 and averaged 53 over 10 innings (career average of 24) as the team's wicketkeeper and number eight batsmen. As the coach concluded, "It just goes to show when you show faith in certain players and you support them it can make a difference" (Interview Coach 2, line 146).

8.3.3.2 Environmental elements.

It was perhaps significant that the interventions which focused on the environment of the team, and thereby worked on the relational aspects of the group, appeared to have a positive reception. A number of strategies had been implemented to address the systems both explicit and implicit within the group. These included the responsibility groups, the mentor system and player-coach communication.

Feedback on the responsibility groups was particularly positive, as the coach indicated in his interview,

It definitely had a positive impact on the team. There's a big difference when the whole team is involved in deciding whether to bowl first, than when me or the captain tell them what we're going to do. There's a lot more buy-in, and I think it's a big positive motivator. (Coach Interview 2, lines 239 – 242)

One of the players echoed this sentiment, saying he felt it was, "very good as it gives us a dialogue towards performance and winning" (Questionnaire, page 4).

One of the most important role players in the team environment is the coach (Bull et al., 2005; Connaughton et al., 2007; Gucciardi, Gordon, Dimmock & Mallet, 2009). It had been a priority in the intervention to work closely with him, and to provide him with skills that would assist in allowing him to address the psychological areas of the team's performance. The feedback from the coach in this domain suggested the value in incorporating this focus into the intervention, "It definitely had a positive impact on me, especially as a new perspective on what's happening, and giving me new tools with which to work" (Coach Interview 2, Lines 221 – 222). He went on to describe how he was incorporating these approaches into his work with the academy sides he coaches. This development suggests the value and long-term impact of working closely with coaches in any efforts at mental toughness development. The most sustainable changes will be those that are guided by a coach with an appreciation of the mental elements of performance and the skills to address them.

The long-term commitment to this approach, and his view on the kind of commitment required for real changes was evident in his first comment of the interview,

You see if we look at it from the start of the season we had a new concept, in terms of our support staff, and we realized some people expected quick results. But it's actually a process. Even up until today people will say we put this into place we put that into place, we got in a fitness trainer, we got in a mental coach; but they don't understand – it's not going to yield immediate results. (Coach Interview, lines 4 – 8)

8.4 Summary of Findings

The analysis identified a number of themes within three categories; *mental toughness performance*, *programme design*, and *programme reception*.

Mental toughness performance contained the participants' reflections on their performance in key attributes of mental toughness, identified by them. The participants' reflections suggest that research into the effectiveness of mental toughness training will provide valuable information. These findings also highlighted the importance of the development of adequate measures of mental toughness. The use of psychometrically sound measures within longitudinal research designs would allow for the development of insight both into mental toughness development, and mental toughness training.

Programme reception highlighted the importance of buy-in and commitment. This theme raised a number of issues that should guide the development of future mental toughness training programmes. The potential barrier of participant scepticism can be a significant obstacle in the effectiveness of these interventions. A number of established approaches from the sport psychology literature may help to address this (Weinberg & Gould, 2011). One of the priorities of future programmes should be the effective integration of individually contextualised approaches, along with the use of more frequent informal sessions that allow for the integration of mental training into the participants overall training programme. These recommendations echo the suggestions of Bull et al. (2005) and a number of principles advocated in mental skills training literature (Vealey, 2007; Weinberg & Gould, 2011).

Programme design raised two themes. The first centred on the concept of trust, and raised a flag for the development of mental toughness in teams. Effective applied work in the development of mental toughness will continue to rely heavily on the research into the conceptualisation, measurement and development of the concept. This finding suggests that future efforts should incorporate a focus on the form mental toughness takes within teams.

The second theme reflected on environmental strategies and suggested that future research should continue to investigate the mechanisms that make the environmental influences of mental toughness (Bull et al., 2005; Connaughton et al., 2007). Translating this understanding

of mental toughness into strategies for interventions remains challenging and will continue to require a creative approach to mental toughness training.

9. Adoption and Separation

The adoption phase of the ODP model requires the findings of the evaluation phase to influence the practices of the organisation (McLean, 2005). As in action research the findings of the research are only the starting point for the next cycle. In this case the evaluation phase indicated the need for continued sessions with a consultant. This prompted a handover to the supervisor of this research to continue the relationship with the Border Cricket Team, and using the information from the evaluation build on the initial programme in a new phase of the intervention.

Although there was not a complete withdrawal from the intervention process (in the form of a termination of the relationship between Rhodes University and Border Cricket), a number of processes had been put in place to facilitate the continued development of the team's mental toughness once withdrawal from the relationship became appropriate (once the mental toughness consultations were no longer required). Throughout the programme an emphasis was placed on working collaboratively with the coach in order to provide a basic framework from which the coach could continue to address mental toughness with his team. In this way the intervention continued to influence one of the most important environmental elements of mental toughness development, a coach-mediated learning environment (Connaughton et al., 2007; Gucciardi & Mallet, 2010). As Gucciardi and Mallet (2010, p. 551) describe, "Sport psychologists can play a pivotal role in guiding coaches in how they might develop these qualities [mental toughness] in their athletes". Copies of the programme booklet that were given to the players were also provided to the coach. At the conclusion of the intervention the coach and management staff also received a report detailing the programme design and implementation, and the findings of the evaluation phase. This document included recommendation and direction on how to progress the development of mental toughness, after the conclusion of the programme.

For the individual players themselves, the programme booklet is a reference they can constantly refer to for tips and guidance. The techniques they have learnt can be adopted on a permanent basis, both in improving performance in cricket and in other areas of sport and life in general (Weinberg & Gould, 2011). It is likely that although the initial research relationship has now come to an end, the relationship between the two institutions (Border Cricket and Rhodes University) will continue to grow, marking new opportunities for mental toughness training and research.

10. Reflection

I have attempted to incorporate my reflections on the research process and my involvement in it throughout this paper in accordance with an action research approach and this reflection hopes to briefly summarise areas I may not have touched on. The positive impact the programme has had on the participants has been highlighted by the participants themselves, and it would be remiss of me not to highlight a similar impact on myself. Working with this team has been an incredible experience, both personally and professionally. The strength of the investment I felt in the team and the players and their performance was profound. This was partly motivated by the emphasis I placed on the team's results as an indication of the success of this work, despite knowing the problems with this line of thinking. Acknowledging my desire to see the programme succeed and reflect the positive outcomes of the intervention, I have made a concerted effort to reflect on and highlight shortcomings and pitfall of this approach.

The entire process was a learning experience, as I was forced to grapple with the inevitable difficulties that arise when conducting any research, especially in action research where you are far removed from a controlled environment. I learnt to be flexible and to be willing to move away from any plans I may have started the day with. I also realised that work of this nature, is not a simple process of inputs leading to outputs. Although this was something I expected on an intellectual level, I was not prepared for the ambiguity that is ever-present in this kind of research on an emotional level. With the difficulties of identifying measurable, visible results, maintaining both my motivation and the motivation of the players throughout the programme was something I grappled with throughout the research. Because of the nature of this process I am very glad that this research has been conducted within the framework of an existing relationship, where the progress that has been made during this study can be continued and improved upon by future involvement between the university and Border Cricket.

From the perspective of a future practitioner in this field it was an incredible opportunity to be able to conduct this type of work within an organisation like Border. I have begun to understand the importance of the skills that I bring to the team, and the importance of being able to work effectively on both an individual and group level. These are areas I will continue to invest time into as I continue to develop as sport psychology practitioner.

11. Conclusion

Building on the work of McInerney (2010) this research applied an action research approach to the development of a mental toughness training programme for a semi-professional team of South African cricketers.

A thorough review of the literature highlighted the strides made in coming to grips with a consensus on the definition of mental toughness. The development of mental toughness assessments was briefly summarised, indicating the work that still needs to be done in this area. Unpacking the research into mental toughness development highlighted Bull et al.'s (2005) model of mental toughness in cricket. This, along with Connaughton et al.'s (2007) mechanisms of mental toughness development, was the foundation of a theoretical framework for the intervention. The area of mental skills training was briefly described as an introduction to a range of approaches that could provide the tools for the intervention. With the emphasis on the environmental influences on mental toughness development a number of strategies were designed to impact on important environmental areas.

A collaborative approach underpinned the entire research process. Using various methods of data collection, including focus groups, interview and questionnaire, the assessment phase prioritised the participants' understandings of their mental toughness and these guided the design of the intervention. The same methods of data collection were used during the evaluation phase in order to document the process of implementation and analyse the participants' perceptions of the programme.

The evaluation phase raised a number of important findings in reflecting on the process of designing and implementing a mental toughness training programme for cricketers. The importance and difficulty of establishing buy-in and adherence from the participants highlighted the need for certain elements of a programme that establish credibility, include measures of mastery, and combine individually customised approaches with increased contact time with the practitioner during both competition and practice. These findings mirror some of the recommendations of the literature, in both mental toughness development and mental skills training (Bull et al., 2005; Weinberg & Gould, 2011).

The design of the programme appeared to cover many of the areas of mental toughness important for the participants. The feedback on the programme's objectives of improving confidence, resilience, motivation, preparation, concentration and team was enlightening. The most important finding was that future research into the effectiveness of mental toughness training would require a longitudinal approach that comprehensively understood the impact of contextual factors on mental toughness, especially performance results.

Reflecting on the design of the programme suggests that combining the model of mental toughness in cricket (Bull et al., 2005) with the mechanisms of mental toughness development (Connaughton et al., 2007) is an appropriate starting point for mental toughness training. The

difficulty of addressing the more stable and less readily influenced areas of mental toughness in terms of Tough Character and Tough Attitude, can perhaps be seen in the players inconsistent commitment to the programme and their mental training. This suggests that *“go the extra mile” mindset, exploit learning opportunities, determination to make the most of ability* are important elements in the way in which players respond to mental toughness training. This indicates the usefulness of Bull et al.’s (2005) model and suggests that future research continues to examine the different categories, and mechanisms.

One of the aspects that appeared especially strong in the design of the programme was the effectiveness of the assessment phase and the manner in which the findings were integrated into a theoretical model, and the overall programme. The use of an assessment phase that prioritised the idiographic understandings of the participants’ provided a way of designing an intervention that was contextually suited to the participants’ needs. In this, the use of focus group, interviews and questionnaires and performance profiling provide very important tools.

Perhaps the most important finding however, was the indication that applying models of mental toughness and its development based on individuals in a team context is naïve. There is a need for investigations into what form mental toughness takes within teams, and understanding how key attributes operate in this context. Research into these areas should provide valuable information for applied work, much of which is conducted in team settings.

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Appendix A
Consent Form Participant

<p>RHODES UNIVERSITY DEPARTMENT OF PSYCHOLOGY AGREEMENT BETWEEN STUDENT RESEARCHER AND RESEARCH PARTICIPANT</p>
--

I (participant's name) _____ agree to participate in the research project of MICHAEL McINERNEY on the Development and Implementation of a Mental Toughness Programme for Border Cricket Team.

I understand that:

1. There are two researchers, one of whom is a student conducting the research as part of the requirements for a Masters in Counselling Psychology at Rhodes University and the other is a lecturer in the Psychology Department at Rhodes University and a DLitt et Phil student at Unisa.
2. The researcher is interested in:
 - Helping the cricketers of Border Senior Team develop Mental Toughness to enhance their well-being and enable them to compete at the level they feel is satisfactory to their context.
 - Researching the cricketers' experience of the programme in order to better understand how best to implement such a programme, and then to publish the results. Names and personal information of the cricketers will not be divulged in the publication of any material.
3. The research process has been communicated to me clearly and I am aware of the procedures to follow with regard to participating in the study.
4. My participation (as a participant of the study) will involve:
 - Attending an interview with the researcher. During this focus group I will be required to engage in a discussion with the researcher regarding specific aspects of the Border senior team's cricketing performance.

- Attending a follow up interview after completion of the Mental Toughness programme. This will involve reflection of the programme and will give me an opportunity to provide feedback to the researcher regarding my experience and opinions. There are no ‘right’ or ‘wrong’ answers as the researcher is interested in what I think about the programme.
5. I am invited to voice to the researcher any concerns I have about my participation in the study and to have these addressed to my satisfaction.
 6. I am free to withdraw from the study at any time – however I commit myself to full participation unless some unusual circumstances occur or I have concerns about my participation which I did not originally anticipate. I understand that there are many reasons a person may withdraw from a study and that withdrawal from this study says nothing about a participant’s level of mental toughness.
 7. My participation in this study is voluntary and the researchers will protect my right to privacy by not divulging any sensitive information about me.
 8. If I experience any form of harm, embarrassment, or offence as a result of participating in this study, I shall inform the researcher immediately. I understand that I can speak to the researchers or approach the supervisor to be referred to a registered clinical or counselling psychologist if I wish.
 9. Specific names will not be included in the final report nor in any publication and I understand that information pertaining to me will be kept confidential and only be available to the researcher and his supervisor. All such information will be kept and handled by the researcher and supervisor and stored in the supervisor’s office.
 10. Feedback will be provided to me via a group meeting after the completion of the Mental Toughness programme. I will also be able to read the full report if I wish.
 11. This research project forms part of a broader research project on Mental Toughness conducted at a PhD level and thus the information gathered and the conclusions drawn throughout this research process will be used in the generation of that particular project. I agree to the researcher’s supervisor having access to the data and being allowed to use the data in his research. I understand that my confidentiality will be protected throughout the process and the information will be locked away in the supervisor’s office.
 12. The researcher has submitted a proposal for this project to the Psychology Department’s Research Projects and Ethics Committee and to the Rhodes University’s

Humanities Higher Degree Committee. Ethical approval has been granted for this study and the supervisors details are as follows:

Mr Gary Steele
Lecturer – Psychology Department
Rhodes University
e-mail: G.Steele@ru.ac.za
tel: 0846224000

Signed on (Date): _____
Participant: _____
Researcher: _____
Witness: _____

Appendix B

Team Focus Group and Coach Interview Schedule

FOCUS GROUP SCHEDULE

A. General Questions Regarding Mental Toughness

1. Do you know what Mental Toughness is?
2. What things beside physical talent play a role in successful performance?
3. Do you believe the mind has any importance when it comes to training and performing?
4. How do you think the mind is able to influence your training and performance at all?
5. Do you have any particular cricketers you think are pretty good? What about them do you think makes them succeed? What kinds of things do you try and take from their performances?

B. Turnaround Toughness

1. How do you deal with poor team performance?
2. How do you deal with poor individual performance?
3. How would you handle going out for a 'duck'?
4. How do you deal with this during the game?
5. How do you deal with this after the game?
6. How would you handle getting hit for a six, or bowling a poor over?
7. How do you deal with this during the game?
8. How do you deal with this after the game?

C. Critical Moment Toughness

1. How do you stay positive when things are going badly? When you can't seem to get a wicket in the field? When you can't seem to get off the mark, or pick up the run rate? When you are going through a patch of poor form, team and individual?
2. What do you do with previous performances?
 - a. Does it affect your confidence levels?
 - b. Does it help increase / decrease your self belief?

D. Endurance Toughness

1. How do you keep yourself sharp after a long fielding / batting session?
2. Do you think you handle these long spells of concentration well?
3. Do you think your concentration levels fluctuate during a game?

E. Risk Management Toughness

1. How do you rate your decision making under high pressure situations?
2. How well do you think you are able to analyse your opponents in terms of their strengths and weaknesses?

F. Areas of Possible Improvement

1. How do you feel you, as a team, have performed throughout this year?
 - a. If you have to give yourselves a score out of 10 as a team, with 10 representing excellent and 1 representing extremely poor, what do you think your team deserves?
2. What are the strengths of this current team? Let us draw up a list of all the positive aspects about this team over the last season.
3. What are the weaknesses of this team? Let us draw up a list of all the negative aspects / weaknesses that this team may have occupied over the last season.
4. What aspects specifically do you believe need improvement?
 - i. Fielding?
 - ii. Bowling?
 - iii. Batting?
 - iv. Preparation?
 - v. Practices?
 - vi. Big Match Temperament?

(Of the areas they identify as needing improvement, probe deeper into specific aspects of each area i.e. batting – learning to deal with ‘big match temperament’ or being able to cope with getting the winning run when tired and fatigued)
5. What are the goals for this team during the off season? Make a list.
6. What are the goals for this team for the up and coming season? Make a list.
7. Generally speaking, let us discuss what this team needs in order to have a successful cricket season. Make a list.

Appendix C

Assessment Questionnaire

Individual Mental Toughness Reflection

A. General Information

Name:

Age:

Occupation:

Cricketing Experience:

B. General Questions Regarding Mental Toughness

1. Besides physical attributes what contributes towards a successful performance?

2. Do you believe the mind has any importance when it comes to training and performing?

C. Areas of Possible Improvement

1. How do you feel you've performed over the past season?

a. If you have to give yourselves a score out of 10, with 10 representing excellent and 1 representing extremely poor, what do you think you deserve?

2. What are your mental strengths?

3. What areas would you like to improve on?

4. What aspects specifically do you believe need improvement?

- i. Fielding?
- ii. Bowling?
- iii. Batting?
- iv. Preparation?
- v. Practices?
- vi. Big Match Temperament?

(Try and be as specific as possible; probe into specific aspects of each area i.e. batting – the final overs, or starting an innings, or being able to cope with getting the winning run when tired and fatigued)

5. What are your goals for the pre-season?

6. What are your goals for the up-coming season?

7. Generally speaking, what is it that you need to make you more mentally tough and to perform better?

Appendix D
Programme Booklet

Mental Toughness

A programme designed for the Border Cricket Senior Provincial Team

Pre-Season 2011

Michael McInerney

Session One - Introduction

Feedback from focus group and interviews

Goal Setting

communication... reflection... analysis...

“ I think the first thing is for as a team we understand why we do what we do, why we come to practice? Why we run five or ten k's or whatever it might be, why we go to gym, why we bowl 6 overs at practice. So it's having that picture in mind as okay that's the goal and that's what we're all going there for, and also as an individual the same thing... ”

Preparation & Practice

goal setting... communication... reflection... analysis... confidence...
handling pressure... concentration... visualisation...

“ I just think if you can prepare by getting yourself into, or practice in situations that you can get into in a game, you'll be better prepared for it and mentally more at ease knowing that “I've been here before I can get through this type of thing” ... ”

“ They're all important it's just that practice influences everything... ”

Concentration

in practice... in fielding... converting starts... dealing with pressure...

“ Concentration is being able to be focused whether it be batting, bowling or fieldin. I know it's impossible to concentrate the whole day so it's important to switch on and switch off and when you're switching on to stay in that bubble whether you're facing the ball whether you're standing at your bowling mark and about to bowl.. ”

“ Cause of the nature of cricket, I think what we need to identify are distractions that take our mind off of what we need to focus on, it can be our team mates, it can be our opposition, it can be the umpire, weather, whatever it might be... ”

Self – Belief & Confidence

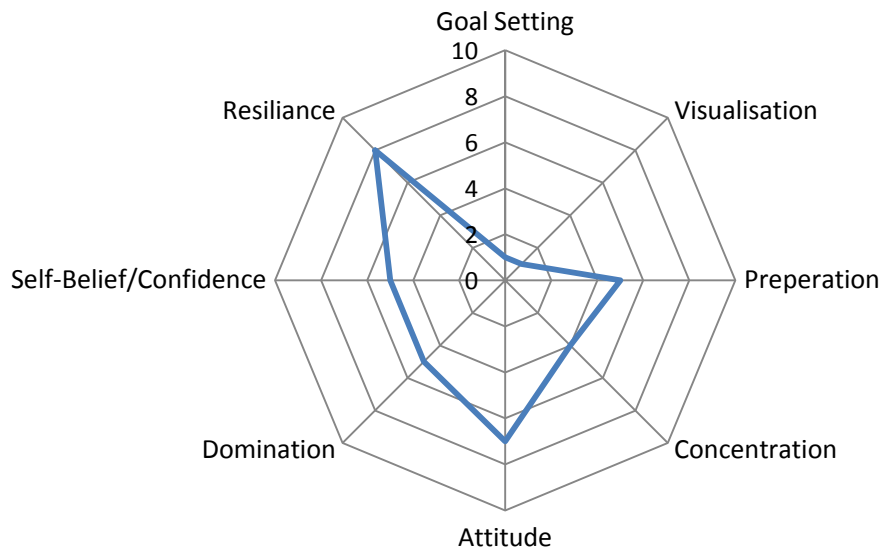
communication... dealing with pressure... self talk... domination... attitude...
resilience...

“ Trusting your skills and your skill set, the decisions you make, whatever, you’ve got to trust it a hundred percent... ”

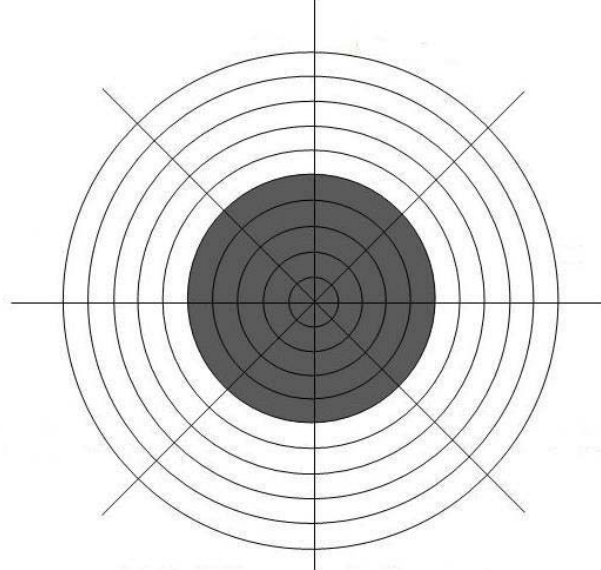
“ It’s more than confidence, confidence that you’re going to, its more than confidence in yourself, it’s kind of a confidence you project so that you can dominate the opposition... ”

Initial Evaluation

Border Senior Team - Mental Performance Profile



Individual Mental Performance Profile



Programme Outline



Talking Points

- Why do we focus on mental toughness?

Research by Williams and Krane (2001) compared successful and less successful athletes and found that highly successful athletes were characterised by the components of mental toughness.

Their research demonstrated that successful athletes are more likely to implement mental skills, including arousal control, mental preparation and visualisation. When people talk about the best athletes they've ever seen, and describe what makes them stand apart – more often than not they refer to the mental strengths of their game.

Shane Warne describing why Tendulkar is his greatest cricketer,

“ I place him very slightly ahead of Lara because I found him slightly tougher mentally. It is such a close call, but here is an example of what I mean: in Australia in 2003-04 he was worried about getting out cover driving so he decided to cut out the shot. I saw the wagon wheel for his next innings: he scored 248 without a single cover drive. ”

- Self-discipline and hard work.

Eric Cantona – Former Manchester United and French International,

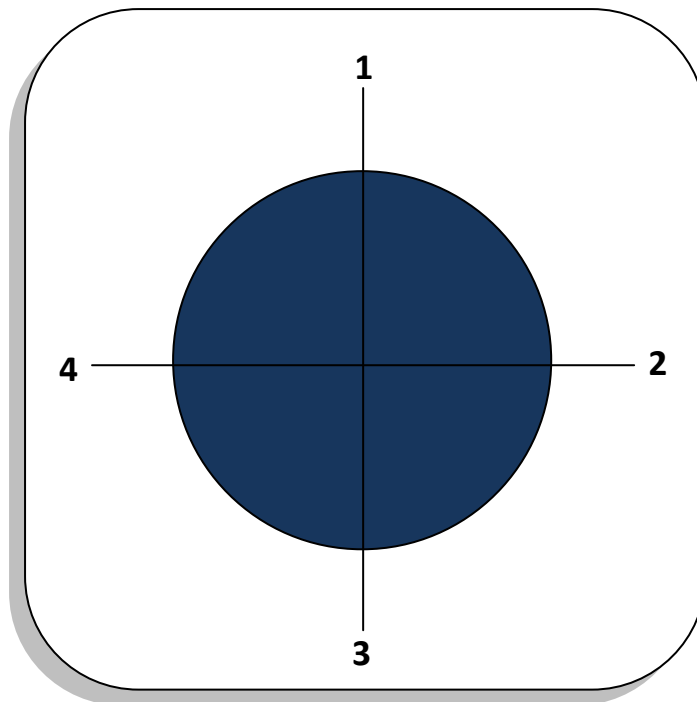
“ Preparation is everything. Focus is the key. The concentration has to be exactly right. It's easy to battle it out on the pitch without having prepared fully and then to say, “I gave it my all”. The point is that if you had prepared you would have had more to give and you'd have played better. ”

Mental skills are not magic! Mental toughness like physical toughness requires hard work. It takes time to learn new mental skills just like it does to learn new physical skills. While you're learning new mental skills it's important to be patient and persevere, as it is only through perseverance and practice that you will ever be able to get the benefits of these new skills.

The Ideomotor Effect - Chevreul's Pendulum

Instructions

1. Hold the piece of string between thumb and forefinger.
2. Rest your elbow on the table in front of you, so that the paper clip dangles **comfortably** roughly one half inch above it.
3. Move the paper, or your elbow, so that the paper clip hovers directly over the centre of the cross in the circle below.
4. **Focus** on the centre of the circle (where the two lines cross). Try to get the paper clip to stay **perfectly still** over that point.
5. Once you've got the paper clip completely still, start thinking to yourself "**up - down**" and move your eyes from the number "**1**" to the number "**3**" and back again. Keep doing this repeatedly. After a while the paper clip may start to move up and down, even though you're keeping your hand completely still. Do this for about 30 seconds, then focus on the middle of the circle and get the paper clip to stay still over the crosshairs.
6. Next see if you can get the paper clip to move from left to right. Keep your hand **steady** and move your eyes from the "**2**" to the "**4**", thinking "**left - right**".



Reflection

One of the most important foundational skills of developing mental toughness is self-awareness. In order to try and develop and hone your self-awareness skills, it is important that you take time to reflect on your performance.

First off answer two questions:

1. How important do you think mental toughness is in your performance, as a percentage?
2. How much of your training and preparation time do you spend on developing your mental game, as a percentage?

Next, in the space below, write your answers to the following questions. Please answer them in the language you feel most comfortable writing in. It does not have to be English.

1. Why do you play cricket?
2. Think about what cricket means to you. How is it significant? How is it valuable?
3. How is it meaningful?
4. In what way is it meaningful?
5. What else is important about that?
6. How many other ways can you identify that cricket is significant to you? What does it allow you to be, that you don't get anywhere else?



A large rectangular area with a background image of a tennis player celebrating a point. The image is faded and serves as a backdrop for a series of horizontal lines intended for writing.

Session Two – Goal Setting

Goal Setting

communication... reflection... analysis...

“ I think the first thing is for as a team we understand why we do what we do, why we come to practice? Why we run five or ten k’s or whatever it might be, why we go to gym, why we bowl 6 overs at practice. So it’s having that picture in mind as okay that’s the goal and that’s what we’re all going there for, and also as an individual the same thing... ”

Team Rating – 1/10

“ Being your best is not so much about overcoming the barriers other people place in front of you as it is about overcoming the barriers we place in front of ourselves. It has nothing to do with how many times you win or lose. It has no relation to where you finish in a race or whether you break world records. But it does have everything to do with having the vision to dream, the courage to recover from adversity, and the determination never to be shifter from your goals. ”

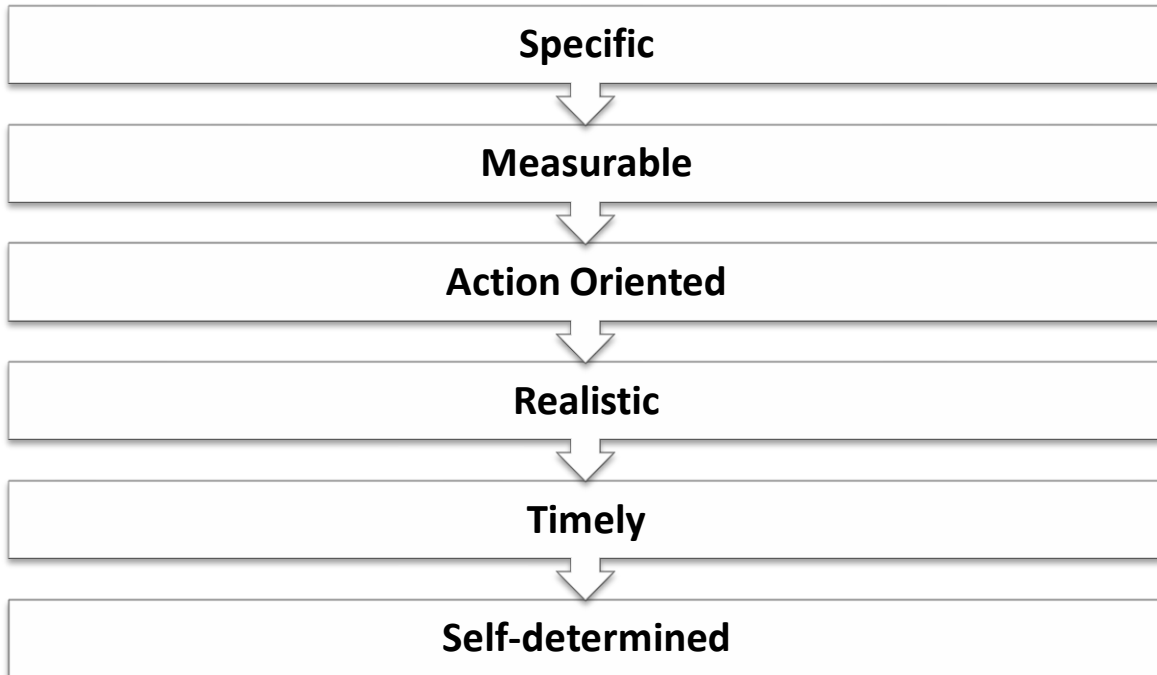
Kieran Perkins (one of the world’s best ever long-distance swimmers)

Types of Goals

- **Outcome Goals:** focus on competitive result of an event. Achieving these goals depends not only on your own efforts but also on the ability and play of your opponents, the weather, decisions of the umpires etc.
- **Performance Goals:** focus on achieving standards or performance objectives that are independent of other competitors. Performance goals are more flexible and within your control.
- **Process Goals:** focus on the actions an individual must engage in during their performance in order to perform well. Research had shown that process goals are particularly effective in improving performance.

- ! More than 500 studies show that goal setting has a consistent and positive effect on behaviour (Weinberg, 2007)

Goal SMARTS



Checklist

- | | | | | | |
|----------------------|--------------------------|-------------------|--------------------------|-----------------------------|--------------------------|
| Specific Goals | <input type="checkbox"/> | Process Goals | <input type="checkbox"/> | Goal Achievement Strategies | <input type="checkbox"/> |
| Moderately Difficult | <input type="checkbox"/> | Outcome Goals | <input type="checkbox"/> | Goal Evaluation | <input type="checkbox"/> |
| Long Term | <input type="checkbox"/> | Practice Goals | <input type="checkbox"/> | | |
| Short Term | <input type="checkbox"/> | Competition Goals | <input type="checkbox"/> | | |
| Performance Goals | <input type="checkbox"/> | Record Goals | <input type="checkbox"/> | | |

Goal Achievement Strategies

“Setting goals without developing corresponding goal achievement strategies is like driving a car to a strange city without consulting a map” (Weinberg, 2007, p. 354).

Goal achievement strategies detail exactly what it is that you need to do to achieve your goals, how much and for how long. These will probably form the base of your practice goals.

Example

- **Outcome Goal:**

Score more hundreds/**Score 3 Hundreds in the 3-day competition**

- **Performance Goal:**

Improve run scoring all round the wicket/**Improve leg side scoring from 20% - 40% of total runs.**

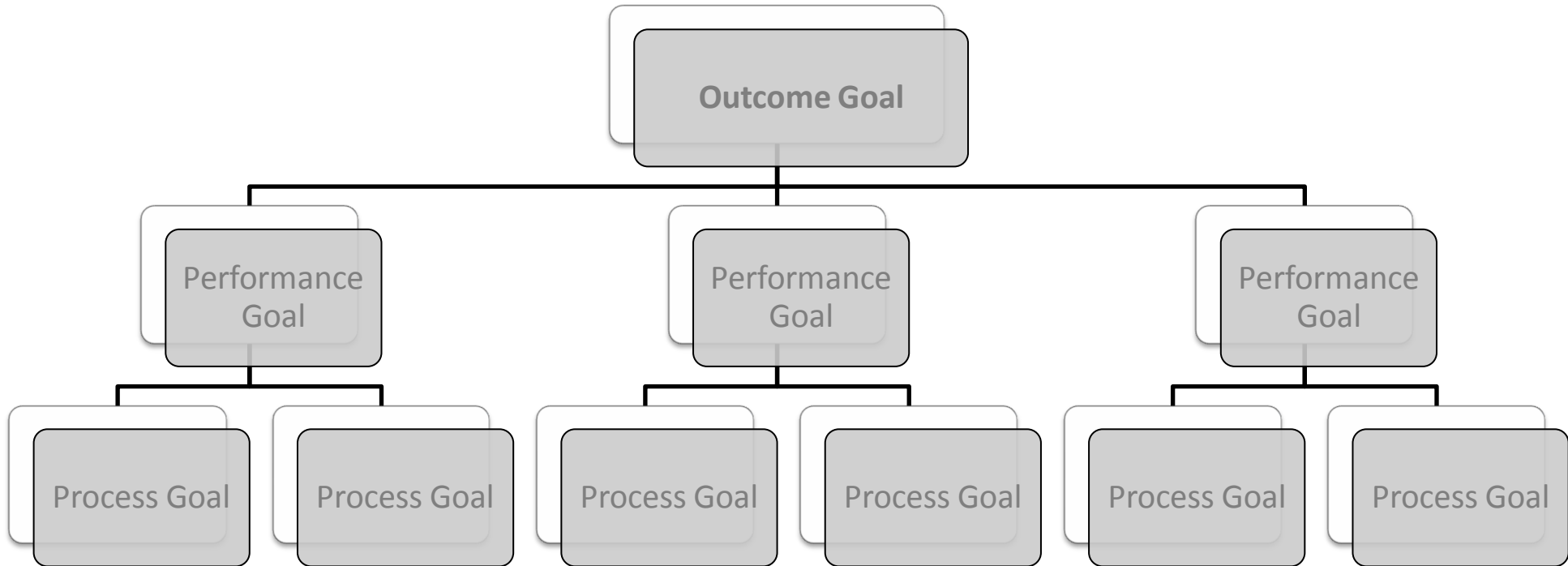
- **Process Goals:**

Work on pull-shot/**Spend 30% of each net focussing on facing short deliveries.**

Use pre-delivery routine to identify and focus on gaps in the field.

Spend 20 min visualising facing short delivery in match build up

Individual Plan



[PRACTICE SCORECARD] [Matthew Jones]

Date:

Session Goals:

1.

2.

3.

BORDER SENIOR TEAM

	Personal Rating	Partner's Rating	Coach's Rating
Effort			
Quality			
Goal 1			
Goal 2			
Goal 3			
Overall			

GENERAL COMMENTS:



A large rectangular area with horizontal lines for writing, overlaid on a faded background image of a basketball player in mid-air. The player is wearing a dark jersey with the number 12 and is reaching up with both hands to catch or shoot a basketball. The background is a blurred crowd of spectators in a stadium.

Session Three – Concentration

Concentration

in practice... in fielding... converting starts... dealing with pressure...

“ Concentration is being able to be focused whether it be batting, bowling or fielding. I know it’s impossible to concentrate the whole day so it’s important to switch on and switch off and when you’re switching on to stay in that bubble whether you’re facing the ball whether you’re standing at your bowling mark and about to bowl.. ”

Team Rating – 4/10

“ Concentration is the ability to think about absolutely nothing when it is absolutely necessary. ”

Ray Kinght Major Leauge Baseball Player

Concentration Grid

04	40	13	83	45	20	03	27	35	09
54	98	69	30	52	86	49	94	63	47
68	74	90	19	79	58	25	56	24	91
84	59	66	53	95	34	44	88	16	73
29	22	31	80	26	07	62	51	46	08
11	70	76	41	10	36	92	18	71	81
60	67	100	14	87	82	15	28	33	57
39	05	55	77	37	23	65	43	99	17
97	75	01	61	48	42	96	02	72	78
32	89	12	21	93	06	38	50	64	85

Quiet Focus

“When an athlete is in complete concentration, their mind and their performance become one - perceptually inseparable. The athlete is **aware of everything around them**, yet this somehow excludes distractions. The athlete **filters out unnecessary noise** and distractions, focussing only on their goal and the steps they need to take in order to achieve the desired outcome”
 (Janssen, 2000)

The ZONE

Players describing what it feels like to be in the zone talk about **“A state of flow”**. It is a period of intense association with **the here and now**, when you are intensely focussed in on the **present moment** and your task at hand. Your objective is clear and accomplishing it seems almost **effortless**.

Concentration is the key to the zone!

Have you ever felt like you’ve been in a state fo flow? What is it like to be in the zone for you? What does it feel like? Jot down some thoughts about the zone and when you might have experienced being in it.

Performance Cues – Pulling The Trigger

MENTAL cues – mentally press the **delete key** on distractions.



VERBAL cues – Use **team slogans** to get them team to focus, or come up with your own verbal cues, that allow you to **refocus** - “get your head in the game”, “regroup NOW”

PHYSICAL cues – spinning your bat, tapping it against your pads, jump, spinning the ball - **associate that movement with focus**. Every time you make that movement you are telling your mind to **tune in!**

VISUAL cues – The green dot, place a green dot on your hand, your shoe, your bat, or even one of the stumps. Each time you look at it you move into the zone. Distractions are gone, and you’re intensely focussed on your objective.

The key is to know yourself and know how your mind works. It takes time and practice to develop but the more you focus on controlling your mental game the easier it becomes

Routine

Identify all the cues that will help you execute **your role** in the team – you can do this mentally, reviewing a recent game or practice session and identifying which cues you need to be aware of.

Memorise these cues; you should know them off by heart. Build them into **routines** > for every delivery you should have developed and apply a particular routine prior to each delivery.

Batting bowling and fielding, you should have a routine that you complete all the time. Incorporate visualisation and self-talk in these routines. Rehearse your performance prior to play – visualise yourself playing particular strokes, approaching the batsman as a fielder, taking the ball if you’re keeper, bowling certain deliveries.

When the performance becomes so routine in your mind it becomes unconscious. You develop the **ability** to unconsciously tune out distractions and **focus on the moment**.

Refocussing

The 3 R's

1. **Recognise** - Again the key is **self-awareness** – being able to recognise when you lose focus, before it turns into a performance error. Recognising that you've lost focus is the first step to regaining it.
2. **Regroup** – you need to break free from distraction Use thought stopping and **self talk** and **performance cues**.
3. **Refocus** – the ability to make a mental adjustment and return to the moment

Self-Reflection – give yourself a rating out of ten

- How well do you focus at the moment?
- In both **practice** and **competition**?
- Do you start focussed? Does it take a while to find your peak concentration?
- Do you find your focus **drifting** as the match progresses?

Distractions

Distractions are inevitable! You can't stop them from happening, but you can control how you react to them. In order to do that you need to be aware of those things that distract you the most –

Draw up a list of your top 5 Internal Distractions

And a list of your top 5 External Distractions



A large rectangular area with a background image of a basketball player in mid-air, overlaid with horizontal lines for writing. The player is wearing a dark jersey with the number 12 and is reaching up with both hands towards a basketball. The background is a blurred crowd of spectators.

Session Four – Preparation & Practice

Preparation & Practice

goal setting... communication... reflection... analysis... confidence...
handling pressure... concentration... visualisation...

“ I just think if you can prepare by getting yourself into, or practice in situations that you can get into in a game, you’ll be better prepared for it and mentally more at ease knowing that “I’ve been here before I can get through this type of thing” ... ”

“ They’re all important it’s just that practice influences everything... ”

Team Rating – 5/10

Simulation Training

“The best athletes made extensive use of simulation training, they approached training runs, routines, plays or scrimmages in practice as if they were at the competition, often wearing what they would wear and preparing like they would prepare” (Orlick & Partington on Olympic Athletes, 1988)

Game Scenarios

What game scenarios would **you** like to practice – think of two and write down. What do you need to achieve that – how would you need to play? How would you need to bowl? Would you be batting with another person? Where would the fielders be? What would the light be like? What run rate is required? Which bowler will you attack? How will you dry up the batsman’s runs?

OVERlearning

“I like to do what I’m going to do in competition over and over again ... I like to have done the whole routine many times so I know that whatever happens, I can do it.”

(Sue Challis, World Champion Trampolinist)

Mental Preparation

My focus was very concentrated throughout the race. We have start plan, and in it I concentrate only on the first few strokes ... then on I concentrate on the next little bit of the race ... then it’s getting to the end, we have to really push. Almost every 3 seconds or so towards the end, I’d have to say “Relax”, and I’d let my shoulders and my head relax, and I’d think about putting on the power, and then I’d feel the tension creeping up again so I’d think about relaxing again, then power, then relax ... (Olympic Kayaker)

Approaching Preparation

Write down in detail how you approach a match.

Days Before Match: What do you do in the days leading up to the match? How do you train? What extra training or preparation do you do? What kinds of routines do you go through the night before the match? What do you think about before you go to sleep? What do you feel like?

The Morning of the Match: What do you do on the way to the ground? What do you do first when you arrive at the field? What things do you think about? What physical preparation do you do? Who do you prepare with? What do you focus on? How do you get your mind to focus on the task at hand? What do you do after your warm up? How do you prepare before you go into bat? What do you do while you're waiting to go into bat? What do you do when you're preparing to bowl your first spell?

How do you prepare for practice?



A large rectangular area with a background image of a tennis player in mid-air hitting a backhand shot. The image is faded and serves as a backdrop for a series of horizontal lines for writing.

Session Five – Imagery & Mental Rehearsal

Visualisation: **Team Rating – 1/10**

So why bother...

“I started visualising in 1978. My visualisation has been refined more and more as the years go on. That is really what got me the world record and the Olympic medals. I see myself swimming the race before the race really happens, and I try to be on the splits. I concentrate on attaining the splits I have set out to do. About 15 minutes before the race I always visualise the race in my mind and ‘see’ how it will go... You are really swimming the race. You are visualising it from behind the block. In my mind I go up and down the pool, rehearsing all parts of the race, visualising how I actually feel in the water.” Olympic Swimmer (Orlick & Partington, 1988, pp. 118-119)

- 99% of Orlick & Partington’s 235 elite athletes used imagery

What do I have to do?

“It took me a long time to control my images and perfect my imagery, maybe a year, doing it every day. At first I couldn’t see myself, I always saw everyone else, or I would see my dives wrong all the time. I would get an image of hurting myself, or tripping on the board, or I would ‘see’ something done really bad. As I continued to work at it, I got to the point where I could see myself doing a perfect dive and the crowd yelling at the Olympics. But it took me a long time. I read everything I had to do and I knew my dive by heart. Then I started to see myself on the board doing my perfect dive. But some days I couldn’t see it, or it was a bad dive in my head. I worked at it so much I got to the point that I could do all my dives easily.” Olympic Springboard Diver (Orlick & Partington, 1988, pp. 114)

- Elite athletes in general have not been born with highly tuned imagery skills but have had to develop them along the way (Hardy, Jones & Gould, 1996)

Introductory EXERCISE

- What are your beliefs around visualisation and its effectiveness? Your attitude will have an impact on the effectiveness of the process.
- Don't expect your imagery to match exactly the 'reality' – your level of detail and the vividness of your imagery should grow as you develop your skill.
- Do a test run – Go through a list of objects in your mind and observe what happens as you think of that object. Try using imagery to 'see' smell, feel, hear your bedroom. See if you can zoom in and out, or move through a list of objects in quick succession, speeding up and slowing down.
- Choose an object to focus on. Take a photo of the image in your mind. Close your eyes and 'see' the photo in your mind, trying to include as much detail as possible. Open your eyes and find the details you have missed. Close your eyes and keep doing this until you have a vivid image in your head, including all aspects of the object, texture, form, colour etc. Practice until you can take detailed 'snapshots' at will. Try holding the object in your hands and adding the feeling, weight to the image in your mind.

(Adapted from Cooper & Goodenough, 2007)

Does it work?

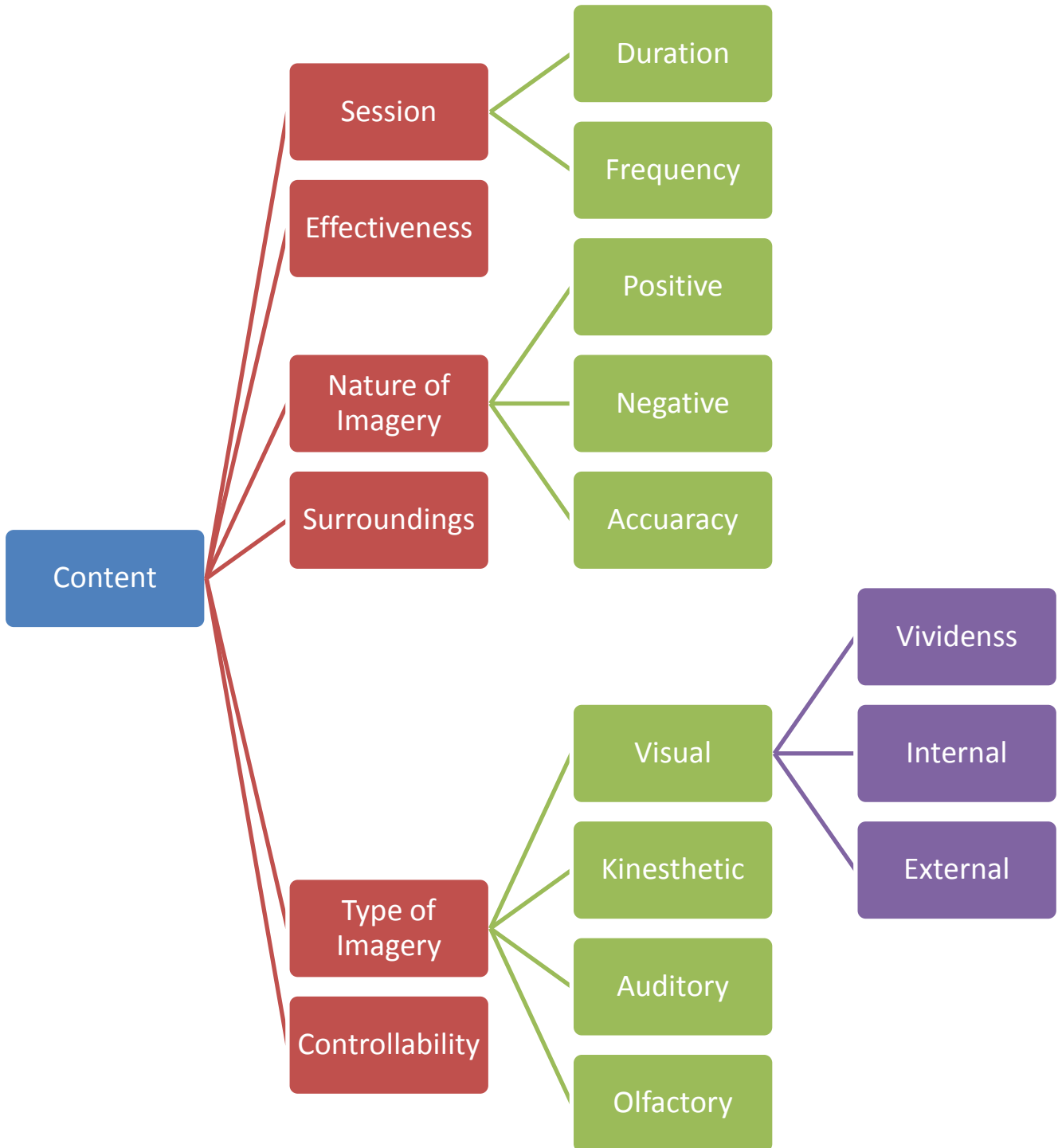
Substantial evidence indicates that imagery works in a variety of sport contexts (Morris, Spittle & Watt, 2005)

- Enhance learning
- Enhance performance
- **Confidence**
- Motivation
- Reduce stress & **anxiety**
- Facilitate recovery from injury

Four W's

- **Where:** Competition, Practice, Preparation
- **When:** Before, after, during – competition, practice, warm-up (15min)
- **Why:** (see above)
- **What:** Content

(Munroe, Giacobbi, Hall & Weinberg, 2000)





A large rectangular area with a background image of a tennis player in mid-air hitting a backhand shot. The image is faded and serves as a backdrop for a series of horizontal lines for writing.

Session Six – Self-Belief, Attitude & Communication

Self-Belief: Team Rating – 5/10

When a team outgrows individual performance and learns team confidence, excellence becomes a reality.

Joe Paterno 1924

“ The biggest thing is to have the belief that you can win every tournament going in. A lot of guys don’t have that. Jack Nicklaus did. ”

- **Tiger Woods**

“ He’s got an aura about him in the locker room. Mentally he’s so confident right now. A lot of his success right now is between the ears. ”

- **Andy Roddick on Roger Federer 2004**

“ I believe strongly in my capabilities. There’s a lot of confidence as well, with my record over the past few years. I’ve built up this feeling on big points that I can do it over and over again. Things are now just coming automatically. ”

- **Roger Federer**

“ The whole thing is never to get negative about yourself. Sure, it’s possible that the other guy you’re playing is tough and that he may have beaten you the last time you played, and okay, maybe you haven’t been playing all that well yourself. But the minute you start thinking about these things you’re dead. I go out to every match convinced that I’m going to win. That’s all there is to it. ”

- **Jimmy Connors - Tennis Legend**

Building Confidence

Act confident - Psych out the opposition; psych yourselves up; “never show when it hurts”

Think confident - thought stopping and positive self talk, keeps motivation and energy high.

Focus on goals - avoid high expectations, so set realistic goals!

Condition your mind & body - trust your skill and ability; doesn't mean hours of practice - short sessions putting in maximum effort

Trust your preparation - once you're in the game practice is over, you can't fiddle with technique and style, you play what's out there; so prepare well and you will go in with the confidence that you've done everything you can!

Dealing with Doubt

Mistakes will happen! Use them as opportunities to **learn** but do not dwell on them.

Eg: Play and miss - use it as an opportunity to learn something about the bowler. Is he changing his pace, swinging the ball or turning it? Or is the pitch a little slow, or showing signs of uneven bounce? Then **wipe that event from your mind** and focus on the present.

Eg: As a bowler you will go for runs. Getting hit for a boundary can point out a batsmen's strength, telling you to attack elsewhere, or demonstrate that he's not going to hesitate to play the short ball, so by moving a man to the square leg boundary could both save you runs and buy you a wicket.

The trick is to take mistakes, analyse and learn from them, and then discard them. This is where **thought stopping** comes in. Use a **key word** to clear your mind and focus on the present.

When facing strong opposition don't allow them to dominate you mentally – they may hit you for runs, or bowl a few good deliveries, but you know what you're good at where your strengths are. Take the focus off them and focus on your ability, talent and strength.

Diagnose your Doubt

Identify triggers that cause a lack of confidence (doubt)

Identify the **symptoms** that indicate a transfer from confident thoughts to doubtful ones.

Create a plan to treat the symptoms

Identify positive self-talk statements – “I am in control of my thoughts and abilities. Others can’t control how I perform”

Build your awareness by keeping a **journal**, or taking notes. Use this journal to keep a record of your successes.

Self-Belief, Self-Reflection

- When am I overconfident?
- How do I recover from mistakes?
- When do I have self-doubts?
- Is my confidence consistent throughout an event?
- Am I tentative and indecisive in certain situations?
- Do I look forward to and enjoy tough highly competitive games?
- How do I react to adversity?

Listening Skills

Fill out the following self-report form.

Never (1) Seldom (2) Sometimes (3) Often (4)	Rating Scale			
1. You find listening to others uninteresting	1	2	3	4
2. You tend to focus attention on the speaker’s delivery or appearance instead of the message.	1	2	3	4
3. You listen more for facts and details often missing the main points that give the facts meaning.	1	2	3	4
4. You are easily distracted by other people’s talking, gestures, rattling paper and so on.	1	2	3	4
5. You fake attention, looking at the speaker but thinking of other things.	1	2	3	4
6. You listen only to what is easy to understand.	1	2	3	4
7. You hear a few sentences of another person’s problems and immediately start thinking about all the advice you can give.	1	2	3	4
8. Your attentions span is very short so it is hard for you to listen for more than a few minutes.	1	2	3	4
9. You are quick to find things to disagree with so you stop listening as you prepare your argument.	1	2	3	4
10. You try to placate the speaker by being supportive through head-nodding and uttering agreement, but you’re not really involved.	1	2	3	4
11. You change the subject when you get bored or uncomfortable with it.	1	2	3	4
12. As soon as someone says anything that you think reflects negatively on you, you defend yourself.	1	2	3	4
13. You second-guess the speaker trying to figure out what he or she really means.	1	2	3	4

14-24 excellent - 25-34 good - 35-44 fair - 45-56 weak

Tips

Everyone on the team should be receptive of the opinions of others - don't be defensive or resistant

Be constructive, not destructive - criticise behaviours, not the person

Deliver constructive criticism using the “sandwich approach” - offers criticism in a sensitive yet effective manner - consists of three elements:

- * a positive statement (well tried)
- * future oriented instructions (next time...)
- * a compliment (good effort)

Self Talk - Intrapersonal communication

Self-talk is the communication we have with ourselves, our **inner dialogue**. What we think, say, to ourselves has a massive influence on our motivation confidence and performance!

Self-talk is heavily influenced by **what others say** to us, if people criticise us, we are more likely to **internalise** those criticisms and say them to ourselves.

It is **mental discipline** to keep certain thoughts out of your head and put certain thoughts in your head. You have conscious control over that. It takes **practice and repetition**. Pretty soon, it's where it is almost **habitual** to keep negative thoughts out or identify negative thoughts and keep positive ones in.

Increase your **awareness** of you internal dialogue - **keep a logbook** after practice and matches, just for a few weeks, to start to identify the things you say to yourself and what effect they have on your performance.

Now you should be able to recognise self-talk that has a negative effect on your performance. Each time you begin to think those things replace them with a positive statement. This technique is called **thought stopping** and can be highly effective in improving performance.



A large rectangular area with a background image of a tennis player celebrating a point. The image is faded and serves as a backdrop for a series of horizontal lines intended for writing.

Session Seven – Pressure *You gotta love it'*

“ Well, I was nervous ... But I felt comfortable. Actually if I hadn't felt nervous, I would have been uncomfortable ”

Michael Johnson 1996 Olympics after setting WR for 200m

“ Pressure is something you put on yourself ”

James Loehr (1982)

Typically tension and anxiety are influenced by your appraisal of three factors; **opponents, venue, occasion** (Cooper & Goodenough, 2007).

How do you feel about competition?

What do you believe about competition?

How is competition different to, or the same as, practice?

What's your performance like in competition compared to practice?

Do you perform better in important matches, or against weaker opposition?

Breath Control Strategies During Play (James Loehr, 1982)

1. When performing well don't think about or be concerned with your breathing.
2. When feeling emotionally flat or lifeless, speed your breathing up until you feel higher energy and activation levels.
3. When negative energy is flowing and you're racing too fast inside, slow your breathing way down. Take deep, long, and regular breaths whenever possible.
4. Attempt to coordinate the process of exhaling with critical moments of execution.



A large rectangular area with a background image of a tennis player in mid-air hitting a backhand shot. The image is faded and serves as a backdrop for a series of horizontal lines for writing.

Appendix E

Evaluation Questionnaire and Focus Group Schedule

Final Focus Group – Mental Toughness Programme

Border Cricket

Evaluation Questions

In **Session One** we discussed the role of the mind in cricket, and we started a process of developing self-awareness by trying to think about the kinds of thought processes and routines we used when we were playing well and when we were playing poorly. We discussed why you play cricket and what motivates you. We also looked at the outline of the programme. I also emphasised how important it is to work on the mental game, in order to improve your performance, and that acquiring mental toughness would not be like magic but would require work. We also did the **paper clip exercise** and discussed the impact of our minds on our body.

Try to think back to that session and the stuff we discussed. What did you find valuable? What wasn't valuable? Would you make any changes? Any other comments?

In **Session Two** we talked about **goal setting**. Specifically we focussed on developing goals, how to create short term and long term goals, the distinctions between process, performance and outcome goals, and how to develop goal achievement strategies. We developed individual goals and I also stressed the need to monitor and assess your progress towards achieving goals at regular intervals, using scorecards etc.

Try to think back to that session and the stuff we discussed. What did you find valuable? What wasn't valuable? Would you make any changes? Any other comments?

In **Session Three** the focus was on **concentration**. We did a **concentration grid** exercise, spoke about distractions and discussed the importance of routines, performance cues and how to refocus.

Try to think back to that session and the stuff we discussed. What did you find valuable? What wasn't valuable? Would you make any changes? Any other comments?

Session Four was on **preparation**. We looked at practicing **game scenarios** and the type of scenarios we could set up in nets. We looked at **over-learning** and discussed **mental preparation**, and our individual approach and preparation for matches, using self-reflection exercises.

Try to think back to that session and the stuff we discussed. What did you find valuable?

In **Session Five** we spent a lot of time looking at team goals, and set up outcome, performance and process goals for the 3-day format. We spent a brief amount of time talking about visualisation and the theory around it.

Try to think back to that session and the stuff we discussed. What did you find valuable?

Session six looked at **confidence and self belief** as well as **communication**. We looked at quotes on the importance of self-belief, and discussed how to build confidence. We also did a **back-to-back** communication exercise and discussed the importance of communication in a team setting.

Try to think back to that session and the stuff we discussed. What did you find valuable?

Is there anything else you would have liked to have been given? Information, skills or exercises?

What did you think of the use of the booklet and handouts for each session?

What did you think of using a “notes” page to make comments and keep ideas?

What do you think of keeping a performance journal?

What are your feelings about the **scorecard system** for practices? Did it work for you?

What do you think about the idea of preparation teams who focus on providing input on a specific area (pitch, bowling, batting) and then provide feedback after a match?

What did you feel about my role as a facilitator of this programme?

What impact if any has this programme had on you?

Have you discussed this programme, the ideas and skills it raised, with anyone? Who?

How would you rate the effort you've put into the programme?

In the sessions? Were you engaged, attentive, concentrating?

In between sessions? Did you read the handouts, make notes or do the exercises?

Thanks so much for your time and effort!!

Mike McInerney

Appendix F

Final Coach Interview Schedule

Coach Interview Schedule – Mental Toughness Programme for Border Cricket Team.

- What was your experience of the programme?
- What kind of impact did it have on you – (have you changed the way you coach? Relate to the boys? Thought more about the mental?)
- How did you view your role within the programme?
- Would you have done anything differently?
- How has your approach to mental toughness been affected by the research?

- What kind of impact did it have on the boys?
- Did you see a change in any of the players (albeit short time frame)?

- Did you think the programme was designed appropriately (focus areas)?
- Would you have designed it differently?
- What weaknesses did the programme have?
- What changes might you suggest for the programme?

- What were the strengths of the programme in your opinion?

- Any other comments (my role)?