

GENDER BASED DIFFERENCES IN EMOTIONAL INTELLIGENCE AND PERSONALITY TRAITS: EVIDENCE FROM VISUALLY IMPAIRED ELITE CRICKETERS AND VISUALLY IMPAIRED NON-CRICKETERS

Original Research

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ABSTRACT

Background: Emotional intelligence (EI) and the Big Five Personality Traits (BFPTs) play crucial roles in shaping social, emotional, and behavioral adaptability. However, gender-based differences in these psychological factors remain underexplored among visually impaired individuals, particularly those engaged in sports. Understanding these variations can help identify how sports participation contributes to emotional and personality development in this unique population.

Objective: The study aimed to investigate gender-related variations in emotional intelligence and personality traits among visually impaired elite cricketers and non-cricketers in Pakistan.

Methods: A quantitative, cross-sectional study design was employed, including 90 visually impaired participants aged 18–35 years, divided equally into 45 elite cricketers and 45 non-cricketers. The sample comprised both males (n=60; 66.7%) and females (n=30; 33.3%). Data were collected using a structured socio-demographic questionnaire, the Big Five Inventory-10 (BFI-10) to assess personality traits, and the short form of the Emotional Intelligence Scale. The data were analyzed using the Mann–Whitney U test through IBM SPSS version 23, with a significance level set at $p<0.05$.

Results: Female visually impaired cricketers demonstrated significantly higher emotional intelligence (Mean Rank=30.80) than male cricketers (Mean Rank=19.10, $p=0.005$), indicating stronger empathy and emotional regulation. No significant gender differences were observed in personality traits, including extraversion ($p=0.131$), agreeableness ($p=0.283$), conscientiousness ($p=0.600$), neuroticism ($p=0.305$), or openness ($p=0.271$) among cricketers. Among non-cricketers, only openness showed a significant gender difference ($p=0.020$), with females scoring higher (Mean Rank=29.03) than males (Mean Rank=19.98), while other traits and EI showed no significant variation.

Conclusion: The findings highlighted that female visually impaired cricketers possess superior emotional intelligence, while female non-cricketers exhibit greater openness to experience. These results emphasize that gender influences emotional and personality dimensions, and sports participation may enhance psychological growth, social adaptability, and emotional well-being among individuals with visual impairments.

Keywords: Athletes, Big Five Personality Traits, Emotional Intelligence, Gender Differences, Pakistan, Personality Development, Visually Impaired.

INTRODUCTION

The Big Five Personality Traits (BFPTs) and Emotional Intelligence (EI) are widely recognized as essential determinants of human behavior that influence both personal and professional outcomes (1,2). These psychological constructs play a crucial role in shaping how individuals perceive, regulate, and express emotions, while also determining their adaptability, communication abilities, and success in various domains of life (3). In the context of sports, particularly among athletes, EI and BFPTs are as vital as physical competence, as they govern an athlete's capacity to handle stress, remain composed under pressure, and cooperate effectively with teammates (4). Emotional intelligence specifically refers to the ability to recognize, understand, and manage one's own emotions as well as those of others (5). Individuals with higher EI generally demonstrate stronger psychological resilience, better interpersonal relationships, and enhanced performance in competitive settings. Conversely, low EI has been associated with anxiety, depressive tendencies, and maladaptive coping behaviors that can impair both sports performance and quality of life (6). Among individuals with visual impairments, EI serves as a protective psychological resource that strengthens coping mechanisms and supports emotional well-being in the face of social and environmental challenges. Personality traits, defined as enduring patterns of thinking, feeling, and behaving, also substantially influence how individuals with visual impairments respond to daily challenges and adapt to adversity (7). The Five-Factor Model—encompassing Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness—is widely utilized for understanding these individual differences (8). Each trait contributes differently to emotional and behavioral outcomes. For instance, conscientiousness is strongly linked with discipline, perseverance, and goal orientation—qualities that help athletes maintain consistent performance and adhere to training schedules. Similarly, openness facilitates adaptability, creativity, and emotional receptivity, which can help visually impaired athletes embrace new experiences and optimize their psychological functioning (9). In contrast, high neuroticism has been correlated with emotional instability and heightened stress reactivity (10). Empirical evidence further indicates that among individuals with disabilities, positive personality traits such as agreeableness, conscientiousness, openness, and extraversion are associated with improved quality of life through the mediating role of perceived social support, underscoring their significance in psychological well-being and social adaptation (11).

Gender-based differences in EI and BFPTs have also been widely documented, including within athletic populations. Studies suggest that females generally score higher in emotional awareness, empathy, and social understanding, whereas males tend to exhibit higher levels of assertiveness and openness to experience (12). These variations may be amplified among individuals with visual impairments due to gendered differences in coping strategies and socialization patterns (13). Participation in sports, particularly team-based activities such as blind cricket, has been shown to foster resilience, cooperation, and self-confidence in visually impaired individuals. Elite visually impaired cricketers rely extensively on auditory cues, emotional regulation, and non-visual coordination, which may contribute to enhanced EI and psychological resilience compared to their non-athletic peers (14). A study on university athletes reported a positive relationship between EI and psychological resilience, with notable gender differences—female athletes exhibited stronger associations between EI and resilience compared to males (15). Despite extensive research on the general population, the interrelationship between BFPTs and EI in visually impaired athletes has not been empirically examined. Prior studies have confirmed significant correlations between these constructs in non-disabled samples (16–18), yet such findings cannot be directly generalized to athletes with visual impairments due to their unique psychosocial context and adaptive mechanisms. Addressing this research gap is essential for understanding how participation in sports influences emotional and personality development among visually impaired individuals. Therefore, this study aims to evaluate gender-related variations in Emotional Intelligence and Personality Traits among visually impaired elite cricketers and non-cricketers, with the objective of identifying how engagement in sports may enhance emotional and psychological attributes within this marginalized population.

METHODS

The present study employed a quantitative, cross-sectional research design to assess gender-based differences in emotional intelligence and personality traits among visually impaired elite cricketers and visually impaired non-cricketers in Pakistan. This design was chosen to allow the comparison of psychological attributes between two groups at a single point in time, providing valuable insight into the influence of sports participation on emotional and personality dimensions in individuals with visual impairments. Ethical approval was

obtained from the institutional research ethics committee prior to data collection and informed consent was secured from all participants before their inclusion in the study, ensuring adherence to ethical standards in human research. The study population comprised visually impaired male and female cricketers and non-cricketers aged between 18 and 35 years. Participants were categorized into three internationally recognized levels of visual impairment according to the World Blind Sports Federation classification: B1 (totally blind), B2 (partially blind), and B3 (partially sighted). For each of the three categories, 10 male participants and 5 female participants were selected from both the cricketer and non-cricketer groups, yielding a total sample of 90 individuals equally divided between the two groups. The mean age of cricketers was 25.84 years ($SD = 4.88$), while non-cricketers had a mean age of 21.47 years ($SD = 2.54$). The mean cricket experience of athletes was reported as 8.27 years ($SD = 40.14$); however, this value appears statistically illogical since the standard deviation (40.14) is disproportionately higher than the mean, suggesting either a typographical or data-entry error that warrants clarification. Participants were included if they met the visual impairment classification and could comprehend either the English or Braille version of the questionnaire. Individuals with cognitive difficulties or those unable to understand the questionnaire were excluded from participation. Data were collected using a structured questionnaire consisting of three sections. The first section recorded socio-demographic data, including gender, age, marital status, educational level, visual category, cricketing status, sports experience, and team role. The second section assessed personality traits using the Big Five Inventory-10 (BFI-10) (18), a concise measure derived from the original 44-item BFI scale. This inventory assesses five domains—openness, conscientiousness, extraversion, agreeableness, and neuroticism—through 10 items rated on a five-point Likert scale ranging from “totally disagree” to “totally agree.” The BFI-10 has been widely validated across various populations, including athletes and students, and demonstrates adequate internal consistency with Cronbach’s alpha values reported between 0.64 and 0.85 in previous studies (17-19). A previous investigation also reported a reliability coefficient of 0.94, supporting the tool’s psychometric robustness (20).

The third section measured emotional intelligence using the short version of the Emotional Intelligence Scale (16), which has been validated for both student and athletic populations. The instrument comprises 10 items encompassing five core domains—self-awareness, emotion regulation, empathy, social skills, and motivation. It has demonstrated satisfactory reliability with Cronbach’s alpha values ranging between 0.86 and 0.90 in previous studies (17,18). Both the BFI-10 and EI scales were translated into Braille for B1 participants to ensure accessibility and comprehension. The tools were freely available and administered with appropriate permissions. Data collection was conducted over a period of three months. Visually impaired cricketers were recruited through the Pakistan Blind Cricket Council (PBCC), while non-cricketers were selected from blind schools, colleges, and universities across Pakistan. Institutional permissions were obtained prior to recruitment. Questionnaires were administered face-to-face in a supportive environment to ensure comprehension and accurate responses. Assistance was provided where necessary—particularly in reading items for participants unable to do so independently—while maintaining neutrality to prevent response bias. Each session took approximately 10–15 minutes to complete. The collected data were coded and analyzed using IBM Statistical Package for the Social Sciences (SPSS) version 23. Descriptive statistics were calculated to summarize demographic and psychometric variables, while the Mann–Whitney U test was used to compare emotional intelligence and personality trait scores between male and female participants and between cricketers and non-cricketers, as the data did not meet normality assumptions. All statistical assumptions were verified prior to analysis.

RESULTS

The study included 90 visually impaired participants, equally divided between cricketers and non-cricketers. Among both groups, males constituted 66.7% ($n=30$) and females 33.3% ($n=15$). In terms of marital status, 55.6% ($n=25$) of cricketers were single and 44.4% ($n=20$) were married, while 95.6% ($n=43$) of non-cricketers were single and only 4.4% ($n=2$) were married. Regarding educational attainment, among cricketers, 24.4% ($n=11$) had completed matriculation, 31.1% ($n=14$) intermediate education, 11.1% ($n=5$) graduation, and 33.4% ($n=15$) had master’s or MPhil qualifications. Conversely, among non-cricketers, 6.7% ($n=3$) were matriculates, 37.8% ($n=17$) intermediates, and 55.5% ($n=25$) held master’s or MPhil degrees. The distribution of participants across visual categories was equal in both groups, with 33.3% ($n=15$) in each of the B1 (total blindness), B2 (partial blindness), and B3 (partial sight) categories. Among cricketers, 24.4% ($n=11$) were batters, 24.4% ($n=11$) bowlers, and 51.1% ($n=23$) all-rounders. The Mann–Whitney U test was performed to compare emotional intelligence (EI) and personality traits between male and female cricketers. Results showed a statistically significant gender difference in total emotional intelligence, with female cricketers (Mean Rank [MR] = 30.80, Sum of Ranks [SR] = 462.00) scoring higher than male cricketers (MR = 19.10, SR = 573.00, $p = 0.005$). This indicates that female cricketers demonstrated greater emotional intelligence. Other personality traits, including extraversion ($p = 0.131$), agreeableness ($p = 0.283$), conscientiousness ($p = 0.600$), neuroticism ($p = 0.305$), and openness ($p = 0.271$), did not exhibit statistically significant gender

differences among cricketers. Among non-cricketers, the Mann-Whitney U test revealed a significant gender difference only in the trait of openness ($p = 0.020$), where female non-cricketers (MR = 29.03, SR = 435.50) were more open to experience than their male counterparts (MR = 19.98, SR = 599.50). No significant gender differences were found for total emotional intelligence ($p = 0.251$), extraversion ($p = 0.742$), agreeableness ($p = 0.596$), conscientiousness ($p = 0.470$), or neuroticism ($p = 0.435$). These results suggest that while female cricketers exhibited higher emotional intelligence, female non-cricketers demonstrated higher openness to experience, with no other significant personality trait differences observed between genders in either group.

Table 1: Demographic Characteristics of Cricketers and Non-Cricketers.

| | | Cricketers | | Non-Cricketers | |
|--------------------|--------------|-------------|--------------|----------------|--------------|
| Variable | Category | Frequency # | Percentage % | Frequency # | Percentage % |
| Gender | Males | 30 | 66.7 | 30 | 66.7 |
| | Females | 15 | 33.3 | 15 | 33.3 |
| Marital status | Singles | 25 | 55.6 | 43 | 95.6 |
| | Married | 20 | 44.4 | 2 | 4.4 |
| Level of education | Matric | 11 | 24.4 | 3 | 6.7 |
| | Intermediate | 14 | 31.1 | 17 | 37.8 |
| | Graduation | 5 | 11.1 | | |
| | Master | 15 | 33.4 | 25 | 55.5 |
| Visual category | B-1 | 15 | 33.3 | 15 | 33.3 |
| | B-2 | 15 | 33.3 | 15 | 33.3 |
| | B-3 | 15 | 33.3 | 15 | 33.3 |
| Serves team as | Batter | 11 | 24.4 | | |
| | Bowler | 11 | 24.4 | | |
| | All-rounder | 23 | 51.1 | | |

Table 2: Mann Whitney U Test among EI and Personality Traits for Male and Female Cricketers.

| Variables | Mean ranked | | Sum of ranked | | P-value | Mann Whitney u | Z |
|------------------------------|-------------|--------|---------------|--------|---------|----------------|--------|
| | Male | Female | Male | female | | | |
| Total Emotional Intelligence | 19.10 | 30.80 | 573.00 | 462.00 | 0.005 | 108.000 | -2.834 |
| Extraversion | 20.97 | 27.07 | 629.00 | 406.00 | 0.131 | 164.000 | -1.511 |
| Agreeableness | 24.45 | 20.10 | 733.50 | 301.50 | 0.283 | 181.500 | -1.074 |
| Conscientiousness | 22.30 | 24.40 | 669.00 | 366.00 | 0.600 | 204.000 | -0.524 |
| Neuroticism | 21.62 | 25.77 | 648.50 | 386.50 | 0.305 | 183.500 | -1.027 |
| Openness | 24.47 | 20.07 | 734.00 | 301.00 | 0.271 | 181.000 | -1.100 |

Table 3: Mann Whitney U Test among EI and Personality Traits for Male and Female Non-Cricketers.

| Variables | Mean ranked | | Sum of ranked | | | | |
|------------------------------|-------------|--------|---------------|--------|---------|----------------|--------|
| | Male | Female | Male | Female | P-value | Mann Whitney u | Z |
| Total Emotional Intelligence | 21.42 | 26.17 | 642.50 | 392.50 | 0.251 | 177.500 | -1.149 |
| Extraversion | 22.55 | 23.90 | 676.50 | 358.50 | 0.742 | 211.500 | -0.329 |
| Agreeableness | 22.28 | 24.43 | 668.50 | 366.50 | 0.596 | 203.500 | -0.530 |
| Conscientiousness | 22.02 | 24.97 | 660.50 | 374.50 | 0.470 | 195.500 | -0.723 |
| Neuroticism | 21.93 | 25.13 | 658.00 | 377.00 | 0.435 | 193.000 | -0.781 |
| Openness | 19.98 | 29.03 | 599.50 | 435.50 | 0.020 | 134.500 | -2.323 |

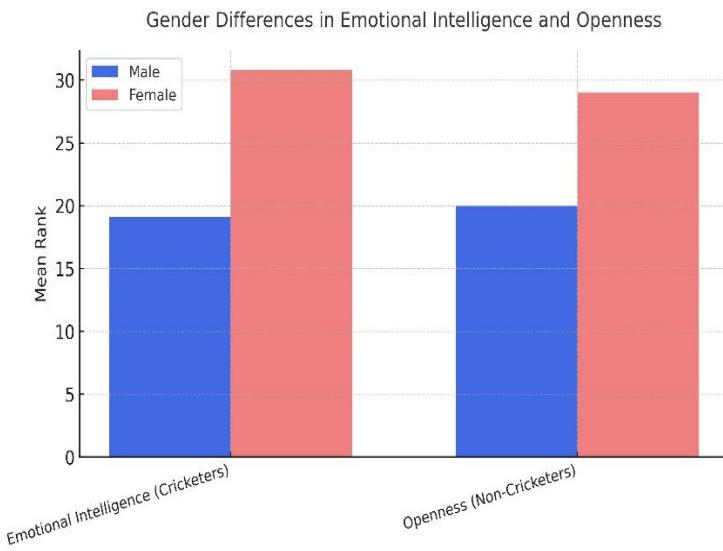


Figure 2 Gender Differences in Emotional Intelligence and Openness

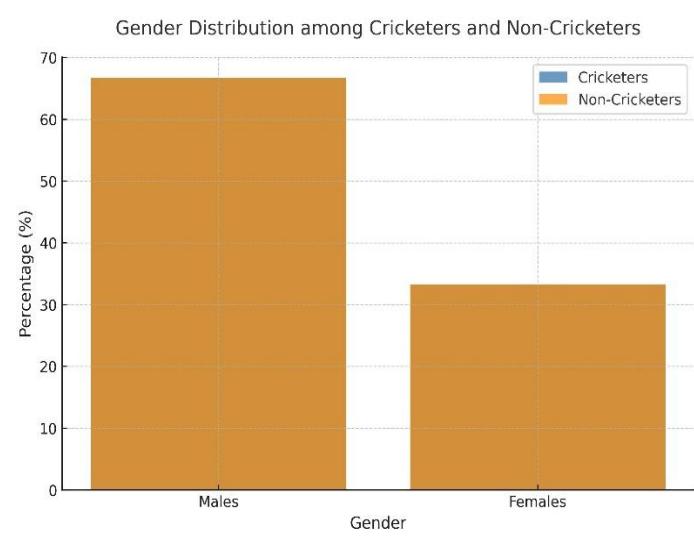


Figure 2 Gender Differences among Cricketers and Non-Cricketers

DISCUSSION

This study aimed to examine gender-related variations in emotional intelligence (EI) and personality traits (PTs) among visually impaired elite cricketers and non-cricketers. The investigation addressed a previously unexplored area by focusing on individuals with visual impairments engaged in competitive sports compared with their non-athletic counterparts. The findings revealed moderate gender-related differences in both EI and the Big Five Personality Traits (BFPTs), emphasizing the psychological diversity that exists within this population. Among visually impaired elite cricketers, female participants demonstrated significantly higher emotional intelligence than male participants, while no statistically significant gender differences were observed in other personality traits. This finding aligns with prior research conducted on general populations, which frequently reported higher emotional awareness, empathy, and regulation abilities among women (16). Such gender differences are believed to stem from greater social sensitivity and interpersonal awareness traditionally observed in women. In the context of visually impaired athletes, these distinctions may be magnified due to reliance on non-visual sensory cues such as tone of voice, spatial awareness, and tactile feedback, which enhance emotional perception and situational understanding. Female visually impaired cricketers may therefore possess heightened emotional adaptability, allowing them to cope effectively with the psychological demands of competitive sports (17,18). This observation is consistent with literature

suggesting that women are more emotionally attuned and resilient when engaging in group-based athletic environments where cooperation and empathy are essential.

Conversely, no significant gender differences were found in the personality traits of extraversion, agreeableness, conscientiousness, neuroticism, or openness among cricketers. This suggests that participation in sports such as cricket may homogenize certain psychological characteristics across genders by promoting teamwork, discipline, and emotional control. Sports participation has been shown to contribute positively to the development of consistent behavioral patterns and adaptive coping strategies, which may minimize gender-related disparities commonly observed in the general population. These findings highlight the potential of sports to serve as an equalizing psychological platform for individuals with disabilities, fostering shared attributes of perseverance, focus, and emotional balance (19). Among non-cricketers, gender differences were limited to the trait of openness, where females demonstrated higher mean ranks compared to males. This finding indicates that female non-cricketers were more open to experience, reflecting greater creativity, emotional receptivity, and adaptability. Although earlier studies on sighted populations have reported minimal gender differences in openness, some investigations have noted that women tend to score higher in openness to feelings, while men exhibit greater openness to ideas (20,21). The higher openness scores observed among visually impaired women may be explained by their enhanced imaginative and sensory compensatory mechanisms, which foster emotional richness and creativity. Furthermore, women who are visually impaired may exhibit a stronger tendency toward exploring new experiences and developing flexible coping strategies in non-athletic contexts. These attributes may serve as psychological adaptations to navigate the limitations imposed by visual impairment. The findings from this research provide valuable insight into the psychological landscape of visually impaired individuals and the moderating role of gender and sports participation. The results suggest that emotional intelligence plays a critical role in fostering psychological resilience among female athletes with visual impairments. Similarly, the trait of openness among female non-athletes highlights their adaptive emotional and creative capacities in non-sporting environments (22,23). Collectively, these findings emphasize the significance of integrating emotional and personality development into rehabilitation and sports training programs for visually impaired populations.

The study demonstrates several strengths, including its focus on a marginalized group rarely addressed in psychological and sports literature, and its use of validated psychometric tools with reliable internal consistency. Moreover, the inclusion of both elite athletes and non-athletes provides a comparative framework that enriches understanding of the influence of sports on personality and emotional domains. However, certain limitations must be acknowledged. The study employed a cross-sectional design, which restricts causal inference between variables. The sample size, although balanced across gender and impairment categories, was relatively small and limited to participants from Pakistan, which may affect the generalizability of findings. Additionally, the unusually large standard deviation in reported sports experience suggests potential data inaccuracies that warrant careful review. Self-reported measures may also have introduced response biases, particularly among participants requiring assistance in questionnaire completion. Future research should expand the sample across diverse geographical regions to enhance representativeness and explore longitudinal designs to track the evolution of emotional intelligence and personality traits over time. Combining self-reported questionnaires with performance-based assessments such as ability-based emotional intelligence tests could provide a more comprehensive understanding of psychological functioning. Developing tailored emotional and social skills training, personality enhancement workshops, and sports-based interventions may contribute significantly to improving the mental health, confidence, and social inclusion of both male and female individuals with visual impairments. Overall, this study underscores that gender differences in emotional intelligence and personality traits persist within visually impaired populations, but their manifestation is influenced by sports participation and psychosocial context. The enhanced emotional intelligence observed among female athletes and the greater openness among female non-athletes illustrate the nuanced interplay between gender, disability, and environmental exposure. These findings provide a foundation for designing evidence-based psychological interventions aimed at empowering visually impaired individuals through emotional development and inclusive sporting opportunities.

CONCLUSION

This study concluded that gender plays a meaningful role in shaping emotional and personality characteristics among visually impaired individuals. Female visually impaired cricketers exhibited greater emotional intelligence, reflecting stronger empathy, emotional awareness, and interpersonal understanding, while female non-cricketers demonstrated higher openness, suggesting enhanced creativity, flexibility, and adaptability in managing challenges. These findings highlight that sports participation can serve as a powerful medium for fostering emotional growth and personality development among individuals with visual impairments, promoting resilience,

confidence, and social integration. The study underscores the need to incorporate psychological and emotional skill-building programs within sports and rehabilitation frameworks to enhance overall well-being and empowerment in this marginalized population.

AUTHOR CONTRIBUTION

| Author | Contribution |
|---------------|---|
| Badar Munir* | Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published |
| Asif Ali | Substantial Contribution to study design, acquisition and interpretation of Data Critical Review and Manuscript Writing Has given Final Approval of the version to be published |
| Qaisar Ali | Substantial Contribution to acquisition and interpretation of Data Has given Final Approval of the version to be published |
| Muhammad Afaq | Contributed to Data Collection and Analysis Has given Final Approval of the version to be published |
| Muhammad Azam | Contributed to Data Collection and Analysis Has given Final Approval of the version to be published |

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