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Social Media And Its Influence On Body Image, Self-Esteem, And Mental Health Of University Students Athletes

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ABSTRACT
This study aimed to investigate the relationships among social media use, body image concerns, self-esteem, and mental health among university students' athletes. A cross-sectional study was conducted among athletes of various sports at different universities in Lahore, Pakistan. Lahore hosts a large, diverse higher education sector with approximately 50 to 60 recognized universities, including both public and private institutions. So it is quite difficult for the researcher to contact the whole population. To overcome this problem, the researcher selected four hundred (400) student-athletes through an available sampling technique during different intervarsity competitions. Participants completed standardized questionnaires assessing their social media use (SMU), body image dissatisfaction, self-esteem (Rosenberg Self-Esteem Scale), and mental health (WHO-5 Well-Being Index). Collected data were tabulated and analyzed by using the Statistical Package for the Social Sciences (SPSS, Version-32) and thus suitable statistical tools were applied. On the basis of data analysis and findings, the researcher arrived at conclusion that use of social media is strongly linked to negative body image, low self-esteem, and worse mental health among university student's athletes.

Keywords: Social Media, Body Image, Self-Esteem, Mental Health, Athletes

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BACKGROUND

Social media like Instagram, TikTok, Facebook, Snapchat, and Twitter are platforms used around the globe as a quick source of information. The use of social media is increasing day by day, and thus, according to Statista (2023), the typical internet user spends two to three hours a day on social media, with younger generations claiming even higher levels of engagement.

Social media has many benefits, like increasing connectivity among friends and family, developing supportive communities, educational opportunities, mental health support, and professional networking (Office of the Surgeon General, 2023). Along with benefits, excessive use of social media have negative effects on psychological well-being, especially about body image dissatisfaction, low self-esteem, and declining mental health, even though they provide real advantages like social connectivity, access to health information, and community building (Fardouly & Vartanian, 2015; Vogel, Rose et al, 2014; Valkenburg, Patti, & Patti, 2022).

Social media plays a vital role in the widespread popularity of athletes through the visibility of training routines, personal stories of athletes, and creating more relatable and engaging images. Social media promotes standards of muscularity among male athletes, which in turn feeds body dissatisfaction and disordered behaviours (Mingoia, Hutchinson, Wilson, & Gleaves, 2017). Social media comments on appearance, body-weight surveillance, and upward social comparisons are especially common among female athletes and those participating in aesthetically judged sports like swimming, gymnastics, and figure skating (Papathomas, 2017; Giel et al., 2016).

Social media and athletics are interrelated to each other. Social media is a tool that significantly influences the physical and psychological performance of athletes (Mountjoy et al., 2018; Reardon et al., 2019). In addition, social media may cause different hurdles for athletes in their routine activities (Anderson & Wood, 2021; Adnan & Butt, 2019).

A key component of psychological well-being and self-concept is body image, which is described as an individual's subjective impressions, thoughts, and feelings regarding their own physical appearance (Cash, 2004; Rosenberg, 1965). Studies repeatedly show that excessive use of social media is linked to a poor body image, which is mainly mediated by internalizing beauty standards and social comparison processes (Tiggemann & Slater, 2013; Fardouly & Vartanian, 2015).

Social media is a major environmental stressor in elite sport because it increases performance scrutiny and exposes athletes to real-time public assessment of both athletic outputs and physical attractiveness (Poucher, Tamminen, Caron, & Sweet, 2021). Competitive athletes have rates of mental health issues, such as anxiety, depression, burnout, and disordered eating, that are on par with or higher than those of the general population (Reardon et al., 2019). One important way that self-esteem is created and challenged online is through the feedback economy of social media, where users obtain measurable indicators of social approbation in the form of likes, comments, and follower counts (Sherman et al., 2016).

METHODOLOGY OF THE STUDY

Research Design

A cross-sectional survey design is the most appropriate method for this study, as it allows the examination of relationships among variables (social media use, body image, self-esteem, and mental health) at a single point in time.

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Study Population

The study population consisted of student-athletes from different universities in Lahore, Punjab, Pakistan.

Sample and Sample Size

Lahore hosts a large, diverse higher education sector with approximately 50 to 60 recognised universities, including both public and private institutions. So it is quite difficult for the researcher to contact the whole population. To overcome this problem, the researcher selected four hundred (400) student-athletes through an available sampling technique during different intervarsity competitions.

Tools for Data Collection

Data were collected using the modified version of the Rosenberg Self-Esteem Scale (Rosenberg, 1965), the WHO-5 Well-being Index (Bech, 2004), the Body Image Scale (Cash, 2002), and the Social Media Use Questionnaire (Smith et al., 2018). These scales were subjected to the process of validity and reliability.

Mode for Data Collection

The whole questionnaire was personally served by the researcher among the respondents and collected back after being filled out by the respondents.

Data Analysis

Collected data were tabulated and analysed by using the Statistical Package for the Social Sciences (SPSS, Version-32) and thus suitable statistical tools were applied.

PRESENTATION OF DATA

Table no.1 Shows the Demographic Characteristics of the Sample (N = 400)

Characteristic	Category	n (%)
Gender	Male	240 (60%)
	Female	160 (40%)
Age (years)	18–24	210 (52.5%)
	25–35	190 (47.5%)
Sport Type	Basketball	160 (40%)
	Football	120 (30%)
	Cricket	120 (30%)
Competition Level	University (recreational)	220 (55%)
	Inter-university (competitive)	180 (45%)

Note. RSE = Rosenberg Self-Esteem Scale. Percentages may not sum to 100% due to rounding.

The final sample comprised 400 athletes (n = 240 male, 60%; n = 160 female, 40%), ranging in age from 18 to 35 years (M = 24.5, SD = 3.8). Sports representation was: basketball (n = 160, 40%), football (n = 120, 30%), and cricket (n = 120, 30%). Fifty-five percent competed at a recreational university level and 45% at an inter-university competitive level.

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Table no.2 Shows the Social Media Use Patterns by Platform Among Athletes (N = 400)

Platform	Users (%)	Mean Hours/Day (SD)	Primary Use (%)
Instagram	45%	2.5 (0.8)	Fitness/body content (62%)
Facebook	30%	2.0 (0.7)	Social networking (74%)
TikTok	15%	1.8 (0.6)	Entertainment (81%)
Twitter/X	10%	1.5 (0.5)	News/sports updates (68%)

Note. SD = standard deviation. Primary use percentages reflect the most frequently self-reported activity per platform.

The above tables shows that Seventy-five percent of athletes reported daily social media use, with 50% spending more than three hours per day on platforms. Instagram was the most frequently used platform (45%), followed by Facebook (30%), TikTok (15%), and Twitter/X (10%). Instagram users reported the highest mean daily usage (M = 2.5 hrs, SD = 0.8) and were most likely to report primarily accessing fitness- and body-related content (62%).

Table no.3 shows the Correlations between Daily Social Media Use Duration and Psychological Outcomes (N = 400)

SMU (hrs/day)	Body Dissatisfaction M (SD)	r (Body Image)	Self-Esteem M (SD)	r (Self-Esteem)	Mental Health M (SD)	r (Mental Health)
1 hr	3.2 (0.6)	.20*	32.1 (3.2)	-.15*	22.4 (2.1)	-.20*
2 hrs	3.7 (0.7)	.30**	30.0 (3.0)	-.25**	20.1 (2.3)	-.30**
3 hrs	4.1 (0.8)	.40**	28.3 (2.8)	-.35**	18.2 (2.5)	-.40**
4 hrs	4.6 (0.9)	.50**	25.4 (2.6)	-.45**	16.3 (2.7)	-.50**
5+ hrs	5.2 (1.0)	.60**	22.1 (2.4)	-.55**	14.1 (2.9)	-.60**

Note. SMU = Social Media Use. RSE = Rosenberg Self-Esteem Scale. WHO-5 = WHO Well-Being Index. *p < .05. **p < .001. Higher body dissatisfaction scores indicate greater dissatisfaction (range 1–7). Higher RSE scores indicate higher self-esteem (range 10–40). Higher WHO-5 scores indicate better well-being (range 0–100).

Table no.3 shows that there is significant associations between daily social media use duration and all three outcome variables. Body image dissatisfaction showed a moderate-to-large positive correlation with daily SMU duration ($r = .60$, $p < .001$), indicating that athletes who spent more time on social media reported higher levels of body dissatisfaction. Self-esteem demonstrated a moderate-to-large negative correlation with daily SMU ($r = -.55$, $p < .001$), and mental health well-being showed a large negative correlation ($r = -.60$, $p < .001$).

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Table no.4 shows the Gender Differences in Psychological Outcomes (N = 400)

Variable	Male M (SD)	Female M (SD)	T	P
Body Image Dissatisfaction	3.8 (0.8)	4.5 (0.9)	-5.21	.001
Self-Esteem (RSE)	28.4 (3.1)	25.7 (3.4)	4.86	.001
Mental Health (WHO-5)	18.6 (2.8)	16.2 (3.1)	4.63	.002
Daily SMU (hrs)	2.8 (0.9)	3.3 (1.0)	-3.17	.002

Note. RSE = Rosenberg Self-Esteem Scale. WHO-5 = WHO Well-Being Index. SMU = Social Media Use. All comparisons significant at $p < .01$. Cohen's d values range from 0.81 to 0.83, indicating large effect sizes.

Table no.4 revealed significant gender differences across all three outcome variables (Female athletes reported significantly higher body image dissatisfaction (M = 4.5, SD = 0.9) compared to male athletes (M = 3.8, SD = 0.8), $t(398) = -5.21$, $p < .001$, $d = 0.82$ (large effect). Male athletes reported significantly higher self-esteem scores (M = 28.4, SD = 3.1) relative to females (M = 25.7, SD = 3.4), $t(398) = 4.86$, $p < .001$, $d = 0.83$ (large effect). Mental health well-being was also significantly higher among male athletes (M = 18.6, SD = 2.8) compared to females (M = 16.2, SD = 3.1), $t(398) = 4.63$, $p = .002$, $d = 0.81$ (large effect).

Table no.5 shows the Sport-Type Comparisons of Psychological Outcomes (N = 400)

Variable	Basketball M (SD)	Football M (SD)	Cricket M (SD)	F (p)
Body Dissatisfaction	3.9 (0.8)	4.2 (0.9)	4.5 (1.0)	6.14 (.002)
Self-Esteem (RSE)	28.1 (3.2)	26.8 (3.0)	25.3 (3.4)	8.42 (.001)
Mental Health (WHO-5)	18.4 (2.6)	17.1 (2.9)	15.8 (3.1)	9.73 (.001)

Note. RSE = Rosenberg Self-Esteem Scale. WHO-5 = WHO Well-Being Index. η^2 values reflect small-to-medium effect sizes. Post-hoc Tukey HSD: Cricket differed significantly from Basketball and Football on all variables ($p < .05$).

The above table indicated a significant differences across sport types for body image dissatisfaction, $F(2, 397) = 6.14$, $p = .002$, $\eta^2 = .030$; self-esteem, $F(2, 397) = 8.42$, $p < .001$, $\eta^2 = .041$; and mental health well-being, $F(2, 397) = 9.73$, $p < .001$, $\eta^2 = .047$. Post-hoc Tukey HSD tests indicated that cricket players reported significantly higher body dissatisfaction and lower self-esteem and mental health scores compared to both basketball ($p < .05$) and football players ($p < .05$). Basketball players reported the most favorable psychological outcomes across all three variables.

DISCUSSION

Findings of this study reveal that use of social media is strongly linked to negative body image, low self-esteem, and worse mental health among university student-athletes. In line with the current study findings, the study conducted by Holland and Tiggemann (2016) and Cohen et al. (2017) shows that Instagram use increases body dissatisfaction through upward appearance comparisons, which is supported by the positive correlation

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(r =.60) between daily social media use duration and body image dissatisfaction. The negative association between social media use and self-esteem (r = -.55) aligns with Sherman et al.'s (2016) neuroimaging evidence that social approval metrics (likes, comments) activate reward circuitry and shape self-evaluative processes. Consistent with Kelly et al. (2019), our data suggest cumulative dose-dependent effects: athletes spending five or more hours daily on social media reported self-esteem scores approximately ten points lower on the RSE than those spending one hour daily — a clinically meaningful difference. The finding that female athletes reported significantly lower self-esteem than male athletes (d = 0.83) corroborates Levine and Murnen's (2009) contention that media exposure disproportionately harms women through thin-ideal internalisation, and extends this finding to the Pakistani athlete population (Fardouly & Vartanian, 2015).

The large negative correlation between social media use and mental health well-being (r = -.60) is consistent with Huang's (2022) meta-analytic evidence and with Poucher et al.'s (2021) observation that social media represents a significant environmental stressor within elite sport. The mean WHO-5 score among athletes reporting five or more hours of daily use (M = 14.1) falls well below the clinical cutoff of 52 (on the 0–100 percentage scale), suggesting a substantial proportion of high-use athletes may be experiencing clinically significant psychological distress warranting intervention. The finding that cricket players reported the poorest psychological outcomes is consistent with Kavussanu and Boardley's (2009) observation that individual sports are associated with greater self-presentational concern and public scrutiny, dynamics that are amplified by social media visibility (Kuss & Griffiths, 2017).

CONCLUSION

On the basis of data analysis and findings, the researcher arrived at conclusion that use of social media is strongly linked to negative body image, low self-esteem, and worse mental health among university student’s athletes.

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