Dark Triad and Sport Performance among Pakistani Players Mediating Role of Antisocial Behavior: A Conceptual Study

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ABSTRACT

The study will measure the association between dark triad and sport performance among Pakistani players with mediating role of antisocial behavior. The total sample (N= 495) of Pakistani players will be recruited from an affiliation with a university institute, or club, and national players will be selected in this research. The age range will be 18-35 years of participants. Three instruments will be used to collect the data, Short Dark Triad, and Sport Performance Scale. While in this study Antisocial Behavior Scale will be developed and validated. This study will be conducted in two phases. The phase-1 comprised the exploratory sequential mixed methods research design (tool development) used to explore the domains of antisocial behavior, develop, and validate the antisocial behavior scale. While, phase-2, is quantitative and cross-sectional in nature. The methods and procedures adopted for both phases are given separately. Considering the literature review and objectives of the study, three proposed hypotheses will be tested after the data collection. H1: The indigenous antisocial behavior scale will be valid and reliable among Pakistani players. H2: There will be an association of dark triad personality (Machiavellianism, Narcissism, and Psychopathy) and antisocial behavior with the sports performance of Pakistani players. H3: There will be an influence of dark triad personality (Machiavellianism, Narcissism, and Psychopathy) on the sport performance of Pakistani players with mediating role of antisocial behavior. H4: In the first phase of the study, data will be analyzed through Content Analysis, and in phase 2, the data will be analyzed through SPSS and AMOS to test the psychometrics properties of newly developed Antisocial Behavior Scale, the association between variables and mediation analysis using Structural Equation Modeling. Regarding implications of the study, this study will be helpful for sports psychologists, players, coaches, and sports policymakers. Dark Triad are important personality traits, which can positively and negatively predict sports performance among players. This research will gain the intention of sports psychologists, coaches, and sports policy makers to develop policies regarding personality traits such as dark triad and antisocial behavior. This study recommends to coaches and team selectors during the selection of players, the personality traits of players should also be measured and players who have negative personality traits will be considered for further psychotherapeutic interventions to overcome their negative personality traits, after this so they can enhance their sports performance.

Keywords: Dark Triad, Sport Performance, Antisocial Behavior, Pakistani Players

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INTRODUCTION

The success of athletes is significantly influenced by personality traits (Vaughan & Madigan, 2021). Personality both directly and indirectly influences athletic performance (Allen et al., 2013). According to literature, personality may play a significant role in the development of great athletes (Hardy et al., 2017). The Dark Triad is a particularly pertinent set of personality traits in this regard (Paulhus & Williams, 2002).

Narcissism, Machiavellianism, and Psychopathy are three emphasized personality traits that are distinct and associated with one another, collectively known as the "Dark Triad" (DT). According to Maples et al. (2014), narcissism expresses grandeur, sentiments of superiority, and justification. Manipulation, self-serving, and dishonesty are characteristics of Machiavellianism. While impulsivity, lack of empathy, and anxiety are characteristics of psychopathy (Paulhus & Williams, 2002). Together, the three personality qualities depict a negative, adversarial, malign, and egotistical character, which explains why they are frequently positively connected with aggressiveness, morally dubious choices, and challenges preserving healthy interpersonal connections (Furnham et al., 2014; Muris et al., 2017).

Particularly when these behaviors conflict with their own values and social norms, people have a propensity to rationalize or justify their antisocial behavior. According to earlier research, individuals who exhibit antagonistic personality traits including Machiavellianism, Narcissism, and Psychopathy report more antisocial behaviors than their peers (Klimstra et al., 2014). These personality traits were also linked to worse moral thinking and more use of justification for antisocial behaviors, notably in the form of moral disengagement, although less is known about the underlying reasons causing these correlations (Tuvblad, 2014).

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The initiative to achieve personal goals and high performance at the expense of the goals and emotions of others may be a benefit of the Dark Triad personality traits for athletes, particularly for performance athletes (Carter et al., 2015). The present study intends to add to the body of knowledge by examining the impact of dark personality traits with antisocial behaviors as a mediator on player's sporting performance. The Dark Triad hasn't been thoroughly investigated in relation to other features of sportsmen, though.

Though professional athletes need to be fully committed to their goals, this commitment is planned in great detail and under strict control (it is one of the greatest developments in sports sciences); amateur athletes have stopped doing this. It should be noted that these personality traits are less researched among athletes despite the rise in popularity of the Dark Triad study. Narcissism, Machiavellianism, and non-clinical psychopathy are the three traits that make up the "Dark Triad" (Paulhus & Williams, 2002). Despite being viewed as maladaptive, certain personality qualities can occasionally give their bearer an edge over others (Furnham et al., 2013).

The Dark Triad and the athlete's attitude towards doping have been linked by empirical studies. For instance, athletes who perform better on the Dark Triad are more likely to use performance-enhancing drugs (Nicholls et al., 2017). A considerable difference between players and non-athletes was found in a study of the Dark Triad conducted on respondents with and without professional sports experience. As a result, compared to non-athletes, athletes obtained higher scores for each of the three signs in the Dark Triad. In contrast to athletes who participate in team sports, those who play solo sports have greater rates of narcissism, Machiavellianism, and psychopathy (Vaughan et al., 2019).

According to prior research, performance domains (such as athletics) make the best study environments for narcissism because they allow for self-aggrandizement and the confirmation of lofty ideals, which are fundamental beliefs for persons with high levels of narcissism (Roberts et al., 2018). Furthermore, athletes with high Narcissism levels perform better under high perceived pressure but not under mild pressure. It's likely that people who have high levels of narcissism work more to promote their own self-belief and dominate others. Additionally, the association between narcissism and

performance is either nonexistent or negatively correlated when self-enhancement is lacking (Roberts et al., 2019).

An agency-communion model of narcissism that distinguishes between those who satisfy grandiose, self-esteem, entitlement, and power beliefs in agentic and communal domains is suggested by research conducted outside of sports (Gebauer et al., 2012). Therefore, those with high levels of narcissism might perform better to achieve their goals in many circumstances. However, research conducted outside of sports also reveals that narcissists do not do any better than narcissists on average (Judge et al., 2006). This suggests that narcissism may not be a powerful predictor of performance on its own, but may instead energize specific behaviors (such as competitiveness) that only surface and support performance in competitive settings (Roberts et al., 2018; 2019).

However, additional research by Pera-Guardiola et al. (2016) has demonstrated a beneficial link between psychopathy and task performance. Brinke et al. (2015) also found that increased psychopathy boosted performance in competitive negotiations but impaired performance in cooperative negotiations when seen in respect to competitiveness. The link between psychopathy and performance seems to be context-dependent, much like agentic narcissism. Situations that call for less socialization or more agency, for instance, seem to be tailor-made for persons with greater levels of psychopathy. In other words, people with higher scores on agentic narcissism place a higher value on agency (getting ahead), much as people with higher scores on psychopathy who similarly value getting ahead of others (Rauthmann & Kolar, 2013). This is consistent with the power drive, according to which traits like aggression, risk-taking, fearlessness, and other core characteristics of psychopathy tend to assist performance (Blickle & Schütte, 2017).

According to earlier research, there is a situation-specific relationship between Machiavellianism and performance; for example, it may be favorable in the short term but unfavorable in the long run (Furnham et al., 2014). There is little doubt that the Dark Triad and performance have a complicated relationship. According to research, the observed context has a crucial role in determining whether performance impacts are favorable or bad. This claim is supported by the notion of trait activation (Tett et al., 2013). This theory outlines an interactionist viewpoint in which a trait is activated in response to situational cues that are relevant to the trait (situation relevance includes competition), trait-specific behaviors are then engaged. This could involve a greater drive to succeed in the context of the Dark Triad in order to satiate fundamental desires like social dominance (Jones & Figueredo, 2013). Geukes et al. (2012) looked at how this theoretical approach was used in sports and discovered that athletes with high levels of narcissism and self-consciousness perform better under high pressure, whereas these traits are irrelevant under moderate pressure.

While antisocial behavior is a significant factor among athletes. Antisocial behavior refers to actions that injure another person or result in a situation that is detrimental to the individual. Antisocial behavior can include, for example, physically threatening or frightening a rival (Sage et al., 2006). Due to its negative effects on others, high cost, and prevalence in a variety of social contexts, including employment and sport, antisocial behavior is a significant social problem. As an illustration, antisocial personality in childhood and adolescence is linked to criminality, substance misuse, and poor social and occupational functioning, and it frequently lasts into adulthood (Moffitt et al., 2002). According to at least three definitions, antisocial behavior includes a wide variety of socially unacceptable behaviors: Violation of social or legal norms, aggressive or violent behavior, and clinical psychiatric diagnoses such as conduct disorder, oppositional deviant disorder, antisocial personality disorder, and psychopathy (Ogilvie et al., 2011). The term "antisocial behavior" has been used to describe actions designed to injure or disadvantage others in the context of sports (Kavussanu, 2014); a distinction has also been drawn between behavior aimed at teammates and opponents. Criticizing and attempting to hurt an opponent, as well as verbally assaulting and cursing at a teammate, are examples of antisocial behavior in sports.

Using foul language, swearing, arguing, criticizing, and showing annoyance over one's bad play are all examples of antisocial teammate behaviors that could have a detrimental impact on the target. These actions can insult the target and make the athletic experience unpleasant overall, thus they should make the recipient upset and generally feel bad. In fact, in cross-sectional studies, antisocial teammate behavior has been positively correlated with rage and poor affect and negatively correlated with both effort and perceived performance (Al-Yaaribi & Kavussanu, 2017). The correlation between anger and unsociable teammate behavior has been particularly high.

There is conflicting evidence regarding the relationship between performance and unsavory teammates: Although it did not predict performance in adult basketball players, this behavior was a poor predictor of perceived performance in both adolescent and adult soccer players (Al-Yaaribi et al., 2016). When coaches were believed to be creating a performance-motivating climate in the squad, this behavior was also a higher negative predictor of perceived performance in adolescent male football players (Al-Yaaribi & Kavussanu, 2018). The antisocial behavior group, or those who experienced antisocial behavior from a teammate, outperformed the control group in a two-minute basketball free-throw shooting competition, indicating that in some situations, this behavior may be advantageous for performance (Al-Yaaribi et al., 2018). It's possible that having an antisocial colleague has some short-term benefits for performance, but it's unlikely that these advantages would last over time.

The past studies above discussed studies provide evidence that dark triad and antisocial behavior are important predictors of sport performance among sportsman. The mostly published researches are from European countries and American countries but in Pakistan still not enough evidence in term of dark triad as predictor of antisocial behavior and sport performance. Meanwhile antisocial behavior as mediator between dark triad personality and sports performance has been not investigated in previous study. Research is needed to shed light on this issue. However, despite theoretical and empirical reasons to do so, no study has yet examined the influence of dark triad traits together with antisocial behavior as mediator on player's sports performance in Pakistan. Whereas as point six, there is no valid and reliable indigenous instrument is available to measure antisocial behavior of players in Pakistan context. So the present research will develop the indigenous instrument of antisocial behavior among Pakistani players. On the above discussed studies, this research has objectives, which are deliberated below.

OBJECTIVES

1. To develop and validate the indigenous antisocial behavior scale among Pakistani players.
2. To measure the association of dark triad personality (Machiavellianism, Narcissism and Psychopathy) and antisocial behavior with sports performance of Pakistani players.
3. To measure the influence of dark triad personality (Machiavellianism, Narcissism and Psychopathy) on sports performance of Pakistani players with mediating role of antisocial behavior.

PROPOSED MODEL OF THE STUDY

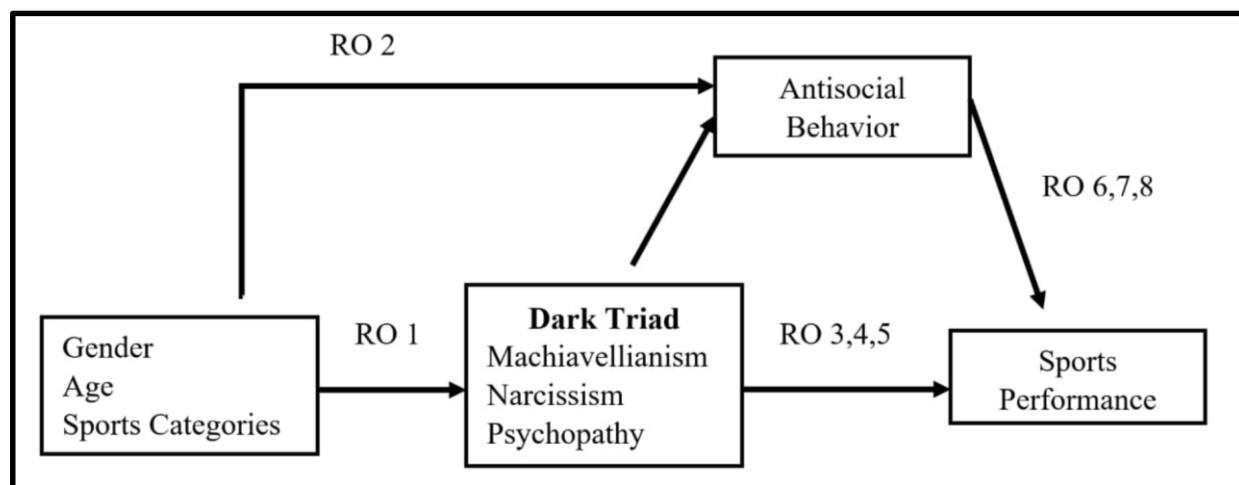Figure 1 shows the mediation role of antisocial behavior between dark triad and sports performance.

Figure 1 The Mediation Role of Antisocial Behavior Between Dark Triad and Sports Performance

RESEARCH METHODOLOGY

This study contains two distinct phases, 1, and 2. The phase-1 comprised of the exploratory sequential mixed methods research design (tool development) used to explore the domains of antisocial behavior, develop, and validate the antisocial behavior scale. While, phase-2, is quantitative and cross-sectional in nature. The methods and procedures adopted for both phases are given separately.

RESEARCH DESIGN

Phase 1

To address the research questions presented in chapter I, this study adopted a mixed methods research design with its focus on *"collecting, analyzing, and mixing both quantitative and qualitative data in a single study"* (Creswell & Plano-Clark. 2007, p.5). From a methodological standpoint, the basic tenet of mixed methods is that the combination of both qualitative and quantitative approaches results in a more thorough understanding of research problems that can be attained by using either approach alone (Creswell et al., 2011). Of all the various mixed methods designs, this study utilized the two phases, exploratory sequential design (Qual → Quan). The basic premise of this design is that the findings of the first, qualitative part inform the development of the second, quantitative part (Creswell et al., 2011). Therefore, this design is also known as the instrument development sequential design (Creswell et al. 2004), which is illustrated in Figure 2.
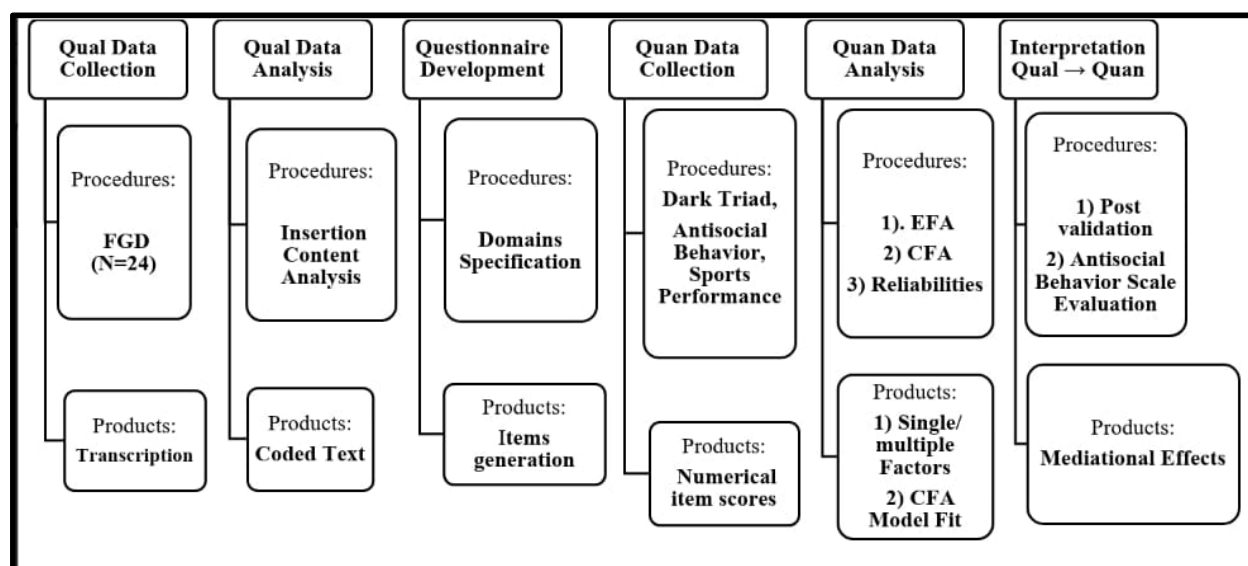

Figure 2: Instrument Development Sequential Design

Above figure 2, adopted from Yildirim and Correia (2015) and modified by the author. Initially, the model will began with the qualitative exploration of antisocial behavior scale through focus group discussions. Then the findings from this qualitative phase will be guided the development of the questions to be used in the antisocial behavior scale (ABS) which are tested in the phase one, quantitative phase. All the steps will be taken in each phase are explained in their respective sections as follows.

Participant Characteristics

All the eligible participants will be residents of selected district (rural and urban both) of Punjab, Pakistan. The further characteristics will be enlisted below:

Sample and Recruitment

A total of 20 eligible participants were recruited for three homogenous focus group discussions (ratio of respondents remained 8:6:6), regardless of gender. To select a sample of Pakistani players existed in Punjab, Pakistan, the purpose sampling technique will be used. All the steps in design and protocol of focus groups will be followed according to the guidelines of Stewart and Shamdasani (2015). The questions posed will be: 1. What do you understand by antisocial behavior? 2. What do you think; you have an antisocial behavior in different domains, e.g. sports activity/ different fields of life? 3. How do you describe the consequences of antisocial behavior in your life? First, a sampling frame will be established, later, the veteran moderator and observer with ten years research experience will be selected to conduct the sessions. As an incentive, the meal will be served to them after the session. The necessary arrangement will be made one day before the sessions are conducted. All the recruited participants will be briefed about the nature and scope of discussion, they will also be given plenty of time to express on the topic. Data will be audio and video tapped along with field notes (memos). On the same day after the session, initial data of moderator and observer will be discussed and reported.

Transcription and Assertions Content Analysis

Before the start of transcription, one training session will be conducted with all coders to familiarize with the defined coding plan and rules for placing units. The panel of trained coders (familiar with the subject matter) will check all audio and video data carefully and transcribe to arrive at reliable results. The audio and video data will be not accessible for any external source except the research team to maintain confidentiality and anonymity. Nonverbal communication, behavioral responses, and gestures (as a sign-vehicle) will be taken care of during the whole process of transcription. Following the guidelines of Krippendorf (2018, pp. 98-111), data will be analyzed in terms of three units; sampling units, recording units, and context units which are collaboratively called assertions content analysis. The two qualitative research experts will be involved to examine the reliability and sources of disagreement; their sole job will be to identify and correct the discrepancy so that a high degree of inter-rater reliability is maintained.

Phase-2

In phase – 2, cross-sectional survey research design will be used to gauge the influence of dark triad on player's antisocial behavior and its impact on player's sports performance in Pakistan. According to Ridker et al. (1993) cross-sectional studies were used to assess the health related needs of a population at a given point of time and are particularly useful in informing the planning and allocation of future interventions.

Participant Characteristics

In this research, 495 participants with affiliation of any club, university institute, and national players will be selected in this research falling in the age bracket of 18-35 years. The age, gender, education, type of sports and sport participation will be considered demographic variables. The non-random purposive sampling will be used in second phase of study.

DATA COLLECTION PROCEDURE

In this study, data were collected using the survey method. According to Burns and Bush (2000) a survey is a suitable method for collecting data about attitudes and opinions. It allows for quantitative analysis to be conducted at the testing of inferences and also permits this study to adopt the in-person self-administered questionnaire survey method for three primary reasons. Firstly, it will be suitable for collecting data about attitudes and opinions (Burns & Bush 2000). Secondly, the self-administered approach will be appropriate for covering a large number of respondent groups and at diverse locations as intended in this study. Finally, by using the self-administered approach, the researcher can overcome

several major constraints such as limitation of time and financial resources, unavailability and inaccessibility of information.

1.   INSTRUMENTS

The Phase -2, based on quantitative data, so following questionnaires or scales were employed on prescribed samples.

Short Dark Triad (SD3)

The dark triad (DT) will be assessed using the Short Dark Triad (SD3) scale developed by Jones and Paulhus (2014). SD3 is a 27-item scale designed to measure three socially aversive traits: Machiavellianism, Narcissism, and Psychopathy. A sample item included "I like to use clever manipulation to get my way." Cronbach's alpha was conducted on all the three sub-dimensions, and the overall reliability of 0.78 was also assessed. The resulting standardized loading of Machiavellianism, Narcissism, and Psychopathy on the dark triad were loaded at 0.78, 0.87, and 0.86, respectively. Thus, it is confirmed that all items loading exceed 0.6 and SD3 can be used to measure dark triad personality.

Antisocial Behavior Scale

The Antisocial Behavior Scale Will Be Developed in Phase 1 Of This Study and Will Be Used in Phase 2.

Level of Sport Performance Scale

Level of Sport Performance Scale (LSPS), contains 30 items, which measures 7 important elements (Speed, Core Training Workout, deal with stress and anxiety, tolerance of pain, confidence, deal with distraction and satisfaction) (Parnabas et al., 2015). Besides that, each participant must evaluate their performance as high, medium or low.

2.   DATA ANALYZES

For analyzing the data, descriptive statistics will be used to understand the pattern of the data and develop the profile of the respondents. Finally, inferential statistics such as actor Analysis, Regression Analysis, Correlation, and t-Test will be utilized to investigate the research questions.

3.   ETHICAL CONSIDERATIONS

The formal permission to use the instruments will be taken from the authors concerned through email. The respondents will be informed about the purpose of the study, their role and rights, confidentiality and the process and procedure of data collection. They will sign a written informed consent prior to the study, once they understood the given information and agreed to participate. Respondents will be paid as a token of appreciation, according to their time consumed. Keeping in view the Pakistani culture, it will be considered as inappropriate to say "*no*" if one will be asked to do something. Hence, the respondents had the right to withdraw from the study at any time. To maintain anonymity, the respondents will be given nicknames/codes to be used in the questionnaires. Formal permission to conduct this study will also be taken from the research and ethics committee.

REFERENCES

Allen, M. S., Greenlees, I., & Jones, M. (2013). Personality in sport: A comprehensive review. *International Review of Sport and Exercise Psychology*, *6*(1), 184-208.

Al-Yaaribi, A., & Kavussanu, M. (2018). Consequences of prosocial and antisocial behaviors in adolescent male soccer players: The moderating role of motivational climate. *Psychology of Sport and Exercise*, *37*, 91-99.

Al-Yaaribi, A., Kavussanu, M., & Ring, C. (2016). Consequences of prosocial and antisocial behavior for the recipient. *Psychology of Sport and Exercise*, *26*, 102-112.

Al-Yaaribi, A., Kavussanu, M., & Ring, C. (2018). The effects of prosocial and antisocial behaviors on emotion, attention, and performance during a competitive basketball task. *Journal of Sport and Exercise Psychology*, *40*(6), 303-311.

Blickle, G., & Schütte, N. (2017). Trait Psychopathy, task performance, and counterproductive work behavior directed toward the organization. *Personality and Individual Differences*, *109*, 225-231.

Brinke, L., Black, P. J., Porter, S., & Carney, D. R. (2015). Psychopathic personality traits predict competitive wins and cooperative losses in negotiation. *Personality and Individual Differences*, *79*, 116-122.

Burns, A. & Bush, R. (2000). *Marketing research*. Upper Saddle River, N.J.: Prentice Hall.

Carter, G. L., Montanaro, Z., Linney, C., & Campbell, A. C. (2015). Women's sexual competition and the Dark Triad. *Personality and Individual Differences*, *74*, 275-279.

Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage publications.

Creswell, J. W., Fetters, M. D., & Ivankova, N. V. (2004). Designing a mixed methods study in primary care. *The Annals of Family Medicine*, *2*(1), 7-12.

Creswell, J. W., Klassen, A. C., Plano Clark, V. L., & Smith, K. C. (2011). Best practices for mixed methods research in the health sciences. *Bethesda (Maryland): National Institutes of Health*, *2013*, 541-545.

Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The Dark Triad of personality: A 10 year review. *Social and personality psychology compass*, *7*(3), 199-216.

Furnham, A., Richards, S., Rangel, L., & Jones, D. N. (2014). Measuring malevolence: Quantitative issues surrounding the Dark Triad of personality. *Personality and individual differences*, *67*, 114-121.

Furnham, A., Richards, S., Rangel, L., & Jones, D. N. (2014). Measuring malevolence: Quantitative issues surrounding the Dark Triad of personality. *Personality and individual differences*, *67*, 114-121.

Gebauer, J. E., Sedikides, C., Verplanken, B., & Maio, G. R. (2012). Communal Narcissism. *Journal of personality and social psychology*, *103*(5), 854.

Geukes, K., Mesagno, C., Hanrahan, S. J., & Kellmann, M. (2012). Testing an interactionist perspective on the relationship between personality traits and performance under public pressure. *Psychology of Sport and Exercise*, *13*(3), 243-250.

Hardy, L., Barlow, M., Evans, L., Rees, T., Woodman, T., & Warr, C. (2017). Great British medalists: Psychosocial biographies of super-elite and elite athletes from Olympic sports. *Progress in brain research*, *232*, 1-119.

Jones, D. N., & Figueredo, A. J. (2013). The core of darkness: Uncovering the heart of the Dark Triad. *European Journal of Personality*, *27*(6), 521-531.

Jones, D. N., & Paulhus, D. L. (2014). Introducing the short dark triad (SD3) a brief measure of dark personality traits. *Assessment*, *21*(1), 28-41.

Judge, T. A., LePine, J. A., & Rich, B. L. (2006). Loving yourself abundantly: Relationship of the narcissistic personality to self- and other perceptions of workplace deviance, leadership, and task and contextual performance. *Journal of Applied Psychology, 91*, 762–776.

Kavussanu, M. (2014). Moral behavior. In R.J. Eklund & G.T. Tenenbaum (Eds.), *Encyclopedia of Sport and Exercise Psychology*. SAGE Publications, Inc.

Klimstra, T. A., Sijtsema, J. J., Henrichs, J., & Cima, M. (2014). The Dark Triad of personality in adolescence: Psychometric properties of a concise measure and associations with adolescent adjustment from a multi-informant perspective. *Journal of Research in Personality*, *53*, 84-92.

Krippendorff, K. (2018). *Content analysis: An introduction to its methodology*. Sage publications.

Maples, J. L., Lamkin, J., & Miller, J. D. (2014). A test of two brief measures of the dark triad: the dirty dozen and short dark triad. *Psychological assessment*, *26*(1), 326.

Moffitt, T. E., Caspi, A., Harrington, H., & Milne, B. J. (2002). Males on the life-course-persistent and adolescence-limited antisocial pathways: Follow-up at age 26 years. *Development and psychopathology*, *14*(1), 179-207.

Muris, P., Merckelbach, H., Otgaar, H., & Meijer, E. (2017). The malevolent side of human nature: A meta-analysis and critical review of the literature on the dark triad (Narcissism, Machiavellianism, and Psychopathy). *Perspectives on psychological science*, *12*(2), 183-204.

Nicholls, A. R., Madigan, D. J., Backhouse, S. H., & Levy, A. R. (2017). Personality traits and performance enhancing drugs: The Dark Triad and doping attitudes among competitive athletes. *Personality and Individual Differences*, *112*, 113-116.

Ogilvie, J. M., Stewart, A. L., Chan, R. C., & Shum, D. H. (2011). Neuropsychological measures of executive function and antisocial behavior: A meta-analysis. *Criminology*, *49*(4), 1063-1107.

Parnabas, V., Mahamood, Y., & Parnabas, J. (2015). Level of sport performance of Universiti Malaya (UM) athletes. *International Journal of Human Movement and Sports Sciences*, *1*(2), 41-45.

Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and Psychopathy. *Journal of research in personality*, *36*(6), 556-563.

Pera-Guardiola, V., Batalla, I., Bosque, J., Kosson, D., Pifarré, J., Hernández-Ribas, R., ... & Cardoner, N. (2016). Modulatory effects of psychopathy on Wisconsin Card Sorting Test performance in male offenders with Antisocial Personality Disorder. *Psychiatry Research*, *235*, 43-48.

Rauthmann, J. F., & Kolar, G. P. (2013). The perceived attractiveness and traits of the Dark Triad: Narcissists are perceived as hot, Machiavellians and psychopaths not. *Personality and Individual Differences*, *54*(5), 582-586.

Ridker, P. M., Vaughan, D. E., Stampfer, M. J., Sacks, F. M., & Hennekens, C. H. (1993). A cross-sectional study of endogenous tissue plasminogen activator, total cholesterol, HDL cholesterol, and apolipoproteins AI, A-II, and B-100. *Arteriosclerosis and Thrombosis: A Journal of Vascular Biology*, *13*(11), 1587-1592.

Roberts, R., Cooke, A., Woodman, T., Hupfeld, H., Barwood, C., & Manley, H. (2019). When the going gets tough, who gets going? An examination of the relationship between Narcissism, effort, and performance. *Sport, Exercise, and Performance Psychology, 8*(1), 93-105.

Roberts, R., Woodman, T., & Sedikides, C. (2018). Pass me the ball: Narcissism in performance settings. *International Review of Sport and Exercise Psychology, 11*(1), 190-213

Sage, L., Kavussanu, M., & Duda, J. (2006). Goal orientations and moral identity as predictors of prosocial and antisocial functioning in male association football players. *Journal of Sports Sciences*, *24*(05), 455-466.

Stewart, D., & Shamdasani, P. (2015). *Focus groups: Theory and Practice* (3rd ed.). Sage Publications.

Tett, R. P., Simonet, D. V., Walser, B., & Brown, C. (2013). Trait activation theory. *Handbook of personality at work*, 71-100.

Tuvblad, C. (2014). Genetic influences on antisocial behavior over the life-course. In M. DeLisi, & M. G. Vaughn (Eds.), *The Routledge International handbook of biosocial criminology* (pp 77–100). London, England: Routledge

Vaughan, R. S., & Madigan, D. J. (2021). The winner takes it all: The mediating role of competitive orientations in the Dark Triad and sport task performance relationship. *European Journal of Sport Science*, *21*(8), 1183-1192.

Vaughan, R., Carter, G. L., Cockroft, D., & Maggiorini, L. (2018). Harder, better, faster, stronger? Mental toughness, the dark triad and physical activity. *Personality and Individual Differences*, *131*, 206-211.

Vaughan, R., Madigan, D. J., Carter, G. L., & Nicholls, A. R. (2019). The Dark Triad in male and female athletes and non-athletes: Group differences and psychometric properties of the Short Dark Triad (SD3). *Psychology of Sport and Exercise*, *43*, 64-72.

Yildirim, C., & Correia, A. P. (2015). Exploring the dimensions of nomophobia: Development and validation of a self-reported questionnaire. *Computers in Human Behavior*, *49*, 130-137.