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IMPACT OF SPORTS PARTICIPATION ON STUDENTS' AGGRESSIVE BEHAVIOR AND MENTAL WELL-BEING

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ABSTRACT

This research investigates the relationship between sports participation and aggression and mental well-being among university students. More specifically, it compares the psychological outcomes between students who do sports daily and students who do sports weekly or monthly. We surveyed 210 university students (daily & weekly/monthly) in public universities in Sindh, Pakistan. The study used an empirical, cross-sectional survey design to examine the effects of sports participation on aggression and mental well-being using descriptive statistics, correlation analysis, and independent sample t-tests. Daily sports participants had significantly lower aggression levels and higher mental well-being than weekly/monthly sports participants. A strong negative correlation between aggression (M = 2.68, SD = .85) and mental well-being (M = 3.85, SD = .84) was found to be (r = -.524, p <0.01), indicating that higher levels of aggression are associated with poorer mental health and vice versa. An independent samples t-test revealed a significant difference in aggression levels between daily and weekly/monthly sports participants, t= -3.226, p = 0.001. The mean difference was M = -.3704, with a 95% confidence interval ranging from -.5967 to -.1441. This

indicates that daily sports participation is associated with lower aggression levels. These results have implications for promoting daily physical activity to improve university students' psychological well-being. Future research should explore the long-term effects of various types of sports participation on mental health outcomes.

Keywords: *Sports Participation, Aggression, Mental Well-Being, Socialization, University Students*

Introduction

Participation in sports and other physical activities is vital for physical, mental, and social well-being (Andersen et al., 2019). While regular sports participation is known to improve physical fitness, boost energy levels, and enhance cardiovascular health (Abrams, 2010), its psychological benefits are increasingly recognized as critical areas for research and practice (Eather et al., 2023). Sports contribute to psychological well-being through emotional regulation, stress management, and life satisfaction (Brown et al., 2024). Despite these positive effects, the relationships between sports participation, aggression, and mental well-being among young men remain a subject of scientific inquiry (Shannon et al., 2019).

Sports provide an outlet for emotional and psychological expression (Anderson & Bushman, 2002). During youth and early adulthood, critical stages characterized by identity formation and peer pressure, sports play a socializing role (Brettschneider, 2001). While sports participation can mitigate aggression and enhance mental well-being (Diener et al., 2010), certain competitive sports, such as combat sports, can intensify aggressive behavior (Russell, 1993; Husman & Silva, 1984).

Aggression and Mental Well-Being

Aggression manifests through physical actions, verbal hostility, or subtle expressions of discontent (Bandura, 1973). Psychologists define it as behavior aimed at harming others, influenced by factors like frustration, competition, social norms, and biological predispositions (Burton et al., 2007). Aggression is often inherent in competitive sports due to high stakes, tempers, and achievement motivations (Shachar et al., 2016).

Contrastingly, mental well-being, the ability to manage stress, work productively, and contribute to society (WHO, 2016), is often precarious for young men navigating complex educational and social environments (Brown et al., 2014). Research highlights a reciprocal relationship between aggression and mental well-being: as aggression increases, mental health deteriorates (Eather et al., 2023; Donaldson & Ronan, 2006). This interplay underscores the importance of understanding the psychological impact of sports participation.

Aggression in Sports

The role of sports in fostering aggression is debated. Physical contact sports such as football and basketball can channel aggression positively, transforming it into goal-oriented actions (Russell, 1993). However, high-stakes competitive environments can exacerbate aggression among players, teammates, and even fans (Spaaij & Schaillee, 2019). Excessive aggression undermines team dynamics, social relationships, and enjoyment of the

game (Björkqvist et al., 1992; Andersen et al., 2019). Thus, the relationship between sports, aggression, and mental health is paradoxical, reflecting both positive and negative influences (Eime et al., 2013).

Gender and Socialization in Aggression

Men, especially young men, are more likely to exhibit aggression than women due to individual traits and societal expectations (Buss & Perry, 1992; Bandura, 1973). Sports environments often equate dominance and competitiveness with masculinity, reinforcing aggressive behaviors (Russell, 1993). However, not all men react to sports similarly. While some may become more aggressive, others use sports as a means of releasing stress and fostering mental health (Diener et al., 2010; Eime et al., 2013). These differences highlight the influence of socialization and cultural factors in shaping aggressive behavior and emotional expression (Andersen et al., 2019).

Sports and Mental Well-Being

The psychological benefits of sports are well-documented. Regular sports participation reduces depression, anxiety, and stress symptoms, while improving cognitive function, self-esteem, and sleep quality (Abrams, 2010; Anderson & Bushman, 2002). Sports also promote social benefits like teamwork, communication, and a sense of belonging (Eime et al., 2013).

For university students, sports provide an outlet for emotional expression, coping with stress, and forming supportive social networks (Miller et al., 2005). Structured sports activities help individuals regulate emotions, reducing negative feelings and improving overall mental well-being (Shannon et al., 2019; Congsheng et al., 2022).

Research Aim and Hypotheses

This study investigates the relationship between sports participation, aggression, and mental well-being among university students. The hypotheses are:

1. Students who regularly participate in sports will exhibit higher mental well-being and lower aggression compared to those participating weekly or monthly.
2. Lower aggression levels will positively correlate with higher mental well-being among sports participants.

Research Design

This empirical, cross-sectional survey examines the effects of sports participation on aggression and mental well-being among male university students in Sindh, Pakistan. The study sampled 210 students aged 18-30 years, equally divided between daily and weekly/monthly sports participants. Instruments included the Buss and Perry Aggression Questionnaire and the Warwick-Edinburgh Mental Well-Being Scale, both validated in diverse settings (Buss & Perry, 1992; Diener et al., 2010).

Data were analyzed using descriptive statistics, correlation coefficients, and independent t-tests to evaluate differences in aggression and mental well-being based on sports participation frequency. Ethical standards, including informed consent and participant confidentiality, were upheld throughout the research.

Inclusion Criteria, Instruments, and Procedure

Inclusion and Exclusion Criteria

The study included university students aged 18–30 years from public sector universities in Sindh who participated in sports daily or weekly. Exclusion criteria ruled out individuals with psychiatric or neurological disorders, those undergoing treatments affecting mood or behavior, and participants involved in concurrent studies to avoid bias and overlap.

Instruments

1. **Consent Form**: Participants signed an Urdu-translated consent form outlining the study's purpose, risks, benefits, and rights, ensuring ethical compliance.
2. **Demographic Questionnaire**: Basic information such as age, university affiliation, and sports involvement was collected.
3. **Aggression Scale**: Buss and Perry's Aggression Questionnaire measured physical and verbal aggression, anger, and hostility, validated for use in Pakistan.
4. **Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)**: This scale assesses psychological functioning, including emotional balance and life satisfaction, and is widely recognized for reliability.

Procedure

Participants were recruited through university announcements and screened based on inclusion criteria. After obtaining consent, participants completed surveys requiring 20–30 minutes. Confidentiality was maintained, with participants free to withdraw at any time.

Data Analysis

Descriptive and inferential statistics analyzed demographic data, aggression, and mental well-being scores. Pearson's correlation coefficients and independent t-tests evaluated the relationships and differences between variables, using SPSS (version 25) with a significance threshold of $p < 0.05$.

Ethical Considerations

The Institutional Review Board (IRB) of the University of Karachi approved the study. Ethical safeguards included informed consent, confidentiality, anonymity, and the right to withdraw, ensuring participant welfare and data integrity.

Results

Table 1

Frequencies and Descriptive Statistics of Demographic Variables

Variable	Group	Frequency	Percentage
Sports Participation	Daily	105	50.0%
	Weekly/Monthly	105	50.0%
Age (M = 22.4)	19–21	108	51.5%
	22–24	66	31.4%
	25–30	36	17.1%
Gender	Male	109	51.9%

	Female	101	48.1%
Socioeconomic Status	Lower	10	4.8%
	Lower Middle	15	7.1%
	Middle	135	64.3%
	Upper Middle	41	19.5%
	Upper	9	4.3%
Marital Status	Unmarried	187	89.0%
	Married	23	11.0%

Table 2

Correlations between Aggression and Mental Well-Being (N = 210)

Variable	**1. Aggression**	**2. Mental Well-Being**
1. Aggression	1	
2. Mental Well-Being	-.524**	
Mean	2.6847	3.8584
Standard Deviation	.85030	.84884

Note: **Correlation is significant at the 0.01 level (2-tailed)**.

A strong negative correlation between aggression (M = 2.68, SD = .85) and mental well-being (M = 3.85, SD = .84) was found to be (r = -.524, p <0.01), indicating that higher levels of aggression are associated with poorer mental health and vice versa.

Table 3

Group Statistics for Aggression and Mental Well-Being

Variable	**Group**	**N**	**M**	**SD**	**SE**
Aggression	Daily	105	2.4995	0.86375	0.08429
	Weekly/Monthly	105	2.8699	0.79854	0.07793
Mental Well-Being	Daily	105	4.0275	0.84055	0.08203
	Weekly/Monthly	105	3.6892	0.82686	0.08069

Table 4

Independent Samples t-Test for Aggression and Mental Well-Being between Daily and Weekly Sports Participants

Variable	**T**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**95% Confidence Interval**
Aggression	-3.226	208	0.001	-0.37038	0.11480	[-0.5967, -

Variable	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval
						0.1441]
Mental Well-Being	4.087	208	0.000	0.33830	0.08279	[0.1755, 0.5011]

An independent samples t-test revealed a significant difference in aggression levels between daily and weekly/monthly sports participants, t (208) = -3.226, *p* = 0.001. Daily sports participants (M = 2.4995, SD = 0.86375) reported significantly lower levels of aggression compared to weekly/monthly sports participants (M = 2.8699, SD = 0.79854). The mean difference was M = -.3704, with a 95% confidence interval ranging from -.5967 to -.1441. This indicates that daily sports participation is associated with lower aggression levels.

A significant difference was found in mental well-being between daily and weekly/monthly sports participants, t (208) = 3.279, *p* = 0.001. Daily sports participants (M = 4.0275, SD = 0.84055) reported higher levels of mental well-being compared to weekly/monthly participants (M = 3.6892, SD = 0.82686). The mean difference was 0.33833, with a 95% confidence interval ranging from 0.1358 to 0.5408. These results suggest that more frequent sports participation is associated with better mental well-being.

The above table shows that Aggression is significantly lower among daily sports participants compared to weekly/monthly participants and mental well-being is significantly higher among daily sports participants. These findings highlight the potential benefits of daily sports participation, particularly in reducing aggression and enhancing mental well-being.

Table 5

Group Statistics for Aggression and Mental Well-Being

Variable	Group	N	M	SD	SE
Aggression	Male	109	2.6950	0.84135	0.08059
	Female	101	2.6737	0.86392	0.08596
Mental Well-Being	Male	109	3.8238	0.79309	0.07596
	Female	101	3.8957	0.90769	0.09032

Table 6

Independent Samples t-Test for Aggression and Mental Well-Being between Male and Female Participants

Variable	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval
Aggression	.181	208	0.857	0.02129	0.11771	[-0.21077, 0.25335]
Mental Well-	-.613	208	0.541	-0.07198	0.11741	[-0.30345, 0.15949]

Variable	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval
Being						

An independent samples t-test revealed a significant difference in aggression levels between male and female sports participants, t (208) = .181, *p* = 0.857. Male sports participants (M = 2.6950, SD = 0.84135) reported no significant difference in aggression compared to female participants (M = 2.6737, SD = 0.86392). The mean difference was M = 0.02129, with a 95% confidence interval ranging from -0.21077 to 0.25335.

For mental well-being between male and female sports participants, t (208) = -.613, *p* = 0.541. Male sports participants (M = 3.8238, SD = 0.79309) reported slightly lower levels of mental well-being compared to female participants (M = 3.8957, SD = 0.90769). The mean difference was -0.07198, with a 95% confidence interval ranging from -0.30345 to 0.15949. These results suggest that no significant difference is presented between male and female sports participants on the levels of aggression and mental well-being.

Discussion

The aim of this study was to explore the effects of sports participation on aggression and mental well-being among university students who engage in sports daily or weekly. The findings demonstrate that daily sports participation is significantly associated with reduced aggression and improved mental well-being. These results contribute to our understanding of the psychological benefits of sports and their impact on young adults' emotional and social health. The discussion evaluates the hypotheses, compares findings with existing literature, and highlights implications for future research and practice.

Sports Participation and Mental Well-Being

The study's first hypothesis, that regular sports participation positively influences mental well-being, was strongly supported. Results from independent sample t-tests indicated that daily sports participants reported significantly higher mental health scores (M = 4.0275, SD = 0.84055) compared to weekly or monthly participants (M = 3.6892, SD = 0.82686). These findings align with previous research by Shachar et al. (2016) and Congsheng et al. (2022), which demonstrated that consistent physical activity enhances emotional stability, diminishes stress and fosters a sense of achievement.

Organized sports, in particular, were found to contribute significantly to managing stress and anxiety. They combine the benefits of physical exercise with social interaction, both of which are essential for maintaining psychological health. The release of endorphins during physical activity further boosts mood and alleviates stress (Shachar et al., 2016). Moreover, regular participation in sports improves symptoms of depression, increases life satisfaction, and promotes resilience, making it a vital tool for enhancing mental well-being.

The type and intensity of sports were identified as variables that might influence mental health outcomes. Bandura (1973) emphasized the social dynamics of team sports as

potentially providing greater psychological benefits than individual sports. Team environments foster a sense of belonging and accomplishment, which can amplify the positive effects of sports participation.

Aggression and Mental Well-Being

The second hypothesis, which proposed a negative correlation between aggression and mental well-being, was also confirmed. The study revealed a significant negative correlation ($r = -0.524$, $p < 0.01$), indicating that individuals with lower aggression levels reported higher mental well-being. Daily sports participation emerged as an effective outlet for managing aggressive tendencies. Structured sports activities provide a controlled environment for channeling potentially harmful impulses into positive behaviors, aligning with findings by Russell (1993) and Shachar et al. (2016).

However, the nature of the sports environment plays a critical role in shaping these outcomes. While cooperative and team-oriented activities promote emotional regulation and reduce interpersonal aggression, hypercompetitive environments may escalate aggressive behaviors. This duality highlights the importance of fostering collaboration and teamwork in sports to mitigate aggression.

The study's results further support Bandura's (1973) social learning theory, which suggests that aggression can be learned and reinforced in certain contexts. Regular sports participation helps reduce aggression by promoting self-control, stress management, and emotional stability.

Gender Differences in Aggression and Mental Well-Being

An analysis of gender differences revealed no significant variation in aggression or mental well-being between male and female participants. Male participants ($M = 2.6950$, $SD = 0.84135$) exhibited aggression levels comparable to females ($M = 2.6737$, $SD = 0.86392$). Similarly, mental well-being scores showed no significant differences, with males ($M = 3.8238$, $SD = 0.79309$) and females ($M = 3.8957$, $SD = 0.90769$) reporting similar benefits from sports participation.

These findings challenge the conventional belief that males are inherently more aggressive than females in sports settings. Instead, they suggest that sports provide universal psychological benefits, regardless of gender. This aligns with Eime et al. (2013), who argued that sports participation equally promotes mental health and reduces aggression among men and women.

Implications and Future Directions

The findings of this study underscore the importance of integrating regular sports participation into university programs. Structured physical activities offer students a means to enhance their mental health, reduce aggression, and build social connections. By encouraging sports engagement, universities can create supportive environments that foster emotional well-being and teamwork.

Future research should explore the long-term effects of various types of sports participation on mental health outcomes. Investigating the differences between team and individual sports, as well as varying levels of competition, could provide deeper insights into optimizing the psychological benefits of sports. Additionally, interventions such as

mindfulness training and conflict resolution strategies could further enhance the positive effects of sports on aggression and mental well-being.

Conclusion

This study demonstrates the importance of regular sports participation, particularly daily participation, for mental well-being and aggression reduction. This was supported in the findings, as it is hypothesized that having better mental health outcomes leads to less aggression, and sports can be used to be an intervention for promoting psychological resilience. Policymakers and educators can use these findings to integrate them into university programs and public health initiatives as a way to encourage young adults to create environments that improve both their mental and physical well-being.

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