

Parental Involvement in Shaping College Students' Attitudes towards Physical Activity; Implications for Policy

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ABSTRACT

Background: Parents' role in the attitude of their adolescent children regarding physical activity has been studied widely but still little information is available in the context of shaping the attitude of their college students in Pakistan. **Goal:** The current study focused on the association between parent involvement and attitudes towards physical activity among college students in Khyber Pakhtunkhwa and wanted to look for gender differences. **Method:** Quantitative, Cross sectional, Multistage probability sampling was used with students of public sector colleges. 450 questionnaires were sent, with 422 valid responses received, as per Cochran's formula. A modified questionnaire that included 11 items for parents' involvement and 12 items for parents' attitudes toward physical activity was used to gather data. Descriptive statistics, Pearson correlation, structural equation modeling and independent samples t-tests were carried out. **Findings:** There was a moderate positive correlation between parental involvement and the attitudes toward physical activity ($r = .46$, $p < .01$), and a significant direct positive relationship between parental involvement and attitudes toward physical activity ($\beta = 0.22$, $p < .001$).

Parent involvement and attitudes were significantly higher for female students than male students ($p < .05$). **Conclusion:** The positive link between parental involvement and college students' attitudes towards physical activity underscores the importance of strategies that involve the family to support an active lifestyle in young adults.

Keywords: Parental involvement; physical activity; attitudes toward physical activity; college students; gender differences; Pakistan.

INTRODUCTION

There is a well-known association between regular participation in physical activity and physical, mental and social health throughout the lifespan. In young adults, regular physical activity may enhance cardiovascular health, healthy body composition, psychological health, academic functioning and/or reduce chronic disease risk. In spite of the proven advantages, the participation rate in PA among college students in many countries is still lower than the recommended amount, which is a cause for concern regarding the establishment of lifelong healthy behaviors during the period of transition from adolescence into adulthood (Anand et al., 2011; Osmani & Perić, 2023; Sangwan et al., 2024).

College is a time of significant growth when students start to make decisions about their lives for themselves, and at the same time are still affected by their family. While higher education offers opportunities for students to become independent, parents still influence students' beliefs, values and choices about their own health and behaviors through emotional support, role modeling, encouragement, expectations, and establishing a health promoting family environment. Family influence therefore does not stop in childhood and has an impact on health-related behaviors such as physical activity and exercise participation (Nicholas et al., 2018; Wang et al., 2025; Lou et al., 2026).

Parenting involvement has been studied mainly within the context of educational institutions where it is always linked to better academic performance, motivation, and student development (Ahmad & Malik, 2018). More recently, researchers have broadened this concept to encompass health promotion and physical activity, and parents as important actors in fostering active lifestyles.

Physical activity behavior is influenced by the behaviours of parents who encourage participation in sports, offer physical and financial assistance with activity, are role models and influence attitudes towards physical education and recreation (Paulson et al., 2022; Kovács et al., 2022). Research also indicates that parental attitudes towards physical education are important factors in shaping children and adolescents' involvement in physical activity at school and in leisure time (Moradi, 2025; Levental et al., 2024).

There is increasing evidence from around the world that family and parental factors remain significant influences on physical activity during the college years. Through studies in China, it has been found that parental influence, family sports culture, and a supportive home environment positively impact the participation in physical activity, leisure experiences, and the establishment of lifelong exercise habits among college students (Li et al., 2025; Wang et al., 2025; Zheng et al., 2025; Lou et al., 2026). Likewise, there is systemic evidence that the various forms of parental involvement are associated with positive health and sport outcomes, with substantial gaps in understanding how family influence manifests across various educational and cultural settings (Kovács et al., 2022). The results taken together highlight the importance of family support in postsecondary education.

Attitudes of students are among the most powerful psychological factors in determining regular participation in physical activity. Positive attitudes promote intrinsic motivation, adherence to exercise, and participation in recreational and competitive sports, while negative attitudes can lead to sedentary lifestyle and lower participation rates (Huang & Hsu, 2019; Esslinger et al., 2016; Nie, 2024). The positive association between positive attitudes toward physical education and physical activity and increased physical activity participation and healthy lifestyle in various countries has been reported in previous studies (Zeng, Wang & Wang, 2016; Zeng, Wang & Wang, 2016; Solomonko et al., 2022; Osmani & Perić, 2023). For this reason, it has become a priority for educators and policymakers to understand the factors that affect these attitudes.

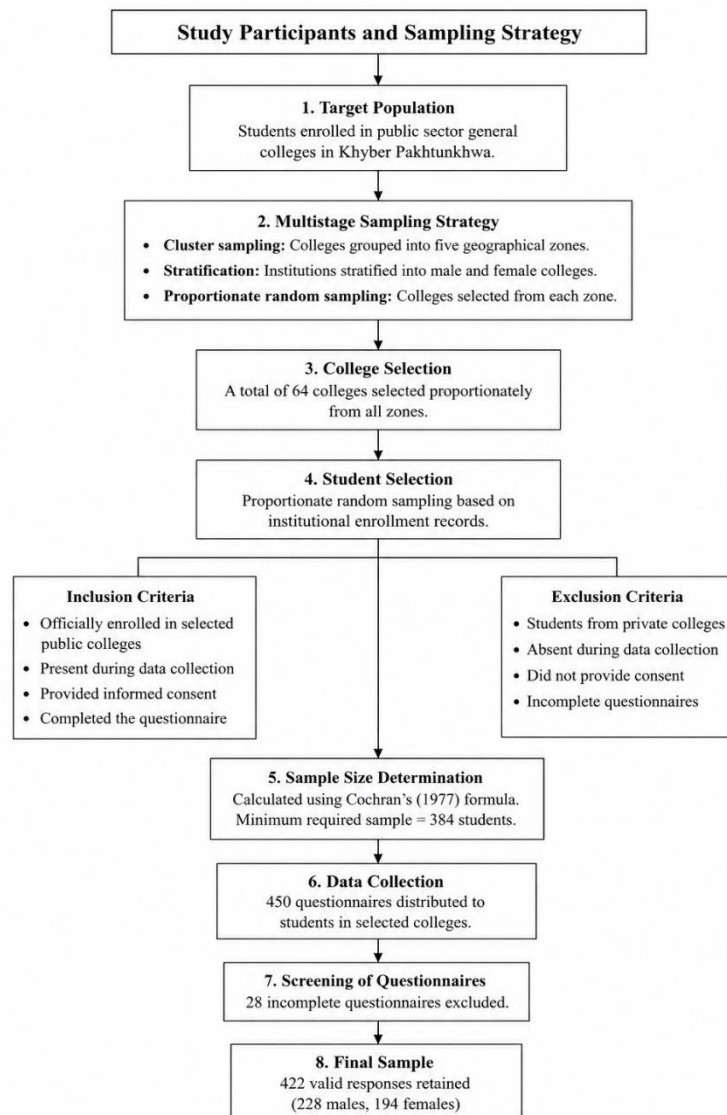
In Pakistan, the research has been mainly descriptive in nature and academic studies have concentrated on the attitude of the college students towards physical education

and sport participation instead of investigating the factors related to the family of the students that influence such attitudes. In Pakistan, the attitudes of college students towards physical education have been reported to be different (Awan, 2020; Saqlain et al., 2020) and it has also been noted that there are various barriers for the participation of students in sports and physical activity (Zaman et al., 2018; Atta et al., 2022). But, in the context of sociocultural environment of Khyber Pakhtunkhwa, there is dearth of empirical evidence about how the parental involvement influences these attitudes among college students. Due to the family-oriented social system in Pakistan, parents' influence on educational decisions, lifestyle habits and recreational activities is likely to remain throughout late adolescence and early adulthood. However, there has been little empirical research on this relationship.

In addition, systematic and international research of the last years pinpointed parental engagement in sport and health promotion as a new field of research in different cultures (Kovács et al., 2022). The current evidence is largely from Western or East Asian contexts, and there is a lack of generalizability to South Asian contexts, where family roles and values, cultural norms, and educational experiences vary significantly. The study of parents' involvement in the context of Pakistan thus offers an opportunity to expand the body of existing knowledge, and to deliver new evidence for policy and practice relevant to the context.

In this context, the present study examines the correlation between Parents involvement and attitudes towards physical activity of college students at public colleges of KPK, Pakistan. The study aims to determine if parental involvement is associated with more positive attitudes toward physical activity among college students using a quantitative cross sectional survey. The results will be part of a growing literature on the importance of family influence on physical activity levels, and will provide evidence to support the development of family-focused strategies for supporting physical activity among young adults in educational institutions, public health practitioners and policy makers.

Conceptual Framework



MATERIALS AND METHODS

Place of Work

The study was carried out in Government Sector General Colleges of Khyber Pakhtunkhwa (KP), Pakistan. In the last survey, there were 33 districts with 174 male and 149 female public sector general colleges. The sampling frame consisted of these institutions. For geographical representation, the colleges were divided into five Administrative Zones namely, Northern, Central, Malakand, Southern and Southern Belt.

Research Design

The approach of the study was quantitative research that adopted a cross-sectional survey design with the positivist paradigm. This design was deemed to be suitable for investigating the association between parental involvement and attitudes towards physical activity among college students across a large population spread across a geographically diverse area.

Study Participants and Sampling Strategy

Students studying in public sector general colleges of Khyber Pakhtunkhwa were the subjects of the study. A multi-stage probability sampling procedure was used. Colleges were grouped together into five geographical zones initially. Later, institutions were segregated into colleges for boys and colleges for girls and then a proportional random sampling of colleges was taken from each zone. A total of 64 colleges were picked.

The students were then sampled by means of proportionate random sampling from the institutional enrollment records. The required sample size was determined by Cochran's formula (1977) which gave a minimum sample size of 384 students. The number of questionnaires distributed was 450, because of potential non-response. A total of 422 questionnaires were analyzed, of which 194 were from females and 228 were from males. A total of 28 questionnaires were discarded due to incomplete questionnaires and 422 were used in the analysis, with 194 from females and 228 from males.

The students were eligible if they were officially enrolled in the selected public colleges, attended during the data collection, gave informed consent and filled the questionnaire. Students from the private colleges and students who submitted incomplete questionnaires were excluded.

Research Instruments

The data was obtained through a structured questionnaire with 11 questions each for the constructs parental involvement and attitudes towards physical activity. The parental involvement items were drawn from and adapted from Epstein's (1995) parental involvement framework (Newman et al., 2019), as well as measuring parental engagement done by (Caliskan, 2025). Likewise, the attitude items were

modified and adapted from the Theory of Planned Behavior (Ajzen 1991) and previous study on physical activity attitudes (Khan et al., 2012; Sangwan et al., 2024; Osmani & Peric, 2023)) related to the context of the study.

The items were rated on a 5-point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree), with higher scores representing higher levels of parental involvement and more positive attitudes towards physical activity. To insure content validity and clarity, the instrument was reviewed by experts and pilot tested before the main survey.

STATISTICAL ANALYSIS

Table 1. *Demographic Characteristics of the Participants (N = 422)*

Variable	Category	n	%
Gender	Male	228	54.0
	Female	194	46.0
	Total	422	100.0

The gender distribution of the 422 respondents was fairly even with a slight majority of male students (228, 54.0% male and 194, 46.0% female). This distribution gave reasonable representation for both genders for comparisons and inferences.

Histogram of Gender Distribution (N = 422)

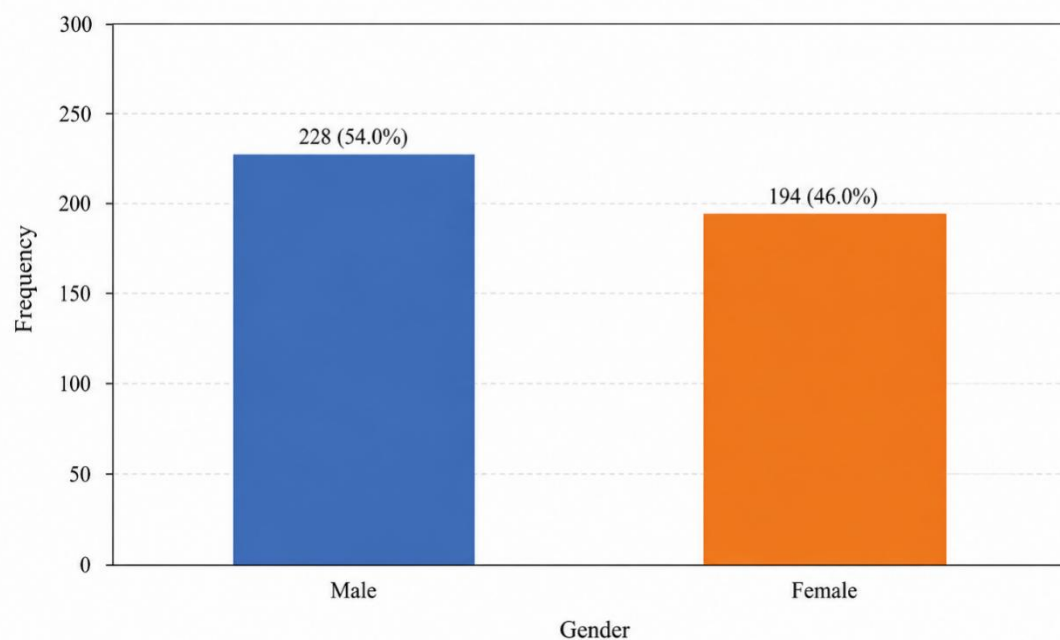
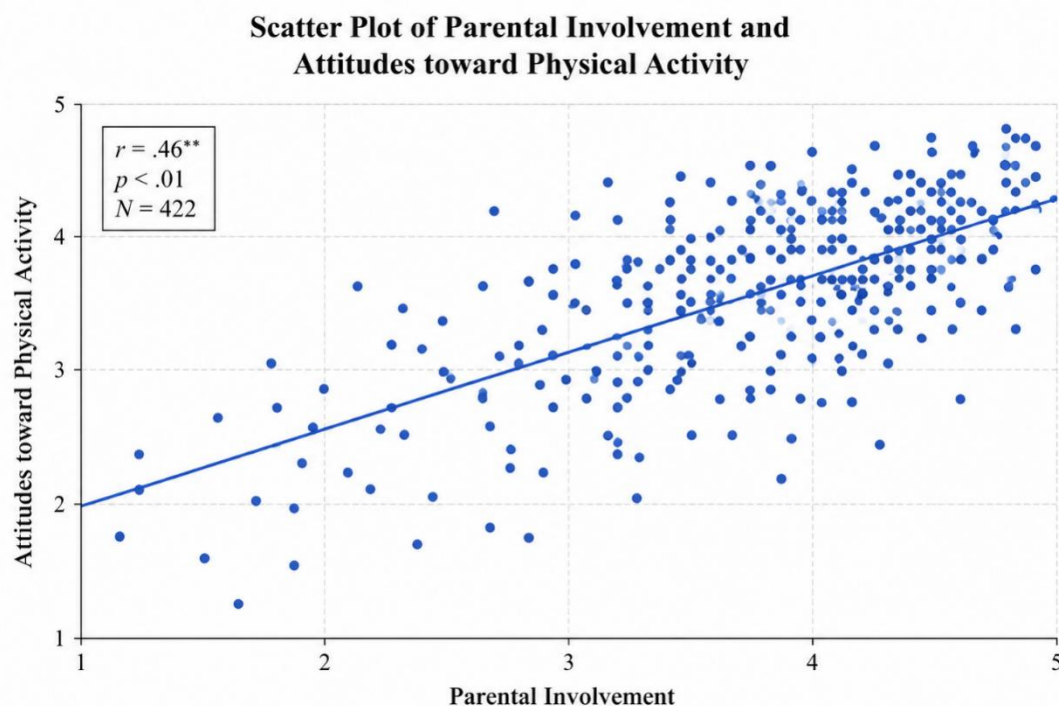


Table 2. Pearson Correlation Matrix of Parental Involvement and Attitudes toward Physical Activity

Variable	M	SD	1	2
1. Parental Involvement	3.91	0.75	—	
2. Attitudes toward Physical Activity	4.34	0.66	.46**	—

Note. M = Mean; SD = Standard Deviation. $p < .01$ (two-tailed). $N = 422$.

The Pearson correlation analysis indicated a moderate positive and statistically significant correlation between parental involvement and attitudes of college students towards physical activity ($r = .46$, $p < .01$). The discovery suggests that students whose parents were more involved in their physical activity were more likely to report positive attitudes towards physical activity.

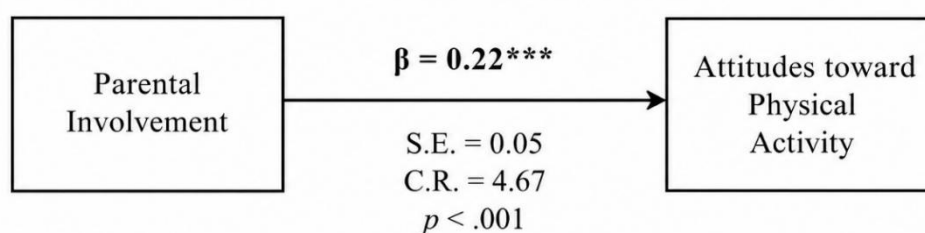


There is an moderate positive correlation between parental involvement and attitude towards physical activity ($r = .46$, $p < .01$) as evidenced by the scatter plot. A positive correlation was found between the parental involvement and the physical activity attitudes of students.

Table 3. Direct Effect of Parental Involvement on Attitudes toward Physical Activity

Path	Standardized β	S.E.	C.R.	P -value
Parental Involvement $\rightarrow$ Attitudes toward Physical Activity	0.22	0.05	4.67	< .001

The structural model showed that parental involvement was a positive and statistically significant direct effect on the students' attitudes towards physical activity ($\beta = 0.22$, $p < .001$). The results show a positive correlation between perceived parental involvement and positive attitudes toward physical activity in college students.



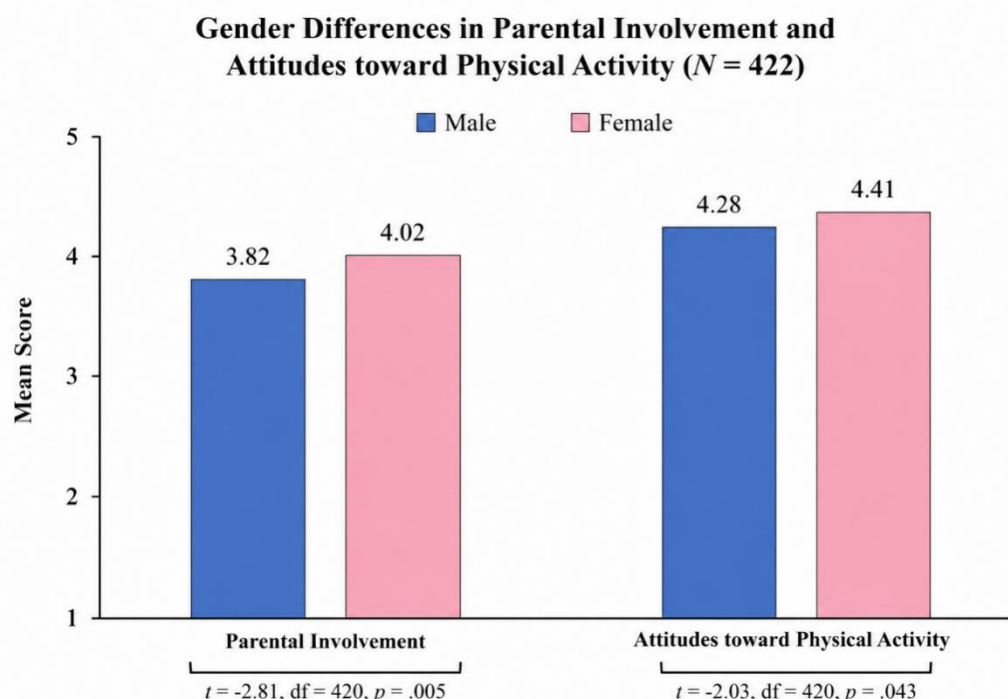
Note. *** $p < .001$

Table 4. Independent Samples t-Test for Gender Differences in the Study Variables

Variable	Male Mean $\pm$ SD	Female Mean $\pm$ SD	t	df	P
Parental Involvement	3.82 $\pm$ 0.74	4.02 $\pm$ 0.73	-2.81	420	.005
Attitudes toward Physical Activity	4.28 $\pm$ 0.67	4.41 $\pm$ 0.64	-2.03	420	.043

Independent samples t-test showed significant differences between the two study variables for the different sexes. There was a significant difference between males and females in relation to students' perceptions of parental involvement and attitudes toward physical activity ($p < .05$); gender was associated with differences in

students' perceptions of parental involvement and attitudes toward physical activity.



Parents' involvement was found to be significantly higher in female students than male students ($p < .05$) and attitudes toward PA were significantly more positive in females ($p < .05$).

Discussion

This study aimed to understand the relationship between the parental involvement and attitude of college students on physical activity in public sector colleges of Khyber Pakhtunkhwa, Pakistan. The results support empirical evidence of the positive association between parental involvement and students' attitudes towards physical activity, and that it remains an important factor throughout the college years. These findings build on the increased awareness of the importance of family environment in health-related behaviors during adulthood.

A moderate positive correlation was found between the student's perception of parental involvement and attitudes towards physical activity, with those who felt their parents are more involved expressing more positive attitudes to being physically active. This finding is supported by previous research that found that although young adults are becoming more independent during higher education,

parents continue to be a significant influence on young adults' health beliefs and lifestyle choices (Nicholas et al., 2018; Wang et al., 2025). In the same way, Li et al. (2025) and Lou et al. (2026) indicated that positive influences from supportive family environments and family members foster physical activity participation and healthy behaviors associated with physical activity among college students. These current findings thus support the stance of the importance of family support in relation to student attitudes towards an active lifestyle.

The structural model also indicated that parental involvement had a significant direct effect on the attitudes toward physical activity. This implies that the positive perceptions of physical activity among college students are partly attributed to parental encouragement, guidance and involvement. The results confirm the theoretical predictions of Epstein's (1995) parental involvement framework that active parent involvement has a positive influence on school outcomes for students. They also reflect the Theory of Planned Behavior (Ajzen, 1991), that influential social agents including parents help create positive attitudes leading to behavioral intentions. Previous studies also have shown that parental support and family sports environments have positive effects on students' motivation and participation in physical activity (Paulson et al., 2022; Moradi, 2025; Zheng et al., 2025).

Important gender disparities in parental involvement and attitudes towards physical activity were also found. Female students' perceptions of parental involvement and attitudes toward physical activity were greater than those of male students. The findings from the previous research on gender differences in physical activity attitudes are inconsistent, but in this research, parental support is found to be one of the significant factors in facilitating female students to appreciate physical activity in the context of Khyber Pakhtunkhwa. The finding is partly consistent with Levental et al. (2024) who noted that parental involvement in sporting participation may differ across genders, which is linked to variations in parental expectations and support. Likewise, Li et al. (2025) noted gender-specific parental influences for physical activity in university students. A higher level of encouragement from parents is likely to boost the confidence and motivation of female students in

participating in physical activity in the context of the Pakistani culture where family is the primary focus.

Overall, results underscore importance of parents as important stakeholders in fostering positive attitudes toward physical activity among college students. Educational institutions are a key to the opportunities for participation, but the importance of family support in relation to students' attitudes seems to continue to be a factor when they are still very young. The results indicate that interventions to increase physical activity in college students should include interventions that engage parents in the effort in the form of awareness campaigns, family-based health promotion interventions, and institutional policies that promote intergenerational partnerships between colleges and families. These coordinated efforts could help create more conducive climates to promote lifelong physical activity.

Conclusion

The findings of this study indicate that parental involvement has an important role in the attitudes of college students towards physical activity in Khyber Pakhtunkhwa, Pakistan. Perceived parental involvement was positively correlated with positive attitudes toward physical activity and positively correlated with higher levels of physical activity attitudes. Positive attitudes toward physical activity were significantly correlated with perceived higher levels of parental involvement, which had a significant direct effect on these attitudes. There was a significant difference between the parental involvement and the attitudes of female students and male students as well.

The results underscore the need to engage parents in the campaign to encourage physical activity among college students. Incorporating efforts to enhance family involvement with programs in addition to institutional efforts could help develop positive attitudes toward physical activity and promote healthier lifestyles among young adults.

Conflict of Interest

The authors declare that they have no conflict of interest.

REFERENCES

Ahmad, S., & Malik, S. (2018). Parental involvement in children's education: A case

- of rural areas of Khyber Pakhtunkhwa. *Journal of Education and Educational Development*, 5(1), 90-108.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Anand, T., Tanwar, S., Kumar, R., Meena, G., & Ingle, G. (2011). Knowledge, attitude, and level of physical activity among medical undergraduate students in Delhi. *Indian journal of medical sciences*, 65(4), 133.
- Atta, H., Nazir, T., & Mushtaq, M. (2022). COLLEGE STUDENTS' ATTITUDES TOWARDS PHYSICAL EDUCATION IN PAKISTAN. *THE SKY-International Journal of Physical Education and Sports Sciences (IJPESS)*, 6, 83-92.
- Çalışkan, E. F. (2025). A Valid and Reliable Scale for Measuring Parental Involvement in Primary School Children ' s Literacy Development. *Sage Open*, 15(4), 21582440251411578.
- Esslinger, K. A., Grimes, A. R., & Pyle, E. (2016). Effects of requiring physical fitness in a lecture-based college course: Students' attitudes toward physical activity. *Physical Educator*, 73(1), 161.
- Huang, W. Y., & Hsu, C. C. (2019). Research on the motivation and attitude of college students' physical education in Taiwan. *Journal of physical education and sport*, 19, 69-79.
- Ibri, L., & Çupi, B. (2025). Investigating Parental Attitudes and Perspectives on the Importance of Physical Activity in Early Childhood Education. *Human Research in Rehabilitation*, 15(2).
- Khan, S., Abbass, S. A., Khan, W., & Din, M. U. (2012). A Study Regarding the Collage Students' Attitudes towards Physical Activities. *International Journal of Academic Research in Business and Social Sciences*, 2(9), 189.
- Kovács, K., Kovács, K. E., Bacskai, K., Békési, Z., Oláh, Á. J., & Pusztai, G. (2022). The effects and types of parental involvement in school-based sport and health programs still represent a knowledge gap: a systematic review. *International journal of environmental research and public health*, 19(19), 12859.
- Levental, O., Lev-Arey, D., & Tamir, I. (2024). Parents' involvement in choosing

- extracurricular sports activities: A gendered perspective from Israel. *Education Sciences*, 14(1), 99.
- Li, H., Xiong, L., & Qiu, Q. (2025). Parental influence, Physical Activity, and Leisure Experience Among Chinese College Students: A Structural and Gender-Differentiated Analysis. *한국여가레크리에이션학회지*, 49(4), 149-162.
- Lou, L., Hu, Y., & Yang, J. (2026). Effect of intergenerational transmission of family sports environment on college students' physical activity. *International Journal of Sport and Exercise Psychology*, 24(2), 232-248.
- Moradi, L. (2025). Association Between Parental Attitudes Toward Physical Education and Children's Physical Activity Participation: A Comparison of In-School and Out-of-School Contexts. *Physical Activity in Children*, 2(2), 15-21.
- Newman, N., Northcutt, A., Farmer, A., & Black, B. (2019). Epstein's model of parental involvement: Parent perceptions in urban schools. *Language Teaching and Educational Research*, 2(2), 81-100.
- Nicholas, K. J., Soptich, K. M., Tyson, A., Abraham, S. P., Perry, G., & Gillum, D. R. (2018). College students' perception of family influence impacting their health and lifestyle. *TEACH Journal of Christian Education*, 12(1), 45-56.
- Nie, J. (2024). An analytical study on changes in university students' attitudes toward physical activity. *Frontiers in Sports and Active Living*, 6, 1323582.
- Osmani, A., & Perić, D. B. (2023). Physical activity, body composition and attitudes toward exercise among college students. *South African Journal for Research in Sport, Physical Education and Recreation*, 45(3), 60-79.
- Osmani, A., & Perić, D. B. (2023). Physical activity, body composition and attitudes toward exercise among college students. *South African Journal for Research in Sport, Physical Education and Recreation*, 45(3), 60-79.
- Paulson, A., Kulinna, P. H., & van der Mars, H. (2022). Effect of parental involvement on perceptions of physical education. *Physical Educator*, 79(4), 441-465.
- Sangwan, N., Rathee, R., Chahal, P., & Rani, T. (2024). A study on the college students' attitudes towards and participation in competitive physical activity. *Sports Science & Health Advances*.

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- Sangwan, N., Rathee, R., Chahal, P., & Rani, T. (2024). A study on the college students' attitudes towards and participation in competitive physical activity. *Sports Science & Health Advances*.
- Solomonko, A., Zanevskyy, I., Bodnarchuk, O., Andres, A., Petryna, R., & Lapychak, I. (2022). Attitude of law college students towards physical culture and sports. *Journal of Physical Education and Sport*, 22(3), 780-787.
- Wang, J., Wang, S., Jiang, B., & Shen, X. (2025). The Influence of Family Environment on Physical Activity Participation Among College Students in Chongqing. *Quality in Sport*, 48, 66676-66676.
- Zaman, S., Mian, A. K., & Butt, F. (2018). Attitude of young students towards sports and physical activities. *Global Management Journal for Academic & Corporate Studies*, 8(1), 33-42.
- Zeng, H. Z., Wang, Y., & Wang, X. (2016). A study of Chinese collegiate attitudes toward physical education. *International Research in Higher Education*, 1(2), 1-11.
- Zeng, Z. H., Wang, Y., & Wang, X. (2016). A Comparison Study of University Students' Attitudes Toward Physical Education. *Research Quarterly for Exercise and Sport*, 87(S2), A24.
- Zheng, H., Xiang, Z., Yang, W., & Xi, H. (2025). The shaping of adolescent physical activity habitus: The role of family sports culture. *Plos one*, 20(12), e0336905.