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Mental Health, Emotional Intelligence, and Self-Esteem in Athletes and Non-Athletes: A Comparative Study

Research Article

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ABSTRACT

Involvement in sports and other physical pursuits might be more advantageous for student-athletes in terms of their mental, emotional, and social development than their non-athlete peers. This study examined the differences in mental health, emotional intelligence, and self-esteem between athletes and non-athletes among university students. A total of 294 participants (147 athletes and 147 non-athletes) were recruited through the convenience sampling technique. Data collection involved the Bangla version of the General Health Questionnaire (GHQ-12), Emotional Intelligence Scale, and Self-Esteem Scale. Data were analyzed using Pearson product-moment correlation, *t*-test, and hierarchical regression. Pearson product-moment correlation analysis revealed a strong negative interconnection between emotional intelligence and mental health problems within both groups. Findings indicated that athletes reported significantly lower mental health problems as compared to non-athletes. Conversely, athletes exhibited significantly higher emotional intelligence and self-esteem than their non-athlete counterparts. Hierarchical regression analysis showed that emotional intelligence significantly predicted mental health for athletes and non-athletes, while self-esteem showed no significant impact. The findings expressed a crucial role of emotional intelligence in mental health. It also highlights the implications of interventions to enhance emotional intelligence in athletic and non-athletic populations.

Keywords: *Mental health, emotional intelligence, self-esteem, athletes, and non-athletes*

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1. Introduction

The significant psychological constructs impacting university students' academic success, social relationships, and overall well-being include mental health, emotional intelligence (EI), and self-esteem (Duckworth et al., 2007; Roberts et al., 2006). These constructs are central to understanding how individuals cope with the demands of university life and how they interact with their environment. Mental health is defined as a state of well-being where individuals realize their abilities, cope with everyday stresses, work productively, and contribute to their community (Singh & Tiwari, 2016). Emotional intelligence (EI) is another crucial factor that refers to the ability to perceive, understand, and regulate emotions in oneself and others (Mayer et al., 2004), while Self-esteem, or the evaluation of one's self-worth, is another crucial psychological construct linked to overall well-being and academic success (Rosenberg, 1965). In the context of university students, there is growing evidence suggesting that students involved in sports may have distinct advantages over their non-athlete peers concerning their emotional, psychological, and social well-being (Sato et al., 2023).

Mental health is a critical area of concern for university students, as the transition into higher education can be challenging, with increasing academic demands, social pressures, and personal responsibilities (Pedersen & Saltin, 2006). Several studies suggest that athletes report better mental health than non-athletes, with lower rates of anxiety and depression, and greater overall life satisfaction (Martens, 1997). According to research, athletes tend to have better stress management capabilities, which may protect them from the mental health issues commonly experienced by university students (Hollis et al., 2024). A cross-cultural study found that university athletes consistently exhibit better mental health outcomes, regardless of cultural context, suggesting that sports participation offers universal mental health benefits (Zhou et al., 2022). This finding is supported by other studies, which show that athletes are less prone to psychological distress and exhibit greater resilience to stress than their non-athlete counterparts (Nicholls & Polman, 2007). The mental health benefits of sports participation are thought to stem from various biological mechanisms, such as the release of neurotransmitters like endorphins, serotonin, and dopamine, which enhance mood and alleviate stress (Dishman & O'Connor, 2009). Moreover, regular exercise has been linked to improved neurogenesis, particularly in the hippocampus, which plays a critical role in emotional regulation and memory (Cotman & Berchtold, 2002). These biological processes contribute to the mental health improvements commonly seen in athletes, particularly to stress management and mood regulation (Guszkowska, 2004).

EI is particularly relevant in the context of university students, as they must navigate the emotional challenges of academic pressure, social relationships, and personal development. High EI has been associated with various positive psychological outcomes, including better interpersonal relationships, increased academic performance, and enhanced emotional regulation (Salovey & Mayer, 1990; Goleman, 2005). Athletes have been shown to score higher on measures of emotional intelligence than their non-athlete peers, suggesting that participation in sports may foster the development of emotional regulation, stress tolerance, and interpersonal communication skills (Rodríguez-Romo et al., 2021). Research highlighted that athletes demonstrate superior emotion regulation abilities compared to non-athletes, which may explain their better mental health and coping skills (Chang et al., 2019; Fox, 2000). Further studies have also shown that athletes exhibit greater stress tolerance, a key component of EI, which enables them to manage performance pressures and life stressors more effectively (Tossici et al., 2024).

Self-esteem influences how individuals perceive and respond to challenges, with higher self-esteem often leading to more adaptive coping strategies

(Sonstroem & Morgan, 1989). Research suggests that high self-esteem is associated with better psychological health, greater resilience, and higher academic achievement (Marsh & Shavelson, 2010). In the context of university students, athletes have been found to report higher self-esteem than non-athletes, a pattern that may be explained by the increased physical fitness, social support, and sense of achievement associated with sports participation (Ouyang et al., 2020). Numerous studies have shown a positive relationship between sports participation and self-esteem, with athletes consistently reporting higher self-esteem levels than non-athletes (Sonstroem & Morgan, 1989). Furthermore, a meta-analysis found that sports participation has a consistently positive effect on self-esteem among university students, highlighting the importance of engaging in physical activity to enhance self-perception and overall well-being (Li et al., 2014).

In the context of university life, understanding the variations in mental health, emotional intelligence, and self-esteem between student-athletes and non-athletes is crucial. Given that university students are under constant pressure to perform academically while also navigating complex social environments, it is important to examine how different forms of engagement—such as participation in sports—may influence these psychological constructs. Sports engagement has been linked to improved emotional intelligence, better mental health, and higher self-esteem (Martín-Rodríguez et al., 2024; Simmons & Childers, 2013), but the existing literature lacks comprehensive studies that directly compare these constructs across both athletes and non-athletes in the university setting. This study aims to fill this gap by exploring the differences between university student-athletes and non-athletes in terms of their mental health, emotional intelligence, and self-esteem.

Research objectives

The main objective of this study was to explore the scenario in mental health, emotional intelligence, and self-esteem among university athletes and non-athletes. We have taken three specific objectives as follows:

I. To find out whether there is any significant association among mental health, emotional intelligence, and self-esteem;
II. To examine whether there are any significant differences in overall levels of mental health, emotional intelligence, and self-esteem between athlete and non-athlete university students;
III. To examine the influence of emotional intelligence and self-esteem on mental health among university students.

2. Methods and Materials

2.1 Sample

In the study, a total of 294 male students (athletes = 147, non-athletes = 147) from Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, participated. Participants' ages ranged between 19 and 25 years (M = 22.0 years, SD = 1.8). They were drawn from 32 academic departments and represented various years of study, ranging from first year to master's level. Athletes were defined as students actively competing in university-level sports, including intra-university and inter-university competitions, while non-athletes were those who did not regularly participate in organized sports.

2.2 Research Design

A cross-sectional survey research design was followed to run the study.

2.3 Measures

The following tools were used for data collection in the current study.

2.3.1 Bangla Version of General Health Questionnaire (GHQ-12). The GHQ-12, originally developed by Goldberg (1979), identifies non-psychotic psychiatric disorders in various settings. The adapted Bangla version (Sorcar & Rahman, 1989) contains 12 items—6 positive (1, 3, 4, 7, 8, 12) and 6 negatives (2, 5, 6, 9, 10, 11). Scoring

ranges from 0 = *'strongly agree'* to 3 = *'not at all agree'* for positive items, with reverse scoring for negative items, indicating greater psychological distress at higher scores. The Bangla version showed satisfactory internal consistency (Cronbach's alpha = .81) and moderate test-retest reliability (.57). In this study, Cronbach's alpha was .84.

2.3.2 Bangla Version of Emotional Intelligence Scale (Uzzaman & Karim, 2017). The original scale was developed by Hyde et al. (2002) and intended for use with a wide range of people, including adults, college students, and adolescents. There are 34 items, of which 13 were negative. The negative items are (7, 8, 9, 10, 12, 13, 14, 15, 18, 20, 22, 25, 26). This scale is a 5-point Likert-type scale ranging from (*strongly agree*) 5 to (*strongly disagree*) 1 and reverse for negative items. A higher score expressed a higher amount of emotional intelligence. The Bangla version of Cronbach alpha ranged between .92 to .93. It also has a strong convergent and discriminant validity (Uzzaman & Karim, 2017). In this study, the Cronbach's alpha was .81.

2.3.3 Bangla Version of Self-Esteem Scale (Akhter & Ferdous, 2019). The scale, originally developed by Rosenberg (1965), is a 10-item tool featuring a four-point response format ranging from strongly disagree to agree. It consists of five positive (1, 2, 4, 6, 7) and five negative items (3, 5, 8, 9, 10). Positive items score ranging from (1) *strongly disagree* to (4) *strongly agree*, while negative items received the opposite score. Higher scores expressed higher self-esteem. The total score ranges from 10 to 40. It has a good internal consistency reliability, Cronbach's alpha = .86. In this study, Cronbach's alpha was .85.

2.4 Procedure

The researchers first built rapport with the participants through conversation and informed them about the purpose of the research. Then, a researcher-made questionnaire was provided to each participant. Participants were encouraged to share any concerns or experiences related to the questions. If any participant was unsure about the questions, the researchers offered clarification. To complete the survey, participants needed 20 to 30 minutes. The participants were assured that their personal information would remain confidential and would be used only for data collection. Once the data was gathered, the researchers expressed gratitude to the participants.

2.5 Data Processing and Analyses

We used SPSS version 27 to input and analyze data. Firstly, we calculated the coefficient to verify the reliability of the measurements, mean, and standard deviation. Secondly, we used Pearson's product-moment correlation to examine the relationships between the variables. Thirdly, an independent sample *t*-test was used to explore the differences between athletes and non-athletes regarding mental health, emotional intelligence, and self-esteem. Finally, we applied hierarchical multiple regression to examine the influence of emotional intelligence and self-esteem on mental health.

2.6 Ethical Consideration

For data collection, informed consent was obtained from all participants before their involvement in the study. The participants were fully informed about the study's objectives, the potential benefits, and any possible risks. Additionally, we ensured that all participant information would remain confidential and would be used only for data analysis. Lastly, participants were informed that they had the right to withdraw from the study at any time and that any data related to them would be removed from the database upon their withdrawal.

3. Results

Before applying inferential statistics, the normality of the collected data on mental health, emotional intelligence, and self-esteem scores was checked. Regarding the Shapiro-Wilk and Kolmogorov-Smirnov tests, p-values are above .05, indicating the variables are normally distributed (Goodman, 1954). After ensuring the satisfactory psychometric

properties of the measuring tools of the study, a Pearson product-moment correlation was used to find the relationships among mental health, emotional intelligence, and self-esteem. Among athletes, a significant and strong negative correlation was found between mental health issues and emotional intelligence (r = -.708, p < .01), indicating that athletes with higher emotional intelligence tend to experience fewer mental health issues. Similarly, a significant negative correlation was observed between mental health and emotional intelligence among non-athletes (r = -.602, p < .01), although the correlation was slightly weaker. This suggests that emotional intelligence offers a protective role for mental health in both groups. The correlation between mental health and self-esteem was weak and non-significant for both athletes (r = -.029) and non-athletes (r = -.129). Emotional intelligence and self-esteem showed weak and non-significant correlations for both groups (athletes: r = .120, non-athletes: r = .037).

To test the differences in mental health, emotional intelligence, and self-esteem between athletes and non-athletes, independent sample t-tests were performed (Figure 1). The results illustrate that athletes reported significantly lower mental health scores (M = 14.94, SD = 3.07) compared to non-athletes (M = 16.11, SD = 3.36), with a significant difference (t = -3.12, p < .05). Athletes also exhibited significantly higher emotional intelligence (M = 126.10, SD = 8.27) than non-athletes (M = 121.97, SD = 10.44), with a significant difference (t = 3.76, p < .05). Furthermore, athletes reported significantly higher self-esteem (M = 23.93, SD = 3.79) compared to non-athletes (M = 17.29, SD = 3.06), with a significant difference (t = 16.53, p < .05).

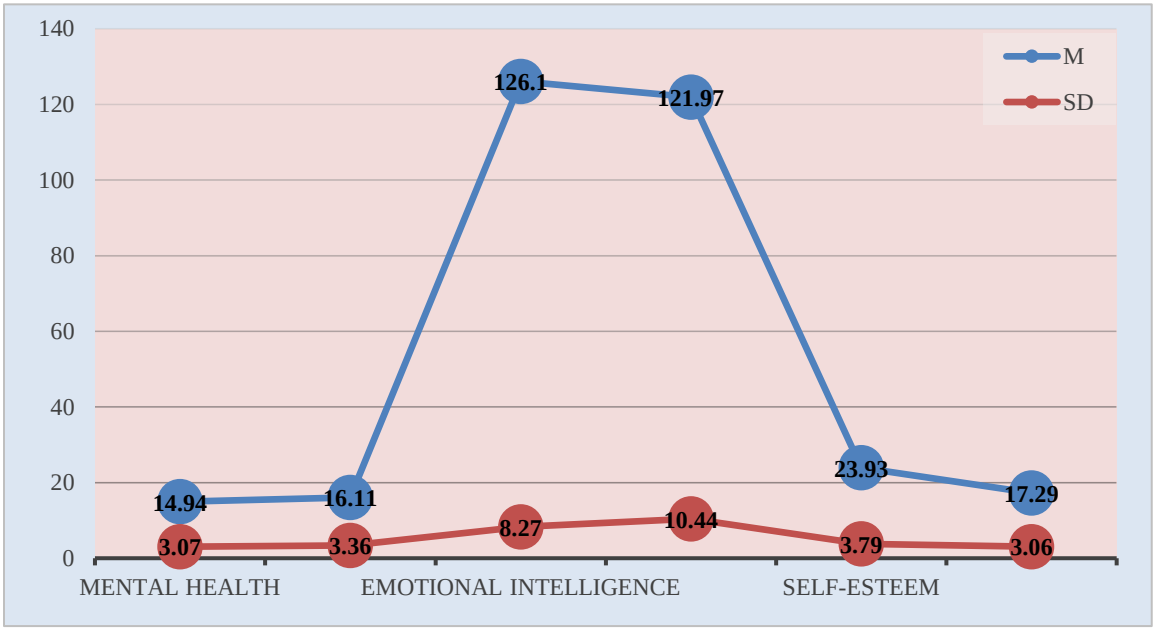

Figure 1. Comparing Mental Health, Emotional intelligence, and Self-esteem between Athletes and Non-athletes University Students

Finally, hierarchical regression analysis was performed to examine the predictive role of emotional intelligence and self-esteem in mental health issues (Table 1). For athletes, emotional intelligence was a significant predictor of mental health (β = -.71, p < .001), explaining 50% of the variance (R^2 = .50). In contrast, self-esteem did not significantly improve the model (ΔR^2 = .00),

suggesting that emotional intelligence plays a more critical role in influencing mental health among athletes. For non-athletes, emotional intelligence was also a significant predictor of mental health (β = -.60, p < .001), explaining 36% of the variance (R^2 = .36), but the addition of self-esteem did not significantly enhance the model (ΔR^2 = .01), indicating that other factors might be more important for non-athletes' mental health.

Table 1. Hierarchical Regression Analysis for Variables Predicting Athletes and Non-Athletes' Mental Health

Type	Variables	*B*	95% *CI*		*SE B*	β	R^2	ΔR^2
			LL	*UL*				
Athletes	Model 1						.50	.50***
	Constant	48.12	42.67	53.56	2.75			
	EI	-0.26	-0.31	-0.22	0.02	-.71		
	Model 2						.50	.01
	Constant	47.33	41.65	53.01	2.87			
	EI	-0.27	-0.31	-0.22	0.02	-.72		
	Self-esteem	-0.05	-0.05	-0.14	0.05	.06		
Non-athletes	Model 1						.36	.36***
	Constant	39.73	34.58	44.89	2.61			
	EI	-0.19	-0.24	-0.15	0.02	-60		
	Model 2						.37	.01
	Constant	37.55	31.77	43.33	2.92			
	EI	-0.19	-0.23	-0.15	0.02	-.60		
	Self-Esteem	-0.12	-0.03	0.26	0.07	.11		

Note. CI = confidence interval; *LL = lower limit*; *UL = upper limit*. ***p < .001. EI = *Emotional Intelligence*.

4. Discussion

This study aimed to explore the relationships among mental health, emotional intelligence, and self-esteem in university students, with a focus on comparing athletes and non-athletes. The first objective was to examine the associations between mental health and emotional intelligence. Among athletes, there is a significant and strong negative correlation between mental health issues and emotional intelligence. This suggests that athletes with higher emotional intelligence tend to experience fewer mental health problems. Research supports this relationship, indicating that emotional intelligence acts as a buffer against stress, anxiety, and depression (Mayer et al., 2008).

Emotional intelligence enhances coping strategies, enabling individuals to better manage their emotional responses to stressors commonly faced in athletic environments, such as performance pressure and competition (Laborde et al., 2016). Similarly, non-athletes show a significant negative correlation between mental health and emotional intelligence. Although slightly weaker than the correlation observed in athletes, this finding highlights the protective role of emotional intelligence. Higher emotional intelligence is

associated with better emotional regulation and resilience, reducing the risk of mental health issues. The correlation between mental health and self-esteem is weak and non-significant for both athletes and non-athletes. This finding contrasts with previous research that has consistently demonstrated a link between low self-esteem and poor mental health outcomes, including depression and anxiety (Orth & Robins, 2013).

For athletes, self-esteem may be more closely tied to performance-based self-worth rather than psychological well-being, which could explain the weak association. Athletes may exhibit high self-esteem due to their physical abilities and achievements, even when experiencing mental health challenges (Slutzky & Simpkins, 2009). For non-athletes, the weak correlation may suggest that other factors, such as social support or life satisfaction, play a more substantial role in influencing mental health outcomes. For both athletes and non-athletes, the correlation between emotional intelligence and self-esteem is weak and nonsignificant. Although prior studies have found that individuals with higher emotional intelligence tend to have greater self-esteem due to their ability to navigate social interactions and manage emotions effectively (Schutte et al., 1998), the current findings do not support a strong relationship between these variables. In athletic populations, self-esteem is more influenced by external achievements and physical performance than by emotional intelligence. For non-athletes, self-esteem may be shaped by psychosocial factors unrelated to emotional intelligence.

The second objective was to explore the differences in mental health, emotional intelligence, and self-esteem between athletes and non-athletes among university students, revealing that athletes reported significantly lower mental health issues, higher emotional intelligence, and higher self-esteem. These findings align with existing literature emphasizing the psychological benefits of athletic involvement. Specifically, athletes demonstrated lower mental health concerns, which supports research by Reed and Buck (2009) and Eime et al. (2013), indicating that physical activity and sports participation contribute to reduced anxiety, depression, and stress. This protective effect may stem from the positive impact of sports on brain function and stress regulation, as well as the social support and sense of accomplishment athletes experience (Penedo & Dahn, 2005). Moreover, athletes exhibited significantly higher emotional intelligence, which is consistent with studies suggesting that sports participation fosters skills such as emotional regulation, empathy, and resilience (Laborde et al., 2016). Athletes' ability to manage emotions under pressure, coupled with their experience in navigating challenges, may enhance emotional intelligence, thereby promoting better coping strategies both in sports and in life (Mayer et al., 2008). Additionally, athletes reported higher self-esteem, a finding consistent with research that links physical activity with increased self-worth through skill development, goal achievement, and social recognition (Fox, 2000). The sense of identity and belonging within athletic environments may further boost self-esteem, while non-athletes, who may derive self-worth from other areas like academics or social relationships, might face lower self-esteem due to different challenges (Orth et al., 2013).

The third objective was to examine the influence of emotional intelligence and self-esteem on mental health among university students. In athletes, emotional intelligence significantly predicted mental health issues. This aligns with research showing that emotional intelligence helps athletes manage stress and regulate emotions, which is critical in high-pressure competitive environments (Laborde et al., 2016). The protective role of EI in mental health is further supported by studies highlighting its ability to foster resilience in athletes (Landa & López-Zafra, 2010). However, the addition of self-esteem with emotional intelligence did not significantly improve the predictive effect on mental health. The finding suggests that emotional intelligence significantly predicted

mental health for athletes, while self-esteem showed no significant impact. This finding may be attributed to athletes' self-esteem being closely tied to performance outcomes rather than their overall mental well-being (van Raalte et al., 2017).

For non-athletes, emotional intelligence was also a significant predictor of mental health, although the relationship was weaker than that observed in athletes. This could reflect the different stressors faced by non-athletes, who do not experience the same performance pressures but still benefit from emotional intelligence in managing everyday challenges (Martins et al., 2010). However, the addition of self-esteem with emotional intelligence did not significantly improve the predictive effect on mental health. The finding suggests that emotional intelligence significantly predicted mental health for non-athletes, while self-esteem showed no significant impact. This supports findings that self-esteem's impact on mental health is often moderated by external influences, such as life satisfaction and social relationships (Orth et al., 2012).

This study had several limitations. The use of convenience sampling limits the generalizability of the findings, as the sample consisted primarily of university students. The reliance on self-reported data may introduce response biases, and the cross-sectional design restricts the ability to draw causal conclusions. Future research should address these limitations by using random sampling, longitudinal designs, and exploring additional factors that may influence mental health, such as social support or the type of sport in which athletes participate.

Conclusion

Athletes displayed higher emotional intelligence and self-esteem and fewer mental health problems than non-athletes. In addition, emotional intelligence significantly predicted better mental health outcomes, and self-esteem showed no significant impact. These findings underscore the importance of fostering emotional intelligence to improve mental health in athletic and non-athletic university students.

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Conflict of Interests

The authors declared no conflict of interest.

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