



A Comparative analysis of the various Personality Factors of able-bodied and disabled Sports Players

Manaal Buhari

B.Sc. Psychology, Women's Christian College, Chennai

buharimanaal@gmail.com

Abstract

The current review research delves into the complex interplay of personality factors within the realm of athletic performance, drawing comparisons between able-bodied and disabled athletes. The growing field of sports psychology has increasingly recognized the pivotal role that personality traits play in shaping an athlete's mindset, motivation, and ultimately, their competitive outcomes. By synthesizing existing research, the current review research aims to provide a nuanced understanding of how personality factors contribute to the sporting experiences of individuals with and without physical disabilities. The review begins by delineating key personality traits such as those of the Big Five and Cattell's 16 personality factors which are commonly associated with athletic performance. It then embarks on a comparative analysis, scrutinizing studies that investigate how these traits manifest differently in able-bodied and disabled athletes. The multifaceted nature of disability adds complexity to the examination, as both internal and external factors influence the adaptive strategies athletes employ to navigate their unique challenges. Additionally, the review addresses the impact of

societal perceptions on the development and expression of personality traits in disabled athletes, exploring the roles of factors such as age and gender as well. The synthesis of findings aims to not only deepen our understanding of the psychological factors shaping athletic performance across diverse populations but also to highlight potential avenues for targeted interventions and support systems. Ultimately, this review sheds light onto the key differences that exist within the realm of personality in both able-bodied and disabled athletes. Some significant findings were found to be differences in abstractedness, which influences the disabled athletes in helping improve performance. The gendered influences also affect disabled and able-bodied athletes differently with women scoring higher in conscientiousness. The review seeks to inform future research directions and interventions aimed at optimizing the psychological well-being and competitive success of athletes across the ability spectrum.

Keywords: Sports, Sports Performance, Disability Big Five Personality, 16 Personality Factors, Sports Psychology

Introduction

Personality is defined as “the enduring configuration of characteristics and behavior that comprises an individual’s unique adjustment to life, including major traits, interests, drives, values, self-concept, abilities, and emotional patterns. Personality is generally viewed as a complex, dynamic integration or totality shaped by many forces, including hereditary and constitutional tendencies; physical maturation; early training; identification with significant individuals and groups; culturally conditioned values and roles; and critical experiences and relationships. Various theories explain the structure and development of personality in different ways, but all agree that personality helps determine behavior” (APA Dictionary of Psychology,

2023; VandenBos, 2007). Coaches and sport psychologists, for more than half a century, have been discussing the specific psychological structure of athletes' personality. Studying the personality of the athletes involved in different sports and at different skill levels can help the better understanding and prediction of their behavior due to an increase competitive efficiency and solving problems which appear in certain periods of their sports career (Bacanac, 2001). Psychological traits or states of athletes who use wheelchairs and able-bodied athletes may help understanding reasons why these two populations participate in physical activities and provide physical educators and coaches with a valuable way to assess participants' behavior.

The development of psychological skills of athletes with disabilities has not been sufficiently studied (Bawden, 2006; Hanrahan, 1998). Although, there are many similarities among athletes with and without disabilities, sport psychologists would benefit from an awareness of information unique to athletes with disabilities (Asken, 1991) Sport, as social phenomena, may achieve very positive influence on the health and social state of people with disability who practice it (Miyahara et al., 2008; Wells & Hooker, 1990). There are psycho-social benefits of participating in sports for people with disability (Campbell & Jones, 1995; Hutzler & Bar-Eli, 1993). People with disabilities who participate in sports have been shown to handle pressure and stressful situations better than those who do not exercise. They also experience less depression, confusion, tension, and anger (Campbell & Jones, 1994; Paulsen et al., 1990). Team sports, wheelchair basketball included, are among disciplines characterized by open habits which means that a player is in a dynamic state throughout, his movements are cyclical and done simultaneously (Naglak, 2005). Therefore, a player on the court performs various actions with and without a ball that require complete mental engagement. Interest and participation in competitive sport has shown substantial growth over the last decade for individuals with physical disabilities (White & Duda, 1993). Few researchers have examined the psychological variables that influence participation of athletes with disabilities compared

to able-bodied athletes (Henschen et al., 1984; Horvat et al., 1989; Cox & Davis, 1992; Martin et al., 1995).

The current review study will focus on the various personalities of disabled sports players and compare it with their able-bodied counterparts. It will see which personality traits exist for the disabled athletes.

Big Five Personality Traits

Costa and McCrae proposed the Five- Factor Model (FFM) which has become one the most widely respected perspectives on personality structure today. Costa and McCrae acknowledged the crucial role that Eysenck played when he recognized extraversion and neuroticism as second-order personality factors, however they disagreed with Eysenck regarding psychoticism. They initially proposed a different factor called openness. When they discussed this issue with Eysenck, he felt that openness might be the opposite pole of psychoticism, but McCrae and Costa believed the factors were significantly different (Costa & McCrae, 1986). Since that time, Costa and McCrae have moved beyond the third factor of openness and added two more second-order factors agreeableness and conscientiousness (Costa & McCrae, 1989).

Conscientiousness

Conscientiousness is one of the five major dimensions in the Big Five model of personality, which consists of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. One of many personality tests that assess these traits are Costa and McCrae's NEO PI-R. According to these models, conscientiousness is a continuous dimension of personality, rather than a categorical "type" of person. Other Big Five personality traits such as low extraversion, high agreeableness, low openness, and low neuroticism are linked to high

conscientiousness. Low conscientiousness is associated with an inability to motivate oneself to perform tasks that one wants to accomplish (Costa & McCrae, 1992).

Conscientiousness is characterized by being structured, disciplined, detail-oriented, attentive, and meticulous in people. Additionally, they have superior impulse control, which enables them to complete tasks and accomplish objectives. People who score low on conscientiousness often struggle with impulse control which disrupts their ability to complete their tasks and meet goals. They tend to be more disorganized and may dislike too much structure.

An individual high in Conscientiousness will have traits such as competence, organized, dutifulness, achievement striving, self-disciplined and deliberation whereas an individual low on the personality trait will be, incompetent, disorganized, careless, procrastinates, indiscipline and impulsive (John & Srivastava, 1999).

Agreeableness

Agreeableness refers to “how people tend to treat relationships with others. Unlike extraversion which consists of the pursuit of relationships, agreeableness focuses on people’s orientation and interactions with others” (Ackerman, 2017). People that score highly on agreeableness are often described as soft-hearted, trustworthy, and popular. They are considerate of others’ needs, kind, and cooperative. They are regarded as being trustworthy and charitable.

Those with poor agreeableness may be perceived as suspicious, manipulative, and uncooperative. They could act antagonistically when engaging with others, which makes them less likable and trustworthy.

An individual high on agreeableness will be trusting (forgiving), straightforward, altruistic (enjoys helping), compliant, modest, empathetic, whereas individuals low on the personality

trait will be skeptical, demanding, insults and belittles others, stubborn, show-off, unsympathetic and apathetic (John & Srivastava, 1999).

Extraversion

The traits Introversion and Extraversion are central dimensions of human personality and were introduced by Carl Jung. Extraversion tends to be manifested in outgoing, talkative, energetic behavior, whereas introversion is manifested in more reflective and reserved behavior. Jung defined introversion as an “attitude-type characterized by orientation in life through subjective psychic contents,” and extraversion as “an attitude-type characterized by concentration of interest on the external object” (Jung, 1995). It encompasses the comfort and assertiveness levels of people in social situations. Additionally, it also reflects the sources from which someone draws energy which can either be. Extraverts tend to be forceful, gregarious, fun-loving, and extroverted people. They like social interactions and feel at ease expressing their thoughts. When they are with people, they frequently get more energized and enthusiastic. People with low extraversion scores are frequently referred to as introverts. They frequently exhibit greater reserve and quieter behavior. Instead of wanting to be heard, they would rather listen to others. Because going to social activities may be quite draining for introverts, they frequently require time alone to recharge. It's important to remember that introverts do not always detest social gatherings; rather, they find them exhausting.

An extrovert will be sociable, energized by social interaction, excitement-seeking, enjoys being the center of attention and outgoing, whereas an introvert will prefer solitude, fatigued by too much social interaction, reflective, dislikes being the center of attention and are reserved (John & Srivastava, 1999).

Openness to Experience

Openness can be viewed as a global personality trait consisting of a set of specific traits, habits, and tendencies that cluster together. Openness tends to be normally distributed with a small number of people scoring extremely high or low on the trait, and most people scoring moderately. People who score low tend to be conventional and traditional in their outlook and behavior. They prefer familiar routines to new experiences, and generally have a narrower range of interests (McCrae & John, 1992).

Openness to experience is a trait that is associated with creativity and artistic ability. They cherish independence and prefer variety. They enjoy exploring new places and learning new things, and they are curious about their environment. Those with poor openness to experience value routine over variety. They choose the known over the unfamiliar because they find change and trying new things to be uncomfortable. Being pragmatic by nature, they frequently struggle with creative or abstract thought.

An individual high on openness to experiences will be curious, imaginative, creative, open to try new thing and they are unconventional, whereas an individual low on openness to experience will be predictable, not very imaginative, dislikes change, prefers routine and traditional (John & Srivastava, 1999).

Neuroticism

It is defined as a tendency for quick arousal when stimulated and slow relaxation from arousal, especially about negative emotional arousal. Another definition focuses on emotional instability and negativity or maladjustment, in contrast to emotional stability and positivity, or good adjustment. It has also been defined in terms of lack of self-control, poor ability to manage psychological stress, and a tendency to complain (McCrae & John, 1992)

Those with high neuroticism levels frequently experience anxiety, insecurity, and self-pity. They are frequently seen as grumpy and temperamental. They frequently experience excessive melancholy and low self-esteem. Low neurotic individuals are more likely to be at ease, secure, and content with themselves. They are less likely to be viewed as moody or anxious. They are more likely to be resilient and have great self-esteem. It also includes one's propensity to experience negative emotions.

An individual high on neuroticism is anxious, angry hostility (irritable), experiences a lot of stress, self-consciousness (shy), vulnerability and experiences dramatic shifts in mood, whereas, low on the personality trait will be calm, emotionally stable, confident, resilient and rarely feels sad or depressed (John & Srivastava, 1999).

16 Personality Factor

Raymond Cattell was a British-American psychologist, known for his psychometric research. It was based on intrapersonal psychological structure. Consequently, he put forth 'Cattell's 16 Personality Factor Theory.' In addition, his work explored the basic dimensions of personality and temperament, the range of cognitive abilities, the dynamic dimensions of motivation and emotion.

According to Cattell (1965), everyone differs from one another on a basic structural level. This structure could be constructed by experience and observation. He also tried to pick out the key characteristics from the vast array of adjectives used in the English language. He therefore used a statistical method known as component analysis to identify the shared structures and discovered 16 fundamental or source features. The source traits are stable. Moreover, they are considered as the building blocks of personality. Besides, there are also several surface traits that result from the interaction of source traits. Cattell described the source traits in terms of

opposing tendencies. As a result, He developed a test, called Sixteen Personality Factor Questionnaire (16PF). This test was for the assessment of personality. This test is widely used by psychologists.

Surface Traits

Allport (1937) discovered these, which stand for the plainly observable personality traits in other people. Surface characteristics are not consistent across time and lack a unitary basis. They consequently don't receive much credit for behavioral accountability. As an illustration, the observable traits of difficulty focusing, ambivalence, restlessness, etc., may group together to generate the surface attribute of neuroticism.

Source Traits

Table 7.1 16PF Scale Names and Descriptors

<i>Descriptors of Low Range</i>	<i>Primary Scales</i>	<i>Descriptors of High Range</i>
Reserved, Impersonal, Distant	Warmth (A)	Warm-hearted, Caring, Attentive To Others
Concrete, Lower Mental Capacity	Reasoning (B)	Abstract, Bright, Fast-Learner
Reactive, Affected By Feelings	Emotional Stability (C)	Emotionally Stable, Adaptive, Mature
Deferential, Cooperative, Avoids Conflict	Dominance (E)	Dominant, Forceful, Assertive
Serious, Restrained, Careful	Liveliness (F)	Enthusiastic, Animated, Spontaneous
Expedient, Nonconforming	Rule-Consciousness (G)	Rule-Conscious, Dutiful
Shy, Timid, Threat-Sensitive	Social Boldness (H)	Socially Bold, Venturesome, Thick-Skinned
Tough, Objective, Unsentimental	Sensitivity (I)	Sensitive, Aesthetic, Tender-Minded
Trusting, Unsuspecting, Accepting	Vigilance (L)	Vigilant, Suspicious, Skeptical, Wary
Practical, Grounded, Down-To-Earth	Abstractedness (M)	Abstracted, Imaginative, Idea-Oriented
Forthright, Genuine, Artless	Privateness (N)	Private, Discreet, Non-Disclosing
Self-Assured, Unworried, Complacent	Apprehension (O)	Apprehensive, Self-Doubting, Worried
Traditional, Attached To Familiar	Openness to Change (Q1)	Open To Change, Experimenting
Group-Orientated, Affiliative	Self-Reliance (Q2)	Self-Reliant, Solitary, Individualistic
Tolerates Disorder, Unexacting, Flexible	Perfectionism (Q3)	Perfectionistic, Organized, Self-Disciplined
Relaxed, Placid, Patient	Tension (Q4)	Tense, High Energy, Driven
<i>Global Scales</i>		
Introverted, Socially Inhibited	Extraversion	Extraverted, Socially Participating
Low Anxiety, Unperturbable	Anxiety Neuroticism	High Anxiety, Perturbable
Receptive, Open-Minded, Intuitive	Tough-Mindedness	Tough-Minded, Resolute, Unempathic
Accommodating, Agreeable, Selfless	Independence	Independent, Persuasive, Willful
Unrestrained, Follows Urges	Self-Control	Self-Controlled, Inhibits Urges

Source: S.R. Conn and M.L. Rieke (1994). 16PF Fifth Edition Technical Manual

Underlying the superficial attributes are some more fundamental characteristics. For instance, shyness, quietness, and a dislike of crowds may all be surface characteristics linked to the more fundamental root attribute of introversion, a propensity to retreat from overstimulating stimuli. Cattell found 16 source qualities using component analysis, a statistical method that searches for clusters and similarities in numerical data (Cattell, 1950; 1966). He also created his

assessment questionnaire, despite subsequently discovering that there may be an additional 7 source qualities to bring the total to 23 (Cattell & Kline, 1977).

Review of Literature

Goran et al., (2011) had aimed to a) to investigate personality characteristics of male professional basketball players and wheelchair basketball players, b) to compare these characteristics of two kinds of athletes. The method of the study had both the professional basketball players (N =29) and wheelchair basketball players (N = 25) have completed a Cattell 16PF questionnaire which estimated personality characteristics. Differences between two groups of participants were calculated by t-test for small samples.

The results demonstrated the existence of differences in the expression of certain forms of behavior within certain dimensions of personality between these two groups. **Wheelchair basketball players had higher scores at factor M - abstractedness ($t = -1.889$; $p = 0.046$), which means that they are more preoccupied by themselves and their inner mental life.** Wheelchair basketball players had lower scores, on factors: C - *emotional stability* ($t = 2.097$; $p = 0.041$), E - *dominance* ($t = 3.530$; $p = 0.001$), F - *liveliness* ($t = 2.658$; $p = 0.010$) and N - *privateness* ($t = 2.527$; $p = 0.015$).

The study highlights the differences between Serbian wheelchair basketball players and professional basketball players. The wheelchair basketball players are **more emotive; they have a lack of self-esteem, less ready for teamwork and collaboration; they are naive and unpretentious.** These differences could be attributed to various other factors apart from the participant's disabilities such as cultural differences or childhood experiences and upbringing.

Lazarevic (2011) had sought out to study how the personality of male wheelchair basketball players had differed from those persons with disabilities who did not compete in sports.

For the purposes of this study, wheelchair basketball players (N=25) and wheelchair non-athletes (N=32) completed a Cattell 16PF questionnaire. Basic descriptive statistics were used in the data processing, and differences between the two groups of participants were calculated by means of the t-test.

The results demonstrated the existence of differences in the expression of certain forms of behavior within certain dimensions of personality between these two groups. Wheelchair basketball players had higher scores for *factor B - Reasoning* ($p=.025$) and *factor G - Rule Consciousness* ($p=.001$), which means that they exhibit a **more developed ability of abstract thinking, problem solving, and have a higher “super ego,” a higher level of reliability and sense of duty to the obligations**, compared to people who do not practice sports. Basketball players had lower scores, than non-athletes, for the following *factors*: *E – Dominance* ($p=.036$), *I – Sensitivity* ($p=.001$), *O – Apprehension* ($p=.005$) and *Q2 – Self-Reliance* ($p=.023$). That means that they exhibit a **higher level of behavior mildness, conformity, modesty, and “sharper temper,” a higher level of confidence, resistance to stressful situations, and they are characterized as “dependent on the group.”**

Zar et al. (2022) had aimed to investigate the relationship between the big five personality traits and the sports performance of disabled athletes in team sports. Three hundred and seventy-six team athletes participated in the study. Subjects completed a questionnaire of five major personality factors and based on the information available on the provincial boards and the Veterans and Disabled Federation, the positions obtained by each athlete were considered as a criterion for sports performance.

There was a significant relationship between the flexibility factor for men and women ($r=0.123, p=0.017$), neuroticism ($r=0.114, p=0.027$), adaptation ($r=0.171, p=0.001$), extraversion ($r=0.157, p=0.002$), duty orientation ($r=0.104, p=0.045$), and sports performance at a national level. There was a significant relationship between neuroticism ($r=0.142, p=0.006$), adaptation ($r=0.133, p=0.010$), extraversion ($r=0.163, p=0.002$), and duty orientation ($r=0.130, p=0.011$) with sports performance at a provincial level. There was a significant relationship between neuroticism ($r=0.156, p=0.002$), extraversion ($r=0.168, p=0.001$), duty orientation ($r=0.182, p=0.001$), and sports performance at international level. Disabled athletes seem to have **above-average performance scores in most personality factors, which can improve their physical health and increase their success in sports.**

This study was conducted by Ibrahim et al. (2020) psychological factors rather than pain intensity affect physical dysfunction in those with persistent low back pain. Clinicians may be able to address the complexity of patients' experiences and create treatments that specifically target these vulnerabilities by assessing personality features. Ibrahim et al. aimed to identify the distinguishing personality traits of a cohort of patients with disabling chronic low back pain and to determine associations between those traits and fear-avoidance beliefs, depressive, and anxious moods.

This (Ibrahim et al., 2020) cross-sectional study included 102 chronic low back pain patients (57% male), who failed standard management and were referred to a multidisciplinary rehabilitation program. All patients completed the five domains of the NEO Personality Inventory (NEO PI)–Revised (Neuroticism, Extraversion, Openness to experience, Agreeableness and Conscientiousness), the Tampa Scale for Kinesiophobia (TSK), and the Hospital Anxiety and Depression Scale (HADS). One-sample *t*-test was used to compare sample personality means with average population norms. Association between the five personality domains with TSK and HADS was assessed using Pearson's correlation, adjusted

for patient demographics and pain-related variables. Linear regression was used to estimate associations adjusted for covariates.

Both men and women had significantly **lower scores in the Openness to experience domain and significantly higher scores in the Conscientiousness domain** than the general population norms. After adjusting for covariates, **Neuroticism was associated with higher fear-avoidance, depression, and anxiety scores**. Conversely, **Extraversion and Openness to experience negatively correlated with depression scores**. Extraversion also inversely correlated with fear-avoidance. Conscientiousness negatively correlated with depression and anxiety after adjustment.

Hayes (1996) had wanted to identify the factors rather than pain intensity that affects physical dysfunction in those with persistent low back pain. It will be useful for the clinicians to be able to address the complexity of patients' experiences and create treatments that specifically target these vulnerabilities by assessing personality features. The first group of participants consisted of 70 AWDs, including 30 men and 40 women, ranging in age from 19 to 55 years ($M = 30$, $SD = 9$). Members of this group were collegiate or community sports team members. The second group consisted of 62 NAWDs (27 men and 35 women) ranging in age from 17 to 77 years ($M = 34$, $SD = 17$). Two thirds of this group were students at a large Midwestern university, whereas the remaining individuals were recruited through community groups. The third group consisted of 73 FAAs (36 men and 37 women) with an age range of 18 to 27 years ($M = 20$, $SD = 2$). All members of this group were student-athletes at a large university. The final group of participants included 108 FANAs (44 men and 64 women) with an age range of 18 to 37 years ($M = 21$, $SD = 4$), who were students at the same Midwestern university. Participants from the first three groups received either \$5 or

course credit, whereas FANAs received only course credit. Procedure Arrangements were made with athletic teams to solicit participation after practices on a voluntary basis. Arrangements with community program directors were made to solicit participation after scheduled group meetings. Other participants were solicited through sign-up sheets around campus. Each participant was asked to complete a brief demographic data sheet describing his or her race, sex, disability, and activity information. Data concerning physical activity were collected by asking participants to indicate how much time they spent, and how often they participated, in 21 physical activities including walking, running, and dancing, and competitive sports (including adapted sports) such as tennis, basketball, bowling, football, and martial arts, among others.

An Activity score (ACT) was computed for each respondent by combining the frequencies of participation in these various physical activities. An ACT scale internal consistency estimate (KR-20) based on whether the activity was engaged in was calculated as .33. Each participant was next asked to evaluate his or her performance in the type of exercise he or she most frequently engaged in (PERF). Participants were also asked, *"If you were to compete in the activity that you most often engage in, how would you evaluate your performance during competition?"*(COMP). Responses for PERF and COMP ranged from 1 (not good at all) to 5 (excellent) on a Likert-type scale. Participants were then asked to complete the Hogan Personality Inventory (HPI; Hogan & Hogan, 1992), a 206-item, true-false response format, self-report questionnaire. The HPI divides the FFM Surgency dimension into Ambition and Sociability, and it divides the FFM Intellect/Openness to Experience dimension into School Success and Intelligence; thus, there are seven FFM scales in the HPI. Each scale is composed of small and highly coherent item subscales called homogeneous item composites (HICs; Hogan & Hogan, 1992).

Inspection of descriptive statistics and reliability analyses reveals that the respondents in this sample (both fully able and disabled) **scored lower in general for adjustment, prudence, and ambition** than did the respondents in the normative database. Respondents in this study scored higher in general for Sociability than did the normative respondents. Each HPI scale indicated that **women scored higher than men for the Likeability and Prudence scales, whereas men scored higher than women for Sociability.**

Çeviker et al. (2020) in this study aims to examine personalities of visually impaired elite athletes and reveal the effect of sports on personality. The study sample covers 168 visually impaired elite level athletes, 51 of whom were female and 117 of whom were male. The age range of these athletes was 15-25 years. All visually impaired athletes who participated in the study are competitors in B1 level national teams. The “Big Five Scale” developed John and al. (1991), which was adapted to Turkish by Gencoz and Oncul (2003), was used in the study as the data gathering instrument.

The data obtained in the research was transferred into SPSS 22.0 program. Significant differences were found between **age groups and personalities of visually impaired athletes in terms of their convergence-peacefulness and personality scale** and between score averages of sub-dimensions in term of sports branch variables. When we look according to the sports branch variable, it is seen that the athletes in judo and goal-ball sports branches have a **greater extraverted structure compared to the athletes in weightlifting and chess branches in the extraversion dimension of personality.** Considering that weightlifting and chess sports are the activities mostly done singularly due to the characteristics of these branches, it may be normal that such athletes have a more introverted structure. In the convergence and peacefulness sub-dimension, it is seen that the athletes in judo, athleticism,

goalball and chess sports branches are **more convergent and peaceful compared to the athletes practicing in the weightlifting branch**. In the emotional stability subdimension as a personality dimension, the athletes in judo, athleticism and goalball sports branches are **more stable emotionally compared to the athletes in weightlifting sports**. It is seen that the visually impaired athletes who participated in the study had in general emotionally stable, adaptable, and convergent personal traits.

Smith (2013) states that disabled athletes tend to have an extraverted and socialized structure in his research. Martin et al. (2011) states in the study conducted on Paralympic basketball team members that the team members have positive state of mind and personality traits. These conclusions in the literature also support the study we conducted. **The athletes engaging in the weightlifting branch had lower scores in emotional stability, convergence and extraversion dimensions compare to other athletes in our study.**

Jędrzejewska et al. (2017) had sought out to assess the characteristics of the six best wheelchair basketball players of the Polish national team. The research has been conducted on a group of six players of the Polish national team before the European Tournament.

For this research the NEO-FFI questionnaire has been used. The questionnaire measures the five basic factors of personality considered to be the most universal: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. The five-factor personality model is the most popular approach for describing human personality (in characteristics) in modern psychology (Szarota, 1995). The concept has extensive practical value in the assessment of personality traits. The basis of the “big five” consists of a hypothesis according to which the most important individual differences are coded in the language. That is why the

analysis of the language that we use to describe ourselves and others may be used to identify the personality traits that are distinguished as the “big five.”

The conducted research indicates that the person received **high scores in the following categories: conscientiousness, agreeableness, and extraversion**. The raw scores were: CON-36, EX-32, AGR-29. The standard scores were: CON-8, EX-6, AGR-6. On the scale of openness OP-18 and the standard score of OP-2, the subject received a low score which indicates weak qualities despite moderate score (17-19) in the confidence interval. People characterized by a low level of openness tend to be conservative when it comes to their value system, but the level of openness itself may be modified by the environment and situations in which the subject participates. The subject **displayed an average level of neuroticism**. The analysis of the above-mentioned research indicates that the subject displays characteristics consistent with conscientiousness, agreeableness and extraversion therefore is a person who is punctual, dependable, optimistic, tends to have fun, likes to keep company and is in a good mood. Low level of agreeableness may be connected to the development of an independent personality.

Skordtlis et al. (2002) wanted to find the level of competition (professional, amateur, and wheelchair basketball athletes) which were considered as independent variables. The dependent variables were scores on the three subscales of Competitiveness, Win orientation, and Goal orientation of the Sport Orientation Questionnaire (Gill & Deeter, 1988).

The participants were men, competing in professional (n =35), amateur (n=36), or wheelchair basketball (n=35) leagues in Greece. Their ages ranged from 18 to 50 years old (M=25.5). These athletes participate in practice sessions and basketball games exclusively in their free time. Wheelchair athletes, specifically, referred to the adult men who played basketball in a wheelchair. According to Owen (1982), *"to be eligible to play wheelchair basketball, an*

individual must have a permanent physical disability of the lower portion of the body, such as (but not necessarily limited to) paraplegia, polio, or amputation of a leg; while benefit through participation in wheelchair basketball; and would otherwise be denied the opportunity to play basketball were it not for wheelchair basketball.”

Greek athletes with physical disabilities possess (a) **sport achievement orientations like their amateur counterparts** and (b) **lower scores on Competitiveness and Win and Goal orientations from professional athletes**. Surprisingly, their **motive to win was unexpectedly high**. To ensure the sustained benefits from participation in sports, coaches and sport psychologists working with Greek individuals with disabilities must provide them with diverse achievement motives (Buonamano et al., 1995). These motives may be emphasized through a mastery-oriented approach in games and practice and elimination of social comparisons which can have detrimental effects in sport contexts (Marsh, 1994).

This study was also conducted by Skordtlis et al. (2003) where he wanted to compare the sports achievement orientation between wheelchair basketball players and able-bodied basketball players. The total number of basketball athletes who participated in the study was 107 (31 wheelchair and 76 able-bodied). Ages of participants ranged from 18 to 45 years. Able-bodied athletes were those with no physical limitations who played recreational basketball at a YMCA. Participants who played wheelchair basketball had a variety of physical disabilities ranging from spinal cord injuries, spina bifida, post-polio syndrome, or amputation. Physical disabilities made it necessary for each of them to use a wheelchair to play basketball. T-Test used to measure differences in sport-achievement orientation between the two groups of athletes was the Sport Orientation Questionnaire (Gill & Deeter, 1988). This questionnaire has 25 items and includes three factors, Competitiveness (13 items), Win Orientation (6 items), and Goal Orientation (6 items). Participants responded to each statement on a 5-point rating scale with anchors of 5: strongly agree and 1: strongly disagree. The participants were

encouraged to select the response which most closely reflected their perceptions as athletes who play basketball.

A multiple analysis of variance (Norugis, 1993) was used to analyze the **differences between scores of able-bodied and wheelchair basketball athletes on Competitiveness, Win Orientation, and Goal Orientation**. A discriminant function analysis was utilized to assess which of the subscale scores were significant predictors in classifying participants as wheelchair or able-bodied basketball athletes. **Wheelchair basketball athletes scored higher than able-bodied basketball athletes on the subscales of Competitiveness and Goal Orientation of the Sport Orientation Questionnaire**. Wheelchair basketball athletes appeared to **enter sports competition to compete with their opponents and accomplish personal goals more than able-bodied athletes**. The outcome of sport situations does not seem to be of great importance for either group of athletes. Both groups seem to participate in sports competition for reasons other than winning.

Limitations

Due to the self-reported nature of the questionnaires, it can be hard to determine whether the individuals are being truthful or not. They could not have a comprehensive understanding of their personality and the many facets of it. Due to Social Desirability the subjects could've hid the negative aspects of their personality from the researchers.

There is only a correlational relationship between the variables. We cannot be certain that the personality factors are due to their disability and the sport that they are playing. There could be many different explanations for their personality such as culture and age which will also play key roles in the manifestation of their personality traits. Since no factors were manipulated, we cannot say for certain what contributed to the athlete's personality and what didn't. This can

be applied in their performance as well; it would be an overstatement to point to only personality factors when assessing them.

Conclusion

There appears to be crucial differences between the personality traits of able-bodied athletes and disabled athletes. Through the analysis of the Big Five Personality traits and Raymond Cattell's 16 Personality Factor analysis, many conclusions can be drawn. From the studies it can be understood that the wheelchair basketball players had higher scores at *factor M – abstractedness*, which translates to them being more preoccupied with themselves and their inner mental life. The wheelchair basketball players are more emotive; they have a lack of self-esteem, less ready for teamwork and collaboration; they are naive and unpretentious. It can also be noted that the wheelchair athletes have a more developed ability of abstract thinking, problem solving, and have a higher “super ego,” a higher level of reliability and sense of duty to the obligations, compared to people who do not practice sports. They exhibit a higher level of behavior mildness, conformity, modesty, and, “sharper temper,” a higher level of confidence, resistance to stressful situations, and they are characterized as “dependent on the group.”

Another study which compared the differences between men and women athletes found that the athletes had lower scores in the Openness to Experience domain and significantly higher scores in the Conscientiousness domain than the general population norms. Neuroticism was associated with higher fear-avoidance, depression, and anxiety scores. Conversely, Extraversion and Openness to Experience negatively correlated with depression scores. Comparison of weightlifting, judo and goal-ball athletes found differences in their

extraversion levels and other factors. Their age also has shown to play a role in their personality and physical ability which has shown to affect each other.

This shows that coaches need to consider the many different facets of the athlete's personality when they provide training. Since there are differences between the able-bodied athletes and the disabled athletes, the coaches won't be able to use the same approaches. They need to implement different strategies for their athletes while ensuring that they can push them to their limits and make them perform at their maximum efficiency.

All these results highlight the key differences existing between the athletes and how their personalities influence their sports performance.

References

- Abdossaleh Zar, Sadeghipour Hamid Reza, Fatemeh Ahmadi, Pantelis T. Nikolaidis, Mohammad Amin Safari, Mohammad Hassan Keshazarz, Roger Ramsbottom, "Investigating the Relationship between Big Five Personality Traits and Sports Performance among Disabled. n.d.
- Ackerman, C. (2017, June 23). Big Five Personality Traits: The OCEAN Model Explained.
- Allport, G. W. (1937). *Personality: A psychological interpretation*. New York: H. Holt and Company.
- Baćanac, Lj. (2001). The Psychological Profile of Yugoslav Boxers. Facta Universitatis – Series Physical Education and sport
- Baron, Mishra, R., 2002. Psychology Indian Subcontinent Edition. 5th ed. Noida
- BRASILE, M. F., & HEDRICK, N. B. (1991) Comparison of participation incentives between adult and young wheelchair basketball players.
- BRASILE, M. F., KLEIBER, A. D., & HARNISCH, O. (1991) Analysis of participation incentives among athletes with and without disabilities. Therapeutic Recreator Journal,
- CAMPBELL, E. (1995) Psychological well-being of participants in wheelchair sports: comparison of individuals with congenital and acquired disabilities. Perceptual and Motor Skills
- Cattell, R. B. (1965). The scientific analysis of personality. Baltimore, Penguin Books.
- Cherry, K. (2019, October 14). What Are the Big 5 Personality Traits?

Ciccarelli, S. K.; White J. N. Adapted by Girishwar Misra (2018). Psychology (5th Edition). Pearson.

Costa, P., Terracciano, A., & McCrae, R. (2001). Gender Differences in Personality Traits Across Cultures: Robust and Surprising Findings. *Journal of Personality and Social Psychology*,

Costa, P.T.; McCrae, R.R. (1992). *NEO personality Inventory professional manual*. Odessa, Fla: Psychological Assessment Resources.

Hutzler, Y., & Bar-Eli, M. (1993). Psychological benefits of sports for disabled people: A review. *Scandinavian Journal of Medicine & Science in Sports*

Ibrahim ME, Weber K, Courvoisier DS, Genevay S. Big Five Personality Traits and Disabling Chronic Low Back Pain: Association with Fear-Avoidance, Anxious and Depressive Moods. *J Pain Res*. 2020

Jang, K. L., McCrae, R. R., Angleitner, A., Riemann, R., & Livesley, W. J. (1998). Heritability of facet-level traits in a cross-cultural twin sample: Support for a hierarchical model of personality. *Journal of Personality and Social Psychology*

John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research*

JOUR, Çeviker, Abdulkerim, Mumcu, Hasan- Kusan, Osman Karakullukçu, Ömür 2020/01/01 Examination on personality types of visually impaired elite athletes VL-10

Komarnicka-Jędrzejewska, Wit Jędrzejewski Aleksander Stuła Olga. "Personality traits of wheelchair basketball players." *IOSR Journal of Sports and Physical Education* 04, no. 01 (February 2017): 42–48

- Lahey B. B. (2009). Public health significance of neuroticism. *The American psychologist*
- Martin, J. J. (2008). Multidimensional self-efficiency and affect in wheelchair basketball players. *Adapted Physical Activity Quarterly*
- Paulsen, P., French, R., & Sherrill, C. (1990). Comparison of wheelchair athletes and nonathletes on selected mood states. *Perceptual and Motor Skills*
- Sepasi, Hossein; Nourbakhsh, Parivash; Aghaei, Hamide (2012) *International Journal of Health, Wellness & Society*
- Skordilis EK, Koutsouki D, Asonitou K, Evans E, Jensen B. Comparison of sport achievement orientation between wheelchair and able-bodied basketball athletes. *Percept Mot Skills*. 2002
- Skordilis, E. K, Gavriilidis, A., Charitou, S., & Asonitou, K. (2003). Comparison of sport achievement orientation of male professional, amateur, and wheel chair basketball athletes. *Perceptual and Motor Skills*
- Skordilis, E. K., Koutsouki, D., Asonitou, K., Evans, E., & Jensen, B. (2002). Comparison of Sport Achievement Orientation between Wheelchair and Able-Bodied Basketball Athletes. *Perceptual and Motor Skill*
- Sporner, M. L., Fitzgerald, S. G., Dicianno, B. E., Collins, D., Teodorski, E., Pasquina, P. F., & Cooper, R. A. (2009). Psychosocial impact of participation in the National Veterans Wheelchair Games and Winter Sports Clinic. *Disability & Rehabilitation*
- Theodore L. Hayes (1996) *How Do Athletic Status and Disability Status Affect the Five-Factor Model of Personality? Human Performance*
- VandenBos, G. R. (Ed.). (2007). *APA Dictionary of Psychology*. American Psychological Association.