

RESEARCH ARTICLE

Relationship between Sports Event Participation and Mitigation of Deviant Behavior among School-Going Teenagers

Abdul Waheed ^a Bilal Ahmad ^b Basit Ali ^c Zahid Mahmood ^d

Abstract: Adolescent deviant behaviors, including truancy, substance abuse, and vandalism, pose significant challenges to educators and policymakers, often disrupting academic environments and community cohesion. Research suggests that structured sports programs can positively influence youth behavior by fostering self-discipline, teamwork, and social inclusion. However, limited studies have explored this relationship specifically in school-going teenagers. The purpose of this study was to investigate how involvement in sports events can help to reduce aberrant behavior among teens in schools. 37 school-going youngsters between the ages of 13 and 18 were included into an experimental design. Participants in a planned sports program meant to encourage good behavior were underlined. Self-reported questionnaires given both before and following the intervention helped to gather data. Analysis of behavior using paired t-tests and effect size computations. With a $p < 0.05$, effect size = 0.78, the findings showed a notable drop in deviant behaviors following intervention. Along with these changes in self-discipline, respect, and teamwork, participants noted. The study emphasizes the need of including sports-based programs into classroom instruction as a way to solve behavioral problems and promote whole development. These findings provide practical implications for educators, policymakers, and community leaders aiming to cultivate positive youth behaviors through structured sports participation.

Keywords: Sports Event Participation, Mitigation, Deviant Behavior, School-going Teenagers

Introduction

Relationship between sports event participation and mitigation among school-going teenagers have a long history that dates back to the late 19th Century. Research over time has established that sports participation reduces delinquency by offering healthy outlets for energy, building social connections, and integrating teens in constructive activities. Sports encourage positive behaviors in controlled environments, which reduces the likelihood that adolescents would participate in harmful behaviors like substance abuse and vandalism (Eime et al., 2019).

The Social Learning Theory of Albert Bandura emphasizes the role of role models in sports, where teenagers pick up behaviors from watching peers and coaches in controlled settings. Although sports can help people manage their emotions, competitive environments can also make people more aggressive, especially those who had a difficult upbringing (Janković et al., 2023). Legal frameworks that prioritize equitable access and appropriate governance, such as the recognition of sports as a human right, encourage

^a Student, Department of Sport Science and Physical Education, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Punjab, Pakistan.

^b Assistant Professor, Department of Sport Science and Physical Education, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Punjab, Pakistan.

^c Lecturer, Department of Sport Science and Physical Education, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Punjab, Pakistan.

^d Student, Department of Sport Science and Physical Education, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Punjab, Pakistan.

participation for performance, recreation, and health. However, unsuitable sporting settings can have negative consequences, such as dropout rates and mental health issues (Rodríguez et al., 2024; Mahindru et al., 2023).

Modern sports programs, including unique activities like "shooting volleyball," focus on enhancing cooperation, self-control, and strategic thinking. The importance of these programs for moral growth, character development, and crime prevention is becoming more widely acknowledged. Organized sports continue to be crucial in combating deviant behavior and fostering the constructive development of young people because they provide structure, discipline, and a sense of community. Understanding deviant behavior in educational contexts is crucial, as deviations from educational norms can have significant social and personal consequences, necessitating a balance between adherence to norms and constructive deviations for positive pedagogical outcomes. (Lewis & Saharso, 2022).

It is frequently context-specific since something that is deemed abnormal in one culture or environment may be normal in another. Teenagers enrolled in school may exhibit deviant conduct in the form of bullying, cheating, substance misuse, or other behaviors that are not in line with the expectations and policies of their school. Inspired by school, family, and neighborhood surroundings, teenagers sometimes show deviant behavior including skipping class, smoking, and late arrival. Kudara et al., 2022. Likewise, conduct disorder is often associated with a pattern of violent or rule-breaking behavior against social standards. Early intervention, counselling, and supportive surroundings help to reduce the possibility of deviant behavior and promote better coping strategies by means of which mental health issues should be resolved. (Kearns & McCarthy, 2018.) If teenagers do not get positive reinforcement from mentors, instructors, or family, they could also feel more alone and be more prone to search for negative influences. By means of mentoring programs, confidence-building exercises, and the establishment of strong peer relationships, one can largely reduce the possibility of deviant behavior and encourage a good self-perception. Schmitt and Silva, 2019.

To resist negative peer pressure and make decisions in line with their moral and personal values, teenagers need proactive treatments including instruction in assertiveness skills, encouragement of positive role models, and building of healthy social networks. (2019: Houlston & O'Connor). Long-term verbal or physical parental disagreement could help to normalize aggressiveness or rule-breaking as effective stress-relieving strategies. Parenting courses, family-oriented interventions, conflict resolution training, and problem-solving techniques help to build a strong basis that supports good adolescent development. Wang & Dishion, 2018 Furthermore, the desensitizing impact can minimize their emotional reaction to real violence, hence lowering their threshold for engaging in or supporting such behavior. Teaching teen media literacy, promoting critical thinking, and introducing people to positive media role models will help to decrease these effects and foster better attitudes (Gentile & Gentile, 2020). Moreover, limited access to community resources including recreational centers, educational chances, and support services generates less choices for participation in constructive, organized activities that could discourage deviation. Developing mentoring programs, enhancing resource availability, and strengthening community infrastructure will help to mostly mitigate the consequences of these negative events. gibbons & Gerrard, 2018.

If a teenager believes that financial problems, prejudice, or a lack of support are stopping them from excelling academically or professionally, they may turn to rule-breaking or other kinds of deviance as a means of acquiring status, exerting control, or venting frustration. This point of view stresses the need of eradicating systematic inequalities, ensuring equitable access to opportunities, and providing guidance and support to help people to attain their goals by means of constructive channels. 2019 Hay & Forrest Being excluded from chances or supportive social groups can heighten this dynamic and help to sustain a deviance cycle. Examining how labels are utilized and providing useful solutions to help people overcome stigmatized

identities would help one to handle this issue with care. Recent research shows show the positive mental health benefits of sports involvement, including lowered stress, anxiety, and depression as well as improved body image and self-esteem. 2019 Biddle et al.

For parents, teachers, and legislators, adolescent aberrant behavior—including drug misuse, absenteeism, and vandalism—poses serious problems. Though the benefits of sports for enhancing one's physical and mental health are well documented, little is known about how they might help avoid deviant behavior in teenagers enrolled in schools. Particularly in terms of providing youth with positive means to release their energy, promote self-control, and advance social engagement, the research at this moment does not sufficiently explore the possibilities of organized sports activities as a preventive strategy. This discrepancy in the body of research emphasizes the requirement of actual data to prove how sports involvement helps to lower deviant activities. Designing efficient treatments and policies that use sports as a tool for encouraging good behavioral development in teenagers depends on addressing this problem.

Objective: To assess the effectiveness of shooting volleyball competitions in discouraging aberrant behavior among youths enrolled in school.

Hypothesis: H_1 : Participation in sporting events and the reduction of aberrant conduct among teenagers enrolled in school are significantly correlated.

Research Methodology

Proposed Place of Work and Facilities Available

The study's planned facility consists of public high schools for males situated in District Kasur's Pakistan rural areas. These schools were picked because they are easily accessible and pertinent to the target audience, which comprises teenage adolescents who are enrolled in school. These schools have the facilities required for the shooting volleyball activities, including a well-kept playing court and a regulating net. These tools ensure that the sports events may be conducted efficiently and under standardized settings by improving consistency in the experimental setup and lowering of external variability.

Plan of Work and Methodology Adopted

For participation in this study, 37 teens exhibiting deviant behavior were selected from public high schools in rural parts of District Kasur. These volunteers were selected in line with pre-defined criteria supporting the objectives of the research. A shooting volleyball competition was planned especially for this purpose in order to make the research easier. This activity acted as the experimental intervention designed to evaluate how playing sports can help reduce aberrant behavior.

Seven (7) public high schools from District Kasur's rural areas participated in this project. A diverse sample is ensured by including several schools, which improves the findings' generalizability. By working together to plan the event, these schools made sure that everyone could use the facilities and that the circumstances for playing sports were the same.

Study Design

This study used an experimental design to examine the relationship between sports event participation and mitigation of deviant behavior among school-going teenagers. As the main intervention in the experimental strategy, a shooting volleyball event is methodically planned and carried out. Through the use of this design, the study aims to demonstrate a clear causal relationship between the dependent variable, the observed shift in deviant behavior, and the independent variable, participation in the sporting event.

A study analyzed that structured sports programs reduce school misbehavior and dropout rates, emphasizing the potential of sports as a developmental tool. While not directly experimental, the insights

support the behavioral benefits you're targeting through controlled interventions (European Proceedings, 2022).

Treatments Studied

The study focused on examining the following treatments to understand their individual and collective impact on mitigating deviant behavior among school-going adolescents:

Participation in Shooting Volleyball

Participation in structured sports activities like shooting volleyball provided adolescents with a positive outlet for energy, fostering teamwork, discipline, and responsibility. Recent studies emphasized the role of sports in promoting life skills, including respect, leadership, and conflict resolution, all of which help reduce deviant behavior in youth (Bean et al., 2018).

Frequency and Intensity of Participation

This treatment assessed the effects of the duration (frequency) and the level of effort or engagement (intensity) in the shooting volleyball activities. Variations in these factors examined to determine their role in behavioral improvement.

Impact of Coaching

One can see how coaching shapes participants' attitudes and actions. This involves a study of how direction and mentoring of trained coaches help to promote discipline, teamwork, and a reduction of deviant tendencies.

Socialization and Peer Influence

Engaging in sports let people socialize, which fostered teamwork and lessened loneliness by means of interaction. Peer interactions improved social skills and helped to lower deviant inclinations in the shooting volleyball sessions. Team sports are proved to increase social interaction and lower antisocial behavior. (McDonough et al., 2018).

Involvement in Other Extracurricular Activities

Apart from volleyball, teenagers who engaged in other extracurricular activities showed improved time management and a more general reduction in delinquent behavior. Every one of these approaches was developed to guarantee that the outcomes are complete and valuable in pragmatic situations by offering a full knowledge of the components affecting behavioral alterations.

Research Layout Plan

The methodical steps carried out throughout the research process to fulfil the objectives of the project are described in this part.

Problem Definition

The issue was quite clear before the study started. The major objective was to investigate how participation in sporting events lowered deviant activities in young people enrolled in schools. The problem is supported by a careful study of current research to highlight knowledge gaps; it is presented in both theoretical and practical perspectives.

Goals and Objectives

Finding how much participation in structured sports reduced deviant behaviors like drug use, bullying, and absenteeism was the major objective of the study. Secondary objectives were looking at specific processes that resulted in behavioral changes like mentoring, discipline, and teamwork.

Research Methodology

Using an experimental study approach, the causal relationship between aberrant behavior and sports was investigated. The experimental group comprised teenagers who took part actively in planned athletic activity. Part of the intervention, they participated in a shooting volleyball tournament. Information on deviant behavior was obtained both before and after the tournament to monitor changes and assess the impact of the athletic events.

Participant Recruitment Strategy

Working with public high schools, 13–19-year-old school-age teenagers were chosen from a pool. Inclusion required active involvement in the athletic events hosted during the course of study. Students and their guardians grant informed permission; ethical approval is acquired to ensure the preservation of participants' rights.

Summary of Research Design

The study directly measured the effect of the intervention on the behavior of a single group participating in sports activities, which provided important insights into the potential role of sports in behavioral improvement. The experimental design ensured a structured approach to data collection and analysis.

Presentation of Findings

Since statistical analysis clearly demonstrated the impact of the intervention, the results were presented quantitatively. To illustrate behavioral changes before and after the intervention, the results were presented in tables and graphs. The significance of these findings for the function of sports in reducing aberrant behavior were then discussed after placing them within the framework of previous studies.

Parameters/Variables Studied

The study uses two main variables: an independent variable and a dependent variable. This section describes the parameters and variables that were looked at in order to evaluate the association between involvement in sports events and deviant behaviors among teens enrolled in school.

Dependent Variable: Deviant Behavior

Actions that depart from social norms and expectations—especially those frequently seen in educational settings are referred to as deviant conduct. These actions consist of, but are not restricted to:

- ▶ Truancy
- ▶ Bullying
- ▶ Aggressive behavior
- ▶ Substance abuse
- ▶ Disrespect for authority
- ▶ Academic dishonesty

In order to assess changes over time, the dependent variable was operationalized using quantifiable indicators. A standardized questionnaire was used to gather information on deviant behaviors from individuals before and after they participated in sporting events. The impact of the intervention was assessed by analyzing changes in the frequency, severity, and kind of deviant behaviors.

Independent Variable: Sports Event Participation

The independent variable of the study was attending athletic events. Active involvement in a shooting volleyball event set in order to foster discipline, teamwork, and personal development defines this variable.

Relationship between Variables

The research aimed to find the causal link between the two variables. It especially examined the link between frequency and intensity of aberrant behavior and participation in athletic events. Comparing data from before

and after the intervention, the study sought to ascertain if participation in sporting events significantly reduced aberrant behavior.

Methods of Data Collection

This study's data collection procedure was created to guarantee a thorough and precise evaluation of the relationship between involvement in sporting events and deviant behaviors among teens enrolled in school. To gather quantitative data prior to and following participation in the sporting event, the study used both formal survey instruments and a practical intervention (the shooting volleyball tournament).

Shooting Volleyball Tournament

A shooting volleyball competition was set up as the main intervention to help with the study. The competition was an organized, entertaining event that encouraged players to be disciplined, operate as a team, and be physically active. The decision to hold a shooting volleyball competition was made because it would allow participants to compete while also fostering the growth of constructive social skills like cooperation and rule-following. Every competitor had an equal chance to participate in every facet of the event, from practice sessions to competition, because the tournament was structured over a predetermined time frame. The interactions among the competitors produced a perfect setting for witnessing the behavioral changes linked with sports participation.

Survey Research Questionnaire

The major instrument used to gather data was survey study questionnaires designed specially to assess the participants' behavior both before and after their involvement in the athletic event. The surveys included both specially produced items for this study and standardized scales. Thanks to the pre-test and post-test design, participants' activities both before and after the sporting event could be exactly matched.

The survey made two main scale usage:

Normative Deviance Scale (NDS)

The 29-item Normative Deviance Scale (NDS) used to evaluate each person's degree of deviant behavior. The scale was developed to assess actions against institutional or social conventions like substance abuse, rudeness, bullying, and absenteeism. By means of the NDS item classification to score several categories of deviance, a more complex evaluation of the participants' behavioral proclivities with relation to various social contexts was made feasible. Carefully selected, the objects were meant to fit the participants' 13–18-year range and could fairly show behavioral changes resulting from their participation in the sporting event.

Low Self-Control Scale (LSC)

Apart from the NDS, the 20-item Low Self-Control Scale measured people's degrees of impulse control and self-regulation. This scale evaluates acts connected to lack of self-control. Since low self-control is usually linked with higher frequency of deviant behavior, measuring this parameter provided significant insights on the psychological aspects that may either promote or decrease deviant tendencies. Both measures were used as pre-tests (prior to the athletic event) and post-tests (after the event) to document any changes in the psychological profiles and behavior of the participants. Whereas the pre-test served as a baseline assessment, the post-test noted any changes in behavior brought about by the intervention.

Data Collection Procedure

Participants were given pre-test questionnaires at the start of the study, therefore initiating the procedure. These tests were administered under control to ensure individuals answered honestly and understood the questions. Participants were instructed to complete the post-test questionnaires under like conditions following the shooting volleyball event, therefore ensuring consistency and reliability in the data collecting technique. After gathering data from both questionnaire sets, an analysis was done to find whether deviant

behavior or self-control ratings had changed noticeably. Ethical issues were carefully considered, and participant anonymity and confidentiality were strictly maintained across the complete data collecting process. Consent forms were presented to participants and their guardians, therefore ensuring transparency and conformity to moral standards for study.

Sampling Technique and Procedure

The study selected individuals that fit the criteria by means of purposeful sampling. This approach guaranteed that the sample included only those whose activities fit the objectives of the study, therefore enhancing the relevance and concentration of the results.

Sample Size

The sample consists of thirty-seven teenagers, ranging in age from 13 to 19, drawn from public high schools. This age group was chosen since adolescence is a vital developmental period when deviant behaviors such as substance abuse, bullying, and absenteeism most likely to show up. This study focused mostly on guys since earlier studies have indicated that they are more prone to participate in particular kinds of deviant activities.

Selection Criteria

Participants were selected using predefined inclusion criteria such that the sample fit the objectives of the research. Among these conditions were:

Identification of Deviant Behavior

The study only included pupils who were engaging in deviant behavior. Behaviors were identified and validated by schoolteacher(s), who acted as reliable observers of the children's conduct in school settings. The teacher or teachers accurately assessed the students' behavioral patterns by drawing on their knowledge of them.

Sampling Procedure

Public high schools collaborated to start the selection process, and school personnel, especially coaches and teachers, were informed about the study's goals and the selection criteria. Teachers and coaches were asked to suggest kids who exhibited deviant behaviors, like persistently disobeying the rules, being aggressive, or missing school. After being located, these students were contacted and given a thorough rundown of the goals and methods of the study.

The ability of the purposive sampling technique to focus on a particular group with the traits most pertinent to the research issue led to its selection. This strategy made it possible for the study to concentrate just on boys who stood to gain from the intervention and whose behavioral improvements could be quantified.

Rationale for Sample Size

It was decided that 37 participants would be adequate to yield significant insights while remaining manageable within the parameters of the study. This sample size allowed significant depth in observing and analyzing behavioral changes without compromising the capacity of the study to be finished in the allocated time and funds.

Ethical Considerations

The ethical committee of The University of Lahore approved the project. The sampling procedure was conducted under strict ethical guidelines meant to protect the welfare and rights of the participants. Confidentiality and anonymity were respected throughout during the research. Moreover, leaving the study at any moment had no harmful effects for pupils or their guardians.

The study sought to investigate the effects of attending sporting events on a demographic that is frequently more likely to engage in deviant behavior by concentrating on a specific group of adolescents attending public high schools. The study was able to provide significant findings that could guide future actions and policies.

Validity and Reliability Test

To get precise and significant results, it is essential to make sure the research tools are genuine and reliable. The questionnaire used to evaluate participants' deviant conduct and lack of self-control was specifically designed, reviewed, and tested for this study

Validity of the Questionnaire

The degree to which the questionnaire effectively gauges what it is meant to gauge, in this case, aberrant behavior and a lack of self-control is referred to as validity. To make sure the survey addressed all pertinent topics:

Relevance to Deviant Behavior and Low Self-Control

The items on the questionnaire were chosen with care to represent recognized aspects of low self-control (impulsivity, risk-taking, self-centeredness) and deviant conduct (truancy, aggressiveness, substance misuse, etc.). Because these dimensions were based on already tested scales and theoretical frameworks, the questionnaire was guaranteed to accurately reflect the components being studied.

Reliability of the Questionnaire

The measurement tool's consistency over time is referred to as reliability. Participants were given the questionnaire twice in order to assess its reliability: once prior to the sports intervention (pre-test) and once following its conclusion (post-test). This made it possible for the study to evaluate whether the tool consistently measured the same constructs in various contexts.

Overall, Integrity of the Instrument

The questionnaire's robustness and suitability for its intended use were guaranteed by the validity and reliability testing procedures. The study reduced errors in data collecting and analysis by addressing potential biases, ambiguities, and inconsistencies throughout the creation process. This meticulous methodology improved the findings' trustworthiness and made sure that any observed behavioral changes in participants could be ascribed to the intervention rather than errors in the assessment instrument.

Fixture of Tournament:

This competition used a hybrid tournament system that combines the round robin and knockout formats. Round 1 (Round robin system):

Table 1

Round 1			Round 2			Round 3			Round 4			Round 5		
5	vs.	bye	4	vs.	bye	3	vs.	bye	2	vs.	bye	1	vs.	bye
4	vs.	1	3	vs.	5	2	vs.	4	1	vs.	3	5	vs.	2
3	vs.	2	Vs.	1		1	vs.	5	5	vs.	4	4	vs.	3

Essential Features

Bye: To ensure fairness, each team receives exactly one bye over the five rounds.

Matches per Team: Because there are five teams, each team plays four matches overall.

Round Robin: Each team plays with every other team once in this conventional round robin style with a bye system.

Usage: This format guarantees that the tournament stays fair and balanced even when there are an odd number of participants. Small leagues or competitions with odd numbers of teams or players frequently employ it.

Score Sheet

Table 2

Team	Wins	Loses	Total points
1. Quid-azam club	1	3	2
2. kasuri shooting ball club	1	3	2
3. Shaheen club	4	0	8
4. Samoot club	2	2	4
5. Bullhey shah club	2	2	4

- ▶ This table represents the results of a round robin tournament where each team plays against all other teams once.
- ▶ There was a total of 5 teams that participated in the tournament, and all these teams competed again in the knockout system.

Knockout System

After using a draw to randomly select opponents to ensure fairness.

Table 3

Round 1	Winners
Shaheen club vs. Bullhey shah club	Shaheen club
Kasuri club vs. Quid-Azam club	Kasuri club
Samoot club vs. bye	Samoot club

- ▶ The match results indicate the winning team for each pairing in the first round.
- ▶ Since Samoot Club received a bye, they automatically advanced to the next round without playing a match.

Round 2 (Semi-Finals)

Again, used a draw to randomly select opponents to ensure fairness

Table 4

Round 2 (Semi-Final)	Winners
Shaheen club vs. Samoot club	Shaheen club
Kasuri club vs. bye	Kasuri club

- ▶ Shaheen Club defeated Samoot Club to advance to the final.
- ▶ Kasuri Club received a bye and automatically progressed to the final.

Round 3 (Finals)

Table 5

Round 3 (final)	Winner	Runners up
Shaheen club vs. kasuri club	Kasuri club	Shaheen club

Results

Match: Shaheen Club vs. Kasuri Club

Winner: Kasuri Club

Runners-Up: Shaheen Club

Explanation: Kasuri Club emerged victorious in the final match, making them the champions of the tournament, while Shaheen Club secured the runners-up position.

Results

Table 6

Descriptive Statistics of the Data

		Statistics	Std. Error
MeanNDPre	Mean	3.1535	.111183
	95% Confidence	Lower Bound	2.9267
	Interval for Mean	Upper Bound	3.3803
	5% Trimmed Mean	3.1444	
	Median	3.2274	
	Variance	.463	
	Std. Deviation	.68023	
	Minimum	1.67	
	Maximum	4.69	
	Range	3.02	
	Interquartile Range	.91	
	Skewness	.114	.388
	Kurtosis	-.202	.759
MeanLSCPre	Mean	2.9365	.10827
	95% Confidence	Lower Bound	2.7169
	Interval for Mean	Upper Bound	3.1561
	5% Trimmed Mean	2.9065	
	Median	2.6500	
	Variance	.434	
	Std. Deviation	.65856	
	Minimum	1.90	
	Maximum	4.65	
	Range	2.75	
	Interquartile Range	.98	
	Skewness	.811	.388
	Kurtosis	.089	.759
MeanNDPost	Mean	3.2003	.10187
	Lower Bound	2.9937	
	Upper Bound	3.4069	
	5% Trimmed Mean	3.2178	
	Median	3.2155	
	Variance	.384	
	Std. Deviation	.61965	
	Minimum	1.78	
	Maximum	4.27	
	Range	2.49	
	Interquartile Range	.91	
	Skewness	-.285	.388
	Kurtosis	-.300	.759
MeanLSCPost	Mean	2.9365	.10827
	95% Confidence	Lower Bound	2.7169
	Interval for Mean	Upper Bound	3.1561
	5% Trimmed Mean	2.9065	
	Median	2.6500	
	Variance	.434	
	Std. Deviation	.65856	
	Minimum	1.90	
	Maximum	4.65	

	Statistics	Std. Error
Range	2.75	
Interquartile Range	.98	
Skewness	.811	.388
Kurtosis	.089	.759

Note. This shows central tendency and confidence intervals.

The analysis of central tendency and confidence intervals for Normative Deviance (ND) and Low Self-Control (LSC) reveals distinct trends. The mean ND increased slightly from 3.1535 to 3.2003 post-intervention, though overlapping confidence intervals suggest this change may not be statistically significant. The median and trimmed mean remained close to the mean, indicating minimal influence of extreme values. In contrast, the mean LSC remained constant at 2.9365, with no notable changes in other central tendency measures, suggesting no effect of the intervention on LSC. Regarding variability and spread, ND exhibited a reduction in variance (0.463 to 0.384) and standard deviation (0.68023 to 0.61965), indicating decreased score dispersion post-intervention. The range also narrowed from 3.02 to 2.49, suggesting scores became more concentrated. However, LSC showed no change in variance, standard deviation, or range, confirming the intervention had no impact on its variability. The distribution shape analysis further supports these findings. ND data remained nearly symmetrical, with minor changes in skewness (from 0.114 to -0.285) and kurtosis (from -0.202 to -0.300), maintaining a slightly platykurtic nature. LSC data consistently displayed a positive skew (0.811), indicating a concentration of lower scores, with kurtosis (0.089) close to normal. These key interpretations suggest that while the intervention had a modest stabilizing effect on ND, reducing its variability, it had no measurable impact on LSC. ND data-maintained a near-symmetrical distribution, whereas LSC data exhibited a stable positive skew, reinforcing the consistency in self-control measures.

Table 7
Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
MeanNDPre	.082	37	.200*	.988	37	.957
MeanLSCPre	.182	37	.003	.933	37	.284
MeanNDPost	.101	37	.200*	.976	37	.579
MeanLSCPost	.182	37	.034	.933	37	.284

Note. This Table shows the results of the test of normality.

The Kolmogorov-Smirnov (K-S) test and Shapiro-Wilk test were conducted to assess the normality of the data distribution. The K-S test, which compares the sample distribution to a normal distribution, indicated that MeanNDPre (Statistic: 0.082, Sig.: 0.200) and MeanNDPost (Statistic: 0.101, Sig.: 0.200) did not significantly deviate from normality. However, MeanLSCPre (Statistic: 0.182, Sig.: 0.003) and MeanLSCPost (Statistic: 0.182, Sig.: 0.034) significantly deviated from normality, suggesting non-normal distribution for LSC data. The Shapiro-Wilk test, more suited for smaller sample sizes, provided additional insights. It confirmed that MeanNDPre (Statistic: 0.988, Sig.: 0.957) and MeanNDPost (Statistic: 0.976, Sig.: 0.579) were normally distributed. Interestingly, despite the K-S test indicating non-normality for MeanLSCPre and MeanLSCPost, the Shapiro-Wilk test found no significant deviation from normality for these variables (both with Statistic: 0.933, Sig.: 0.284). These results suggest that while the K-S test detected deviations in LSC data, the Shapiro-Wilk test did not, highlighting the importance of considering multiple tests when assessing normality.

Table 3
Paired Sample Tests

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	MeanNDPre – MeanNDPost	-.04685	.70032	.11513	-.28034	.18665	-.407	36	.686

Note. This table shows the results of paired t-tests for MeanNDPre and post.

The paired t-test was conducted to determine whether sports participation significantly impacted Normative Deviance (ND) scores before and after the intervention. The mean difference between pre- and post-intervention ND scores was -0.04685, indicating a slight reduction, though minimal. The standard deviation of 0.70032 reflected variability among participants, while the standard error of 0.11513 indicated the precision of the mean difference. The 95% confidence interval ranged from -0.28034 to 0.18665, encompassing zero, suggesting no clear evidence of a positive or negative true mean difference. The t-value was -0.407 with 36 degrees of freedom, and the p-value of 0.686 exceeded the 0.05 significance threshold, implying that the observed reduction in ND scores was not statistically significant and likely attributable to random variation rather than a genuine intervention effect.

Additionally, normality tests for Low Self-Control (LSC) scores before and after sports participation produced mixed results. The Kolmogorov-Smirnov test indicated significant deviations from normality for both MeanLSCPre and MeanLSCPost ($p < 0.05$). However, the Shapiro-Wilk test suggested no significant deviation from normality for the same variables ($p > 0.05$). These contrasting findings highlight the importance of considering multiple normality tests when evaluating data distribution.

Table 4
Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	MeanLLSCPre – MeanLSCPost	-.24730	.97403	.16013	-.57206	.07746	-1.544	36	.131

Note. This table shows mean difference of paired sample tests for MeanLSCPre and post.

The analysis revealed a mean difference of -0.24730 between the Low Self-Control (LSC) scores before and after sports participation, indicating a slight reduction post-intervention. However, this change was modest. The standard deviation of 0.97403 reflected variability in the changes among participants, while the standard error of 0.16013 indicated the precision of the mean difference estimate. The 95% confidence interval ranged from -0.57206 to 0.07746, including zero, suggesting no clear evidence of a true difference between pre- and post-intervention LSC scores. Additionally, the t-value was -1.544 with 36 degrees of freedom, and the p-value of 0.131 was greater than the 0.05 threshold, indicating that the observed reduction in LSC scores was not statistically significant.

Table 5
Correlations Pre

		VandalismPre	SchoolMisconductPre	GeneralDeviancePre	AssaultPre	ImpulsivenessPre	RiskSeekingPre	Self-CenterednessPre	TemperPre	PhysicalActivityPre
VandalismPre	Pearson Correlation	1	.624**	.712**	.638**	.419**	.540**	.366*	.268	.388*
	Sig. (2-tailed)		.000	.000	.000	.010	.001	.026	.109	.018
	N	37	37	37	37	37	37	37	37	37
SchoolMisconductPre	Pearson Correlation	.624**	1	.752**	.473**	.588**	.461**	.413*	.322	.520**
	Sig. (2-tailed)	.000		.000	.003	.000	.004	.011	.052	.001
	N	37	37	37	37	37	37	37	37	37
GeneralDeviancePre	Pearson Correlation	.712**	.752**	1	.550**	.565**	.685**	.423**	.311	.454**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.009	.061	.005
	N	37	37	37	37	37	37	37	37	37
AssaultPre	Pearson Correlation	.638**	.473**	.550**	1	.505**	.531**	.617**	.433**	.362*
	Sig. (2-tailed)	.000	.003	.000		.001	.001	.000	.007	.027
	N	37	37	37	37	37	37	37	37	37
ImpulsivenessPre	Pearson Correlation	.419**	.588**	.565**	.505**	1	.540**	.641**	.424**	.649**
	Sig. (2-tailed)	.010	.000	.000	.001		.001	.000	.009	.000
	N	37	37	37	37	37	37	37	37	37
RiskSeekingPre	Pearson Correlation	.540**	.461**	.685**	.531**	.540**	1	.634**	.317	.496**
	Sig. (2-tailed)	.001	.004	.000	.001	.001		.000	.056	.002
	N	37	37	37	37	37	37	37	37	37
SelfCenterednessPre	Pearson Correlation	.366*	.413*	.423**	.617**	.641**	.634**	1	.560**	.539**
	Sig. (2-tailed)	.026	.011	.009	.000	.000	.000		.000	.001
	N	37	37	37	37	37	37	37	37	37
TemperPre	Pearson Correlation	.268	.322	.311	.433**	.424**	.317	.560**	1	.202
	Sig. (2-tailed)	.109	.052	.061	.007	.009	.056	.000		.230
	N	37	37	37	37	37	37	37	37	37
PhysicalActivityPre	Pearson Correlation	.388*	.520**	.454**	.362*	.649**	.496**	.539**	.202	1
	Sig. (2-tailed)	.018	.001	.005	.027	.000	.002	.001	.230	
	N	37	37	37	37	37	37	37	37	37

Note. This table shows correlations of all sub-scales pre intervention of Normative Deviance scale.

The correlation analysis revealed significant associations between various pre-intervention behavioral traits and tendencies. Vandalism exhibited strong positive correlations with general deviance ($r = .712, p < 0.01$), school misconduct ($r = .624, p < 0.01$), and assault tendencies ($r = .638, p < 0.01$), indicating its deep connection to broader deviant behaviors. Additionally, moderate correlations were found with risk-seeking ($r = .540, p < 0.01$) and physical activity ($r = .388, p < 0.05$), suggesting that individuals engaging in vandalism may also display risk-seeking traits, with a possible link to physical activity. Similarly, school misconduct showed strong correlations with general deviance ($r = .752, p < 0.01$) and impulsiveness ($r = .588, p < 0.01$), alongside a moderate relationship with physical activity ($r = .520, p < 0.01$), highlighting a behavioral overlap that could inform intervention strategies. General deviance was strongly linked to risk-seeking ($r = .685, p < 0.01$) and impulsiveness ($r = .565, p < 0.01$), while also showing a notable correlation with physical activity ($r = .454, p < 0.01$), further reinforcing its association with high-risk behavioral traits. Additionally, physical activity correlated significantly with impulsiveness ($r = .649, p < 0.01$) and self-centeredness ($r = .539, p < 0.01$), while also being associated with vandalism ($r = .388, p < 0.05$) and school misconduct ($r = .520, p < 0.01$). These findings suggest that while physical activity may be linked to certain deviant tendencies, its influence may depend on contextual factors such as structure, supervision, and purpose.

Table 6
Correlations post

		Vandalism Post	School Misconduct Post	General Deviance Post	Assault Post	Impulsiveness Post	Risk Seeking Post	Self-Centeredness Post	Temper Post	Physical Activity Post
VandalismPost	Pearson Correlation	1	.611**	.701**	.136	.558**	.614**	.582**	.437**	.451**
	Sig. (2-tailed)		.000	.000	.422	.000	.000	.000	.007	.005
	N	37	37	37	37	37	37	37	37	37
SchoolMisconductPost	Pearson Correlation	.611**	1	.740**	.320	.595**	.448**	.205	.351*	.316
	Sig. (2-tailed)	.000		.000	.054	.000	.005	.223	.033	.057
	N	37	37	37	37	37	37	37	37	37
GeneralDeviancePost	Pearson Correlation	.701**	.740**	1	.244	.758**	.546**	.313	.407*	.512**
	Sig. (2-tailed)	.000	.000		.146	.000	.000	.059	.012	.001
	N	37	37	37	37	37	37	37	37	37
AssaultPost	Pearson Correlation	.136	.320	.244	1	.233	.324	-.023	.076	.105
	Sig. (2-tailed)	.422	.054	.146		.166	.051	.891	.656	.537
	N	37	37	37	37	37	37	37	37	37
ImpulsivenessPost	Pearson Correlation	.558**	.595**	.758**	.233	1	.534**	.396*	.418*	.425**
	Sig. (2-tailed)	.000	.000	.000	.166		.001	.015	.010	.009
	N	37	37	37	37	37	37	37	37	37

		Vandalism Post	School Misconduct Post	General Deviance Post	Assault Post	Impulsiveness Post	Risk Seeking Post	Self-Centeredness Post	Temper Post	Physical Activity Post
RiskSeekingPost	Pearson Correlation	.614**	.448**	.546**	.324	.534**	1	.477**	.508**	.459**
	Sig. (2-tailed)	.000	.005	.000	.051	.001		.003	.001	.004
	N	37	37	37	37	37	37	37	37	37
SelfCenterednessPost	Pearson Correlation	.582**	.205	.313	-.023	.396*	.477**	1	.375*	.385*
	Sig. (2-tailed)	.000	.223	.059	.891	.015	.003		.022	.019
	N	37	37	37	37	37	37	37	37	37
TemperPost	Pearson Correlation	.437**	.351*	.407*	.076	.418*	.508**	.375*	1	.363*
	Sig. (2-tailed)	.007	.033	.012	.656	.010	.001	.022		.027
	N	37	37	37	37	37	37	37	37	37
Physical ActivityPo	Pearson Correlation	.451**	.316	.512**	.105	.425**	.459**	.385*	.363*	1
	Sig. (2-tailed)	.005	.057	.001	.537	.009	.004	.019	.027	
	N	37	37	37	37	37	37	37	37	37

Note. This table shows post-intervention analysis of Normative Deviance scale.

The post-intervention correlation analysis revealed that while some associations between deviant behaviors and personality traits persisted, structured sports programs could serve as potential intervention strategies. Vandalism maintained strong positive correlations with general deviance ($r = .701, p < 0.01$), risk-seeking ($r = .614, p < 0.01$), and self-centeredness ($r = .582, p < 0.01$), indicating that these behavioral tendencies remained influential. A moderate correlation with physical activity ($r = .451, p < 0.01$) suggested that unstructured or impulsive aspects of engagement might still align with vandalism. Similarly, school misconduct remained strongly associated with general deviance ($r = .740, p < 0.01$) and impulsiveness ($r = .595, p < 0.01$), with moderate links to temper ($r = .351, p < 0.05$) and physical activity ($r = .316, p = 0.057$), underscoring the importance of self-discipline and emotional regulation in mitigating misconduct.

General deviance continued to exhibit strong correlations with impulsiveness ($r = .758, p < 0.01$) and physical activity ($r = .512, p < 0.01$), with a moderate link to temper ($r = .407, p < 0.05$), emphasizing the need for structured interventions that promote teamwork and self-regulation. Furthermore, physical activity retained significant positive correlations with impulsiveness ($r = .425, p < 0.01$), risk-seeking ($r = .459, p < 0.01$), and vandalism ($r = .451, p < 0.01$), highlighting both its potential as a mitigating factor and its possible reinforcement of deviant tendencies if not properly structured.

Overall, the findings suggest that while sports participation can influence behavioral traits, its effectiveness depends on the structure and content of the programs. Impulsiveness and risk-seeking emerged as key traits influencing deviant behaviors, reinforcing the need for interventions that emphasize emotional regulation, decision-making, and teamwork. The dual role of physical activity—either mitigating or reinforcing deviance—further underscores the importance of supervision and well-designed sports programs to maximize positive behavioral changes.

Conclusion

Sports participation has been demonstrated to foster responsibility, discipline, and teamwork, all of which help to lessen deviant behavior. The study emphasized how exercise can help prevent dangerous behaviors including impulsivity and anger management problems. These results lend credence to the idea that sports-based therapies are useful ways to deal with behavioral issues in teenagers. The study contributes insightful information to the larger discussion regarding youth development and how physical activity shapes favorable results.

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