Mental Fortitude Training™: An Evidence-Based Approach to Developing Psychological Resilience for Sustained Success

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Abstract

Drawing on the body of knowledge in this area, this article presents an evidence-based approach to developing psychological resilience for sustained success. To this end, the narrative is divided into three main sections. The first section describes the construct of psychological resilience and explains what it is. The second section outlines and discusses a mental fortitude training™ program for aspiring performers. The third section provides recommendations for practitioners implementing this program. It is hoped that this article will facilitate a holistic and systematic approach to developing resilience for sustained success.

Keywords: environment, excellence, intervention, mindset, performance, personal qualities, resilient, resiliency, sport.
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Human history is characterised by our individual and collective desire for advancement. Since the times of Confucius and Socrates, philosophers have extolled the virtues associated with humans pursuing worthwhile and challenging ideals. From the formation of ancient civilizations to the exploration of the cosmos, we have always endeavoured to extend the frontiers of our experience and accomplishment. Such ambition, however, brings pressure. Irrespective of the arena, our attempts to progress are accompanied by internal and external demands that test our capabilities, often to their limits. As expectations intensify, it is not an overstatement to suggest that only the fittest will survive. However, merely surviving is not enough to succeed at the highest levels; humans must thrive on the pressure.

Underpinned by resilience-related theory and research, we present a program of mental fortitude training™ for persons wishing to develop resilience for sustained success. To begin with, we describe what psychological resilience is. We then outline the main aspects of the training program and discuss its application to enhance performers’ ability to withstand and thrive on pressure. We then reflect on our experiences of implementing the program to provide recommendations for professional practice in this area.

What is Psychological Resilience?

Put simply, psychological resilience refers to the ability to use personal qualities to withstand pressure. As Fletcher and Sarkar (2013) and others have pointed out (cf. Alexander, 2013; Gillespie, Chaboyer, & Wallis, 2007; McMurry, 2010; Reghezza-Zitt, Rufat, Djamant-Tran, Le Blanc, & Lhomme, 2012; Rogers, 2012), the meaning of the word resilience has evolved somewhat from its Latin origin of resilire translated as “to leap back” to its current psychological-related usage of having a protective effect (Luthar, 1993; Rutter, 1987) that
involves individuals maintaining their functioning (Bonanno, 2004; Carver, 1998). To represent its etymology and lexicology, we use the term “robust resilience” to refer to its protective quality reflected in a person maintaining their well-being and performance when under pressure, and the term “rebound resilience” to refer to its bounce back quality reflected in minor or temporary disruptions to a person’s well-being and performance when under pressure and the quick return to normal functioning. In line with both traditional and contemporary meanings of the word resilience, training in psychological resilience — otherwise known as mental fortitude — should be both proactive (cf. robust resilience) and reactive (cf. rebound resilience) in nature and target performers' before, during and after stressful or adverse encounters. In contrast to a resilient individual, vulnerable people tend to succumb to pressure with it significantly affecting their well-being and/or performance and, as a result, they have to then attempt to cope with and recover from their negative experiences. Because people’s mental characteristics and outlook changes over time, so too does their psychological resilience. Psychologists and others can, therefore, seek to influence — and hopefully enhance — people’s mental fortitude.

**The Mental Fortitude Training™ Program**

Drawing on the existing body of knowledge in this area, this section presents an evidence-based approach to the development of psychological resilience for sustained success. The mental fortitude training™ program focuses on three main areas — personal

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1 Although the polysemy of resilience can be frustrating from a research and operational perspective, we believe that it can be of heuristic and pragmatic value, particularly for practitioners, students, coaches, and performers seeking to develop resilience. Nonetheless, in writing this practically orientated article, we also are minded of Alexander’s (2013) observation: “if only language were kept simple in scholarly work on resilience, one feels that much of the debate about what terms mean and how to interpret them would be unnecessary” (p. 2713).

2 Rather than implying weakness or potential for abuse (cf. Hutchon & Lashewicz, 2014), we use the term vulnerable in this context for heuristic purposes to promote greater understanding of resilience and its development (cf. Lotz, 2016). In reality, resilience and vulnerability are not antonyms of each other; rather they are orthogonal whereby they co-exist in everybody (cf. Miller, Osbahr, Boyd, Thomalla, Bharwani, Ziervogel, Walker, Birkmann, Van der Leeuw, Rockström, Hinkel, Downing, Folke, & Nelson, 2010).
qualities, facilitative environment, and challenge mindset – to enhance performers’ ability to withstand pressure (see Figure 1).

**Personal Qualities**

The cornerstone of this resilience training program is, not surprisingly, an individual’s personal qualities, which can be described as the psychological factors that protect an individual from negative consequences (cf. Fletcher & Sarkar, 2012). When considering the psychological architecture underlying an individual’s personal qualities, the distinction between personality and skills is an appropriate starting point. Personality can be defined as the “psychological qualities that contribute to an individual’s enduring and distinctive patterns of feeling, thinking, and behaving” (Cervone & Pervin, 2013, p. 8) and is multi-layered consisting of dispositional traits, characteristic adaptations, and self-narrative identities (Coulter, Mallett, Singer, & Gucciardi, 2016; McAdams, 2013). Psychological skills are defined as the cognitive-affective techniques and processes that are strategically used by an individual to enhance and optimize his or her functioning (cf. Hardy, Roberts, Thomas, & Murphy, 2010; Thomas, Murphy, & Hardy, 1999), and can be used on their own or in combination and described along a basic to advanced continuum (Hardy, Jones, & Gould, 1996). Personality, therefore, is a more stable personal quality, whereas psychological skills are more malleable personal qualities.

Another important distinction in this area, which is often overlooked, is between an individual’s psychological processes and outcomes. To illustrate, MacNamara, Button, and

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1 Although the mental fortitude training™ program is designed for individuals performing in any pressurized domain (cf. Sarkar & Fletcher, 2014a), much of the underpinning evidence stems from research that ourselves and colleagues have conducted in the elite sport environment. As part of Team GB’s preparations for the London 2012 Olympic Games, Dr. David Fletcher led a programme of research at Loughborough University to study resilience (and growth) in the world’s best athletes and teams, the findings of which have been presented in a series of reports (Fletcher, 2008; Fletcher & Sarkar, 2010) and publications (Fletcher & Sarkar, 2012; Howells & Fletcher, 2015, 2016; Morgan, Fletcher, & Sarkar, 2013, 2015; Sarkar & Fletcher, 2014b; Sarkar, Fletcher, & Brown, 2015). Through Dr. Fletcher’s role as the Director of Sport Psychology Services, the research findings have been translated and applied to the preparation of athletes and teams across the campus. Following ongoing refinement, the mental fortitude training™ program presented in this article represents the Rio 2012-2016 Olympiad version.
Collins (2010a; MacNamara & Collins, 2011) list a range of psychological characteristics for developing excellence (see also MacNamara et al., 2010b; MacNamara & Collins, 2013); however, without differentiating between processes (e.g., imagery, goal-setting) and outcomes (e.g., self-confidence, commitment) it is difficult to determine underlying mechanisms and developmental pathways (cf. Gould & Maynard, 2009; Hardy et al., 1996; Thomas et al., 1999; Vealey, 1988). For example, personality characteristics, such as self-esteem and optimism, combined with effective goal-setting, self-talk and imagery skills, are likely to lead to a more confident and efficacious individual.

With the above conceptual distinctions in mind, in our resilience training program within the area of personal qualities, we differentiate between personality characteristics, psychological skills and processes, and desirable outcomes that protect an individual from negative consequences (see Figure 2). In any moment of time, these personal qualities will likely be tested by stressors and adversities and/or supported by social and environmental resources (see the next subsection). The distinction between different types of personal qualities is important for two main reasons. Firstly, because it is problematic to “use the skill of confidence or motivation”, this differentiation focuses attention on the underpinning personality characteristics and psychological skills that make-up mental readiness for demanding situations. Secondly, it is important that skills such as goal-setting, self-talk and imagery are not (solely) taught for practice’s sake; rather, they should be trained with a view to developing specific and measurable desirable outcomes (e.g., enhance confidence, optimize motivation).

The most salient, evidence-based personal qualities for developing psychological resilience are categorized and summarised in Table 1. It is important to note that the relevance and importance of these qualities will vary across contexts and time. For example, in the sport domain, being resilient to training-related stressors will likely necessitate a
different combination of personal qualities than those needed to withstand competition-related stressors. Another point worth reinforcing is that personality characteristics are less amenable to change than psychological skills, both of which underpin desirable outcomes. Hence, in terms of the developmental potential of psychological resilience, there are aspects of an individual’s psyche which are more malleable than others. Based on this observation, we refer to an individual’s ‘resilience bandwidth’ as an indication of his or her natural developmental trajectory compared to his or her point of highest potential with psychosocial intervention. In Figure 3, we illustrate the natural development trajectories of two individuals who have minimal resilience-related training; however, one individual is high in resilience-related personality characteristics and the other individual is low. (Although the trajectories are presented linearly to facilitate comprehension, they will in reality most likely follow nonlinear pathways). In Figure 4, we show how the developmental trajectory alters with the introduction and maintenance of resilience-related training to develop relevant psychological skills and processes. Here, the individual low in resilience-related personality characteristics benefits from the training (to the extent that they become more resilient than the individual high in resilience-related personality characteristics who has not had training).

With these points in mind, the aim of mental fortitude training™ is to optimise an individual’s personal qualities so that he or she is able to withstand the stressors that they encounter at any given moment. This aim is, of course, aspirational because any individual, no matter what his or her psychological make-up is, will succumb at some point (his or her ‘breaking point’) to (extreme) adversity and hardship (cf. Basoglu, 1997; Basoglu, Mineka, Paker, Aker, Livanou, & Gök, 1997; Sales, 2016; Schleifer, 2014). It is, therefore,

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4 We make this (extreme) point to illustrate that the conception and development of psychological resilience cannot occur by solely focusing on an individual and that the stressors he or she encounters, together with the support he or she receives, always need to be considered in parallel with personal qualities.
imperative to look beyond an individual’s personal qualities to the wider environment in which he or she operates.

**Facilitative Environment**

Although psychological resilience is, by definition, a fundamentally cognitive-affective construct manifested in individuals’ behaviours (Fletcher & Sarkar, 2013), it is profoundly influenced by a wide range of environmental factors. Such factors may originate from social, cultural, organizational, political, economic, occupational and/or technological sources; therefore, any psychological resilience training program should, as much as practically possible, consider the broader environment within which individuals operate (cf. Fletcher & Sarkar, 2012). We refer to a setting or context that fosters the development of psychological resilience as a facilitative environment. Since person-environment interactions are highly complex (cf. Egeland, Carlson, & Sroufe, 1993), it is helpful to identify cross-cutting properties that span the aforementioned environmental factors. In terms of developing psychological resilience, we propose that the concepts of challenge and support are of fundamental importance.

Sanford (1967) was the first to discuss the importance of challenge and support in human development in his work on student advancement. He argued that for students to improve their academic performance, the educational environment must balance the challenge and support presented to them (see Figure 5). Challenge involves having high expectations of people, and helps to instil accountability and responsibility. The provision of developmental feedback is important to inform about how to improve and, in the context of the present discussion, develop resilience. Support refers to enabling people to develop their personal qualities, and helps to promote learning and build trust. The provision of motivational feedback is important to encourage and inform about what has been and is effective in developing resilience. Sanford’s theory of challenge and support has been widely

adapted and applied in various domains, including in teaching and mentoring (Cameron-Jones & O’Hara, 1997; Daloz, 1986; Martin, 1996), medicine (Bower, Diehr, Morzinski, & Simpson, 1998), education (Hamrick, Evans, & Schuh, 2002; Ward, Trautvetter & Braskamp, 2005), executive coaching (Bird & Gornall, 2015; Blakey & Day, 2012; Jones, Gittens, & Hardy, 2009), military (Hardy, Arthur, Jones, Shariff, Munnoch, Isaacs, & Allsopp, 2010), and sport (Arthur, Hardy, & Woodman, 2013; Fletcher & Streeter, 2016).

Sanford’s theory of challenge and support led to the development of various 2 x 2 matrixes (cf. Blakey & Day, 2012; Daloz, 1986; Sanford, 1967) which differentiate between four categories: low challenge-low support, high challenge-low support, low challenge-high support, and high challenge-high support. In our mental fortitude training™ program, we label these quadrants as stagnant environment, unrelenting environment, comfortable environment, and facilitative environment, respectively (see Figure 6). Each environment is characterised by different features (see Table 2), but for resilience to be developed for sustained success, a facilitative environment needs to be created and maintained. If too much challenge and not enough support is imposed then the unrelenting environment will compromise well-being; conversely, if too much support and not enough challenge is provided then the comfortable environment will not enhance performance.

Importantly, the notion of balancing challenge and support needs to be considered over time rather than in any one instant (cf. Cameron-Jones & O’Hara, 1997; Daloz, 1986; Martin, 1996; Sanford, 1967). In pressurized performance domains, an effective method for oscillating challenge and support is pressure inurement training™, defined as the manipulation of the environment to evoke a stress-related response with the aim of maintaining functioning and performance under pressure. Its theoretical origin lies in the medical practice of inoculation involving exposing an individual to a small amount of an infectious disease, known as a vaccine, to develop immunity to the disease. These principles
were originally applied to treating human stress-related disorders in clinical populations by Wolpe (systematic desensitization training, 1958) and Meichenbaum (stress inoculation training, 1976, 1977), and more recently to managing stress in performance contexts in non-clinical populations by Johnston and colleagues (stress exposure training, Johnston & Cannon-Bowers, 1996; Driskell & Johnston, 1998). In the sport domain, a growing body of evidence supports the effectiveness of the aforementioned (viz. Driskell, Sclafani, & Driskell, 2014; Mace & Carroll, 1985, 1986, 1989; Mace, Eastman, & Carroll, 1986, 1987) and similar (viz. Bell, Hardy, & Beattie, 2013; Lewis & Linder, 1997; Oudejans & Pijpers, 2009, 2010; Seifried, 2008; Smith, 1980) psychosocial training programs for stress desensitization and inoculation. Based on the procedures outlined in this work, we propose a multi-phased pressure inurement training™ approach to oscillate and balance challenge and support, develop resilience, and enhance performance (see Figure 7).

Following skill acquisition and automation, pressure inurement training™ involves gradually increasing the pressure on an individual(s) via challenge and the manipulation of the environment. This occurs in two main ways: firstly, by increasing the demand of the stressors, through their type (e.g., competitive), property (e.g., novelty), or dimension (e.g., frequency) and, secondly, by increasing the significance for the appraisals, through their relevance (e.g., beliefs), importance (e.g., goals), and consequences (e.g., punishment). Ideally, but not always necessarily, these modifications should simulate where possible features of the environment where high or peak performance is desired. Concomitantly, the environment should also be manipulated to increase the support provided to individuals to enhance their personal qualities (see the previous subsection) through increased learning and practice. Importantly, coaches and psychologists will need to carefully monitor how

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5 Aligned with these training programmes, various psychological concepts support the premise of pressure inurement training, including steeling (e.g., Rutter, 1987), psychophysiological toughness (Dembroski, 1989, 1992), eustress (Hargrove, Becker, & Hargrove, 2015), and discretionary vulnerability (Lotz, 2016).
individuals react to these manipulations, both in terms of their psychological responses and other outcomes (e.g., wellbeing, performance). When the pressure exceeds the available resources, individuals are likely to react with more debilitative responses and negative outcomes, in which case increased motivational feedback and support should be provided (cf. Mahoney, Gucciardi, Gordon, & Ntoumanis, 2017; Mahoney, Ntoumanis, Gucciardi, Mallett, & Stebbings, 2016), together with possibly temporarily decreasing the challenge. Conversely, when individuals react with more facilitative responses and positive outcomes, indicating that they are/have adapted to the pressure, then increased developmental feedback and challenge should be imposed (cf. Bell et al., 2013; Oudejans & Pijpers, 2009). As the German theologian, Dietrich Bonhoeffer, succulently advised: “comfort the troubled, and trouble the comfortable” (a quote that the Australian, Ric Charlesworth, is known for applying to the sports coaching process).

**Challenge Mindset**

Arguably the pivotal point of any psychological resilience training program is for individuals to positively evaluate and interpret the pressure they encounter, together with their own resources, thoughts and emotions (cf. Fletcher & Sarkar, 2012). Largely predicted by (the combination of) an individual’s personal qualities and his or her immersion in a facilitative environment, the ability to evoke and maintain a challenge mindset is of crucial importance in developing resilience. The focus here is on how individuals react to stressors and adversity, rather than the environmental events themselves. As Epictetus wrote in Enchiridion: “Men are disturbed not by things, but by the views which they take of them,” and as Shakespeare wrote in Hamlet: “There is nothing good or bad but thinking makes it so.”

Drawing on the theorising of Lazarus (1964, 1966) and others (viz. Arnold, 1960; Grinker & Spiegel, 1945; Speisman, Lazarus, Mordkoff, & Davison, 1964), during any
encounter an individual will appraise the relevance and significance of what is happening in relation to his or her’s goals and the implications of what is at stake (“how might this affect me and do I care?”) – an ongoing process known as primary appraisal. An individual may react negatively, evaluating an encounter as a harm/loss or threat, or positively, evaluating the encounter as a challenge (Lazarus, 1966, 1981; Lazarus & Folkman, 1984; Lazarus & Launier, 1978). The distinction between challenge and threat appraisals is evident in much of the stress theory in sport psychology (see, e.g., Anshel, Kim, Kim, Chang, & Eom, 2001; Burton, 1998; Burton & Naylor, 1997; Fletcher & Fletcher, 2005; Fletcher, Hanton, & Mellalieu, 2006; Fletcher & Scott, 2010; Gill, 1994; Rotella & Lerner, 1993; Tenenbaum, Jones, Kitsantas, Sacks, & Berwick, 2003a; see also Anderson & Williams, 1988; Smith, 1980, 1985, 1986) and supported by research findings (see, e.g., Didymus & Fletcher, 2012; Meijen, Jones, Sheffield, & McCarthy, 2014; Moore, Vine, Wilson, & Freeman, 2012, 2014, 2015; Moore, Wilson, Vine, Coussens, & Freeman, 2013; Neil, Hanton, Mellalieu, & Fletcher, 2011; Turner, Jones, Sheffield, & Cross, 2012; Turner, Jones, Sheffield, Slater, Barker, & Bell, 2013; Turner, Jones, Sheffield, Barker, & Coffee, 2014; Vine, Freeman, Moore, Chandra-Ramanan, & Wilson, 2013).

Although an individual’s appraisal of pressure and adversity is an important part of resilience training, it is not the whole story of developing a challenge mindset. In addition to evaluating an environmental encounter, individuals also appraise the availability of coping resources to deal with the harm/loss, threat and challenge (“what can I do about this and will it be enough?”) – an ongoing process known as secondary appraisal (Lazarus, 1964, 1966). Furthermore, regardless of primary and secondary appraisal, individuals also evaluate their own thoughts and emotions – a process known as meta-cognition and -emotion (Flavell, 1979; Hooven, Gottman, & Katz, 1995; Mayer & Gaschke, 1988) – in terms of their relevance for performance and well-being (Crum, Salovey, & Achor, 2013; Hanin, 1997, 2010).
272 2000; Fletcher & Fletcher, 2005; Fletcher et al., 2006). This evaluation of thoughts and
273 feelings occurs at a higher level of cognitive-affective processing than the evaluation of the
274 environment demands and personal resources, and is often overlooked by stress and
275 resilience researchers (see, for exceptions, Fletcher & Sarkar, 2012; MacIntyre, Igou,
276 Campbell, Moran, & Matthews, 2014), despite having important implications for
277 withstanding pressure and sustaining performance.
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279 With the above in mind, our mental fortitude training™ program places emphasis on
280 helping individuals to positively evaluate and interpret the pressure they encounter, together
281 with their own resources, thoughts and emotions. Central to this is changing negative
282 appraisals into positive or constructive thinking. For those who due to their personalities,
283 background, or surroundings tend to look on the dark side, this can be very difficult. This is
284 why, as noted earlier, psychological skills and processes need to be practised regularly and
285 why the environment needs to facilitate this development through an appropriate balance of
286 challenge and support. Fundamental to changing this mindset should be individuals having
287 an awareness of any negative thoughts that make them more vulnerable to the negative
288 effects of stress (for some examples, see Table 3) and realizing and accepting that they have a
289 choice about how they react to and think about events.
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291 Drawing in part on cognitive-behavioural therapies (cf. Beck, 1976; Ellis, 1962; see
292 also Turner, 2014; Turner & Barker, 2013, 2014; Turner, Slater, & Barker, 2014, 2015), the
293 key to dealing with negative thinking is to regulate one’s thoughts (for some examples, see
294 Table 4). Although the aim is to engender and maintain a positive evaluation of pressure and
295 a challenge mindset, it is important to recognize that we are all human and will at times
296 engage in negative thinking. Indeed, it may be that automatically initiating the thought
297 regulation strategies outlined in Table 4 in a habitual fashion proves too difficult at times to
298 begin or maintain. In these circumstances, individuals are at risk of becoming trapped in a
state of distress characterized by prolonged worry and rumination. Individuals should be accepting and non-judgemental about any negative thoughts so that they can begin, when they are ready, to adapt how they respond to such thoughts and beliefs (Perfect & Schwartz, 2002; Wells, 2011). An important message for those wishing to develop a challenge mindset is that this occurs at multiple levels of cognitive-affective processing, involving positive evaluations and interpretations of the pressure individuals’ encounter, together with their own resources, thoughts and emotions. We believe that it is this ongoing process that coach Bob Bowman (2016) was (implicitly) referring to when he described his swimmer, Michael Phelps, the most successful Olympian in history, as a “motivational machine” who could take anything that happened to him – ‘good’ or ‘bad’ – and channel it to his advantage to enhance his performance.

Developing Psychological Resilience: From Theory to Practice

Resilience training, like many areas of applied psychology, is arguably easier to research and write about than to put into practice and elicit positive change. As noted earlier, we have attempted to translate and apply the findings of our resilience research program to the preparation of athletes and teams for the 2012 and 2016 Olympic Games. Most of this work has occurred on the Loughborough University campus but, following the London 2012 Olympic Games, the training program has been in part refined with colleagues from the United States Olympic Committee, the Swedish Sports Confederation, and High Performance Sport New Zealand in preparation for the Rio 2016 Olympic Games. Drawing on our ongoing reflections, in this section we provide some practical recommendations for those implementing or undertaking this program (see also Fletcher & Sarkar, 2013; Robertson,

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6 Loughborough University was Team GB’s Official Preparation Camp Headquarters prior to the London 2012 Olympic Games. The University has a long sporting heritage and has Britain’s largest concentration of world-class training facilities across a wide range of sports. At the London 2012 Olympic and Paralympic Games, 90 athletes with University connections competed, winning a total of thirteen medals, and at the Rio Olympic and Paralympic Games, 85 athletes with University connections competed, winning a total of 34 medals.
Any psychologist operating in an organization with aspirations of sustained high achievement should pay careful attention to the constantly unfolding psychosocial and political dynamics (cf. Fletcher & Wagstaff, 2009; Ravizza, 1988). Of particular importance is identifying the main decision-makers (e.g., performance directors) and personnel (e.g., coaches) whose views will likely influence potential intervention. It is also worth noting who within the organization is receptive to the fields of psychology and/or management (cf. Hardy, Jones, & Gould, 1996). It is likely that, for a variety of reasons, individuals will vary in the extent that they are willing to engage with support in these areas. For example, it may be that individuals who are high in resilience-related personality characteristics (and therefore tend to better withstand pressure in their lives) perceive less need for resilience training. We have observed, however, that the effectiveness of work in this area can depend on the breadth and depth of commitment from all layers of and personnel within an organization. Because misunderstandings exist about resilience, training in this area should begin with an explanation of what resilience is and is not. It should be emphasised that feeling vulnerable to stress or struggling to cope with adversity should not be perceived as weakness. Rather, open discussion about this topic is a sign of strength and the potential beginning of positive change that will hopefully lead to individuals withstanding – and potentially thriving on – pressure. The initial phase of training should seek to determine how individuals react in pressurised situations and utilize a range of diagnostics including self-report, observation, and physiological indices (cf. Sarkar & Fletcher, 2013). Any training should be endorsed at a group level but tailored to meet individuals’ needs and circumstances. Where possible, the intervention should be integrated into performers’ existing (physical and psychological) training programs and provide varied opportunities for experiential learning. Performers’ responses to resilience training should be closely monitored so that the content of the training...
can be modified and optimised accordingly. A successful resilience training program should be progressively adaptive over time with evidence of developments in both wellbeing and performance.

One of the most important implications of the mental fortitude training™ program is that the development of psychological resilience for sustained success is a multifactorial endeavour. All three areas – personal qualities, facilitative environment, and challenge mindset – need to be appropriately addressed to enhance performers’ ability to withstand pressure. Interventions that solely focus on personal qualities (e.g., “psychological characteristics for developing excellence”), the environment (e.g., autonomy-supportive climate), or mindset (e.g., challenge state), will not comprehensively develop psychological resilience or sustain high performance over time. Although these three areas have been presented separately in this article to facilitate reader understanding, in practice they will need to be addressed and integrated collectively rather than in isolation to maximize their effect.

Although the focus of this article has been on psychological resilience at an individual level, there is evidence to suggest that resilience is also occurs at a group level (Morgan et al., 2013, 2015). Rather than simply aggregating individuals’ levels of psychological resilience, it appears that team resilience is “greater than the sum of its parts” (Aristotle). Just because a team might contain resilient individuals it doesn’t necessarily follow that the team will be resilient under pressure. At a team level, what is crucial is the way that the individuals’ collective qualities (e.g., defined roles and responsibilities, group goal commitment and alignment, nurtured supportive and caring relationships, strong belief in one another) are harnessed in which every member of the team can thrive (Morgan et al., 2013, 2015). Hence, any resilience training program implemented within teams must focus on building not only individual capability but also interpersonal relationships, shared processes, and group
In further extending the notion of team resilience, our wider experiences and research in elite sport (see, e.g., Fletcher & Wagstaff, 2009; Fletcher & Streeter, 2016) have emphasized the importance of individuals’ perceptions of their organization as a whole and, in the context of developing resilience, individuals’ perceptions of how people within the organization perform under pressure. Of particular importance is the language that individuals use about pressure-related events and their behaviors when under pressure. Put simply, is there a challenge culture where individuals view pressure as an opportunity to perform, or a threatening culture where pressure evokes a fear of failure? In a challenge culture, the majority of people, the majority of the time, will express and display the personal qualities (see Table 1 and Figure 2) and challenge mindset (see Table 4) discussed previously when faced with a pressurized situation, thus contributing to a facilitate environment (see Table 2 and Figure 6). Furthermore, the leadership, management, coaching, support staff and parents have important roles in creating and role-modelling the desired culture, through appropriate motivational and developmental feedback. The organization’s vision should inspire those within it to establish a collective identity that embodies cultural and behavioral norms of reacting positively to pressure. The vision should also be authentic, drawing on the organization’s heritage and desired legacy. Stories and images of team members withstanding and thriving on pressure and subsequent success will further reinforce the challenge culture. It is also important to seek input from current members of the organization to engender ownership of resilience development at all levels. Because how individuals feel and what they do will continually affect those around them, shaping cultural and behavioral change are critical factors in developing resilience for sustained success.

Concluding Remarks
In conclusion, this article has presented a mental fortitude training™ program for developing resilience for sustained success. In describing this training program, we have extolled the virtues of resilience and its development. Although the benefits are wide-ranging and far-reaching, it is important to emphasize that resilience training is most certainly not a panacea for all mental health or performance problems. Training in this area should be part of a holistic psychosocial support program that includes other areas of focus, such as ethical awareness, emotional intelligence (Laborde, Dosseville, & Allen, 2016), performance intelligence (Jones, 2012), and counselling (Longstaff & Gervis, 2016), to develop well-adjusted, high performers. It may also be appropriate to supplement aspects of resilience training, such as enhancing self-awareness, with complementary training in related areas, such as mindfulness (Röthlin, Horvath, Birrer, & Holtforth, 2016). The point that we are making here is that, without other psychosocial assets and contextual sensitivity, training resilience on its own may actually become a vice that undermines wellbeing and performance (cf. Friedman & Robbins, 2012). Indeed, those seeking to develop resilience would be wise to bear in mind Adolf Hitler, a resilient individual who was high performing in some respects (e.g., outstanding orator, dynamic leader) but who was also unequivocally and devastatingly flawed.

In view of the misunderstandings that exist in this area, there is need to further underscore that resilience is not about choosing to place one’s (or others’) health, wellbeing or even life at risk. Confusion occurs when, paradoxically, weakness is misconstrued as strength. Examples include being under stress and denying it, being so single-minded and focused on performance that everything else is ignored, continually pushing hard when it is clear to others that it is futile and can only compromise health or wellbeing, and the suppression or absence of emotions. At a team level, examples include celebrating dysfunctional behaviors and mislabelling them as “badges of honor”, conforming to unethical
norms and behaviours, sacrificing one’s health and wellbeing for the “good of the team”, and blaming or isolating those who are struggling with stress or mental health issues. Scholars, practitioners, and others working with performers should distinguish between resilience and weakness to minimize misunderstanding.

There is another important reason why a lack of resilience should not be confused with weakness. As we noted earlier, resilience and vulnerability co-exist in everybody and any individual will at some point succumb to extreme adversity and hardship. It is, in fact, one the paradoxes of human psychology that being vulnerable (cf. Brown, 2012, 2015) to pressure and adversity may be needed to (later) develop the resilience necessary for high performance (cf. Joseph, 2013; Rendon, 2015). Put another way, in order to withstand and thrive on the highest levels of pressure, individuals may first need to succumb to adversity to subsequently benefit from the psychological and behavioural changes that only this level of trauma can bring. Research findings show that failing to cope with adversity can, ultimately, lead to growth and enhanced resilience in across various performance domains (Joseph, Murphy, & Regel 2012; Linley & Joseph, 2004; Tedeschi & Calhoun, 2004), including sport (Howells & Fletcher, 2015, 2016; Sarkar, Fletcher, & Brown, 2015). Trauma can sometimes be required for re-evaluation and reflection, opening up dialogue and frank communication, enhancing relationships, stimulating learning, gaining perspective, humility, and a new beginning. The aphorisms “what doesn’t break me, makes me stronger” and “every cloud has a silver lining” are relevant here.

In conclusion, this article has presented a mental fortitude training™ program for developing resilience for sustained success. Although it is based on a wide-ranging evidence-

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7 Of course, it should go without saying, that this is not to be confused with the unethical and inappropriate imposition of adversity. Worryingly, it appears that extreme challenge-no support environments have been created under the guise of "toughening-up" performers (cf. Hodgson, 2006; Lord, 2005), and it is important that we learn the lessons from these and comparable cultures (see Cavallerio, Wadley, & Wagstaff, 2016; Coulter, Mallett, & Singer, 2016; Gucciardi, Hanton, & Fleming, in press; Tibbert, Andersen, & Morris, 2015).
base, the effectiveness and efficacy of the intervention has not been comprehensively evaluated using research designs that maximize internal and external validity. This training program therefore represents a ‘work in progress’ that will undoubtedly be further refined and adapted, particularly with respect to how best to optimize both wellbeing and performance across different domains. In the meantime, it is hoped that the program described in this article will facilitate a holistic and systematic approach to developing resilience for aspiring performers.


Driskell, T., Sclafani, S., & Driskell, J. E. (2014). Reducing the effects of game day pressures...


Fletcher, D., & Scott, M. (2010). Psychological stress in sports coaches: A review of


Lazarus, R. S., & Launier, R. (1978). Stress-related transactions between person and environment. In L. A. Pervin & M. Lewis (Eds.), *Perspectives in interactional...


Table 1. Salient Personal Qualities for Psychological Resilience.

<table>
<thead>
<tr>
<th>Type of Personal Quality</th>
<th>Personal Quality (and Related Terms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personality characteristic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Outgoing and seek attention from others (extraverted)</td>
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<td></td>
<td>• Thorough and concerned about doing things correctly (conscientious)</td>
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<td></td>
<td>• High personal standards (perfectionist)</td>
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<td></td>
<td>• Positive expectations about the future (optimistic, hopeful)</td>
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<td></td>
<td>• A grandiose view of oneself and feelings of entitlement (narcissistic)</td>
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<tr>
<td></td>
<td>• Subdued experience or expression of emotions (alethymic)</td>
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<td></td>
<td>• Compares oneself to others (competitive)</td>
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<td></td>
<td>• Creates or controls a situation (proactive)</td>
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<td></td>
<td>• Enjoys doing activities and tasks (intrinsicly motivated)</td>
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<td></td>
<td>• Wants to demonstrate competence over others (ego orientated)</td>
</tr>
<tr>
<td></td>
<td>• Wants to demonstrate competence through personal improvement (task orientated)</td>
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<tr>
<td></td>
<td>• Able to maintain self-esteem by putting success down to own abilities and efforts, but putting failure down to external or transient factors (self-serving attributional style)</td>
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<td></td>
<td>• Belief in oneself and one’s ability (self-confident)</td>
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<tr>
<td>Psychological skill</td>
<td>• An awareness of oneself, others, and the environment (self-awareness, social awareness)</td>
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<td></td>
<td>• Direct thoughts and mental images (self-talk, imagery, mental rehearsal, visualization)</td>
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<tr>
<td></td>
<td>• Direct attention appropriately (attentional control)</td>
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<tr>
<td></td>
<td>• Regulate arousal levels (relaxation, activation, arousal control)</td>
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<td></td>
<td>• Set effective goals (goal-setting)</td>
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<tr>
<td></td>
<td>• Plan for expected and unexpected events (preparation routines, VUCA (volatility, uncertainty, complexity and ambiguity) planning, “what if” scenario analysis, “black swan” event response)</td>
</tr>
<tr>
<td>Desirable outcome</td>
<td>• Optimally motivated (self-determined, intrinsically motivated)</td>
</tr>
<tr>
<td></td>
<td>• Regulate thoughts, mental images, and emotions (executive functioning, cognitive control, emotional regulation/control)</td>
</tr>
<tr>
<td></td>
<td>• Maintain attention on what matters (concentration, focus, control)</td>
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<tr>
<td></td>
<td>• Attain, maintain and regain confidence in oneself and others (confidence, self-efficacy)</td>
</tr>
<tr>
<td></td>
<td>• Handle pressure and deal with distress (stress management, coping)</td>
</tr>
<tr>
<td></td>
<td>• Automatically execute skills, processes, strategies and routines (automaticity)</td>
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<tr>
<td></td>
<td>• Recognize support (perceived social support)</td>
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<tr>
<td></td>
<td>• Manage relationships (emotional intelligence, communication)</td>
</tr>
<tr>
<td></td>
<td>• Work with the environment (political acuity)</td>
</tr>
</tbody>
</table>
Table 2. Environment Characteristics.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| Stagnant environment   | • Unseen leaders and managers  
• People are not stimulated  
• People are just going through the motions and surviving  
• Culture of mediocrity  
• Little is going on  
• Good performance more by accident than by design  
• People either don’t know what to do or don’t care |
| Unrelenting environment| • Unhealthy competition  
• Leader exposes and ridicules under performers  
• Blame culture when high standards are not met  
• Avoidance mentality due to consequences of making mistakes  
• Little care for well-being  
• People feel isolated  
• Potential conflict  
• Performance unsustainable  
• Stress and potential burnout  
• “Sink or swim” |
| Comfortable environment| • An over-caring, parent-like culture  
• The people are “nice”  
• Too cozy  
• People are working in their comfort zones  
• Air of complacency  
• People are bored  
• Ambiguity and uncertainty  
• Stifling for individuals who want to be stretched  
• Difficult conversations are avoided  
• Lack of personal and professional development  
• Lack of celebration of achievement  
• Underperformance is not addressed  
• “A happy performer will be a great performer” |
| Facilitative environment| • Supportive challenge towards a goal  
• People thrive in a challenging but supportive environment  
• Individuals have input into and take ownership of goals  
• Individuals seek out challenges to develop  
• Individuals crave constructive feedback  
• Good relationships between performers and leaders or coaches  
• Psychologically safe environment that encourages sensible risk-taking  
• Healthy competition  
• Everyone supports one another  
• Learn from mistakes and failure  
• Success is recognized and celebrated  
• “We’re in this together” |
### Table 3. Examples of Types of Negative Thinking Patterns.

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>“End of the world” thinking</td>
<td>Catastrophizing by blowing things out of proportion and thinking that the worst has, will, or may happen: “I’m not ready to perform tomorrow – it’s going to be a disaster.”</td>
</tr>
<tr>
<td>“It’s all the same” thinking</td>
<td>Overgeneralising by applying your own thoughts, feelings and attitudes across all people and situations: “He didn’t say anything positive about my performance – this team aren’t supportive”.</td>
</tr>
<tr>
<td>“Yes, but…” thinking</td>
<td>Taking positive events and twisting them into negative ones: “Okay, so everyone told me my performance was good, but nobody said that it was great”.</td>
</tr>
<tr>
<td>“Second guessing” thinking</td>
<td>Making assumptions about what others are thinking and with negative repercussions for yourself: “The coach looks bored. He’s not interested in what I’m doing”.</td>
</tr>
<tr>
<td>“It can’t be done” thinking</td>
<td>Looking into the future and predicting a negative outcome: “I’ll never be able to improve my performance”.</td>
</tr>
<tr>
<td>“Black and white” thinking</td>
<td>Viewing the world in an either/or way, with little scope for grey areas: “If I don’t perform now I’ll never get another chance”</td>
</tr>
<tr>
<td>“Taking things personally” thinking</td>
<td>Viewing failures or negative feedback as a reflection of your own shortcomings: “They said that I could have performed better. I’m useless”.</td>
</tr>
<tr>
<td>“It has to be perfect” thinking</td>
<td>Viewing any mistakes as failure: “I made a mistake – I never get it right”</td>
</tr>
<tr>
<td>“Should and must” thinking</td>
<td>Constantly reminding yourself of what you should or must do: “I must get off to a good start”</td>
</tr>
</tbody>
</table>
Table 4. Thought Regulation Strategies.

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stop</strong></td>
<td>Stop negative thoughts by simply thinking “stop!” or similar thoughts such as “don’t go there”, “take control”, or “wait a minute”. Be assertive. For maximum effect, use imagery to reinforce the statements, such as visualising a red “stop” sign.</td>
</tr>
<tr>
<td><strong>Verbalise</strong></td>
<td>Expose negativity by telling someone about your thinking. Ensure that this person will help you confront any irrationality and replace with more positive thoughts.</td>
</tr>
<tr>
<td><strong>Park</strong></td>
<td>‘Park’ any negative thoughts by writing them down or drawing pictures of what they represent, and either disposing of them or putting them aside in an envelope to be confronted later.</td>
</tr>
<tr>
<td><strong>Confront</strong></td>
<td>Challenge any irrationality by asking questions (“have I got all the information?”, “is there another way to view this situation?”), (“is there anything positive I can take from this situation?”), (“what is the worst thing that could happen?”), (“if I had a month to live, how important would this be?”). Sometimes, this is easier if you imagine (a “better” version of) yourself or someone you respect asking such questions to you in a safe place. Alternatively, switch it around by imagining a close friend who is talking negatively (similar to your thoughts) and what rational, encouraging support you would provide. At some point, however, it is likely that you will need to take ownership of your thoughts and focus on making choices that you have probably forgotten you have.</td>
</tr>
<tr>
<td><strong>Replace</strong></td>
<td>Once negative thoughts are eliminated, minimised or parked, you need to replace them with positive thoughts and images. These thoughts should ideally focus on what is in your control, on processes, the present, what’s positive, and staying composed. If thinking about your performance is proving too difficult, then distract yourself by doing and/or thinking about something completely different and thinking about your performance later.</td>
</tr>
</tbody>
</table>
Figure 1. A Mental Fortitude Training™ Programme for Sustained Success.
Figure 2. A Basic Psychological Structure of Personal Qualities and Influencing Factors for Developing Psychological Resilience.
Figure 3. Differences in the Development of Resilience in Individuals with Minimal Resilience Training.
Figure 4. Effect of Resilience Training on an Individual Low in Resilience-Related Personality Characteristics.
Figure 5. The Relationship between Challenge, Support and Performance (reproduced from Sanford, 1967).
Figure 6. A Challenge-Support Matrix for Developing Resilience (adapted from Daloz, 1986; Sanford, 1967).

Challenge

Low

High

Support

Low

High

Unrelenting environment

Facilitative environment

Stagnant environment

Comfortable environment
Figure 7. A Model of Pressure Inurement Training™ for Developing Resilience.