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A COMPARATIVE STUDY ON SELECTED PSYCHOLOGICAL VARIABLES OF UNIVERSITY FOOTBALL PLAYERS

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Abstract:

Sports psychology improves an athlete's mind-set, emotional well-being, and mental skills to improve performance and make sports more enjoyable and successful. Athletes can improve performance, cope with challenges, and optimise their injury by addressing sports psychology. Self-esteem and self-efficacy are interconnected psychological traits that affect an individual's beliefs, attitudes, behaviours, and sports performance. This study examines self-esteem and self-efficacy levels of university representing footballers and the explore relationship between basic physical and psychological traits. This study included 71 male football players. The SES-DSDU and SES-MGBR were used to measure self-esteem and self-efficacy of the footballers. Self-efficacy scores were barely different among footballers with different demographics. However, self-esteem scores differed significantly ($p = 0.01$). The data analysis showed a predicted regression equation of $y = 0.1665x + 59.053$ for self-esteem and self-efficacy, which are marginally related and suggesting a positive relationship between these two factors. Footballers also scored higher than secondary school students in self-esteem and self-efficacy. This higher self-esteem and self-efficacy suggest that footballers are more likely to believe in their abilities to execute skills, make accurate decisions, and contribute to their team's success. These psychological traits can boost athletes' performance and success.

Key Words: Psychological Traits, Self-Esteem, Self-Efficacy, Football, Sports Performance

Introduction:

Sports psychology is a branch of psychology that focuses on understanding the behaviour of athletes and the influence of various psychological factors on sports performance (Weinberg & Gould, 2011). It explores the relationship between psychological variables and their impact, whether positive or negative, on an individual's physical performance. The field of sports psychology also investigates how participation in sports and exercise affects the psychological development of individuals in different sporting situations (Weinberg & Gould, 2011).

The role of psychology in sports extends to various aspects such as selection training, materials, competition level, and rehabilitations, all of which contribute to achieving sports excellence (Samanta & Rout, 2018). Developing appropriate strategies to optimize performance is crucial for attaining high levels of achievement in sports. In highly competitive sports like football, the physical, physiological, and psychological fitness of players is of utmost importance (Nanda, Pandey, & Goswam, 2020). Coaches, trainers, and instructors in physical education must recognize the significance of both the performance aspects and the degrees of participation level in order to support aspiring athletes effectively.

Psychological preparation plays a vital role in overcoming obstacles and failures that athletes may face during performance, such as lack of concentration due to nervousness, negative thoughts, and feelings of being drained.In the modern era of intense competition, the psychological readiness of a team is as crucial as teaching the technical skills of the game (Katko et al., 2010).

Researchers, psychologists, experts, and sports practitioners have extensively studied self-efficacy and self-esteem from various perspectives. Self-efficacy and self-esteem are critical factors that significantly impact sports performance. Both constructs are closely intertwined and influence athletes' motivation, perseverance, and overall well-being. Understanding the role of self-efficacy and self-esteem can help sports psychologists, coaches, and athletes develop strategies to enhance these constructs and optimize athletic performance. According to existing literature, there is a scarcity of research focusing on the impact of psychological traits on performance in Indian football (Sharma et al., 2019). Thus, it is important to investigate the influence of psychological factors on the performance of football players in India. From this point of view, the study aims to examine the relationship between selected psychological traits, namely self-esteem and self-efficacy, among university representing footballers. Additionally, the study seeks to determine the variation in self-esteem and self-efficacy levels across various universities.

Methodology:

The Volunteers: A total of 71 male football players representing different universities were selected for this study (University of Kalyani (UK), n = 18; University of Burdwan (UB), n = 19; Visva Bharati University (VB), n = 15; Jadavpur University (JU), n = 19). The participants' ages ranged from 18 to 26 years. To ensure consistency, all participants had a minimum of five years of playing experience and were free from chronic injuries. The study adhered to the ethical guidelines outlined in the Declaration of Helsinki (World Medical Association, 2013) and received approval from the Institutional Ethical Committee. Prior to participating in the research, written informed consent was obtained from all participants.

Data Collection: The researcher collected basic physical and personal data of the participants. The measurement of self-esteem and self-efficacy was conducted using the Self-Esteem Scale (SES-DSDU), developed by Dr. S. Dhar and Dr. U. Dhar in 2015 (Dhar & Dhar, 2015), and the Self-Efficacy Scale (SES-MGBR), developed by Mathur and Bhatanagar in 2012 (Mathur & Bhatanagar, 2012).

Statistical Analysis: Descriptive statistics were employed to provide an overview of the data, while inferential statistics were utilized to make comparisons and determine relationships. The Shapiro-Wilk normality test was conducted to assess the distribution pattern of the dataset, revealing that a significant portion of the data adhered to the normal distribution curve. Therefore, a parametric test was employed. The statistical analysis and graphical presentation were performed using Gnumeric spreadsheet software version 1.10.16. The significance level was set at $\alpha \leq 0.05$.

Results:

Table 1: Demographic Characteristics of the footballers

Parameters	UK	UB	VB	JU	P value
Age (y)	20.8 ± 1.5	20.7 ± 1.7	21.1 ± 1.2	21.7 ± 1.1	0.2724
Height (cm)	170.3 ± 6.0	171.9 ± 7.2	167.0 ± 7.4	165.1 ± 4.5 ^{b*}	0.0114
Body mass (kg)	62.0 ± 7.5	64.1 ± 7.8	56.9 ± 6.7 ^{b*}	59.7 ± 6.7	0.0200

Data are represented as Mean ± SD, a= Compared to UK; b= Compared to UB; c= Compared to VB, Level of significance: * = ≤0.05

Table 1 displays the demographic traits of university representing footballers. It reveals that the average height of UB footballers is significantly greater than that of JU footballers (p = 0.032). Conversely, the body mass of UB footballers is significantly higher than that of VB footballers (p = 0.045).

Figure 1: Graphical representation of Body mass Index (BMI) of different university representing footballers

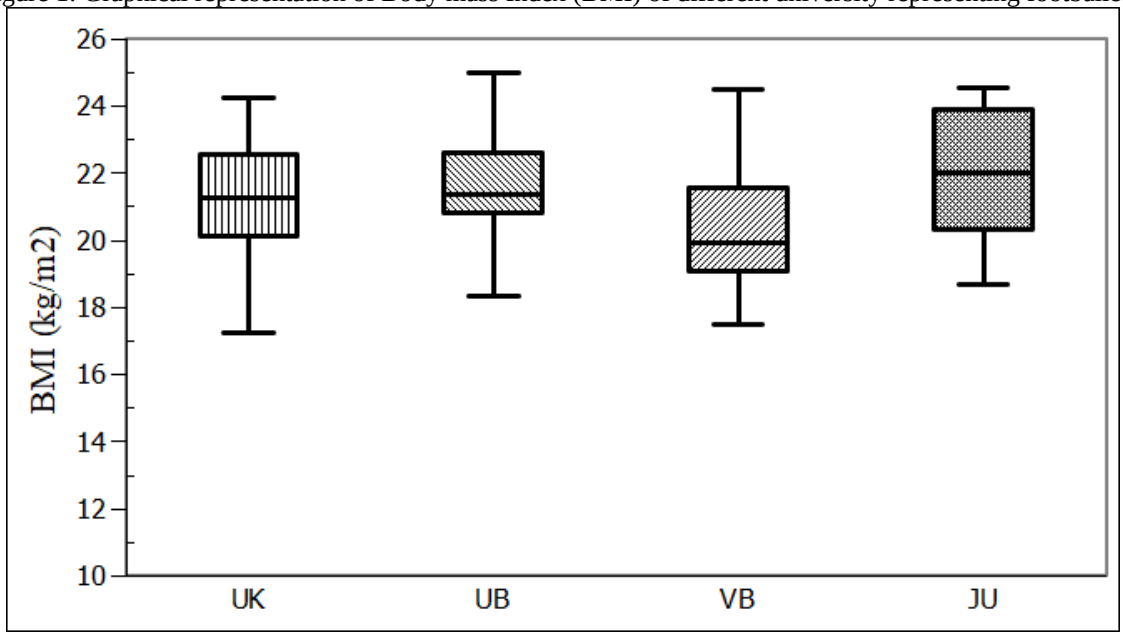


Figure 1 depicts a visual representation of the Body Mass Index (BMI) for footballers from various universities. However, no statistically significant difference was found among the groups, as indicated by a p-value of 0.085.

Figure 2: Graphical representation of Self-esteem of different university representing footballers

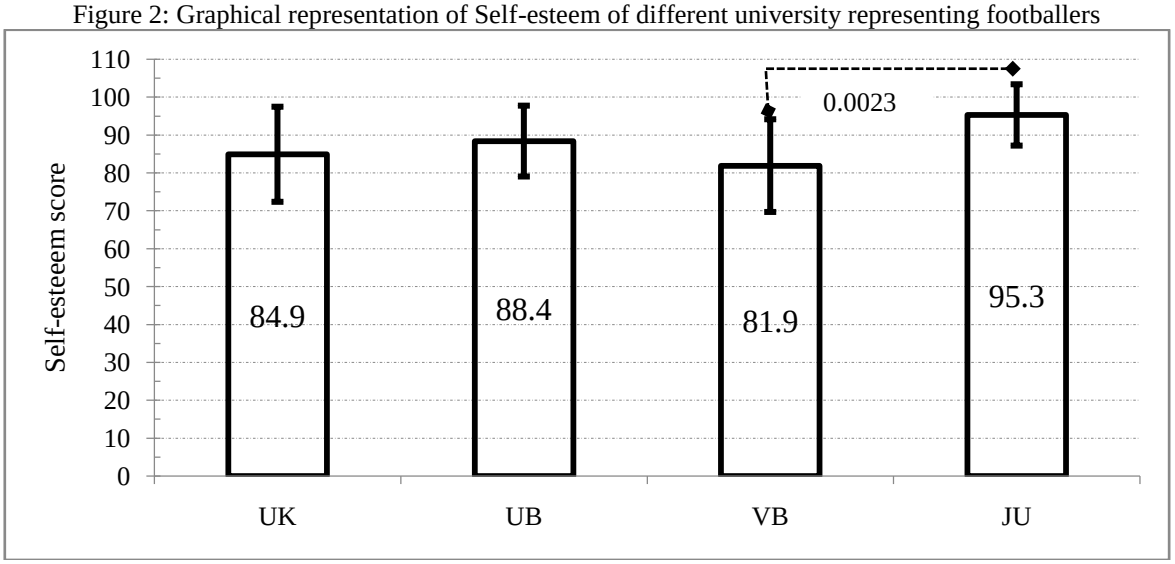
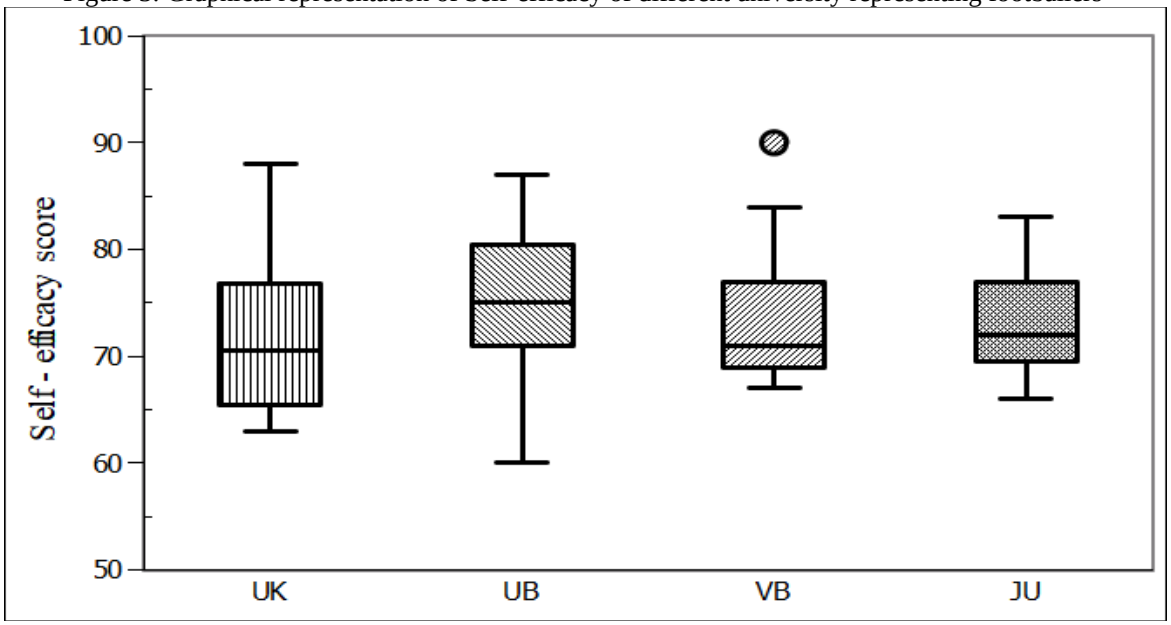


Figure 2 illustrates a graphical representation of self-esteem, indicating a noteworthy distinction between VB and JU (p = 0.002).

Figure 3: Graphical representation of Self-efficacy of different university representing footballers



The box plot shown in Figure 3 indicates that there is no statistically significant difference in self-efficacy among footballers from different universities.

Table 2: Psychological traits (self-esteem and self-efficacy) scores of the footballers

parameters	UK	UB	VB	JU	P value
Self-Esteem	84.9 ± 12.5	88.4 ± 9.3	81.9 ± 12.2	95.3 ± 8.1^{c*}	0.0103
Self-Efficacy	72.2 ± 7.9	75.0 ± 7.4	73.6 ± 6.5	73.5 ± 5.2	0.6932

Data are represented as Mean ± SD, a= Compared to UK; b= Compared to UB; c= Compared to VB, Level of significance: * = ≤0.05

Table 2 presents the psychological trait scores (self-esteem and self-efficacy) of footballers from different universities. The findings reveal a significant difference in self-esteem between the VB and JU groups. However, there were no significant differences observed in self-efficacy across the various groups.

Table 3: Comparison of self-esteem among the university level footballers

ANOVA						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	1632.91	3	544.30	4.0561	0.010385	2.7416
Within Groups	8990.92	67	134.19			
Total	10623.83	70				
Tukey's Post Hq test after One Way ANOVA to explore specific significant different among the groups						

Compared Gr.	Mean diff.	n of 1st Gr.	n of 2nd Gr.	SE	q	q table
UK vs UB	-3.48	18	19	2.69	-1.29	3.74
UK vs VB	2.99	18	19	2.69	1.11	3.74
UK vs JU	-10.38	18	15	2.86	-3.62	3.74
UB vs VB	6.47	19	19	2.66	2.44	3.74
UB vs JU	-6.90	19	15	2.83	-2.44	3.74
VB vs JU	-13.37	19	15	2.83	-4.73	3.74

Table 3 displays the comparison of self-esteem levels among footballers at the university level. The analysis of variance (ANOVA) results indicate that there is a significant difference between the groups ($p = 0.010385$), suggesting that self-esteem scores vary across the universities. The table also provides the F-value (4.0561) and critical F-value (2.7416) for reference. Additionally, the Tukey's post hoc test identifies specific significant differences in self-esteem scores between the VB and JU groups.

Table 4: Comparison of psychological trait (self-efficacy) among the university level footballers

ANOVA						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	68.91	3	22.97	0.49	0.6932	2.7415
Within Groups	3166.42	67	47.26			
Total	3235.32	70				

Based on the analysis of variance (ANOVA) results presented in table 4, there is no significant difference in self-efficacy among the different groups of university-level footballers. This implies that the levels of self-efficacy are similar across these groups.

Table 5: Coefficient of correlation among psychological and basic physical variables

r	Height (cm)	Body Mass (kg)	Self-esteem
Body mass (kg)	0.68		
t	7.64		
p-value	9.16^{e-11}		
Self-esteem	0.23	0.25	
t	1.99	2.11	
p-value	0.05	0.04	
Self-efficacy	0.11	0.05	0.30
t	0.92	0.42	2.63
p-value	0.36	0.68	0.01
	Correlations in bold are significant at the 5% level (2-tailed)		

Table 5 presents the correlations between psychological and basic physical variables. The results indicate that body mass is positively correlated with height ($r = 0.68$, $p < 0.001$) and shows a weaker positive correlation with self-esteem ($r = 0.23$, $p = 0.05$). Moreover, there is a significant positive correlation between self-esteem and self-efficacy ($r = 0.25$, $p = 0.04$). This suggests that individuals with higher self-esteem tend to exhibit higher levels of self-efficacy as well.

Figure 4: Relationship between of Self-esteem and self-efficacy among the footballers

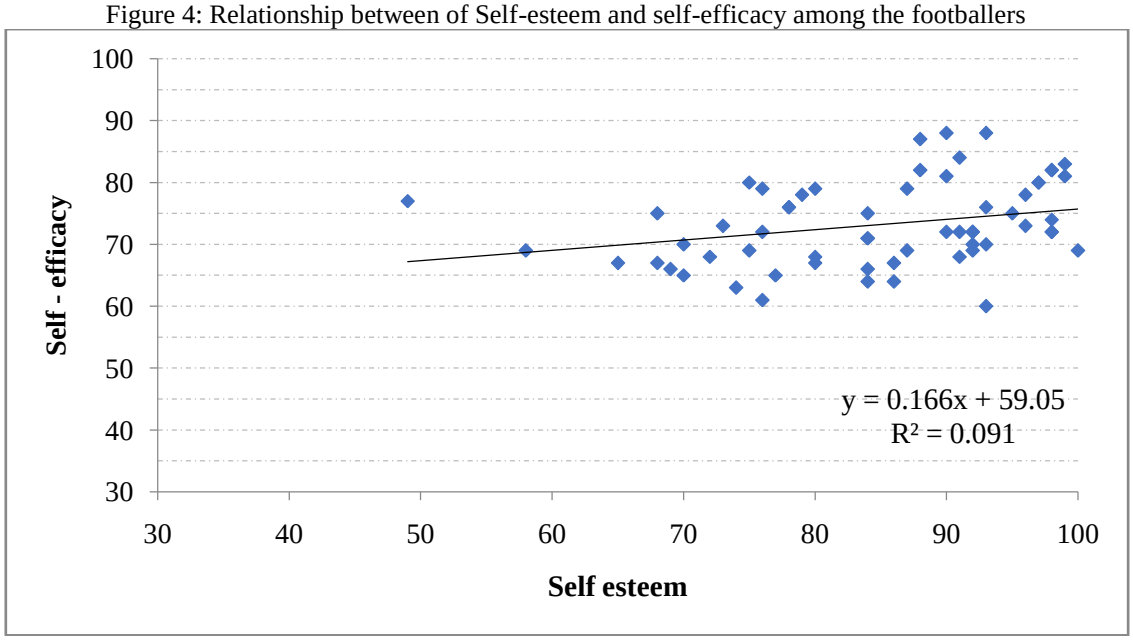


Figure 4 investigates the connection between two psychological traits. The analysis reveals a moderately positive correlation, which is marginally significant, between self-esteem and self-efficacy. The predicted regression equation is $y = 0.1665x + 59.053$, indicating that as self-esteem increases, so does self-efficacy. The coefficient of determination (R^2) is 0.0911, suggesting that approximately 9.11% of the variation in self-efficacy can be explained by self-esteem.

Discussions:

The performance and competitiveness of football players are greatly impacted by physical attributes such as age, height, body mass, and body mass index (BMI). Examining these demographic factors in Indian footballers can provide valuable insights into their physical profiles, identify trends, and highlight areas for improvement (Chakraborty et.al., 2018; Deb et. al., 2020). Research conducted by Chakraborty, Subba, and Hazra (2018) in the Indian Super League (ISL) revealed that the majority of players, including university-level footballers, were aged between 20 and 30 years. Similarly, Deb, Mukherjee, and Bose (2020) studied the age distribution of players in the I-League, India's top professional football league, and found a similar trend with most players falling within the same age range. Height plays a crucial role in the performance of football players, particularly in areas like aerial duels and positional play. Ray, Rathi, and Ghosh (2019) investigated the physical attributes of Indian youth footballers and discovered that the average height for players aged 15-18 years was 170.3 cm, similar to university-level footballers. However, footballers from VB and JU were shorter than Indian youth footballers. The body mass of football players significantly affects their physicality and ability to compete in different positions on the field. Research by Kesavachandran et. al. (2012) revealed that the body mass of footballers is lower than the average for Indian individuals in their respective age groups. In a study by Mandal and colleagues (2020) that examined the BMI of Indian male football players across various age categories, it was found that the average BMI ranged from 21.14 to 23.85 kg/m² across the age groups. This finding supports the observations made in the aforementioned studies.

Self-esteem and self-efficacy play crucial roles in the performance of football players. Self-esteem refers to an individual's overall evaluation of their self-worth and personal value, while self-efficacy pertains to their belief in their ability to accomplish specific tasks or goals, which is very much important to execute technical and tactical skill in accordance to interest of the team. These factors greatly impact an athlete's confidence, motivation, and resilience, thereby influencing their performance on the football field. Bandura (1977) highlighted the importance of self-efficacy in sports performance, stating that individuals with higher levels of self-efficacy are more likely to set challenging goals, persist in the face of obstacles, and perform at their best. In the context of football, players with high self-efficacy are more inclined to believe in their ability to execute skills, make accurate decisions, and contribute to their team's success.

Similarly, self-esteem has been found to significantly impact athletic performance. Harter (1999) emphasized that individuals with higher levels of self-esteem are more likely to engage in adaptive behaviours, take risks, and demonstrate greater resilience when faced with setbacks. In football, players with healthy self-esteem are more likely to display assertiveness, take on leadership roles, and effectively cope with performance-related stressors. Studies have compared the self-esteem scores of footballers to higher secondary school children, showing higher self-esteem among football players (Subhankar, 2018). Moreover, self-esteem and self-efficacy are interconnected and mutually reinforcing. Research by Robazza and Bortoli (2007) highlighted that athletes with higher self-esteem tend to develop stronger self-efficacy beliefs, which, in turn, contribute to enhanced performance outcomes. Conversely, low self-esteem and self-doubt can undermine self-efficacy and hinder performance in football. Coaches and sports psychologists play a crucial role in fostering positive self-esteem and self-efficacy in football players. Strategies such as providing constructive feedback, setting realistic goals, and utilizing imagery and visualization techniques can help enhance self-beliefs and boost performance (Vealey, 2001). Additionally, creating a supportive and encouraging team environment contributes to the development of healthy self-esteem and self-efficacy among players (Horn, 2008). Enhancing self-esteem and self-efficacy has significant implications for the performance of football players, promoting confidence, motivation, and resilience, ultimately leading to improve on-field performance. Coaches and sports psychologists should prioritize strategies aimed at fostering positive self-esteem and self-efficacy among football players to optimize their potential.

Conclusion:

The performance and competitiveness of football players are significantly influenced by physical attributes and a trivial difference has been observed compared to Indian footballers. Moderate to high self-efficacy and self-esteem has been observed which strong enough to set challenging goals, persist in the face of obstacles, and perform at their best as well as more inclined to engage in adaptive behaviours, take risks, and demonstrate greater resilience, assertiveness, take on leadership roles, and effectively cope with performance-related stressors. Coaches and sports psychologists play a crucial role in fostering positive self-esteem and self-efficacy in football players. Strategies such as providing constructive feedback, setting realistic goals, and utilizing imagery and visualization techniques can enhance self-belief and boost performance. Additionally,

creating a supportive and encouraging team environment contributes to the development of healthy self-esteem and self-efficacy among players.

Conflicts of Interest:

The authors declare no conflict of interest for the study.

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