

Getting gritty about practice and success: Motivational characteristics of great performers

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Abstract

We consider the data reported in the target article with respect to key motivational frameworks and characteristics, including grit and self-determined forms of motivation. Empirical data are reviewed that highlight the relationships between these concepts and practice and success. We highlight the concept of grit as a defining characteristic of the super-elite athletes, in reference to both their continued perseverance in the face of obstacles, as well as the increased motivation seemingly caused by such obstacles or set-backs. We discuss the dynamic nature of motivation with respect to cross-sectional and longitudinal age-related comparisons in athletes. Such research is necessary to better understand the characteristics that are potentially transitory or that are a consequence of success, rather than being causal in nature. In the final section, we provide evidence consistent with a profile of a super-elite athlete that is best defined with respect to co-existing types of motivations that have traditionally been considered both positive and negative with respect to their outcomes. The between group comparisons of highly successful athletes in the target article, is unusual yet important if we are to better understand the psychosocial profiles necessary to succeed, that are unbiased by age, practice and competition experience.

Keywords: Grit, self-determined motivation, expertise, sport

“What really makes that person have that real difference to really want it to make it?” (Hardy et al., p68). This quote from one of the Super-Elite (SE) athletes captures the essence of this work and why, as scientists, we seek to understand the minds and behaviours of highly elite athletes. The approach taken by Hardy et al. to assess multiple factors that contribute to variance at the highest levels of sport is timely and important and has been underscored by shortcomings identified with methods that rely solely on practice history profiling (cf., MacNamara, Moreau & Hambrick, 2016).

Hardy et al. present a unique data set, full of rich insights, describing the psychosocial characteristics and environments of athletes that have been extremely successful. In our commentary, we relate some of these data to motivational frameworks and characteristics that have been applied to the study of sport expertise. We consider what these data, frameworks and characteristics mean for key outcomes, such as engagement in training and success at the elite level.

Several psychological characteristics are considered to underpin sporting success, including grit (e.g., Duckworth et al., 2007), resilience (e.g., Fletcher & Sarkar, 2012; Galli & Vealey, 2008), intrinsic or self-determined motivation (e.g., Deci & Ryan, 1985; 2002), passion (e.g., Vallerand et al., 2008), and perfectionism (e.g., Hall, 2006; Stoeber, 2011). The profiles of the SE athletes in the target article show elements commensurate with these motivational frameworks. We focus on the concept of grit as a driver of success at the elite level and review data with respect to self-determined versus more controlling forms of motivation. These motivational frameworks were either not cited or fully considered in the target article, despite their potential relevance in explaining the data and athlete success.

Grit

Grit has been defined as the “sustained and focused application of talent over time (Duckworth et al., 2007; p1087) and “the tenacious pursuit of a dominant superordinate goal despite setbacks” (Duckworth & Gross, 2014, p319)”. Grit accounts for more variance in success across a range of domains than just conscientiousness (Duckworth et al., 2007, yet see Crede, et al., 2016). Similarly, Hardy et al. showed that aspects of grit, such as perseverance over time and resilience to setbacks, discriminated Elite and SE athletes, as opposed to differences in conscientiousness. Their finding that the SEs reported an *increase* in motivation as a result of setbacks, rather than just a failure to be deterred, extends the literature on grit.

In our own work, “grit” has been positively related ($r = .32$) to differences in training amounts and perceptual-cognitive skill acquisition among elite youth soccer players in Australia (Larkin et al., 2016). Moreover, one of the key characteristics of Australian Olympic athletes was “showing perseverance and determination when facing obstacles” (Gulbin et al., 2010, p. 159). The dataset presented in the target article highlights the importance of concepts such as grit, which place emphasis on the desire to achieve in the face of adversity (e.g., Collins & MacNamara, 2012).

Although the motivational profile among the SEs is commensurate with the concept of grit, a high commitment to training (i.e., duration and intensity of this activity), did not consistently differentiate the SEs (14/16 athletes) from the Elites (9/16 athletes). In other work, the duration (e.g., Güllich & Emrich, 2014; Hornig et al., 2016) and perceived intensity of practice or training (e.g., Hodges & Starkes, 1996) have not differentiated across skill or success among elite, adult athletes. We suggest the SEs engaged in a better *quality* of practice

compared to the Elites, potentially as a result of their more obsessive, adaptive perfectionist tendencies and greater mastery focus (e.g., Coughlan et al., 2013). Hardy et al. summarise this difference as “SEs left no stone unturned in their preparation” (p. 148). We have argued that a *deliberate environment* is important for elite success, in which *all* of the decisions and behaviours across the athlete’s life are goal-directed and optimised towards achieving success (Ford et al., 2013; 2015). It is likely that the “grit” evidenced by the SEs towards mastery, is led by their elevated “need to succeed”, driving their sustained engagement in higher quality practice and deliberately, tailored lifestyle (Duckworth et al., 2010).

Controlled motivation

Self-determination theory assumes that motivation lies on a continuum, ranging from intrinsic motivation, via autonomous and controlled extrinsic forms of motivation to amotivation (Deci & Ryan, 1987). More self-determined motivations positively correlate with effort, persistence, and performance (Vallerand & Miquelon, 2007). The satisfaction of three needs related to competency, autonomy, and social relatedness are thought to lead to motivations that are more self-determined (Deci & Ryan, 2000). Although both the SEs and Elites showed a need for autonomy and competency, SEs appeared low for satisfaction of relatedness (e.g., terminating inter-personal relationships, lack of engagement in other activities), which was not true for the Elites. Moreover, contrary to ideas that the motivations of elite performers are self-determined (e.g, Deci & Ryan, 1985; 2002; Cresswell & Eklund, 2005; Mallett & Hanrahan, 2004), the profiles of the SEs were better described by more controlled motivation (or obsessive passion, Vallerand et al., 2003), which Hardy et al., argued

was a driving force behind their practice and success (see also, Vallerand, Mageau, Elliot, Dumais, Demers & Rousseau, 2008).

In our own work, elite, youth soccer players are characterised by more self-determined motivations until 16 years of age, whereas after this age both longitudinal and cross-sectional comparisons show a decrease in autonomous and increase in controlled motivation (Hendry et al., 2014; Hendry et al., in preparation; see also, Ward et al., 2007). Since these age-related changes were not shown in age-matched, non-elite youth samples, the data suggest that the lure of a professional career/elite success changes the reasons for engagement. It may be that this change in motivation is necessary for SE success, although in a follow-up of the elite, youth athletes, motivation did not discriminate players who later did or did not receive a professional contract to play soccer at adult levels. An important point to take from this research is that these motivations are dynamic and potentially multifaceted. There are clear problems in determining precursors to success at a single time point.

Co-existing types of motivation

With respect to the profiles of SE athletes being defined in terms of several coexisting types of motivation, similar findings exist in other sports (e.g., Gillet et al., 2009; Gillet, Berjot, Vallerand, Amoura, & Rosnet, 2012). In one study (Gillet et al. 2012), the best junior national fencers were those classified as “high” for both intrinsic/autonomous and controlled motivation. In a second study in the same paper, extreme runners showed a similar “high” (i.e., mixed) motivation profile.

Some SE athletes did not find training enjoyable, but were motivated to engage in it because of its value. This finding is congruent with the motivational constraint outlined by

Ericsson et al. (1993) that “deliberate practice is not inherently enjoyable and that individuals are motivated to engage in it by its instrumental value in improving performance” (p. 371; see Ford et al., 2015). Moreover, SE athletes were identified as being simultaneously mastery- and outcome-oriented in their motivations (based on concepts developed by Duda, 1992), whereas Elites were outcome-orientated, but did not demonstrate the more extreme ‘need to succeed’, or a co-existing mastery-orientation. High levels of mastery motivation in expert performers have been described by Winner (1996) as a ‘rage to master’ consisting of an extreme desire to master a domain. The data showing high levels of ego or outcome motivation and an elevated ‘need to succeed’ in SEs show they also have a ‘rage to succeed’ that led to them overcoming setbacks, reducing relatedness needs, and narrowing their focus to selfishly maximise mastery and success in their sport.

Concluding remarks

The research by Hardy et al. demonstrates subtle, yet potentially important psychosocial discriminators of success at the highest levels of sport. In addition to expert performers being successfully discriminated based on the amount and quality of practice (cf., Ericsson et al., 1993), this research shows they can be delineated based on psychosocial variables. Such comparisons of SEs to merely Elite performers highlight characteristics related to gritty motivational profiles. These characteristics may be somewhat obsessive and driven by co-existing motivations (associated with both bad and good outcomes). Further research is required to examine the causes of these motivational characteristics (such as trauma) and how changeable these characteristics are across development and sporting success. What appears clear from the target article and current research is that these motivational characteristics

highlighted above appear necessary for sustained engagement in quality practice (despite setbacks) and for eventual success at the highest levels.

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