# Personality and Success in Sports

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## ABSTRACT

Sports has transformed from a recreational activity to a highly competitive activity. Collaborations of international organizations, major events such as the Olympics, and the growth of social media have created a global market focused on athletes. Sports organizations are always looking for key players who have the potential to become the next superstar of the sports world. However, predicting success in sports is a difficult task. Sports organisations try to get the best out of their athletes by offering the best facilities, profitable packages and comprehensive training. However, despite all the efforts of both organisations and athletes, only a few can reach the elite level. An athlete's core characteristics influence his/her performance in the sports environment as well as his/her ability to transition to the professional level.

This research article aims to explore the impact of personality traits on athletes' performance in competitions. Additionally, the research article aims to uncover the role of personality in predicting the long-term success of athletes.

## I. INTRODUCTION

Sports is no longer a leisure activity, but, has become a fully organised and commercial global industry. Sports activities are not only undertaken at an individual, but, also at organisational, national, and international levels. The globalisation of sports has led to the formation of international sport markets, where sports teams and organisations collaborate with corporate sponsors creating opportunities not only for the athletes but also for the businesses and organisations.

The centre of attraction of the sporting industry are the athletes, particularly, the ones that make it to the top. Sports organizations are constantly on the search for high performers, such as the right coach, the best manager, the top CEO or a new key athlete who can bring them success and a competitive edge in the sports markets (Khan et al., 2016). In a bid to find their next superstar, sports organisations make every effort possible to provide the optimum environment and facilities for the development of their athletes. However, despite the best efforts of both the organisation and the athletes themselves, only a few manage to make it to the top.

Who will be the next Roger Federer or Lionel Messi is a billion-dollar question. However, predicting success in sports can be a daunting task as each athlete has a specific physical, psychological and sociological make-up, depending upon the type of sport, the age factor, the training received the genetic combination and the innate talent (Khan et al., 2016).

This article aims to explore the role of personality traits in athletic performance by studying the existing literature. The article also intends to find out the influence of personality traits in increasing the chances of long-term success in the field of sports. From the 1960s onwards extensive research was done on the role of personality in sport. Interestingly, just as contemporary theories of personality began to emerge during the turn of the 1990s, transforming the field and strengthening our understanding of personality trait structure, research inquiry in competitive sport came to a rather abrupt end (Allen, Greenlees, & Jones, 2011). The decline is explained by a shift in interest toward more specific aspects such as optimism, hardiness, trait anxiety, and mental toughness. These topics have been investigated extensively in recent years. Although an athlete's tendency to experience anxiety (or show resilience, or be optimistic) across sport competitions may provide some insight into their personality, such domain-specific measures provide little information about the overall contribution of cardinal traits to athletic performance and success (Allen, Greenlees, & Jones, 2011).

THE BIG 5 MODEL OF PERSONALITY

Personality can be defined as 'psychological qualities that contribute to an individual's enduring and distinctive patterns of feeling, thinking and behaving'. Personality theory has a long history. Detailed accounts of personality structure can be found in the works of many philosophers and religious scriptures.

In the modern era, there are two main approaches to studying personality: type-based assessments which categorise an individual as one type or another and trait-based assessments which position an individual on a series of bipolar linear continua (Allen, Greenlees, & Jones, 2011). Although type-based assessments are still used in clinical settings, they have attracted plenty of criticism as most people score in the middle of the scale (McCrae & Costa, 1989). Trait-based assessments, therefore, offer a much more accurate assessment of personality. An example of a trait-based assessment is the 16PF (Personality Factors) model. It measures 16 primary factors like warmth, reasoning, emotional stability, and dominance. After many decades, researchers have finally come to a consensus on a general model of personality traits: The Big 5 Model.

The Big 5 Model or the Five-Factor Model describes the most basic and general dimensions upon which people are typically perceived to differ (John, Naumann, & Soto, 2008). These dimensions are Openness to Experience (assesses the tendency to seek new experiences), Conscientiousness (organization, goal-directed behaviour), Extraversion (assesses the quantity and intensity of interpersonal interactions), Agreeableness (assesses individuals concern for cooperation and peace) and Neuroticism (assesses proneness to experience emotional instability and anxiety). Each of these includes more specific traits called facets. For Example, Neuroticism includes the facets of impulsiveness, hostility, anxiety, depression, vulnerability etc. The Big 5 Model has become the most widely accepted model of personality trait structure.

The 5 personality dimensions have consistently been associated with important personal, interpersonal, and social behaviours such as leadership (Shahzad et al., 2020), motivation (Judge & Ilies, 2002), job performance (Hurtz and Donovan, 2000), burnout (Alcaron et al., 2009), academic performance (Poropat, 2009), relationship satisfaction (Malouff et al., 2010; O'Meara & South, 2019), and coping strategies (Connor-Smith & Flachsbart, 2007; Carver & Connor-Smith, 2010).

PERSONALITY AND SPORTING SUCCESS

Organized sport is another arena where personality traits can exercise crucial influence on performance outcomes. Success in sport settings like in work or academics is determined by the athlete's capacity (ex. Ability to cope with stress) and willingness to perform (ex. Effort, persistence). Thus, it can be tempting to assume that the associations between personality and sport performance could be similar to those found in academic or organizational contexts. However, several critical differences between these domains (e.g., competitive sport is an optional endeavour whereas academia and employment are compulsory) may prevent findings from transferring directly across contexts (Allen, Greenlees, & Jones, 2011).

Predicting single-game success using personality traits has proven to be a struggle as a single moment of bad luck, a poor decision by the officials, or any unexpected event can drastically alter the outcome of the competition. To better understand the processes connecting personality traits to athletic success, researchers have recently begun to explore associations between personality traits and discrete athletic behaviours (Allen and Laborde, 2014). For instance, conscientiousness has been positively correlated with the athlete's quality of preparation in the lead-up to the competition (Woodman et al., 2010). Sport participants with high levels of extraversion or low levels of neuroticism respond to unsuccessful outcomes with more positive cognitive and emotional symptoms (Allen, Greenlees, & Jones, 2014).

Other research has explored the contribution of personality to psychological states such as aggressiveness (Trninic et al., 2008) and coping strategies (Kaiseler et al., 2012). These studies have shown that athletes with low levels of agreeableness, emotional stability, and/or extraversion are more likely to exhibit aggressive behaviours. Athletes with high levels of neuroticism and/or low levels of openness to experience are likely to use avoidance-based coping strategies whereas those with high levels of conscientiousness, emotional stability, and/or

extraversion are more likely to use problem-focused coping strategies.

Certain moderating effects too have been identified in athletic samples. Indeed, the degree to which sports performance is influenced by the presence of an audience and the degree to which performance is influenced by emotions is moderated by the trait of extraversion (Allen et al., 2013). Extraverted athletes perform better than introverted athletes when there is an audience present but no difference is found in the case of an absent audience. Anger seems to positively impact performance only in the case of extraverted athletes

The relationship between personality traits and athletic success has been explored through a variety of research designs. One such design is to compare the personality scores of athletes competing at a lower level with those competing at higher levels. While this type of research design cannot control the effect of other variables in contributing to performance levels, they do provide important information on the association between personality traits and long-term or career success in sports (Allen et al., 2013).

This research design was used by Paweł Piepiora and Zbigniew Piepiora (2021). In their study, they attempted to define the personality profile of sports champions using the Big 5 Model by comparing the personality scores of champions and athletes competing at a lower level. The NEO-FFI Personality Questionnaire was used to examine the athlete's personality in terms of the Big 5 Model. The sample of champions consisted of 118 men (9% of the respondents), and the sample of other athletes was 1142 men (91% of the respondents). All the athletes were Polish and between the ages of 20 and 29.

The results of the study by Piepiora (2021) showed statistically significant results in all the traits of the Big 5 Model. Strong differences were found in the case of neuroticism. Moderately strong differences were found in the case of conscientiousness and extraversion. Weak differences were found in the case of agreeableness and openness to experience. Sports champions were characterised by lower neuroticism and higher conscientiousness, agreeableness, and openness to experience.

**Table 1.** Analysis of differences between champions and other athletes in the intensity of personality traits.

| Variables | Other Sportsmen (n = 1142) | | Champions (n = 118) | | t | p | Cohen's d |
|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | | | |
| Neuroticism * | 15.30 | 5.58 | 5.58 | 2.56 | 33.79 | <0.001 | 1.81 |
| Extraversion | 30.98 | 5.75 | 34.13 | 5.80 | −5.65 | <0.001 | 0.55 |
| Openness to experience | 25.54 | 5.87 | 28.28 | 5.79 | −4.83 | <0.001 | 0.47 |
| Agreeableness | 27.91 | 5.99 | 30.20 | 6.78 | −3.91 | 0.001 | 0.38 |
| Conscientiousness | 34.06 | 6.33 | 38.56 | 5.82 | −7.40 | <0.001 | 0.72 |

* correction for heterogeneity of variance; *t*—t statistic value; *p*—significance level; and Cohen's *d*—a measure of the size of the effect.
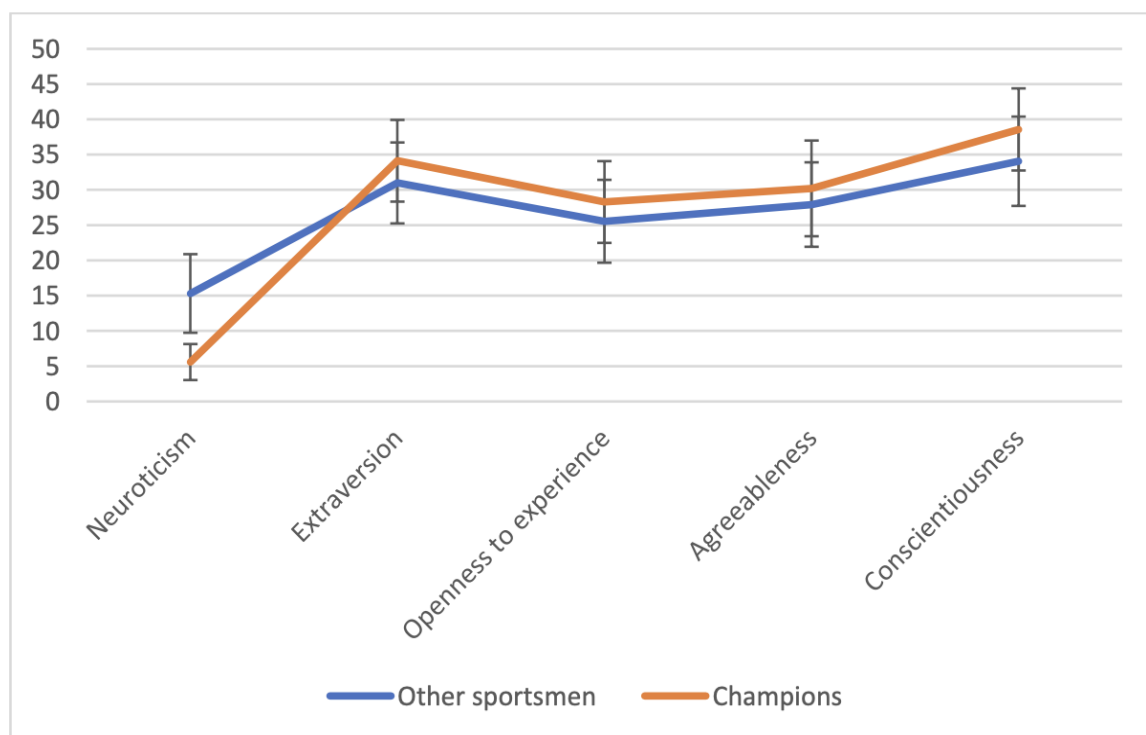
Source- (Piepiora & Piepiora, 2021)

**Figure 1.** Line graph of personality profiles; breakdown into champions and other athletes.

Source- (Piepiora & Piepiora, 2021)

Neuroticism in particular was an important trait when differentiating the athletes based on their achievements; the lower the level of neuroticism, the greater the probability of being classified as a sports champion. Neuroticism reflects emotionality in terms of experiencing negative emotions, i.e., emotional adaptation in relation to emotional imbalance (Piepora and Piepora, 2021). Sports champions were characterized by very low levels of neuroticism. Thus, it can be assumed that they were emotionally stable, calm, relaxed, and able to deal with stressful situations without experiencing tension or anxiety. Highly neurotic people are prone to irrational thoughts and impulsive behaviour. They also lack the ability to effectively cope with stress. This is due to the general excitement of the autonomic nervous system. Emotionally unstable athletes can experience strong pre-game emotions and can become ineffective when faced with a high-stakes competition. It can be expected that in difficult situations, their efficiency of perception, speed and accuracy of sensorimotor responses, the efficiency of thinking processes, and the quality and effectiveness of action will deteriorate significantly

(Piepora and Piepora, 2021). Since sports champions have very low levels of neuroticism they can be differentiated from other sportspersons by a low level of anxiety, aggressiveness and hostility, impulsiveness, depressiveness and high concentration and ability to cope with failure. Lastly, sports champions can also be distinguished by low levels of self-criticism that determine self-confidence and self-efficacy.

Similar results have been reported in other studies (Fuller, 2011; Piepora, 2020; Piepora, 2021). Based on these studies, the general personality profile of an elite athlete in terms of the Big 5 Model is low neuroticism, high extraversion and conscientiousness, average openness to experience and agreeableness. Whether the personality traits determining success in sports were formed over many years of a sporting career or were already present at the beginning of sports practice remains an open question as participation in sports activities can also shape personality traits (Piepora; 2019). Being exposed to training and living a disciplined life moderates the personality of athletes. They become convinced that they are

the authors of their own lives. Therefore, the successes achieved can build strong personalities of athletes.

Another approach that has been used to study the influence of personality traits on long-term success is to compare athletes who progress to the professional level with their peers who could not do so. EV Aidman (2007) conducted a longitudinal study wherein he attempted to assess the long-term and moderating effects of personality on the long-term success of elite Australian junior football players. The sample included a highly successful junior squad of 32 Australian Rules football players aged 16-19. The 16 Personality Factors Inventory. The performance of the players in the preceding season along with their potential was rated by the coach on a 5-point Likert scale from 1 (poor) through 5 (excellent). Seven years later, a follow-up assessment was conducted on the same group of players to evaluate their progress. The most important question was whether the player had made it to the senior Australian Football League.

The elite junior players assessed at the start of the study were more sociable (A+), group-oriented (Q2-), confident (O-), enthusiastic (F+), socially bold (H+), and emotionally stable (C+) relative to their respective age norms. They were also less driven (Q4-) and trusting (L-). Out of the sample of 32 players, 13 made it to the senior AFL, whereas others ended up playing in minor leagues or completely left the sport. Initially, no significant differences were found between the groups. But, when the player's physical potential (rated by the coach at junior level) was controlled, the differences became highly significant on several individual factors. The players who made a successful transition to seniors had reported less tension on factor Q4, stronger group orientation on factor Q2, and preference for less radical / more traditional views on factor Q1 and tended to report greater conscientiousness on factor G, than their team-mates who did not make it to the senior AFL competition (Aidman, 2007).

Table 2.      Personality differences between junior football players who made a transition to seniors and those who did not

|  | did not make it to senior AFL | | Successful transition to senior AFL | | MANCOVA differences |
|---|---|---|---|---|---|
|  | Mean | SD | Mean | SD | $p$ |
| G: conscientiousness | 11.74 | 2.86 | 13.38 | 3.20 | .08 |
| Q1: radicalism | 10.16 | 3.72 | 8.00 | 3.58 | .018 |
| Q2: group orientation | 8.84 | 2.03 | 6.92 | 2.29 | .003 |
| Q4: drive / tension | 12.53 | 5.65 | 9.23 | 2.71 | .048 |

Source- (EV Aidman, 2007)

The available data shows that personality traits play a very significant role in both athletic performance and long-term or career success in the field of sports. Also, because personality can moderate important relationships in sports, it is important to understand how personality differs across discrete athletic populations to allow sports psychology practitioners to tailor their interventions according to the client and the environment in which they are operating.

Another common objective in sport-based personality research is to identify whether personality test scores can discriminate between athletes participating in different sports (Allen et al., 2013). Important differences in personality traits have been reported between athletes participating in different *types* of sports. Studies have consistently demonstrated that team sport athletes have different personality characteristics

from individual sport athletes (Allen et al., 2013). Particularly, team sport athletes show greater extraversion and lower conscientiousness than individual sports athletes (Allen et al 2011; Nia & Besharat, 2010).

A large number of studies have also reported personality differences between men and women. The general conclusion of these studies is that women, compared to men, are more neurotic, agreeable, conscientious, and extraverted. A study by Allen et al. (2011) reported that female athletes were more neurotic, agreeable, and conscientious, findings that mirror those observed in non-athletic samples.

## II.     FUTURE RESEARCH

Laborde et al. (2020) conducted a mapping review of all trait-based assessments published in sport and exercise journals in an attempt to provide potential areas of future research that can enhance our understanding of the impact of personality in sport.

*Narrow trait facets:* Research in sport and exercise psychology has rarely adopted facet-level measures of global personality, choosing to adopt brief measures of overarching trait dimensions (e.g. neuroticism, extraversion) or just one or two trait facets (e.g. trait anxiety, aggressiveness). With many facets such as those related to straightforwardness or altruism underrepresented, using facet-level measures of global personality might be a useful method of identifying the discrete components of personality that are most important for behaviour in sport

*Developmental Perspective*: Much of the research on personality in sport has been cross-sectional. Little is known about the traits that contribute to participation, continuation and eventual success in sport. Longitudinal studies can better identify the personality traits that lead to success in sports. Also, longitudinal designs can help identify the processes that lead to stability and change in personality.

*Personality as a moderator*: The moderating role of personality can be seen in the available studies. Allen et al. (2013) in a review concluded that athletes who score high on extraversion perform better in the presence of an audience. Social loafing (low effort) tends to occur in sporting activities among people who score high on narcissism. Future research can explore how athletes with

certain personality traits respond to environmental changes.

*Validation efforts*: Validation efforts are also required for personality assessments commonly used in athletic samples. The recently revised NEO-PI-3 and NEO-FFI-3 scales, derived from the NEO-PI-R and the NEO-FFI have shown evidence of construct and concurrent validity in non-athletic samples as have the big five inventory, the international personality item pool and the 10-item personality inventory (Allen et al., 2013). These measures can be used in both self-report and other-report formats and there is an urgent need to assess the validity and reliability of these instruments in adult and youth sport populations.

*Intra-Individual Variability*: Researchers have also considered the degree to which individuals vary over time in the expression of personality traits. Similar findings have also been reported in sport settings. For example, research in sport teams has reported meaningful cross-time variation in mental toughness, with values similar to those identified for other trait assessments. Future research can look to explore whether intra-individual variability in traits can relate to participation and success in sport.

## III.     CONCLUSION

Personality research in sport has started to re-emerge as an important academic pursuit since the 2010s. Certain conclusions about the importance of personality traits for performance and success in sport have been reported. Firstly, there is evidence from longitudinal studies and population comparison to support that short-term behaviours and long-term success in sports can be predicted by personality traits. Secondly, personality traits can differentiate between different populations of athletes. In particular, team sport athletes show higher levels of extraversion and lower levels of conscientiousness than individual sport athletes. The size of these effects will become clearer once a substantial body of research has been accumulated. Also, a lot of the studies in this area have been published before the development of the Big 5 model. For example, research in sport teams has reported meaningful cross-time variation in mental toughness, with values similar to those identified for other trait assessments (Allen et al., 2013). Future researchers can adopt this model for effective studies on personality in sport. Longitudinal studies can further shed light on the

impact of personality traits in predicting long-term success in sport.

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