

The Effect of Exercise on Peer Relationship and Peer Bullying Level in Children

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Abstract

This study aimed to explore the relationship between peer relations and peer bullying among children engaged in sports activities, as well as the impact of being bullied on the perpetration of bullying behaviours. The research involved 227 students, aged 13 and 14, enrolled in public schools under the Bingöl Provincial Directorate of National Education. Data were collected using a questionnaire technique, specifically employing the “Peer Relationship Scale” and the “Peer Bullying Scale.” The analysis of the data was conducted using SPSS Statistics 22. Descriptive statistics, including arithmetic means, standard deviations, frequencies, and percentage distributions, were utilized to summarize demographic information and responses to group-related questions. To assess the peer relations and peer bullying levels of the participants, numerical ratios, percentage frequencies, and arithmetic mean values were calculated and presented in tabular form. Correlation analysis (Pearson) was employed to examine the relationships between the sub-dimensions of peer relations and those of bullying and being bullied. Additionally, regression analysis was performed to investigate the extent to which being bullied by peer’s influences subsequent bullying behaviour. The findings indicated that the peer relationship levels of students participating in sports activities were generally favourable. However, the levels of peer bullying and experiences of being bullied were found to be significantly high. Furthermore, it was concluded that students' engagement in bullying behaviours was influenced by prior experiences of being bullied themselves.

Keywords: Peer Relationship, Peer Bullying Level, Children.

Introduction

Throughout various stages of life, individuals encounter a range of experiences, both positive and negative. While it is natural to wish to avoid negative events, such occurrences are an inherent aspect of life. One particularly detrimental experience that individuals may face is bullying, which can manifest in social, workplace, or educational settings. The literature provides multiple definitions of bullying, with Olweus (1993) characterizing it as intentional and repetitive harmful behaviors exhibited by individuals or groups toward those perceived as weaker. In school contexts, bullying constitutes a pattern of antisocial behavior characterized by repeated negative actions directed by one or more students toward their peers, often involving an abuse of power. Key features of this phenomenon include the intentionality behind the

abusive behaviors and the aim to inflict physical, social, or psychological harm on the victim (Castañeda-Vázquez et al., 2020; Cook et al., 2010; Evans et al., 2016; Hunt, Peters, & Rapee, 2012; Karaaslan, Ilkim, & Özdemir, 2021; Ortega-Ruiz, Del Rey, & Casas, 2016).

The consequences of bullying exposure and a lack of peer relationships among children are notably detrimental. Victims of bullying often suffer from physical issues (Gini & Pozzoli, 2009) and emotional difficulties (Kaltiala-Heino et al., 1999; Roland, 2002). Longitudinal studies indicate that children who experience bullying during adolescence are at a heightened risk for developing anxiety disorders, panic disorders, and depression in young adulthood (Sigurdson et al., 2015; Wolke et al., 2013). Furthermore, the absence of healthy peer relationships can lead to social dissatisfaction, loneliness, anxiety, and avoidance of social interactions (Ladd & Burgess, 2001; Ladd, Kochenderfer,

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& Coleman, 1997). Children facing peer rejection may also exhibit behavioral issues, including aggression and a propensity to bully others (Denham & Holt, 1993; Gülay, 2011). This pattern of rejection can have long-term repercussions, including academic failure and persistent social exclusion throughout primary and secondary education (Beyazkurk, Anliak, & Dincer, 2007; Hay, 2006; Ladd & Burgess, 2001). The implications of limited peer relationships and exposure to bullying are critical, underscoring the significance of the current study, which investigates the effects of physical exercise on peer relationships and bullying.

This research is not the first to address the intersection of peer relationships and bullying. A review of the literature reveals that studies conducted in Turkey primarily focus on university students (Can & Akdoğan, 2007), high school students (Çakır & Yazıcıoğlu, 2007; Ertokuş-Delikara, 2000), primary school students (Akgün, 2005; Bilgiç & Yurtal, 2008; Gültekin, 2003; Önder & Gülay, 2008; Pekel, 2004), and preschool students (Salı, 2014). Various strategies exist to help children cope with bullying, and one such approach is through engagement in physical activity. Numerous studies have demonstrated the psychological and physical benefits of physical activity. Research has shown that participation in sports enhances cognitive skills (Lipscomb, 2007), improves educational attainment (Barron, Ewing, & Waddell, 2000; Crispin, 2017; Eide & Ronan, 2001; Stevenson, 2010), and can positively influence labor market outcomes, including wages (Barron et al., 2000; Eide & Ronan, 2001; Kosteas, 2010; Kuhn & Weinberger, 2005; Stevenson, 2010). Furthermore, involvement in sports has been linked to reduced dropout rates (Cuffe, Waddell, & Bignell, 2017). The aim of this study is to investigate the direct and indirect effects of physical exercise on peer relationships and bullying, thereby contributing valuable insights to the existing literature.

The findings are expected to serve as a resource for preventing peer bullying, benefitting students, families, and policymakers in implementing effective measures. This study specifically aims to assess the peer relationship levels and peer bullying experiences of elementary school students who participate in sports. By examining the interplay between these variables, the research seeks to highlight the negative implications of peer bullying, which is particularly concerning for young individuals, their families, and school administrators. The research is significant as it underscores the importance of sports in fostering positive peer relationships and offers recommendations for strategies aimed at enhancing peer interactions or mitigating bullying behaviours.

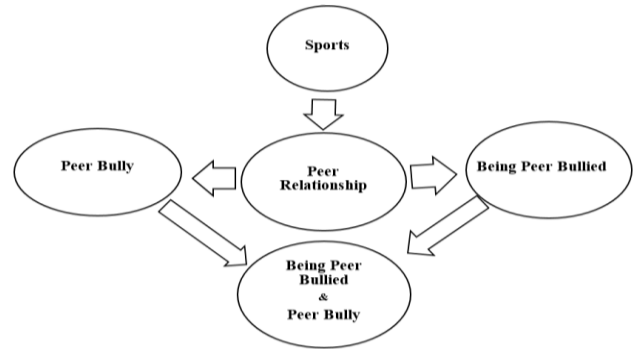


Figure 1: Research Framework.

Method and Research Model

This research is designed as a field survey, utilizing a "questionnaire technique" to gather data. Prior to completing the questionnaires, participants were thoroughly informed about the study's purpose and procedures. In the initial phase of analysis, frequency and percentage distributions of the data collected through the peer relations and peer bullying instruments were assessed. This analysis aimed to illustrate the participants' tendencies regarding these variables. Subsequently, relational analysis was performed to explore the relationships between the identified variables. Finally, impact analysis was conducted to examine the predictive power of these variables on one another. The hypotheses proposed for this research are outlined in the Table 1.

Study Group and Data Collection Tools

Participants in this study consisted of 227 students aged 13 and 14, all enrolled in public elementary schools and actively engaged in sports (either licensed in school sports or club sports) during the 2023-2024 academic year. The study employed a questionnaire technique as the primary data collection method. The questionnaire was divided into two parts. The first part gathered demographic information about the participants, including variables such as gender and sport type. The second part featured the "Peer Relationship Scale," adapted into Turkish by Atik et al. (2014), and the "Peer Bullying Identification Scale," developed by Pişkin and Ayas (2011). In the Peer Relationship Scale, higher arithmetic means scores indicate stronger peer relationships, while lower scores in the conflict sub-dimension suggest reduced conflict among peers. Conversely, an increase in the arithmetic mean score of peer bullying signifies a decrease in bullying behaviour. The Peer Bullying Scale is structured into two sections to distinguish between victims and perpetrators of bullying. Although numerous similar instruments exist in

the literature, the selection of these specific scales is justified by their development and adaptation for comparable age groups, enhancing the compatibility of the data collection tools and the reliability of the research findings. This choice underscores the appropriateness of these measurement instruments for the study's objectives.

Statistical Analysis and Findings

This section outlines the statistical results of the study, focusing on analyses conducted according to the demographic characteristics of the participants. The data collected from the scales measuring peer relations and peer bullying among student athletes were analysed using the SPSS Statistics 22 software. Descriptive statistics,

including arithmetic mean, standard deviation, frequency, and percentage distributions, were presented to provide insights into the demographic characteristics and responses to group-related questions.

To assess the peer relations and peer bullying levels among the participants, numerical ratios, percentage frequencies, and arithmetic mean values of the responses to the scales were calculated and displayed in tabular format. The normality of the distributions was evaluated using the Kolmogorov-Smirnov test, followed by the examination of skewness and kurtosis. According to Osborne and Ovrbay (2004), scores are considered "normal" if their Z values fall between -3 and +3, while values outside this range are classified as "outliers."

Table 1

Distribution and Means of the Statements Reflecting the Peer Relationship Levels of the Students Participating in the Study

Propositions of the Peer Relations Sub-Dimension	Strongly disagree		Disagree		Undecided		Agree		Totally Agree		\bar{x}
	n	%	n	%	n	%	n	%	n	%	
1. My friend and I spend all our free time together.	33	14.5	24	10.6	67	29.5	39	17.2	64	28.2	3.33
2. My friend thinks of fun things that the two of us can do together.	24	10.6	12	5.3	25	11.0	45	19.8	121	53.3	4.00
3. My friend and I go to each other's house after school and on weekends.	90	39.6	40	17.6	31	13.7	24	10.6	42	18.5	2.50
4. Sometimes my friend and I sit idly by and talk about things we like, like school, sports, etc.	26	11.5	16	7.0	38	16.7	37	16.3	110	48.5	3.83
Togetherness Sub-Dimension (Questions 1 and 4)											3.41
5. I can fight with my friend.	105	46.3	43	18.9	35	15.4	14	6.2	30	13.2	2.21
6. Even if I tell my friend not to do it, he or she can still make me angry or annoy me.	69	30.4	40	17.6	42	18.5	21	9.3	55	24.2	2.79
7. My friend and I argue a lot.	135	59.5	35	15.4	19	8.4	18	7.9	20	8.8	1.91
8. My friend and I disagree about many things.	91	40.1	40	17.6	39	17.2	13	5.7	44	19.4	2.46
Conflict Sub-Dimension (Questions 5 and 8)											2.34
9. If I forget my lunch or need some money, my friend will lend it to me.	22	9.7	16	7.0	26	11.5	22	9.7	141	62.1	4.07
10. My friend helps me when I am in trouble.	11	4.8	8	3.5	22	9.7	35	15.4	151	66.5	4.35
11. My friend will help me when I need it.	10	4.4	11	4.8	14	6.2	36	15.9	156	68.7	4.39
12. If other kids bother me my friend will help me.	14	6.2	9	4.0	22	9.7	27	11.9	155	68.3	4.32
13. If a child gets me into trouble, my friend will defend me.	21	9.3	10	4.4	23	10.1	26	11.5	147	64.8	4.18
Solidarity Sub-Dimension (Questions 9 and 13)											4.26
14. If I have a problem at school or at home, I can talk about it with my friend.	42	18.5	21	9.3	40	17.6	28	12.3	96	42.3	3.50
15. I can even say things to my friend that I wouldn't say to anyone else.	50	22.0	24	10.6	23	10.1	35	15.4	95	41.9	3.44
16. If my friend or I do something that makes either of us uncomfortable, we can easily handle it.	24	10.6	17	7.5	37	16.3	52	22.9	97	42.7	3.79
17. If my friend and I fight or squabble, we say "I'm sorry" and everything will be okay.	17	7.5	24	10.6	25	11.0	37	16.3	124	54.6	4.00
Protection Sub-Dimension (Questions 14 and 17)											3.68
18. If my friend has to go far away, I will miss him/her.	15	6.6	14	6.2	14	6.2	27	11.9	157	69.2	4.30
19. I feel happy when I am with my friend.	9	4.0	9	4.0	12	5.3	32	14.1	165	72.7	4.47
20. Even if my friend is not around, I think about him/her.	20	8.8	14	6.2	44	19.4	42	18.5	107	47.1	3.88
21. When I do a good job, my friend is happy for me.	16	7.0	16	7.5	30	13.2	32	14.1	132	58.1	4.08
22. Sometimes my friend does something for me and I feel special.	24	10.6	16	7.0	29	12.8	35	15.4	123	54.2	3.95
Closeness Sub-Dimension (Questions 18 and 22)											4.14
Peer Relations Grand Total											3.62

Table 2

Distributions and Averages of Statements Reflecting the Peer Bullying Levels of the Students Participating in the Study

Propositions Concerning the Peer Bullying Sub-Dimensions		Strongly Disagree		Disagree		Undecided		Agree.		Totally Agree	\bar{x}	
		n	%	n	%	n	%	n	%	n	%	
Physical Bullying X: 4.36	1. Attacking with sharp instruments (knife, scissors, etc.)	3	1.3	2	.9	3	1.3	-	-	219	96.5	4.90
	2. Sticking sharp objects (pencil, pin, etc.)	5	2.2	6	2.6	10	4.4	22	9.7	184	81.1	4.64
	3. Kicking, slapping and punching	17	7.5	15	6.6	20	8.8	34	15.0	141	62.1	4.17
	4. Hitting with an object (stick, rod, ruler, etc.)	12	5.3	9	4.0	10	4.4	30	13.2	166	73.1	4.44
	5. Intentional shoulder throwing, elbow hitting, bumping	14	6.2	21	9.3	20	8.8	31	13.7	141	62.1	4.16
	6. Hair and ear pulling, pinching, biting	15	6.6	12	5.3	9	4.0	27	11.9	164	72.2	4.37
	7. Pushing, bending the arm and dropping	13	5.7	10	4.4	14	6.2	11	4.8	179	78.9	4.46
	8. Throwing objects, wetting	23	10.1	34	15.0	24	10.6	40	17.6	106	46.7	3.75
	9. Disturbing with hand-arm jokes or tickling	14	6.2	21	9.3	26	11.5	42	18.5	124	54.6	4.06
	10. Placing an uncomfortable object underneath when about to sit down	11	4.8	2	.9	5	2.2	16	7.0	193	85.0	4.66
Verbal Bullying X: 4.18	11. Swear, use words such as stupid, idiot, or retard.	40	17.6	24	10.6	24	10.6	31	13.7	108	47.6	3.63
	12. Calling unpleasant names (nicknames)	28	12.3	13	5.7	27	11.9	30	13.2	129	56.8	3.96
	13. Making fun of one's appearance	9	4.0	9	4.0	11	4.8	26	11.5	172	75.8	4.51
	14. Making fun of speaking style (accent, stuttering, etc.).	13	5.7	5	2.2	15	6.6	10	4.4	184	81.1	4.52
	15. Teasing, verbalizing, annoying for various reasons	20	8.8	23	10.1	22	9.7	33	14.5	129	56.8	4.00
	16. Threaten	14	6.2	9	4.0	14	6.2	13	5.7	177	78.0	4.45
	17. Not to be played	11	4.8	14	6.2	16	7.0	23	10.1	163	71.8	4.37
Exclusion Bullying X: 4.35	18. Leaving alone by not including in a friend group	9	4.0	6	2.6	11	4.8	22	9.7	179	78.9	4.56
	19. Not talking, not answering questions	14	6.2	14	6.2	25	11.0	34	15.0	140	61.7	4.19
	20. Preventing other students from talking and making friends	8	3.5	12	5.3	8	3.5	16	7.0	183	80.6	4.55
	21. Not deliberately passing the ball while playing	20	8.8	24	10.6	21	9.3	21	9.3	141	62.1	4.05
Rumour Spreading Bullying X: 4.60	22. Creating and spreading rumours	9	4.0	6	2.6	14	6.2	13	5.7	185	81.5	4.58
	23. Blaming for something he/she did not do	9	4.0	4	1.8	12	5.3	14	6.2	188	82.8	4.62
	24. Disrupting relations with friends by talking bad words	5	2.2	6	2.6	15	6.6	15	6.6	186	81.9	4.63
	25. Writing ugly words about him in various places	6	2.6	7	3.1	12	5.3	15	6.6	187	82.4	4.63
	26. Complaining to the teacher about things they did not do	7	3.1	7	3.1	13	5.7	10	4.4	190	83.7	4.62
	27. Putting in a difficult situation by telling secrets	7	3.1	11	4.8	7	3.1	15	6.6	187	82.4	4.60
	28. Snitching for no good reason	6	2.6	10	4.4	12	5.3	26	11.5	173	76.2	4.54
	29. Taking money or property by force	5	2.2	6	2.6	7	3.1	12	5.3	197	86.8	4.71
	30. Stealing money or goods	6	2.6	8	3.5	7	3.1	5	2.2	201	88.5	4.70
	31. Intentionally damaging belongings (breaking, tearing, etc.)	8	3.5	9	4.0	6	2.6	20	8.8	184	81.1	4.59
Property Damage Bullying X: 4.55	32. Drawing and scribbling in notebooks or books	19	8.4	15	6.6	28	12.3	22	9.7	143	63.0	4.12
	33. Taking ball and running away	18	7.9	15	6.6	15	6.6	26	11.5	153	67.4	4.23
	34. Tearing clothes, trying to tear clothes, soiling clothes, etc.	7	3.1	5	2.2	12	5.3	14	6.2	189	83.3	4.64
	35. Searching through bags or other belongings without permission	4	1.8	8	3.5	11	4.8	14	6.2	190	83.7	4.66
	36. Forced to buy something from the canteen	5	2.2	10	4.4	12	5.3	20	8.8	180	79.3	4.58
	37. Not returning borrowed money or items	3	1.3	10	4.4	5	2.2	15	6.6	194	85.5	4.70
Peer Bullying Total											4.42	

Additionally, a kurtosis value within ± 1 is deemed optimal for most psychometric assessments, though values within ± 2 may also be acceptable depending on the context (George & Mallery, 2010). Since the dataset demonstrated a normal distribution, Pearson correlation analysis was employed to investigate the

relationships between the variables. Furthermore, regression analysis was conducted to determine whether the students' experiences of being bullied by peers affected their own bullying behaviours. All results were evaluated at a 95% confidence interval, with significance set at $p < 0.05$.

Table 3

Distributions and Means of the Statements Reflecting the Levels of Peer Bullying of the Students Participating in the Study

Propositions for the Sub-Dimensions of Being Subjected to Peer Bullying		Strongly Disagree		Disagree		Undecided		Agree		Totally Agree		\bar{x}
		n	%	n	%	n	%	n	%	n	%	
Physical Bullying X: 4.06	1. Attacking with sharp instruments (knife, scissors, etc.)	5	2.2	2	.9	9	4.0	18	7.9	193	85.0	4.72
	2. Sticking sharp objects (pencil, pin, etc.)	13	5.7	9	4.0	30	13.2	36	11.5	149	65.6	4.27
	3. Kicking, slapping and punching	27	11.9	20	8.8	22	9.7	28	12.3	130	57.3	3.94
	4. Hitting with an object (stick, rod, ruler, etc.)	16	7.0	10	4.4	24	10.6	25	11.0	152	67.0	4.26
	5. Intentional shoulder throwing, elbow hitting, bumping	17	7.5	32	14.1	37	16.3	32	14.1	109	48.0	3.81
	6. Hair and ear pulling, pinching, biting	25	11.0	21	9.3	22	9.7	29	12.8	130	57.3	3.96
	7. Pushing, bending the arm and dropping	15	6.6	11	4.8	21	9.3	21	9.3	159	70.0	4.31
	8. Throwing objects, wetting	32	14.1	24	10.6	27	11.9	37	16.3	107	47.1	3.71
	9. Disturbing with hand-arm jokes or tickling	48	21.1	29	12.8	31	13.7	20	8.8	99	43.6	3.40
	10. Placing an uncomfortable object underneath when about to sit down	24	10.6	10	4.4	12	5.3	21	9.3	160	70.5	4.24
Verbal Bullying X: 3.79	11. Swear, use words such as stupid, idiot, or retard.	65	28.6	21	9.3	20	8.8	21	9.3	100	44.1	3.30
	12. Calling unpleasant names (nicknames)	65	28.6	12	5.3	25	11.0	28	12.3	97	42.7	3.35
	13. Making fun of one's appearance	41	18.1	14	6.2	20	8.8	26	11.5	126	55.5	3.80
	14. Making fun of speaking style (accent, stuttering, etc.)	24	10.6	10	4.4	15	6.6	10	4.4	168	74.0	4.26
	15. Teasing, verbalizing, annoying for various reasons	35	15.4	20	8.8	24	10.6	34	15.0	114	50.2	3.75
	16. Threaten	16	7.0	14	6.2	15	6.6	22	9.7	160	70.5	4.30
	17. Not to be played	26	11.5	12	5.3	12	5.3	33	14.5	144	63.4	4.13
Exclusion Bullying X: 4.08	18. Leaving alone by not including in a friend group	23	10.1	11	4.8	19	8.4	31	13.7	143	63.0	4.14
	19. Not talking, not answering questions	21	9.3	23	10.1	26	11.5	23	10.1	134	59.0	3.99
	20. Preventing other students from talking and making friends	12	5.3	14	6.2	23	10.1	18	7.9	160	70.5	4.32
	21. Not deliberately passing the ball while playing	32	14.1	24	10.6	19	8.4	27	11.9	125	55.1	3.83
	22. Creating and spreading rumours	21	9.3	18	7.9	21	9.3	25	11.0	142	62.6	4.09
Rumour Spreading Bullying X: 4.06	23. Blaming for something he/she did not do	26	11.5	18	7.9	26	11.5	28	12.3	129	56.8	3.95
	24. Disrupting relations with friends by talking bad words	28	12.3	1	0.4	18	7.9	30	13.2	136	59.9	4.01
	25. Writing ugly words about him in various places	22	9.7	18	7.9	18	7.9	27	11.9	142	62.6	4.09
	26. Complaining to the teacher about things they did not do	21	9.3	24	10.6	21	9.3	30	13.2	131	57.7	3.99
	27. Putting in a difficult situation by telling secrets	21	9.3	11	4.8	21	9.3	28	12.3	146	64.3	4.17
	28. Snitching for no good reason	20	8.8	14	6.2	16	7.0	39	17.2	138	60.8	4.14
	29. Taking money or property by force	10	4.4	17	7.5	16	7.0	14	6.2	170	74.9	4.39
	30. Stealing money or goods	16	7.0	7	3.1	12	5.3	23	10.1	169	74.4	4.41
Property Damage Bullying X: 4.30	31. Intentionally damaging belongings (breaking, tearing, etc.)	14	6.2	11	4.8	17	7.5	22	9.7	163	71.8	4.36
	32. Drawing and scribbling in notebooks or books	21	9.3	19	8.4	26	11.5	19	8.4	142	62.6	4.06
	33. Taking ball and running away	21	9.3	20	8.8	17	7.5	29	12.8	140	61.7	4.08
	34. Tearing clothes, trying to tear clothes, soiling clothes, etc.	13	5.7	8	3.5	13	5.7	17	7.5	176	77.5	4.47
	35. Searching through bags or other belongings without permission	16	7.0	13	5.7	13	5.7	27	11.9	158	69.6	4.31
	36. Forced to buy something from the canteen	16	7.0	6	2.6	18	7.9	24	10.6	163	71.8	4.37
	37. Not returning borrowed money or items	20	8.8	9	4.0	22	9.7	13	5.7	163	71.8	4.27
Peer Bullying Total											4.08	

As shown in Table 1, several propositions were included to gather students' perspectives on peer relations. These propositions encompass statements related to peer interactions. Based on the responses from student participants, the peer relationship levels of those engaged in sports were found to be generally good to very good, with mean scores ranging from \bar{x} : 3.33 to \bar{x} : 4.47 (3.40 – 4.20 indicating a good level and 4.20 – 5.00 indicating a very good level). The lower average score observed in the conflict sub-dimension is attributed to the presence of negatively phrased

questions. Notably, the question with the lowest positive response rate was question 3. Table 2 presents propositions designed to capture students' views on peer bullying. These propositions include statements addressing bullying behaviours. Analysis of the responses indicates that the level of peer bullying among student athletes falls within the high to very high range, with mean scores between \bar{x} : 3.63 and \bar{x} : 4.90 (3.40–4.20 representing a high level and 4.20–5.00 representing a very high level). The overall score for the peer bullying scale was \bar{x} : 4.42, categorizing it at a high level.

Table 3 presents propositions aimed at assessing students' views on experiences of being bullied. The responses from student participants indicate that the level of exposure to peer bullying among those engaged in sports ranges from \bar{x} 3.30 to \bar{x} 4.72, categorizing their experiences as high to very high (with 3.40–4.20 representing a high level and 4.20–5.00 representing a very high level). The overall score for the peer bullying scale \bar{x} 4.08, was reflecting a high level of reported experiences. Upon examining Table 4, a statistically significant relationship was identified between the sub-dimensions of peer relations and several sub-dimensions of peer bullying and victimization. Specifically, a significant relationship was noted between the conflict dimension of peer relations and all bullying and victimization dimensions, with the exception of verbal bullying and exclusion bullying.

Additionally, a significant relationship was found between the helping dimension of peer relations and the rumour-spreading bullying dimension. The closeness dimension of peer relations also showed significant relationships with most dimensions of bullying and victimization, excluding verbal bullying, rumour-spreading bullying, and property damage bullying. Table 5 presents the results of the regression analysis conducted to determine the impact of students' experiences of peer bullying on their own bullying behaviours. The analysis revealed that the level of bullying ($R^2 = 0.38$) exhibited by the students was significantly influenced by the peer bullying they had previously encountered ($p < 0.001$). This underscores the predictive relationship between experiencing bullying and engaging in bullying behaviours.

Table 4

Correlation Analysis between the Peer Relationships Levels, Peer Bullying and Peer Bullying Levels of the Students Participating in the Study

Peer Relations Sub-Dimensions	Sub-Dimensions of Peer Bullying						Sub-Dimensions of Being Subjected to Peer Bullying				
	Physical Bullying Sub-Dimension	Verbal Bullying Sub-Dimension	Exclusion Bullying Sub-Dimension	Rumour Spreading Bullying Sub-Dimension	Property Damage Bullying Sub-Dimension	Physical Bullying Sub-Dimension	Verbal Bullying Sub-Dimension	Exclusion Bullying Sub-Dimension	Rumour Spreading Bullying Sub-Dimension	Property Damaging Bullying Sub-Dimension	
Togetherness Sub-Dimension	r .003 p .965 n 227	r -.012 p .856 n 227	r .013 p .844 n 227	r .011 p .869 n 227	r .010 p .878 n 227	r -.002 p .977 n 227	r .026 p .693 n 227	r .046 p .492 n 227	r -.019 p .778 n 227	r .025 p .711 n 227	
Conflict Sub-Dimension	r -.157 p .018* n 227	r -.108 p .103 n 227	r -.075 p .259 n 227	r -.210 p .001** n 227	r -.150 p .024* n 227	r -.257 p .000*** n 227	r -.210 p .001** n 227	r -.222 p .001** n 227	r -.248 p .000*** n 227	r -.247 p .000*** n 227	
Solidarity Sub-Dimension	r .086 p .196 n 227	r .099 p .139 n 227	r .080 p .229 n 227	r .171 p .010* n 227	r .126 p .059 n 227	r .097 p .147 n 227	r .126 p .058 n 227	r .104 p .116 n 227	r .064 p .334 n 227	r .054 p .421 n 227	
Protection Sub-Dimension	r .086 p .195 n 227	r .070 p .291 n 227	r .011 p .874 n 227	r -.012 p .854 n 227	r -.056 p .398 n 227	r .073 p .270 n 227	r .118 p .075 n 227	r .088 p .184 n 227	r .048 p .473 n 227	r -.014 p .835 n 227	
Closeness Sub-Dimension	r .198 p .003** n 227	r .201 p .002** n 227	r .165 p .013* n 227	r .154 p .021* n 227	r .186 p .005** n 227	r .137 p .039* n 227	r .118 p .077 n 227	r .157 p .018* n 227	r .060 p .372 n 227	r .098 p .139 n 227	

p<0.05*, p<0.01**, p<0.001***

Table 5

Regression Analysis between the Levels of Being Bullied by and Bullying to Peers of the Students Participating in the Study

Independent Variable	Dependent Variable	Variables	Beta (β)	S. Hata	t	F	p	R ²
	Being Bullied by Peers ¹	AZU ¹ > AZU ²	.346	.035	7.753	60.115	.000***	.38

p<0.001***

Discussion

This study aimed to investigate the effects of sports on peer bullying and the levels of bullying and victimization among peers. The findings indicated that the peer relationship levels of children engaged in sports, as well as their experiences of bullying others and being bullied, were notably high. An analysis of existing literature on sports and peer relations reveals findings consistent with our study. For instance, [Pehlevan and Bal \(2018\)](#) demonstrated that participation in sports positively influences peer relationships and social support systems (family and friends) among middle school students aged 13-15. Additionally, [Melek \(2019\)](#) concluded that individuals participating in regular physical activities tend to have better peer relationships compared to those who do not. [Makar \(2016\)](#) also found that involvement in sports fosters harmony in social relationships, enhancing both physical abilities and social connections. A critical finding from our study is that students who engage in sports not only bully their peers but also experience peer bullying themselves. This observation aligns with various studies in the literature ([Arufe-Giraldez et al., 2019](#); [Henriksen et al., 2016](#); [Lodewyk, McNamara, & Sullivan, 2020](#); [Nikolaou & Crispin, 2022](#); [Roman & Taylor, 2013](#); [Sibold et al., 2015](#); [Vancampfort et al., 2019](#)). Conversely, some studies indicate that student athletes may be victims of bullying despite not engaging in bullying behaviors themselves. These findings suggest that the misuse of the physical, social, and psychological advantages conferred by sports could contribute to bullying behaviors. It is crucial for families, coaches, and sports environments to emphasize that negative actions are incompatible with the values of sportsmanship and should not be tolerated. While it is commonly believed that sports participation reduces bullying, our findings highlight instances where students leverage their advantages to engage in peer bullying. Several studies support this notion ([Benítez-Sillero et al., 2023](#); [Méndez, Ruiz-Esteban, & Ortega, 2019](#); [Montero-Carretero et al., 2021](#); [Moore, Woodcock, & Dudley, 2019](#); [Zych et al., 2020](#)). Nonetheless, other research suggests that sports can indeed reduce peer bullying ([Lindell-Postigo et al., 2023](#); [Majed et al., 2022](#); [Ouyang & Liu, 2023](#); [Yang et al., 2023](#)), indicating a complex relationship between sports participation and bullying behavior. Our study also concluded that sports can enhance peer relationships. Given the positive impact of peer relationships on bullying behaviors, it can be inferred that sports may indirectly reduce peer bullying. This assertion is supported by studies linking peer relationships to bullying dynamics.

One of the most significant outcomes of our research is the finding that the level of bullying students inflict on their peers is influenced by their prior experiences of being bullied. This underscores the cyclical nature of bullying behavior and highlights the importance of addressing both bullying and victimization in interventions aimed at fostering healthier peer interactions.

Conclusion and Recommendations

In conclusion, this study suggests that sports may positively influence peer relationships and impact both bullying and victimization. Given the numerous programs aimed at reducing peer bullying ([Gaffney et al., 2019](#); [Olweus, 1993, 2007](#); [Olweus, Limber, & Mihalic, 1999](#)), it is important to consider the integration of sports into these initiatives. A significant finding from our research is the correlation between peer bullying and peer victimization ($R^2 = 0.38$). This indicates that students who engage in bullying may have experienced bullying themselves or may be more likely to bully others if given the opportunity. To enhance peer relations and address peer bullying, several recommendations arise. Firstly, the positive effects of physical activity on peer relationships should be communicated to all stakeholders, particularly families. Parents, school administrators, and teachers should be informed about these benefits, and students exhibiting bullying behaviors should be encouraged to participate in sports. Additionally, those already involved in sports should receive guidance to prevent them from engaging in bullying. Furthermore, sports activities or educational games should be organized specifically for students with poor peer relations and those who frequently bully one another. When possible, these students should be assigned complementary roles within the same team to promote their integration. Additionally, seminars, symposiums, and meetings focusing on peer relations and bullying should be organized, with efforts made to include families in these discussions. Decisions and findings from these gatherings should be communicated to the broader community. For future academic research on peer relationships and bullying, various avenues can be explored. Field studies focused on these dynamics can provide deeper insights. Researchers could identify students struggling with peer relations and bullying and then reassess them after a period of engagement in exercise and educational activities. Comparative studies examining peer relationships and bullying across different age groups could also be valuable. Additionally,

investigating the effects of physical activity on negative peer relationships and other contributing variables to bullying would be insightful. Lastly, understanding why

children with poor peer relationships and experiences of bullying do not participate in sports could illuminate further intervention strategies.

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