The Effect of Educational Games According to a Sports Educational Program in Reducing School Violence Among Middle School Students

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Abstract:

The study aimed at identifying the effect of playing educational games according to a proposed sports educational program in reducing school violence and to show this, the researcher relied on the experimental approach with the design of the two equal groups, which consists of a set of educational games that were chosen according to their procedural goals and that are in line with the indicators of school violence. The results have shown that there are statistically significant differences between the control and experimental groups in both verbal, physical, and symbolic violence at the level of dimensional measurements, which confirms the presence of a positive and statistically significant effect of the proposed educational games according to the sports educational program in reducing the level of school violence.

KEY WORDS : Educational Games, Violence, School Violence

الملخص:

هدفت الدراسة إلى التعرف على الأثر الذي تحدثه ممارسة الألعاب التربوية وفق برنامج تعليمي رياضي مقترح في التقليل من العنف المدرسي، ولإظهار ذلك اعتمد الباحث على المنهج التجريبي ذو تصميم المجموعتين المتكافئتين، وقد أظهرت النتائج أن هناك فروق ذات دلالة إحصائية بين المجموعتين الضابطة والتجريبية في كل من العنف اللفظي، المادي والرمزي على مستوى القياسات البعدية، مما يؤكد على وجود أثر إيجابي ودال إحصائيا للألعاب التربوية المقترحة وفق البرنامج التعليمي الرياضي في خفض مستوى العنف المدرسي لدى تلاميذ التعليم المتوسط.

الكلمات المفتاحية: الألعاب التربوية؛ العنف؛ العنف المدرسي.

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1- Introduction and Research Problematic:

Violence is a social phenomenon that has spread and become deeply rooted in contemporary societies due to its association with various cultural, social, and political factors (Radaoui & Kechida, 2023, p. 1187). The educational system has been affected by this phenomenon, extending its impact to almost every aspect. School violence has appeared as a particular form of aggressive behavior associated with the school environment. It is considered one of the most serious threats to students' academic achievement. Besides, studies demonstrate a substantial negative relationship between school violence and academic performance. This is illustrated in the academic achievement of diverse samples, including the student population, aiming to identify and address the shortcomings that have emerged in academic performance, particularly among students with high levels of violence, as confirmed by Farid Boubekri's study (2001) on the causes of academic failure in schools in Constantine. The researcher interviewed 114 teachers from ten (10) secondary education institutions and found that several factors contribute to academic failure, including class size and violence within the school environment. In addition, researcher Nadjoua Amireche (2019) studied the causes of school violence from the perspective of educational and vocational counselors. She found that family and psychological factors are the most important causes of this phenomenon, where students with high levels of school violence often experience academic failure or drop out of school in some cases.

Therefore, consideration of the actions that can be implemented and the methods to tackle the issue of school violence and enhance academic performance started. Many studies have indicated that students, particularly adolescents, feel comfort and psychological satisfaction when engaging in educational sports. As noted by the thinker Reed, 'Physical activity disciplines our will, asserting that he does not regret the time allocated to games in our school; on the contrary, it is the only time that passes in a good way' (Mohammed Al-Hmahmi 1962, pp. 3-4). Similarly, the study conducted by Bachiri Attia (2019) on the relationship between educational and physical activity and the psychological well-being of secondary school students, where he distributed a questionnaire to a sample of 140 students chosen intentionally. The results concluded that there were statistically significant differences between students who engage in

educational sports activities and those who do not, in favor of the practitioners. Researcher Rabah Seghiri (2013) also affirmed that engaging in physical activities is a viable alternative to maintain the health of individuals with special needs. Engaging in these sports activities becomes a source of joy and happiness, forming acceptable behaviors towards oneself and society. This can apply to students in the middle school stage. The author Schiller mentioned in his letter 'Aesthetics of Education' that a person is truly human only when he plays.' Accordingly, educational sports activity is an essential part of humans in general and for students inside and outside educational institutions. It provides them with knowledge, skills, and physical characteristics needed in the educational process and their daily lives. One of the oldest texts highlighting the significance of recreational sports activity is what Socrates mentioned: 'Citizens must engage in physical exercises to maintain physical fitness as responsible citizens for their people and respond to the call of the nation when it summons them.'

From what has been discussed, it is evident that students in the middle school stage undergo various biological, psychological, behavioral, and cognitive changes. They find themselves immersed in both negative and positive emotions, experiencing forms of verbal, symbolic, and material violence. However, education experts and specialists have addressed this situation by incorporating physical and sports education and educational activities as positive catalysts.

Hence, the problematic aspects of the study become clear. If studies confirm that educational activities serve as an outlet and a space for intellectual, psychological, and social discharge for students, we raise the following question:

Does the implementation of proposed educational games according to the sports education program have an effect on reducing school violence among middle school students?

This problematic gives rise to the following two questions:

- **Are there statistically significant differences between the control and experimental groups in the dimensional measurement of verbal violence?**
- **Are there statistically significant differences between the control and experimental groups in the dimensional measurement of material violence?**

- – **Are there statistically significant differences between the control and experimental groups in the dimensional measurement of symbolic violence?**
- – **Are there statistically significant differences within the experimental group in the dimensional measurement of violence attributed to the gender variable?**

We will attempt to answer the questions through the following hypotheses:

There is a significant and statistically valid effect of the proposed educational games according to the sports education program in reducing the level of school violence among middle school students.

This main hypothesis includes a set of sub-hypotheses:

- – There are statistically significant differences between the control and experimental groups in the dimensional measurement of verbal violence.
- – There are statistically significant differences between the control and experimental groups in the dimensional measurement of physical violence.
- – There are statistically significant differences between the control and experimental groups in the dimensional measurement of symbolic violence.
- – There are statistically significant differences within the experimental group in the dimensional measurement of violence in favor of males.

2- Study Significance:

This study derives its importance from two main axes:

- The topic's vitality is evidenced by the nature of the information presented about it.

- The human segment under study, as the current study, is a manifestation of these two axes by examining the general impact of play, particularly educational games, on reducing certain negative behaviors in the educational environment, including school violence, which is the study subject.

Moreover, the study is essential as it contributes to better planning to enhance this group's conditions and determine appropriate and possible solutions to the sources and negatives of school violence.

3- Study Objectives:

- Highlighting the comprehension of the school violence problem by examining existing theoretical perspectives and leveraging the results

of previous studies to gain a deeper and broader understanding of these disorders.

- Attempting to promote critical concepts related to the study variables to provide a more comprehensive understanding for readers, presenting and organizing them chronologically.

- Identifying the effect of educational games on reducing school violence among middle school students.

4- Study Terminology:

Educational Games:

Terminologically: These are forms of education that accomplishdifferent educational programs aimed at nurturing and developing the individual comprehensively—physically, sensoryly, motorically, emotionally, and affectionately. (Al-Basyouni, 1992, p. 132).

Procedurally: Refers to a set of educational sports activities, whether individual or collective, proposed for middle school students according to the provided sports program.

Violence:

Terminologically: Represents aggressive behaviors that may manifest verbally, physically, or even through gestures, causing damage to others. (Dmana, 2023, p. 159).

School Violence:

Terminologically: Defined by Adnan Kifi as the behavioral practices occurring in some schools involving students and teachers. It originates from anger, fueled by increasing emotions, leading to actions such as hitting, kicking, and using sharp objects, sticks, and sometimes even weapons. Therefore, it poses a danger to the lives of individuals in this group, considered a phenomenon rather than an isolated problem affecting collective feelings. (See Al-Arabi, 2010, p. 313).

Procedurally: Refers to a range of negative behaviors produced by students or teachers, taking different forms such as verbal abuse, symbols referring to anger, or physically hitting and kicking material possessions within the school environment.

5- Applied Part:

1. **Methodology:**

Survey Study:

In this stage, the researcher collected information and reviewed previous research, studies, and relevant theses related to the research

topic, aiming to provide sufficient information and insights from all aspects to form a comprehensive and complete understanding of the subject. This enabled the formation of a theoretical foundation and background for the topic. Before applying the program and distributing the survey forms related to the research, a survey study was conducted on the research sample, seeking to understand the field practices in the selected middle school and communicate with some students to gather information about their study community (study times, times of physical education classes, etc.). In this stage:

- External variables that could impact the study results were identified.
- The suitability of experimental conditions before and during program application was verified.
- The questionnaire's appropriateness and students' understanding of its items and terms were confirmed.
- Some shortcomings in the survey application procedures were discovered.
- The time required for program and survey implementation was determined.
- Training was conducted for survey administration.

Study Delimitations:
ime Delimitations: The study lasted from October 3, 2023, to November 26, 2023.
Spatial Delimitations: The study was conducted at the level of students in Middle School on October 17 in Laghouat.
Study Methodology:
The nature of the research problem primarily determined the research methodology suitable for its investigation. The experimental methodology was employed to study and test the hypotheses.
Study Sample:
Two groups were employed in this research: a control group and an experimental group consisting of middle school students with an equal number of males and females at the same academic level for the academic year 2023/2024 in Middle School on October 17 in Laghouat. Each group comprised 20 students, selected randomly to ensure homogeneity between the groups. The age of the sample members ranged between 12 and 14 years.

Calculating Sample Homogeneity:

Table (01) illustrates the calculated means and the t-test values for indicators of school violence, age, gender, and educational level for both the control and experimental groups in the pre-assessment.

Value Dimension	Group	Mean	Standard deviation	T value	P-value	Statistical Significance
Verbal violence	Control	35.90	4.74	0.242	0.575	Not significant
	Experimental	35.55	4.55			
Physical violence	Control	32.00	3.93	0.619	0.162	Not significant
	Experimental	32.27	3.18			
Symbolic violence	Control	29.66	3.46	-1.565	0.529	Not significant
	Experimental	29.04	2.98			
Age	Control	13.86	2.82	-1.784	0.808	Not significant
	Experimental	13.91	2.66			
Gender	Control	20.60	3.60	0.266-	0.891	Not significant
	Experimental	20.90	3.53			
Educational level	Control	10.60	2.13	1.000-	0.330	Not significant
	Experimental	10.65	2.13			

Degreeof freedom : (38)

Table (01) indicatesthat the probability values for verbal, physical, and symbolic violence were 0.575, 0.162, and 0.529, respectively. These values are greater than the significance level of 0.05, confirming the absence of statistically significant differences regarding school violence between individuals in the control and experimental groups. This is evident before the application of the proposed sports educational program. Additionally, the probability values for gender, age, and educational level were 0.808, 0.891, and 0.330, indicating the absence of statistically significant differences between the two groups in these non-experimental variables. Thus, we can conclude that the groups are homogeneous in all non-experimental variables.

Data Collection Tools:

Proposed Sports Educational Program:

The program contains 12 sessions applied outside the physical education and sports classes, conducted every Tuesday evening.

4-3-1- Tools Used in Implementing the Proposed Sports Educational Program:

- Various small-sized balls
- Plastic baskets
- Medicinal balls

- Seats and chairs
- Stopwatch and whistle
- Long plastic columns
- Ropes
- 5-meter long mat

Foundations of the Proposed Recreational Sports Program:

- The program is applied in educational sports sessions.
- The sports-educational setting provides social interaction and represents the psychological dimensions of school violence (verbal, physical, and symbolic violence) while seeking solutions to reduce it.
- The program must include collective and individual sports-educational activities that help reduce psychological stress.
- Continuity, sustainability, and alternation in applying the program and practicing sports-educational activities.

Field Application Procedures for the Proposed Recreational Program:

The following Diagram represents the procedures employed in implementing the proposed sports educational program:

Diagram illustrating the field procedures for applying the proposed sports educational program.

Months	Classes	Axes	Objectives according to the sports educational program	Indicators
October	First session (first week)	Verbal violence	Boosting self-confidence, cultivating a desire to succeed, and relieving the pressures associated with studying.	Self-confidence and overcoming fear as a result of participation.
	Second session (second week)		Getting rid of all forms of verbal violence by promoting competition, a love for excellence, and respecting the opponent.	Relieving nervous pressure for achieving comfort
October	Third session (third week)	Physical violence	Developing self-needs and responding to events that mitigate tensions arising from desirable aspirations and that lead to violence	Not being tense when faced with unusual behaviors as they are spontaneous during play.

	Fourth session (fourth week)		Assuming roles in organization, management, expressing opinions, and confronting stress by avoiding hitting the opponent and adhering to the principle of sportsmanship.	Taking responsibility and reducing the fear of defeat.
November	Fifth session (second week)	Symbolic violence	The ability to continue social work that requires collaboration and solidarity for actively facing the pressure.	Managing unfamiliar movements in different and unique spaces.
	Sixth session (Third week)		The pursuit of solving confrontation issues, integration, and controlling behaviors without feeling pressure.	Expressing positive symbols and coordinating them with auditory and visual cues

Importance of the Proposed Sports Educational Program:

- The program can benefit those interested in social upbringing, educators, and educational and awareness committees in the community.
- It can benefit youth in general and students in particular in facing different psychological variables and problems that may negatively influence their academic achievement.
- It helps release pressure, tension, and confusion, leading to school violence.
- It can assist in achieving the physical, psychological, and social balance of students, thereby reaching the goals aimed at by the educational system.

Questionnaire:

Prepared by the researcher, the questionnaire was designed to measure the impact of educational sports games according to a proposed sports education program in reducing the level of school violence. It consists of 30 items distributed across three dimensions:

- Verbal violence, with items numbered from (1) to (10).
- Physical violence, with items numbered from (11) to (20).
- Symbolic violence, with items numbered from (21) to (30).

Tool Scientific Conditions:

Two methods were used to calculate the validity and reliability of the questionnaire on the standardization sample (n = 15) selected from

middle school sections, with an equal representation of males and females aged between (12-14) years. The results are as follows:

Firstly, the Calculation of the Validity of the Tool: The discriminant validity method was used

Discriminant validity was calculated using the bilateral comparison method on the calibration sample for the entire questionnaire and its three dimensions. The t-test was used to calculate the significance of the differences between the (27%) highest and lowest means of the median. The following table shows the values (t):

Table No. (02) shows the t value for calculating discriminant validity.

Dimension	Comparison group	Number	Statistical values		T value	Sign level
			Mean	Median		
Symbolic violence	Higher than the median Less than the median	07 07	56.72 35.5	5.15 5.40	130.01	0.01
Verbal violence	Higher than the median Less than the median	07 07	52.09 34.27	1.62 5.79	13.6	0.01
Physical violence	Higher than the median ess than the median	07 07	36.81 21.40	2.49 3.22	17.31	0.01
Total score	Higher than the median Less than the median	07 07	233 139.86	15,59 22,45	15.62	0.01

From Table (02), statistically significant differences at the 0.01 level are evident between the (27%) highest and lowest median levels on the questionnaire dimensions and the questionnaire as a whole. This is supported by the calculated values (t), which are greater than the tabulated (t) values (estimated at 2.09), confirming the discriminatory ability of the questionnaire and its dimensions.

Secondly, Scale Reliability:
Internal consistency using Cronbach's alpha method was used to calculate the reliability coefficient on the standardization sample, and the following table illustrates the results of the reliability coefficient:

Table No. (03): Represents the reliability coefficient for the test anxiety scale.

Dimension	Cronbach's alpha	Significance level
Symbolic violence	0.93	0.01
Verbal violence	0.82	0.01
Physical violence	0.76	0.01
Total score	0.80	0.01

From the previous table, it is evident that the questionnaire exhibits a high level of reliability, as indicated by Cronbach's alpha coefficients, all of which are close to the value of 1. Additionally, all coefficients are statistically significant at the 0.01 level.

Statistical Methods Used in the Study:
- Means.
- T-test to determine the significance of differences.
- Cronbach's alpha coefficient.

2. Presentation, Analysis, and Discussion of Results:
Presentation and Analysis of the First Partial Hypothesis:
The hypothesis stated that there are statistically significant differences between the control and experimental groups in the dimensional measurement of verbal violence.

Table No. (04): Illustrates the mean values, standard deviations for the dimensional tests between the control and experimental

groups, and the calculated and tabulated (T) values for the test of verbal violence.

Statistical Parameters	Mean	Standard Deviation	T value		Degree of Freedom	Sign Level	Type Difference
			Calculated	Tabulated			
Control group	22.33	2.05					
Experimental group	14.23	1.66		1.79	38	0.05	Significant

Table No. (04) shows that the mean for the control group was (22.33) with a standard deviation of (2.05), while the mean for the experimental group was (14.23) with a standard deviation of (1.66). The calculated (t) value was (4.33), which is greater than the tabulated (t) value of (1.79). This indicates the presence of statistically significant differences between the two groups in the level of verbal violence in favor of the experimental group (14.23).

Analysis and Interpretation of Results:

In light of the study and through the statistical methods employed to verify these hypotheses, and after reviewing the study results, the researcher attempts to discuss and interpret them in the context of theoretical frameworks and previous studies as follows:

The statistical analysis of the results obtained from the impact of educational games according to the proposed sports education program in reducing school violence among middle school students revealed the following:

First Hypothesis:

The first hypothesis, which stated that there are statistically significant differences between the control and experimental groups in dimensional measurement at the level of verbal violence, has been confirmed.

The results align with the work of Bachiri Attia (2019), who studied the relationship between educational, physical activity, and psychological well-being among secondary school students. He demonstrated differences in psychological well-being levels between students engaged in physical activity and those not, favoring the physically active group. Besides, the researcher Aboud Douha (2012)

highlighted the relationship between psychological well-being and domestic violence. The inverse relationship found between psychological well-being and verbal violence suggests a potential link between educational, physical activity, and verbal violence.

The researcher indicated these findings by suggesting that verbal violence is a common phenomenon among all students, regardless of their academic levels. The conclusion drawn is that students who do not engage in educational, physical activities may encounter higher levels of verbal violence compared to their physically active counterparts. Furthermore, the presence of non-significant differences between the pre-test and post-test measurements in the control group concerning verbal violence may be attributed to the regular physical education sessions within the educational program.

Second hypothesis:

The second hypothesis was confirmed, stating statistically significant differences between the control and experimental groups in the dimensional measurement of physical violence. This result aligns with the work of Ben Youcef Walid (2017), who identified the role of educational sports activities in reducing violence among students within educational institutions. His study, which involved distributing questionnaires to a sample of 160 students, was divided into two groups – one practicing physical education within scheduled sessions and another not engaging in such activities – and reported statistically significant differences in verbal, physical, and symbolic violence. This corresponds with the results found in the current study.

Besides, the researcher Ahmed Amine (2005) concluded in his study on the role of physical education in reducing aggressive behavior among adolescent students that physical education has an important effect on reducing physical violence in schools.

The interpretation of these results can be grounded in different theories such as the relief theory, play theory, and the surplus energy theory suggested by the English philosopher Herbert Spencer. These theories show that students are surrounded by the care of their parents, providing them with food and caring for their cleanliness and health without engaging in negative behaviors. Instead, they accumulate surplus energy that they expend in play rather than using it in negative actions like breaking or hitting.

Third hypothesis:

The third hypothesis was confirmed, which asserted the existence of statistically significant differences between the control and experimental groups in the dimensional measurement of symbolic violence. This aligns with the results of researcher Seghiri Rabah (2013), who sought to identify the role of adapted physical activity in reducing aggressive behaviors among mentally disabled children with learning disabilities.

Considering that this category of students often experiences speech difficulties due to their special needs, symbolic violence becomes a more expressive and prominent form of violence compared to physical violence. The researcher concluded that engaging in physical activities mainly reduces different forms of violence in this group, and this conclusion can potentially be extended to students in the middle school stage.

Symbolic violence resulting from numerous situations in a student's life, particularly during the middle school education stage, can have more severe consequences than verbal and physical violence, which may include feelings of depression or gastrointestinal disorders (Abdellatif Hussein Faraj, 2009). Therefore, it is crucial to diagnose symbolic violence through criteria such as neurological symptoms, intense emotional reactions, difficulty concentrating, muscle tension, and sleep disturbances. The results of the third hypothesis indicate that engaging in educational sports activities could effectively reduce the severity of symbolic violence.

Conclusions and Recommandations:

The study focused on revealing the impact of educational activities in reducing school violence among middle school students. A sports educational program was developed for this purpose, and the results showed statistically significant differences between the control and experimental groups in terms of the measured dimensions of each indicator of school violence targeted in the study.

The researcher provides a set of suggestions and recommendations for students, teachers, and specialists working in the field of guidance and school counseling, including:

-Prioritizing sports educational activities as essential to students' daily and academic life to address academic challenges and enhance psychological well-being.

-Emphasizing development and prevention strategies in physical education curricula related to academic issues in general and school violence in particular.

-Focusing on sports educational programs as significant methods for addressing academic challenges and promoting harmony and mental health within schools.

-Allocating sufficient time for students to engage in different sports and educational activities for developmental, preventive, and therapeutic purposes to protect and treat students from academic issues.

-Paying attention to small group sports activities for their potential in addressing academic challenges.

-Developing group sports programs based on students' needs and preferences, involving physical education teachers and guidance counselors.

-Creating special sessions for non-curricular activities within the physical education curriculum, employing effective techniques to address academic and school violence issues.

-Supporting school sports and giving it the deserved attentionto address issues like school violence.

-Recognizing the role of media, educational programs, and entertainment in curbing school violence.

-Using games with educational dimensions to instill social values and train good behavior contributes to the educational aspect.

-Preparing educational and cultural sports programs on video tapes and employing them for self-guided instruction to address school violence.

-Investigating the relationship between teachers' professional competencies and school violence.

-Studying the correlation between students' physical self-perception and school violence in middle school.

-Assessing the effect of biofeedback nutrition through physical education lessons on reducing school violence.

-Developing recreational sports programs that combine memorization habits, leisure time use, and some educational and sports activity techniques to study their effectiveness in addressing academic and school violence issues.

-Studying the reality of students impacted by excessive school violence, comparing traditional and contemporary treatment approaches.

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