

The Impact of Practicing Sports Activities on Reducing University Violence from the Point of View of Students of the Faculty of Sports Science at Mutah University

Prof. "Zainalabedin" Mohammad Bani Hani¹, Dr. Sofyan M. Alleimon^{2*}

Abstract

Student violence is a fundamental issue that the university administration must handle. Many pupils who lack mental fortitude participate in violent activities. This study explores, from a student's perspective, how athletic activity influences the level of violence on college campuses. This study's sample consists of students from the department of physical education at Mutah University. 600 students from Mutah University's faculty of physical education participated in the survey. In the sample, there were 324 male and 276 female students. According to the research findings, student participation in sports activities plays a significant effect in preventing violence. The study recommended developing standards and procedures to encourage university students to participate in athletics. This research has produced an important framework that is also an original contribution to knowledge. In addition, the research has credible theoretical implications that contribute to expanding the body of knowledge. Similarly, the practical consequences of this study are reliable for enhancing university students' participation in sports activities. This study has several limitations discussed in conjunction with its future directions.

Keywords. Sports participation, sports activities, mental health, psychological control, emotional well-being

1. Introduction

Physical education is one of the fields that has significantly grown to the social level in the modern era, as public knowledge of its health, recreational, and educational worth has increased, and sports activities have become ingrained in the brains of people of different ages, cultures, and origins. People acknowledged the concept of sports and understood its value (Snedden et al., 2019). Youth encounter several economic, social, and cultural challenges, such as poverty, unemployment, and tribal intolerance, as well as the growth of cronyism and drug and alcohol addiction and an increase in the number of college students participating in these issues. Consequently, it diminishes the productivity of young individuals and impacts their educational levels. It is also reflected negatively in each person's behavior toward them. Such concerns subconsciously compel the individual to revert to prior behavior patterns marked by a propensity for anger and violence in interpersonal interactions (Wilson et al., 2021). The topic of university violence has become one of the most serious issues facing the university community, and it is a phenomenon with negative psychological and social impacts on university individuals and their surroundings. Young people suffer from economic, social, and cultural issues, as well as tribal, sectarian, and regional

intolerance, which affects their level of education and their ability to achieve academic success. This, in turn, causes problems for the university community, and its negative effects are transmitted to the larger society.

Aggressive behavior (violence) is among the greatest threats to the security and stability of educational institutions. The conduct of students at any time or place is influenced by several elements, including their gender, personal and social needs, talents, and mental ability. The individual is also impacted by his family and social and cultural standing (Van Slingerland, Durand-Bush, & Rathwell, 2018). The student's aggressive behavior reflects the influence of several social, economic, academic, and aggressive factors, as the matter does not represent an absolute truth in the sense of being a fact; it is also a relative matter that is determined by several variables such as time, place, and social conditions (Vincent, Patel, & Zaremski, 2022). The phenomena of campus violence escalated at Jordanian universities, attracting the attention of official authorities and leaving experts and observers baffled as to the causes of this type of violence. Researchers have recently observed the escalation of violence, disorder, and insurrection in several institutions, which has reached intolerable proportions (Vincent et al., 2022).

¹ Professor, Physical Education Department, Faculty of Sports Science at Mutah University, Jordan. Email: handball@mutah.edu.jo

² Assistant Professor, National University College of Technology, Amman, Jordan. ORCID 0000-0001-7242-2112; Email: sallymon@nuct.edu.jo (Corresponding Author*)

This study is important and has solid arguments because it will investigate the function of sports in lowering violence among university students and mitigating this phenomenon's detrimental effects. Due to the size of the university violence phenomenon, which has become a concern for all university workers in Jordanian universities due to its significant increase, and the inability to find appropriate solutions to reduce this phenomenon, the researchers decided to conduct this study to determine the role of sports in reducing university violence from the students' perspective. Due to the active participation in sports events, the Faculty of Sports Sciences at Mutah University improves social relations among the participants.

This study intends to investigate, from the perspective of students at the Faculty of Sports Science at Mutah University, the effect of practicing sports activities on reducing university violence. According to the variables (gender, cumulative average) from the student's standpoint (gender, cumulative average). In addition, this study sought to answer several interrelated issues, the most important of which was: what effect do sports activities have on reducing violence among Jordanian university students, from the perspective of students at Mutah University's Faculty of Sport Sciences? Can disparities between gender and median cumulative variables be statistically significant? This research has produced an important framework that is also an original contribution to knowledge. In addition, the research has credible theoretical implications that contribute to expanding the body of knowledge. Similarly, the practical consequences of this study are reliable for enhancing university students' participation in sports activities. This study has several limitations discussed in conjunction with its future directions.

2. Review of Literature

Chang et al. (2020) noted that the scenario in our colleges has altered, as they have become arenas for fighting and assaulting fellow students and tea. Moreover, if this situation is intensified, colleges will lose their historical prestige and roles in preparing and building society-beneficial individuals. As a social, economic, and scientific issue, university violence is a serious phenomenon that threatens the surrounding community's safety. In recent years, universities in Jordan have experienced various depictions of violence. The remainder consists of a swift intervention to examine the displayed rat's causes and devise appropriate ways to eradicate it before it worsens to the point where its eradication becomes routine (Gross et al., 2018). Sport is regarded as one of the social institutions that actively contribute to creating a semi-positive social environment between those who are involved in its activities and various

programs, as sports achievements and activities on the global level are regarded as an essential indicator by which people measure the level of social and cultural progress for a specific society. Sport is also a socio-cultural phenomenon embedded organically within many entities' systems and social structures (Charest & Grandner, 2020).

No longer is sport merely physical training or activity undertaken by the individual or the group in the form of exercises to move or strengthen the body's organs. Nonetheless, it has become a tool for constructing a person at all stages of his life, including physical, psychological, and deformed components (Logue et al., 2020). The relationship between man and sport is a component of cultural particularities and human development and progress. This interaction has beneficial and harmful effects on individual and group lives. As a result, we proceed with our study, which aims to discover the function of sports in lowering the phenomena of campus violence, which has begun to spread in various forms in our institutions and has consequently become a pervasive and harmful societal phenomenon.

In this context, Deng et al. (2020) note that one of the most important solutions to the phenomenon of university violence is the provision of sports programs that contribute to the university youth's exercise sports activity, which is one of the most important factors in the overall development of the university student's personality (mental, physical, psychological, social). Preparing individuals to adjust to their lives and communities is one of the most important educational tasks. Young people are the energy and future of nations, the mind and the pulse of society, as Vincent et al. (2022) attest. They must be cultivated to assume responsibility and enhance the integrity of leadership. The significance of this study rests in the fact that it is one of the first to throw light on the role of sports in reducing campus violence. This results in appropriate prosocial behavior.

Zhang et al. (2023) confirm that sport aids in the acquisition of numerous physical and social skills, as it makes the student more in control of his emotions and nerves, as sport provides a vast space for the student to fill a void, maintain good health, release excess energy, and avoid anger and tension. People are protected from moral deviance and gain self-confidence, as well as the possibility for self-expression and personality development, which leads to acceptable social behavior because sports activities improve interpersonal relationships. Undoubtedly, sports provide an opportunity for learning and team play and promote concepts of love, cooperation, and coordination away from violence and aggressive behavior; the university is considered the community in which the student spends the

majority of his day and interacts with the human (faculty, administration, and students) and material components of the educational process (buildings, structures, university furniture, playgrounds, and tools). This contact could manifest as either positive or negative conduct. The phenomenon of aggressive behavior (violence) is regarded as one of the most pervasive adverse problems within the university environment, and numerous educational institutions face it; this phenomenon could be verbal, physical, or symbolic and manifests in the forms of beating with the hands, the use of sharp objects, the destruction of university property, an assault on some students, and the confusion of the university system.

According to the study by [McGuine et al. \(2021\)](#), students are required to participate in various sports to strengthen their physical endurance and general health, which benefits their cognitive growth. The constancy of the students' performance is contingent upon the effectiveness of their decision-making processes. In this technique, [Zhang et al. \(2023\)](#) suggested that students required mental motivation to develop their fitness through exercise and sports participation. Physically unfit students lack the motivation to complete their assignments. According to the research conducted by [Zhang et al. \(2023\)](#), students who engage in any form of physical activity to improve their mental health exhibit a high level of psychological control. The study by [Grasdalsmoen et al. \(2020\)](#) concluded that students must be self-motivated to improve their health, as this is the only factor that can aid in this endeavor. In addition to having no control over their physical health and a weak will, students who are not physically fit also perform poorly. Therefore, each student must take better care of their health, as doing so will improve their academic performance.

[Deng et al. \(2020\)](#) noted that to make prudent decisions. One needs to have a healthy mental state, strengthened by physical activity and participation in various activities. The academic performance and interpersonal ties of students who maintain good physical health are enhanced. In addition, [Charest and Grandner \(2020\)](#) discovered that students' performance is enhanced when they have reliable opportunities to improve their physical and mental health.

According to the study by [Logue et al. \(2020\)](#), athletes who participate in sports can maintain a good fitness level. Participation in sports, a well-established way of improvement, improves students' health. The study by [Ströhle \(2019\)](#) also highlighted the necessity for educators to motivate their pupils to do better. Physical fitness improves both the mental and physical health of individuals. These students' mental health improves over time due to their commitment to regular exercise. Similarly, the study by [Andersen, Ottesen, and Thing \(2019\)](#) demonstrated that children could gradually improve their academic performance with the right help. [Gross et al. \(2018\)](#) found that students who do not participate in activities to improve their physical fitness struggle with several concerns, including their physical fitness. The student's emotional health, which is essential for their enhanced performance and productive attitude, can be influenced by the trainers' healthy habits and helpful acts. The study by [Van Slingerland et al. \(2018\)](#) suggests that inappropriate attitudes may contribute to children's emotional and disrespectful behavior. The study by [Vincent et al. \(2022\)](#) determined that students' mental health is crucial to their everyday interactions. Emotional people typically have a negative attitude at work because they cannot think optimistically.

Moreover, according to the research of [Wilson et al. \(2021\)](#) students with the appropriate attitude toward the profession must regularly work to perform better and be more productive. According to [Snedden et al. \(2019\)](#), when people lack emotional self-control, their emotions can hinder their performance. The kids' psychological approach, which motivates them to do better, results from poor mental health. Based on this literature, the study framework presented in [Figure 1](#) is built.

Hypothesis 1: *The is a relationship between sports participation and psychological control.*

Hypothesis 2: *The is a relationship between sports participation and mental health.*

Hypothesis 3: *The is a relationship between sports participation and emotional well-being.*

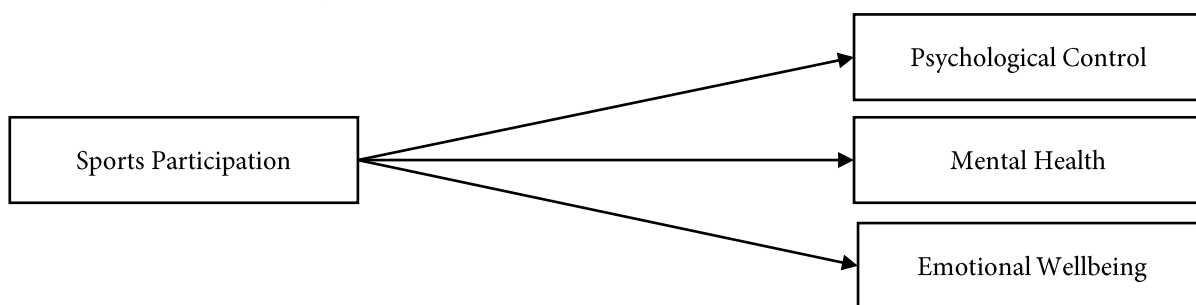


Figure 1. Conceptual Framework

3. Methodology

To collect primary data that conformed to the study's aims, a questionnaire based on the Likert scale was used to collect primary information. The study population consists of students in grades one through four from the faculty of sports sciences at Mutah University. After confirming the instrument's reliability and validity, 650 questionnaires were delivered to the study sample, and 613 were returned. In addition, upon assessment of the returned questionnaires, thirteen were disqualified for failing to meet the scientific requirements. Consequently, the study sample of 600 questionnaires comprised 324 male, and 323 female students picked randomly. The age range of the study participants was 18 to 22 years. The sample comprised all semesters of study, from level one to level four. These students participated in football, basketball, volleyball, and handball, among other sports. These students also led training programs for at least four days, each lasting between two and three hours. The scale items were adapted from past studies, and the sports

participation scale items were taken from Khan et al. (2012). Consequently, the psychological control scale elements are derived from Spreitzer (1995). In addition, the mental health scale items are derived from Meo et al. (2020), and the emotional well-being scale items are derived from Por et al. (2011). Smart PLS 3.0 is used for data analysis in this study.

4. Findings and Results

4.1 Convergent Validity

The research relied on the "PLS Algorithm" findings to check the reliability and validity. The outcomes of "average variance extracted (AVE < 0.50), Cronbach' alpha ($\alpha > 0.70$), factor loadings (FL > 0.60) and composite reliability (CR > 0.70) are checked" (Alarcón & Sánchez, 2015; Peterson, 2000; Taber, 2018). Furthermore, these values are tested with measurement model assessment reported in Figure 2. The outcomes reported in Table 1 achieved the thresholds, and the research findings have reliability and validity.

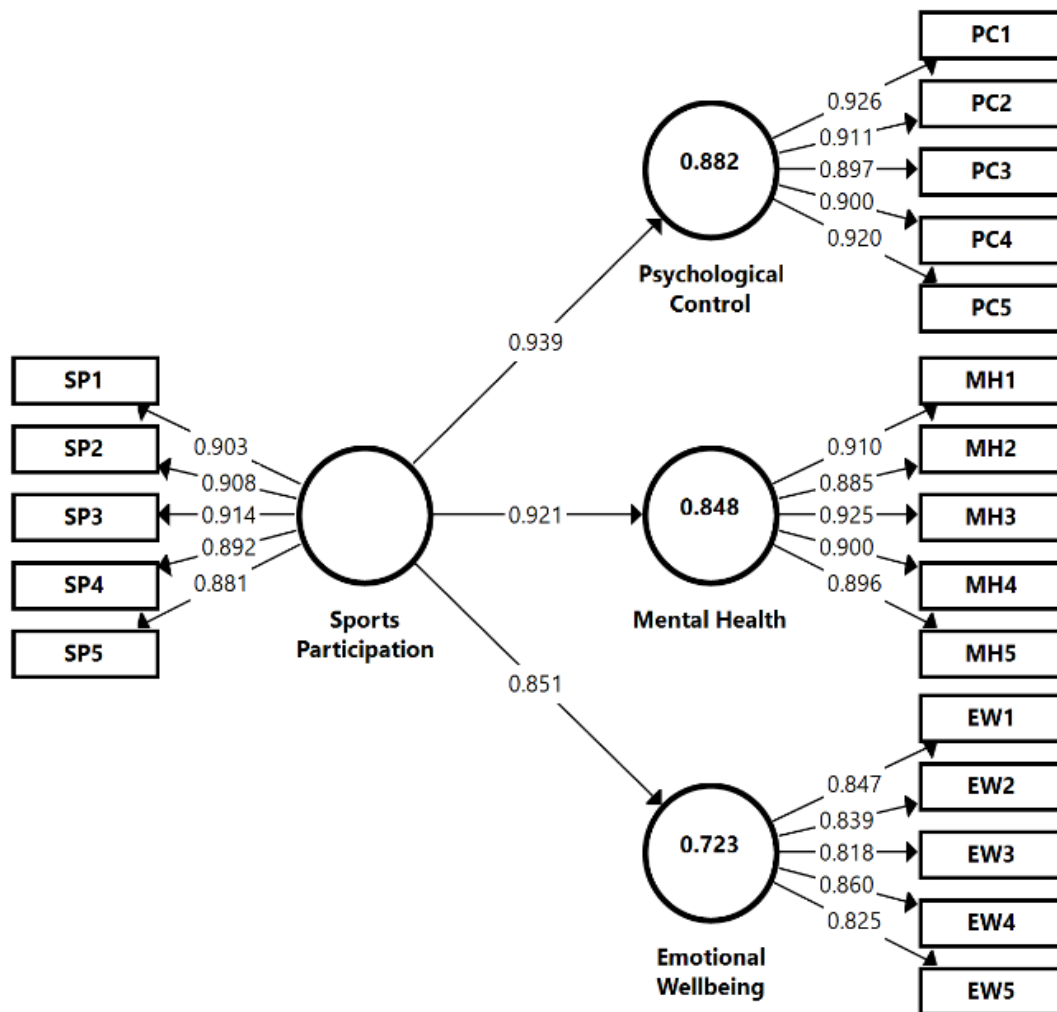


Figure 2. Measurement Model Assessment

Table 1

Convergent Validity

Constructs	Items	FL	α	CR	AVE
Emotional Well-being	EW1	0.847	0.895	0.922	0.702
	EW2	0.839			
	EW3	0.818			
	EW4	0.860			
	EW5	0.825			
Mental Health	MH1	0.910	0.943	0.957	0.816
	MH2	0.885			
	MH3	0.925			
	MH4	0.900			
	MH5	0.896			
Psychological Control	PC1	0.926	0.949	0.961	0.829
	PC2	0.911			
	PC3	0.897			
	PC4	0.900			
	PC5	0.920			
Sports Participation	SP1	0.903	0.941	0.955	0.809
	SP2	0.908			
	SP3	0.914			
	SP4	0.892			
	SP5	0.881			

4.2 Discriminant Validity

The “PLS Algorithm” findings are also used to test the discriminant validity. The well-known method, “Heteritrait-Monotrait (HTMT),” is used in this research (Roemer, Schubert, & Henseler, 2021). The threshold

“HTMT < 0.90” is recommended by Gold, Malhotra, and Segars (2001) to get significant discrimination between the findings representing each construct. The outcomes in Table 2 demonstrate that the research has discriminant validity.

Table 2

Discriminant Validity

Constructs	Emotional Well-being	Mental Health	Psychological Control	Sports Participation
Emotional Well-being				
Mental Health	0.766			
Psychological Control	0.684	0.687		
Sports Participation	0.607	0.677	0.594	

4.3 Partial Least Square – Structural Equation Model

The research has evaluated the results of the structural model for path findings using the “p < 0.05” standard established by Chin (1998). Figure 3 demonstrates the structural model. The results of H1 indicated that the effect of sports activity on psychological control is acceptable. In

addition, the research suggested that the impact of sports engagement on mental health is positively accepted; hence, Hypothesis 2 is supported. Lastly, the study indicated that the favorable direct effect of sports activity on emotional wellness is accepted, so H3 is proven. Table 3 summarizes the results.

Table 3

Path Coefficients

Relationship	Original Sample	Sample Mean	SD	t	p
Sports Participation -> Psychological Control	0.939	0.939	0.251	3.741	0
Sports Participation -> Mental Health	0.921	0.922	0.248	3.713	0
Sports Participation -> Emotional Well-being	0.851	0.853	0.238	3.575	0.001

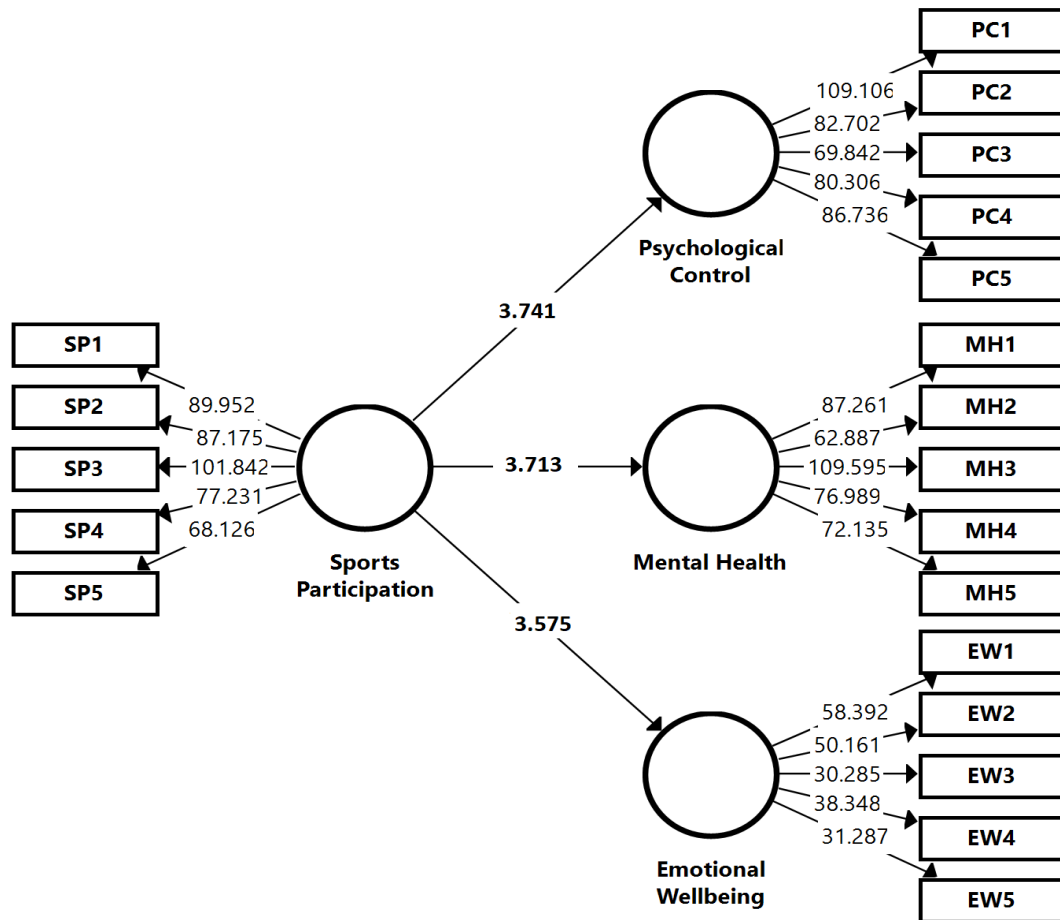


Figure 3. Structural Model Assessment

5. Discussion

The primary purpose of this study was to determine, from the perspective of students in the faculty of sports sciences at Mutah Campus, the influence of sports in reducing university violence. According to students of the faculty of sports sciences at Mutah University, the sport has a crucial role in reducing university violence. Accordingly, all three hypotheses of this study are supported since the findings indicate that the effect of sports engagement on psychological regulation is supported. The findings of this study are consistent with those of previous research. According to the analysis of [Snedden et al. \(2019\)](#), when students engage in physical exercise to improve their mental health, they exhibit strong psychological control. Accordingly, the study by [Wilson et al. \(2021\)](#) concluded that students must be self-motivated to improve their health because their motivation is the sole factor contributing to improving their health. In addition, the academic performance of pupils who are not physically fit is poor because they lack control over their physical fitness and tenacity. In light of this, each student is needed to improve their health since greater health would be advantageous for

their productive work. Following [Van Slingerland et al. \(2018\)](#)'s findings, students are forced to participate in a variety of activities to improve their physical fitness and health, which aids in their mental development. The dependability of the student's performance depends on their working methods' usefulness in making sound decisions throughout time. In this approach, the study by [Gross et al. \(2018\)](#) argued that students must be mentally driven to increase their health through physical exercise and involvement in games. Those kids who are less inclined to participate in their activities are unfit.

In addition, the research indicated that the effect of sports engagement on mental health is accepted positively. The findings of prior studies support the results of this study. According to the study by [McGuine et al. \(2021\)](#), athletes can achieve a healthy fitness level by engaging in sports activities. Participation in sporting activities is a reliable method of work that enhances the pupils' health. [Grasdalsmoen et al. \(2020\)](#) also showed that professors must encourage pupils to enhance their product performance. Individuals' physical fitness is also beneficial to their mental health. These kids' mental fitness improves over time as they cultivate an attitude of regular physical activity.

Consequently, the study by [Zhang et al. \(2020\)](#) proved that students with enough help could enhance their learning ability over time. Also, [Deng et al. \(2020\)](#) observed that mental health is essential for making sound judgments, but that mental health can be enhanced by physical fitness and participation in various activities. Physical active students do better in their daily tasks and have stronger interpersonal relationships. Moreover, [Ströhle \(2019\)](#) study showed that students' performance could improve when they have access to dependable possibilities to improve their physical and mental health.

Finally, the study indicated that direct engagement in sports positively affects mental well-being. Accordingly, the findings of this study are corroborated by prior research findings. The study by [Chang et al. \(2020\)](#) indicated that pupils' emotional health is crucial to their daily interactions. The more emotionally-driven individuals have a bad work attitude since they are incapable of optimistic thinking. In addition, [Vincent et al. \(2022\)](#) found that pupils with proper work attitudes must work dependably to achieve superior and more productive results. The study by [Andersen et al. \(2019\)](#) also argued that when individuals have no control over their emotional attitude, their emotionality can hinder their performance. The emotional attitude of the students that influences them to enhance their performance is due to their poor mental health. The study by [Logue et al. \(2020\)](#) indicated that students who do not participate in activities to improve their physical health face various challenges, including issues with their physical health. The emotional well-being of the students is crucial to their improved performance and productive attitude and can be influenced by the trainers' assistance and the students' health consciousness. According to the research conducted by [Charest and Grandner \(2020\)](#), students' inappropriate attitudes may contribute to their emotional and impolite behavior.

6. Theoretical and Practical Implications

This study has significant theoretical and practical ramifications. This study has produced a major framework that is also an original contribution to the body of knowledge. In addition, the research has credible theoretical implications that contribute to expanding the body of knowledge. This study offered novel results that had not been presented in previous studies. Accordingly, this research reported in the literature that sports engagement had a favorable effect on students' psychological control. This association is novel to the literature, and no previous study in the setting of psychological control has revealed it. In addition, our research revealed in the literature that sports engagement

has a favorable effect on the mental health of pupils. Certainly, this association is novel to the literature, and no previous study in the context of mental health has exposed it. Similarly, this study reported in the literature that participation in sports had a favorable effect on the emotional health of students. Unquestionably, this association is novel to the literature, and no previous study has revealed it in the context of emotional well-being.

Secondly, the conclusions of this study have practical relevance. The study revealed that the university management must alter the perceptions of students regarding athletic performance. Indeed, athletic performance is essential for improving student conduct on college campuses. Students participating in sports would be more motivated to improve their health and pay less attention to other activities. In addition, the students' engagement in athletics can help them develop their psychological control, allowing them to avoid conflict. In addition, the students are needed to correctly enhance their mental health because the more they develop to improve their health, the more positive they will be about their actions.

Consequently, the participation of students in sporting activities is required to influence their mental health, which is enhanced by this element. Students are thus required to assume an active role in improving their mental health and engaging in sporting activities. The university administration is expected to encourage student participation in athletic activities that can affect the students' conduct and mental health.

7. Conclusion

As seen by the study's findings, it relied on primary data collected using a rating scale and the partial least square approach for data analysis to achieve its aims. According to the students of the faculty of physical education at Mutah University, participation in sports activities significantly minimizes violence by impacting their psychological control, mental health, and emotional well-being. In addition, regardless of gender, students concurred that participation in sports activities has a favorable effect on campus violence. Moreover, regardless of their grade point average, all students feel that athletic activities help minimize campus violence. Therefore, the university administration must increase student engagement in sports to improve their mental health, emotional well-being, and psychological control, thereby reducing campus violence. In light of the study's objectives and findings, the researcher suggested providing directions and regulations to encourage student participation in athletic activities. Second, arrange workshops and programs highlighting the sport's good

aspects to fill their leisure time successfully. Thirdly, university administrations must provide the necessary facilities and conditions to increase the number of students participating in sports.

8. Limitations and Future Directions

There are drivers and constraints on the results. Thus there may be other elements that influenced the sample's results, either favorably or adversely, based on the conditions and variables that the members of the study sample encounter, such as societal, familial, and economic variables. There are occasionally extraneous elements, such as the cultural level of the parents, their customs and traditions, and the

nature of the subjects they study during the study's period of application. Therefore, the results may not be applicable beyond the community of students at sports science faculties. The findings may also apply to students in Jordanian institutions' faculties of sports sciences. Despite these limitations, this study has inherent strengths. Select a typical study scale for data gathering first. Secondly, the size of the study sample represents the overall population of the research correctly as well. The respondents' age group comprises the majority of Jordanian society, comprising more than 70 percent of the youth. Future research must collect longitudinal data to improve this study's model by picking the sample population from a different demographic.

References

- Alarcón, D., & Sánchez, J. A. (2015). Assessing convergent and discriminant validity in the ADHD-R IV rating scale: User-written commands for Average Variance Extracted (AVE), Composite Reliability (CR), and Heterotrait-Monotrait ratio of correlations (HTMT). In *Spanish STATA meeting* (pp. 1-39). STATA. https://www.stata.com/meeting/spain15/abstracts/materials/spain15_alarcon.pdf
- Andersen, M. H., Ottesen, L., & Thing, L. F. (2019). The social and psychological health outcomes of team sport participation in adults: An integrative review of research. *Scandinavian journal of public health*, 47(8), 832-850. <https://doi.org/10.1177/1403494818791405>
- Chang, C., Putukian, M., Aerni, G., Diamond, A., Hong, G., Ingram, Y., Reardon, C. L., & Wolanin, A. (2020). Mental health issues and psychological factors in athletes: detection, management, effect on performance and prevention: American Medical Society for Sports Medicine Position Statement—Executive Summary. *British journal of sports medicine*, 54(4), 216-220. <https://doi.org/10.1136/bjsports-2019-101583>
- Charest, J., & Grandner, M. A. (2020). Sleep and athletic performance: impacts on physical performance, mental performance, injury risk and recovery, and mental health. *Sleep medicine clinics*, 15(1), 41-57. <https://doi.org/10.1016/j.jsmc.2019.11.005>
- Chin, W. W. (1998). The partial least squares approach for structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336). Lawrence Erlbaum Associates Publishers. <https://www.researchgate.net/profile/Wynne-Chin/publication/311766005>
- Deng, C.-H., Wang, J.-Q., Zhu, L.-M., Liu, H.-W., Guo, Y., Peng, X.-H., Shao, J.-B., & Xia, W. (2020). Association of web-based physical education with mental health of college students in Wuhan during the COVID-19 outbreak: cross-sectional survey study. *Journal of medical Internet research*, 22(10), e21301. <https://doi.org/10.2196/21301>
- Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of management information systems*, 18(1), 185-214. <https://doi.org/10.1080/07421222.2001.11045669>
- Grasdalsmoen, M., Eriksen, H. R., Lønning, K. J., & Sivertsen, B. (2020). Physical exercise, mental health problems, and suicide attempts in university students. *BMC psychiatry*, 20(1), 1-11. <https://doi.org/10.1186/s12888-020-02583-3>
- Gross, M., Moore, Z. E., Gardner, F. L., Wolanin, A. T., Pess, R., & Marks, D. R. (2018). An empirical examination comparing the mindfulness-acceptance-commitment approach and psychological skills training for the mental health and sport performance of female student athletes. *International Journal of Sport and Exercise Psychology*, 16(4), 431-451. <https://doi.org/10.1080/1612197X.2016.1250802>
- Khan, M. Y., Jamil, A., Khan, U. A., & Kareem, U. (2012). Association between participation in sports and academic achievement of college students. *International Journal of Academic Research in Business and Social Sciences*, 2(8), 419-431. https://hrmars.com/index.php/journals/archive_detail/IJARBSS/260
- Logue, D. M., Madigan, S. M., Melin, A., Delahunt, E., Heinen, M., Donnell, S.-J. M., & Corish, C. A. (2020). Low energy availability in athletes 2020: an updated narrative review of prevalence, risk, within-day energy balance, knowledge, and impact on sports performance. *Nutrients*, 12(3), 835. <https://doi.org/10.3390/nu12030835>

- McGuine, T. A., Biese, K. M., Petrovska, L., Hetzel, S. J., Reardon, C., Kliethermes, S., Bell, D. R., Brooks, A., & Watson, A. M. (2021). Mental health, physical activity, and quality of life of US adolescent athletes during COVID-19–related school closures and sport cancellations: a study of 13 000 athletes. *Journal of athletic training*, 56(1), 11-19. <https://doi.org/10.4085/1062-6050-0478.20>
- Meo, S. A., Abukhalaf, A. A., Alomar, A. A., Sattar, K., & Klonoff, D. C. (2020). COVID-19 pandemic: impact of quarantine on medical students' mental wellbeing and learning behaviors. *Pakistan journal of medical sciences*, 36(COVID19-S4), S43–S48. <https://doi.org/10.12669/pjms.36.COVID19-S4.2809>
- Peterson, R. A. (2000). A meta-analysis of variance accounted for and factor loadings in exploratory factor analysis. *Marketing letters*, 11, 261-275. <https://doi.org/10.1023/A:1008191211004>
- Por, J., Barriball, L., Fitzpatrick, J., & Roberts, J. (2011). Emotional intelligence: Its relationship to stress, coping, well-being and professional performance in nursing students. *Nurse education today*, 31(8), 855-860. <https://doi.org/10.1016/j.nedt.2010.12.023>
- Roemer, E., Schuberth, F., & Henseler, J. (2021). HTMT2—an improved criterion for assessing discriminant validity in structural equation modeling. *Industrial management & data systems*, 121(12), 2637-2650. <https://doi.org/10.1108/IMDS-02-2021-0082>
- Snedden, T. R., Scerpella, J., Kliethermes, S. A., Norman, R. S., Blyholder, L., Sanfilippo, J., McGuine, T. A., & Heiderscheid, B. (2019). Sport and physical activity level impacts health-related quality of life among collegiate students. *American Journal of Health Promotion*, 33(5), 675-682. <https://doi.org/10.1177/0890117118817715>
- Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of management Journal*, 38(5), 1442-1465. <https://doi.org/10.5465/256865>
- Ströhle, A. (2019). Sports psychiatry: mental health and mental disorders in athletes and exercise treatment of mental disorders. *European archives of psychiatry and clinical neuroscience*, 269(5), 485-498. <https://doi.org/10.1007/s00406-018-0891-5>
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in science education*, 48, 1273-1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Van Slingerland, K. J., Durand-Bush, N., & Rathwell, S. (2018). Levels and prevalence of mental health functioning in Canadian university student-athletes. *Canadian Journal of Higher Education*, 48(2), 149-168. <https://doi.org/10.7202/1057108ar>
- Vincent, H. K., Patel, S., & Zaremski, J. L. (2022). Impact of COVID on sports injury patterns, changes in mental well-being, and strategies to prepare for future pandemics in sport. *Current sports medicine reports*, 21(6), 196-204. <https://doi.org/10.1249/JSR.0000000000000966>
- Wilson, O. W. A., Holland, K. E., Elliott, L. D., Duffey, M., & Bopp, M. (2021). The impact of the COVID-19 pandemic on US college students' physical activity and mental health. *Journal of Physical Activity and Health*, 18(3), 272-278. <https://doi.org/10.1123/jpah.2020-0325>
- Zhang, W., He, E., Mao, Y., Pang, S., & Tian, J. (2023). How Teacher Social-Emotional Competence Affects Job Burnout: The Chain Mediation Role of Teacher-Student Relationship and Well-Being. *Sustainability*, 15(3), 2061. <https://doi.org/10.3390/su15032061>
- Zhang, Y., Zhang, H., Ma, X., & Di, Q. (2020). Mental health problems during the COVID-19 pandemics and the mitigation effects of exercise: a longitudinal study of college students in China. *International journal of environmental research and public health*, 17(10), 3722. <https://doi.org/10.3390/ijerph17103722>