

Passion a key for success: Exploring motivational factors in football players

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ARTICLE INFO

Keywords:

Football
Young
Passion
Grit
Mindset
Achievement
Performance

ABSTRACT

The principal aim of the present study was to investigate whether passion, grit and mindset differ between distinct levels of football competence in two football teams - elite and junior teams. We compared the 30% highest scoring (HFC) and the 30% lowest scoring groups (LFC) of football competence using the trainer's rankings among two teams from west part of Norway. The results showed that the HFC groups scored significant higher on the passion scale than the LFC groups. That was the case for both teams. There was no difference between the groups for grit or mindset total scores. These results may indicate the important role of passion for achievement and for becoming a good football player.

1. Introduction

In order to succeed in any sport, an exceptional amount of training is requested. Thelen and Smith (1994) noted that the experience and training is essential to become skillfull in a particular area, and football is no exception. Previous scientific investigations have indicated that to become an expert (defined as the ability to constantly perform outstandingly in an activity), requires a minimum 10 years engagement in deliberate practice or 10,000 h of focused training (Ericsson & Charness, 1994; Ericsson et al., 2007; Sala & Gobet, 2017; Sigmundsson et al., 2017). Helsen et al. (1998, 2000) studies on deliberate practice in football and hockey indicated that the accumulated training of 10,000 h was the key distinguishing element between athlete level of expertise (local, national and international levels). Thus, it can be argued that to become an elite football player, one needs to devote an extensive amount of time of training to improve factors such as physiological status and tactical knowledges.

However, becoming an elite football player is more complex than just accumulating training time or spend a number of hours in deliberate practice. There are a number of very diverse factors that contribute to become a highly skilled football player. Some of them have been previously reported in the scientific literature and are, for example: technical ability, tactical knowledge, physical fitness, and perceptual-cognitive expertise (Baker et al., 2003; Engle, 2002; Larkin et al., 2016). The path to achievement in football can be extremely difficult as

it requires considerable effort and includes challenges, obstacles, mistakes, and setbacks. Therefore, it has been argued in the literature that personal characteristics are good predictors for becoming an elite football player. Ericsson et al. (1993) hypothesized that personality factors could have an indirect influence on becoming an expert as they may predispose individuals to engage in deliberate practice and sustain high level of effort over a long period. This notion has gained support through recent years. Duckworth et al. (2011) demonstrated that grit, which is a personality factor reflecting persistence and passion in accomplishing long-term goals, positively predicted deliberate practice which then positively predicted performance by a Spelling Bee contestant. Furthermore, Bonneville-Roussy et al. (2011) found that passion - which is defined having a strong enthusiasm or desire for something - positively predicted mastery goals which positively predicted deliberate practice. These findings suggest that personality traits may be associated with the acquisition of an high level of expertise. However, passion and grit in these studies were completely mediated and explained by individual differences in deliberate practice. So, although the personality factors may explain why individuals engage in greater deliberate practice than others, they seem not to explain differences in individual performance independently. Also worth mentioning regarding deliberate practice in a sporting context, factors like motivational climate, coaches, upbringing, teammates and other social agents could influence individuals motivational process to a great extent (Ommundsen & Vaglum, 1991). Taken a socio-cultural perspective, Shamshirian et al.

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Table 1
The eight Passion for achievement Scale Questions.

1. I have an area/theme/skill I am really passionate for
2. I would like to use much time to become good in that area/theme/skill
3. I think I could be an expert in one area/theme/skill
4. I have a passion enough to become very good in the area/theme/skill I like
5. I work hard enough to fulfill my goals
6. I have burning passion for some areas/theme/skills
7. I use lot of time on the projects I like
8. My passion is important for me

Table 2
Mean score for passion, grit and mindset in relation to trainers ranking of players in his teams. Two teams Elite and Junior.

Groups	HFC		LFC		p*
	HFC	Min-Max	Mean (SD)	Min-Max	
Passion					
Elite	4.75 (0.22)	4.25–5.0	4.42 (0.52)	3.5–5.00	.04
Junior	4.87 (0.20)	4.50–5.00	4.46 (0.35)	3.87–4.87	.004
Grit					
Elite	4.17 (0.22)	4.00–4.5	3.98 (0.46)	2.87–4.25	ns
Junior	3.98 (0.65)	2.875–4.625	3.64 (0.39)	3.12–4.25	ns
Mindset (growth)					
Elite	4.40 (0.45)	3.87–5.25	4.32 (1.09)	2.25–5.37	ns
Junior	4.69 (1.11)	3.25–6.0	4.70 (0.75)	3.5–5.62	ns

*Mann-Whitney U test (one – tailed).

(2021) found that Iranian top male wrestlers scored higher than controls on passion, grit and growth mindset. Also, comparing music and spelling performance with performance within a sport team setting is arguably inaccurate. In sport setting, one's need a range of skills and take various forms of training alone and within a cohesive interactive group of team members, which makes deliberate practice in team sports more difficult. In addition, although Ericsson and Charness (1994) noted that the motivational forces that contribute to sustained deliberate practice is unclear, other factors like starting at a young age (Ericsson et al., 1993), genetics predisposition (Coon & Carey, 1989), and intelligence (Frydman & Lynn, 1992) could all contribute to the likelihood of becoming an expert.

Sigmundsson et al. (2020a) model of "To become experts" integrates five factors that contribute to excellence in certain area/theme/skill. They argue that the factors which contributes to success are: Deliberate practice and good mentor (Ericsson et al., 2007; Ericsson & Pool, 2016), mindset (Dweck et al., 1995) – the set of beliefs in one's own attributes, grit (Duckworth et al., 2007) and passion (Vallerand, 2010; Jachimowicz et al., 2018; Sigmundsson & Haga, 2020, Sigmundsson et al., 2020a,b). They further suggest that passion may set the direction to achievement by capturing one's attention in the area/theme/skill they want to develop and use one's energy in while grit contributes to achievement by sustaining hard work over long period of time. Thus, if one individual shows a high degree of grit and passion, he/she may more likely devote effort and time to train and practice, as well as to sustain hardship and keep on going although adversities. In this respect, growth mindset is seen as an underlying factor for both grit and passion (Sigmundsson et al., 2021). Also, Sigmundsson et al. (2020c) argued that the best way to achieve self-determination (Deci & Ryan, 2010) is having a combination of grit, growth mindset and passion.

The main purpose of the article was to compare passion, grit and mindset in a group with 30% highest football competence (HFC) and a group with the 30% lowest football competence (LFC), in two teams Elite and Junior team.

2. Method

Data from forty-six male athletes was included in the study. The participants belonged to two distinct samples: Sogndal Football elite

(Elite), mean age 22.32 (SD = 4.86, N = 25) and Sogn og Fjordane County team (Junior) mean age 14.85 (SD = 0.35, N = 21). Recruitment was conducted among professional and semi-professional football players in the county of Vestland (Sogn og Fjordane) in September/October 2019. The elite team played qualification for Norwegian premier league (eliteserien). The county team Junior 15 are at top national standard. The participants responded to a questionnaire investigating the personality factors of passion, grit, and mindset. In addition, trainers (trainerteam) in each group ranked the players football competence according to their own knowledge.

From this sample two groups were selected from each of the teams post-hoc, according to the trainer's ranking competence. The athletes that were evaluated as the highest in competence (HFC group) and other rated as the lowest (LFC group), relatively to their own group. Elite team: HFC group consisted of 8 participants with the 30% highest score from the trainers ranking. The LFC consisted of 8 participants with the 30% lowest score from trainers ranking. Junior team: HFC group consisted of 7 participants with the 30% highest score from the trainers ranking. The LFC consisted of 7 participants with the 30% lowest score from trainers ranking.

3. Measurements

3.1. Passion

Participants completed the Passion scale (Sigmundsson et al., 2020a) as a measure of passion for achievement. Participants indicated their responses to eight items on a 1 (not like me at all) to 5 (very much like me) scale. For the overview of the 8-items see Table 1. The maximum score on this scale is 5 (extremely passionate) and the lowest is 1 (not at all passionate). The Passion for achievement scale has demonstrated good internal consistency (Cronbach's alpha value .86) and high levels of test-retest reliability (Sigmundsson et al., 2020a). Intra class correlation coefficient (ICC) between test and retest total scores was 0.92 (N = 21, mean age 23.67, SD = 2.41). Construct validity: Pearson correlation coefficient between total score Passion and Grit S Scale were .39 for adults, mean age 21.23 (SD = 3.45) (N = 107) (Sigmundsson et al., 2020a).

3.2. Grit

Participants completed a Norwegian version of the Grit S Scale (Duckworth & Quinn, 2009; Sending, 2014) as a measure of level of grit. The scale has two dimensions; Consistency of Interest (COI) (e.g., 'I often set a goal but later choose to pursue a different one' (reverse-scored) and Perseverance of Effort (POE) (e.g., 'I finish whatever I begin'). All eight items was measured on a 5-point Likert scale wherein 1 would mean 'not like me at all' and 5 would mean 'very much like me' Likert (1932). The maximum score on this scale is 5 (extremely gritty), and the lowest score is 1 (not at all gritty). Grit-S has shown good internal consistency in several studies, $\alpha = 0.82$ and $\alpha = 0.84$ (Duckworth & Quinn, 2009, p.170), and provided evidence for the predictive validity, consensual validity, and test-retest stability of the Grit-S.

3.3. Mindset

Participants completed a Norwegian version of Dweck (1999) Theories of intelligence Scale (TIS) as a measure of mindset (Bråten & Strømsø, 2004). The self-form for adults of this measure was used to ensure that the students focused on their ideas about their own intelligence and not their ideas about people in general. In completing the scale participants indicated their agreement or disagreement using a 6-point scale (1 = strongly agree to 6 = strongly disagree) on a variety of items related to the malleability and stability of intelligence and talent. The scale consists of two subscales, and the items were presented so that agreement indicated either support for an entity theory, i.e., fixed

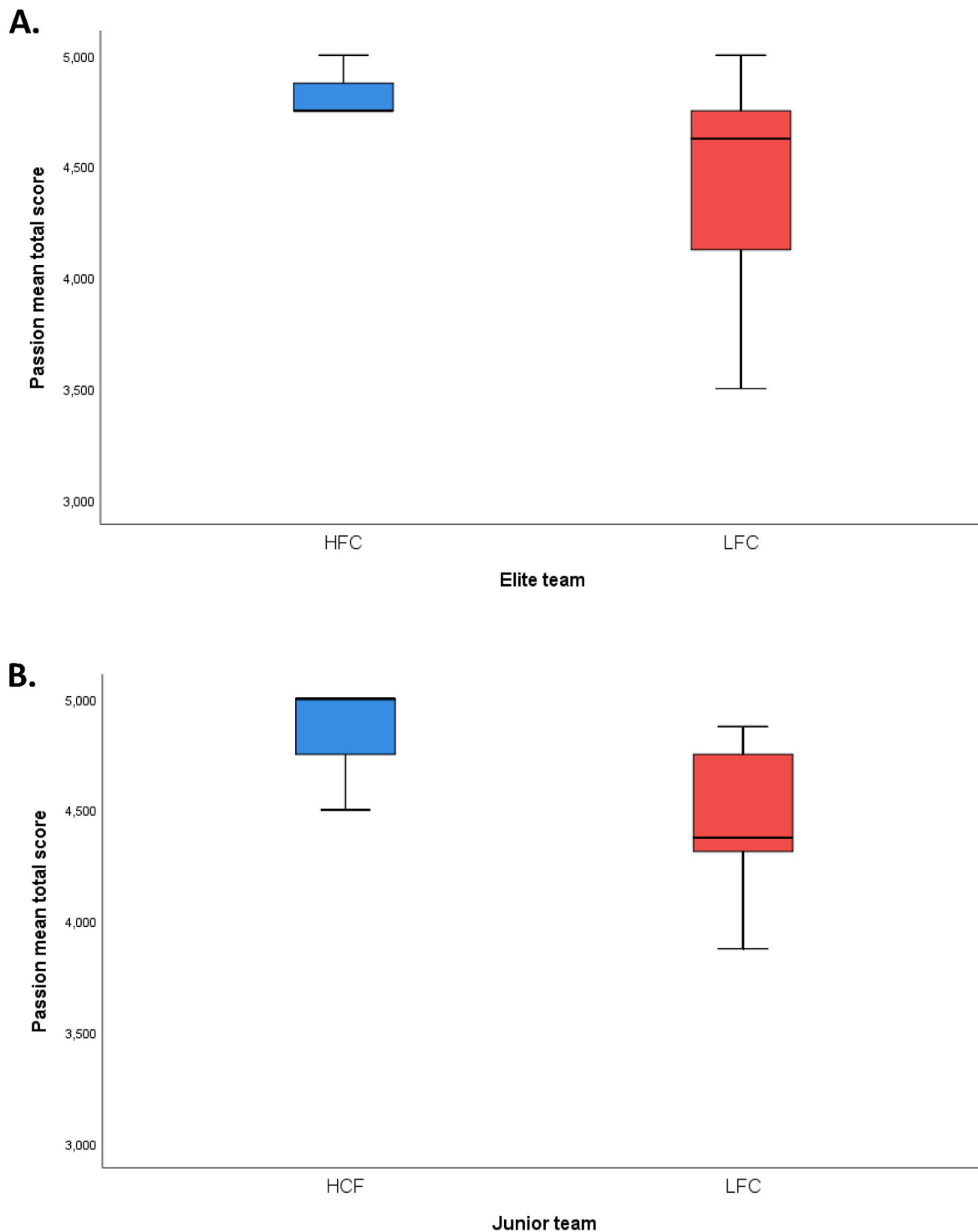


Fig. 1. Box plots depicting the passion score for HFC group and LFC group (A) Elite team (B) Junior team. Horizontal lines within boxes represent the group medians. Box edges define the first and third quartiles, whiskers define the 10th and 90th percentile.

mindset (e.g., You have a certain amount of intelligence, and you can't really do much to change it) or an incremental theory, i.e. a growth mindset (e.g., No matter who you are, you can significantly change your intelligence level). Before summing all items, the incremental scale items were reversed. Therefore, the higher average scores indicate a greater amount of incremental beliefs about intelligence i.e. growth mindset. The reliability data for the scale comes from Dweck et al. (1995) and is based on the 8-item scale. The scale showed good internal consistency ($\alpha = 0.85$) and test-retest reliability at 2-weeks ($r = 0.80$).

Additionally, the scale showed a good construct validity with scores predicting meaningful relationship with several variables (Dweck et al., 1995). The Norwegian version of TIS has been found to be reliable as well, with Cronbach's α of .86 for entity items and 0.88 for the incremental items (Bråten & Strømsø, 2004).

3.4. Data reduction and analysis

For the statistical analysis, SPSS Version 25 for Windows was used

(SPSS Inc., Chicago, IL, USA). To analyse the differences between the factors related to groups Mann-Whitney *U* test was used.

4. Results

Mann-Whitney *U* test was used to investigate if there was a difference between HFC and LFC group on passion, grit and growth mindset.

Elite group: Passion total score for the HFC ($M = 4.75$, $SD = 0.22$) was significantly higher than for the LFC ($M = 4.42$, $SD = 0.52$) ($p = .04$). There was not significant difference between the groups in relation to grit ($M = 4.17$, $SD = 0.22$ vs. $M = 3.98$, $SD = 0.46$) or mindset ($M = 4.40$, $SD = 0.45$ vs. $M = 4.32$, $SD = 1.09$).

Junior group: Passion total score for the HFC ($M = 4.87$, $SD = 0.20$) was significantly higher than for the LFC ($M = 4.46$, $SD = 0.35$) ($p = .004$). There was not significant difference between the groups in relation to grit ($M = 3.98$, $SD = 0.65$ vs. $M = 3.64$, $SD = 0.39$) or mindset ($M = 4.69$, $SD = 1.11$ vs. $M = 4.70$, $SD = 0.75$) (see Table 2 and Fig. 1 a, b).

5. Discussion

The main goal of the study was to focus on whether passion, grit and mindset differs between distinct levels of football competence in two football teams, elite and junior teams. We compared the 30% highest scoring (HFC) and the 30% lowest scoring groups (LFC) of football competence using the trainer's rankings among two teams from west part of Norway.

5.1. Passion

The results show a significant difference between HFC ($M = 4.75$) and LFC ($M = 4.42$) group on their passion scores in the elite team. In the junior team the findings correspond to the elite team. Results show that there is a significant difference between HFC ($M = 4.87$) - and LFC ($M = 4.46$) group on their passion scores. This could indicate that passion is what differentiate the players within elite teams in terms of competence and performance. Furthermore, passionate athletes could be affected by better well-being, which could motivate the HFC group to perform better in stressful situations (Vallerand, 2008; Vallerand et al., 2007; Verner-Filion et al., 2017). Additionally the HFC group could be engaging in more deliberate practice compared to those in the LFC, as a result of being more passionate (Bonneville-Roussy et al., 2011; Verner-Filion et al., 2017). Furthermore, passion for achievement have been related to higher harmonious passion (Loftesnes et al., 2021). Hence, the top ranked players could experience a flexible relationship with football which have been related to more positive affect (Vallerand et al., 2003), mastery-goals (Vallerand et al., 2008), and optimal functioning in sports (St-Cyr et al., 2021). Consequently having passion in elite groups could marginally differentiate those who show higher competence in performance contexts.

5.2. Grit

In the elite team there was a non-significant difference between HFC ($M = 4.17$), and LFC ($M = 3.98$) group in grit. The junior team showed a similar difference, HFC ($M = 3.98$) and LFC ($M = 3.64$), but also for this group, the difference observed was statistically non-significant. Potentially showing that grit is not directly important in differentiating the best from the good within high-performance contexts. Furthermore grit is associated both with engaging in more deliberate practice and in better performance in football players (Duckworth et al., 2011; Larkin, O'Connor, & Williams, 2015). Therefore, grit could potentially be beneficial in reaching high-performance contexts.

5.3. Mindset

Mindset in elite team showed a non-significant difference between

HFC ($M = 4.40$), and LFC ($M = 4.32$). Furthermore in the junior team there was a non-significant difference between the HFC ($M = 4.69$), and LFC ($M = 4.70$) on mindset. Mindset have shown to be important in shaping individuals beliefs about skills, but also academic performance in school (Blackwell et al., 2007; Yeager et al., 2019). Even though mindset could be influential in performance settings, our results show that mindset does not differ between the HFC and LFC groups.

5.4. Limitations and future directions

The present study faces a number of limitations. The groups in which analyses were based, were established only on the subjective assessment of football competences, and not objective measures. Obtaining objective measures for sport competences may be challenging in the context of football, however, future studies may attempt to consider using different objective and quantifiable performance metrics.

A further limitation of the present study is represented by the small number of participants of which data was analyzed.

The groups HFC and LFC were established post-hoc, using a cut-off level subjectively established by the authors of the present study. This might be inflate type I error (false positive). For this reason the results of the present study should be considered as explorative, and future studies should attempt to replicate the present findings with a larger sample.

6. Conclusion

These results may indicate the important role of passion for achievement and for becoming a good football player. Our findings indicate clear difference between HFC and LFC groups for both Elite and Junior team in passion, supporting anecdotal evidence. The results of our study suggest that passion may be a key factor for athletic success.

Author statement

Hermundur Sigmundsson: idea, data collection, analyses, writing Benjamin H. Dybandal: data collection, analyses, writing Jan Morten Loftesnes: idea, data collection, analyses, writing Bergsveinn Ólafsson: writing Simone Grassini: analyses, writing.

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