

## The impact of practicing sports on the educational values of high school students

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<sup>123</sup>Laboratory of cognitive dimensions and applied perceptions of the improvement of sports training through multiple approaches

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### Abstract:

This study attempts to identify the impact of practicing sports on the educational values of high school students. Using the descriptive approach, researchers distributed a questionnaire consisting of the following three variables: social, moral, and cognitive values. The study sample consisted of 300 male and female students, including 218 students practicing physical and sports activities, while the remaining 82 students did not practice physical and sporting activities. The study results showed that practicing physical and sporting activities positively impacts the educational values of high school students.

Key words: **sports practice; educational values; high school students;**

### المخلص:

تهدف هذه الدراسة إلى التعرف على تأثير الممارسة الرياضية على القيم التربوية لدى تلاميذ الطور الثانوي، حيث تم استخدام المنهج الوصفي مناسبته لطبيعة الموضوع، وتمثلت عينة البحث في 300 تلميذ و تلميذة، منهم 218 تلميذ ممارسي الأنشطة البدنية و الرياضية و 82 تلميذ غير ممارسين للأنشطة البدنية و الرياضية ، وقد تم استخدام استبيان يتكون من ثلاث محاور وهي القيم الاجتماعية، القيم الأخلاقية، القيم المعرفية، ومن نتائج الدراسة أن ممارسة الأنشطة البدنية و الرياضية تأثير إيجابي على القيم التربوية لدى تلاميذ الطور الثانوي.

الكلمات المفتاحية: الممارسة الرياضية؛ القيم التربوية؛ الطور الثانوي؛

## **1-Introduction:**

Practicing physical and sporting activities is an essential social phenomenon in all institutions, especially educational institutions. Its presence within the educational system results from scientific and logical thinking that seeks to meet the requirements of educational institutions through the goals and tasks set and directed to meet the desires and needs of students. School activities are among the most critical components of the educational process that contribute to the comprehensive growth of the youth throughout all the study settings.

In addition, practicing physical and sports activities is an educational value in itself, serving as a means to achieve the goals of sound education that impart to students many positive values and habits that contribute to building a sophisticated and robust society. Educational values have an essential role in students' success and progress toward the development and prosperity of nations and the unification of peoples, primarily cognitive, moral, and social values.

Thus, it is one aspect that raises the importance of values. It is considered one of the fundamental pillars in the educational process, which has an impact on bringing about a change in the personality of students by implanting positive values and deleting negative values. Practicing physical and sports activities has played an important role. These build values and spread noble meanings in the hearts of its practitioners, especially at this sensitive and effective age stage in society.

In this matter, there are some relevant and notable studies, including Chelihi et al. (2021). This study aimed to highlight the role of the professor of physical and sports education in guiding some of the moral values of high school students. Where the descriptive approach was used on a sample composed of (230) male and female students in the municipality of Brikka, a questionnaire form of 13 ethical values was distributed (honesty, cooperation, obedience and order, hygiene, responsibility, tolerance, honesty, public morals and social values, centrism, non-violence, justice, humility, and sportsmanship) with 55 words for all values, the study found a very prominent and significant presence of a class and professor of physical and sports education in guiding the moral values under study. Researchers also suggested that research be conducted to determine the extent to which the section varies by level of study, gender, and

geographic location of the city and the countryside. (Chelihi et al., 2021)

Abderahman Lakhel and Feirouz Aziz's (2019) study aimed to identify the levels of values of practitioners and non-practitioners of physical education and sports among high school students. The researchers relied on the descriptive approach, as the study sample consisted of (380) students distributed among several Algerian high schools, where the number of those practicing physical education and sports was 200 students. In comparison, the number of non-practitioners was 80 students. They were chosen based on a nonprobable sampling method. The tool used was a values scale consisting of (35) statements divided into six variables: social values, moral, economic values, self-esteem values, cognitive values, and aesthetic values. The study results revealed that the level of values for practitioners and non-practitioners of physical education and sports was average in all value variables. There are also differences in the level of values between practitioners and non-practitioners of physical education and sports. The researchers recommended the need to pay attention to educational values at the level of educational institutions by teachers of physical education and sports.

To pursue further, the Bouchou Fahem Study (2023) sought to identify the contribution of recreational physical and sporting activities to forming specific educational values for students in the middle school stage. It also attempted to show the degree of variations in statistically significant averages in the level of development of educational values for students who participated in sports for fun activities and those who did not, as embodied in the middle schools. In this study, the descriptive approach was used as a scanning method, and the pedagogical values scale comprises six variables of educational values. It was also adapted to collect data and information from design (Al Battikhi, 2011). Hence, the sample was estimated to be 682 fourth-year students, with an average of (340) students participating in recreational sports and (342) non-practicing students dispersed across all averages of the State of Algeria. The "Kruskal-Wallis one-way analysis test" demonstrated differences in averages across many groups, whereas the "Mann-Whitney U test" found differences across the samples. The study's results demonstrated the following: students who participate in recreational physical sports activities and those who do not differ in averages of statistical

significance regarding the development of educational values, as do practitioners at the middle schools.

Furthermore, Nouwara's study (2019) also seeks to identify the role of physical and sports education classes in helping middle school-level students develop their sporting values. Then, it seeks to identify the role of these values in helping students behave better and identify the most widely held values among students due to physical education and sports education classes. The sample size was estimated to be 430 students, allocated according to some of the Bejaia state averages. Nabil Hassan and Ibrahim Abd Rabbo Khalifa created the values scale. It consisted of 35 phrases divided into four categories: social, aesthetic, self-esteem, and cognitive. Along with an interview, we asked the professors of physical and sports education and certain representatives of the Department of Education several insightful questions during the interview for our study. Cooperation values are developed through physical education and sports. Honor, integrity, hygiene, honesty, and fair play are ideals spread through physical education and sports. Eventually, students receive unique knowledge from the cultural and cognitive aspects of physical and sports education through these subjects.

### **1-1 Statement of The Problem**

In the light of what has been stated, the current study is conducted to answer the following questions:

Are there statistically significant differences between high school students who participate in physical sports and those who do not in terms of their educational values?

### **1-2 Sub-questions**

This study also brings some sub-questions to the surface:

1. Are there statistically significant differences between practitioners and non-practitioners of physical sports activities concerning the social value of high school students?
2. Are there statistically significant differences between practitioners and non-practitioners of physical sports activities about the moral value of high school students?
3. Are there statistically significant differences between practitioners and non-practitioners of physical sports activities relative to the cognitive value of high school students?

### **1-3 Hypotheses**

At the high school level, there are statistically significant differences between students who participate in physical sports and those who do not.

### **1-4 Sub-hypotheses**

1. There are statistically significant differences between practitioners and non-practitioners of physical sports activities concerning the social value of high school students.
2. There are statistically significant differences between practitioners and non-practitioners of physical sports activities concerning the moral value of high school students.
3. There are statistically significant differences between practitioners and non-practitioners of physical sports activities concerning the cognitive value of high school students.

### **2- General objective of the study:**

It is evident that all research endeavors possess an inherent objective rooted in the pursuit of truth. In this study, researchers aim to delve into the profound significance of sports, seeking to uncover the following points:

- Identifying whether there are statistically significant differences between practitioners and non-practitioners of physical sports activities concerning the social value of high school students.
- Identifying whether there are statistically significant differences between practitioners and non-practitioners of physical sports activities concerning the moral value of high school students.
- Identifying whether there are statistically significant differences between practitioners and non-practitioners of physical sports activities concerning the cognitive value of high school students.

The significance of this study lies primarily in its scientific side. Also, its value is grounded in its potential to contribute substantially to the realm of knowledge, adding depth and insight to our understanding of the subject matter through rigorous scientific exploration. This is done by attempting to determine the differences between students who practice and those who do not practice physical and sporting activities. This study aims to offer solutions regarding sports practice and its impact on high school students' educational values.

It is worth mentioning that the study has a practical significance that resembles the following. The study's findings are

used in educational settings, and different statistical techniques are employed to analyze the quantifiable phenomenon.

### **3- Procedural definition of the concepts mentioned in the research:**

#### **- Sports practice:**

**The definition of practice:** The word "practice" is defined as "treated, practiced, practically applied, executed, done". It is derived from the verb to march (Maskaf & Charpie, 2018).

**The definition of sports practice:** Allaoui defines sports practice as an activity driven by social motivation. It is a social phenomenon, similar to all other human activities involving their environment, and it is a crucial component in developing a person's personality as a whole. It is also vital to provide each individual with a comprehensive and well-rounded education. (Marouan Abdelmajid Ibrahim and Iyad Abdelkarim al-Azaoui, 2002).

**Procedural definition:** Sports practice is an essential component of the high school system and is intended to help students evolve and prepare on all levels: Physically, psychologically, socially, morally, and mentally. It does this by using physical activities that have significant educational value as a medium for instruction.

Educational values:

**- The definition of values:** A criteria or measure that is used to evaluate behavior and is deemed desirable. That is what is meant by the term "values." (Majid Zaki, 2005)

**The definition of educational values:** According to Hassan and Wallace, they are a collection of social standards and behavioral guidelines that shape how people behave and interact with one another in the sporting community. These standards and guidelines are poured into important standardized models and frameworks that unite people on a mental, intellectual, and behavioral level. (Ali and Mahmoud, 2018)

**Procedural definition:** It is a set of positive standards and behaviors acquired by pupils within educational institutions while engaged in physical and sporting activities.

### **4- The methodological procedures used in the study:**

#### **4-1 Method and tools:**

The researchers deliberately selected the descriptive approach for its seamless alignment with the study's requirements. This method was chosen to meticulously capture and analyze the multifaceted nuances inherent in the subject matter.

#### **4-2 The exploratory study**

The survey serves as the first step in assisting the researcher in taking an overview of the field study "State," where an exploratory experiment was conducted at the level of three high schools for the data collection tool. For the school year 2022/2023, we randomly selected students and took a sample of ten students involved in physical and sporting activities and ten not. We have generated initial findings, the most significant of which are:

- Identifying the field and choosing the right time to apply the study.
- Verify the simplicity of use and clarity of the questionnaire wording.

#### **4-3 Sample:**

The study's population is represented by high school students who participate in and do not participate in physical and sporting activities. The students are drawn from several high schools in Laghouat City, including First November, Imam Al Ghazali, and El Mokawama El Chaabia. (218) students participating in physical and sports education, (82) students not participating in sports and physical education, and (300) students overall.

#### **4-4 Field of The Study:**

This study was conducted at the level of three high schools in Laghouat.

#### **4-5 Timeframe:**

The research was conducted in October and November of 2023.

#### **4-6 Population:**

The study population consisted of 320 high school students in Laghouat City. As for the sample, 20 are survey sample students, while the remaining 300 are basic study sample students.

#### **4-7 Variables of The Study**

##### **4-7-1 Independent Variables:**

In the present study, sports practice is the independent variable.

##### **4-7-2 Dependent Variables:**

In the present study, educational values are the dependent variable.

#### **4-8 Tools of the study**

##### **4-8-1 Credibility of the tools:**

In order to achieve the objectives of the study, we relied on the questionnaire, which is considered one of the necessary methods for the study to collect the largest possible number of opinions and ideas on the subject. This is done by answering some of the questions raised and verifying the hypotheses. After ensuring the suitability of the questionnaire for our study and modifying it by the arbitration experts,

we went to the high schools representing the study sample. We distributed it to students who practice physical and sports activities and those who do not practice. The questionnaire tool was used, which consists of three variables (social value, moral value, and cognitive value), and each variable consists of 08 statements.

**4-8-2 Validity of the tools:**

In this study, researchers implemented a three-way Likert scale, where a rating of (03) denoted 'always,' (02) represented 'sometimes,' and a response of (01) was assigned for 'never.'

**4-9 Statistical tools**

This study used the following statistical tools: Arithmetic Mean, Simple Regression, and T.tests. Researchers analyzed the data using the SPSS 27 software.

- Mean: A measure of central tendency used to identify the average distribution of a grade from a set of grades.

- Standard deviation: A measure of dispersion used to identify the degree of deviation of a grade  $S_x^2 = \frac{\sum_{i=1}^n (X_i - \bar{X})^2}{N-1}$ .

- Cronbach's alpha: A measure of internal consistency used to assess the reliability of a scale. It is calculated using the following formula:

- $r_\alpha = \frac{N}{N-1} \left( 1 - \frac{\sum S_i^2}{S_x^2} \right)$

- $[[S_i]]^2$  : variance of the items,  $[[S_x]]^2$  : total variance of the set of grades, N : number of items.

- Guttman split-half method: A measure of internal consistency used to assess the reliability of a scale. It is calculated using the following formula:  $R=2(1- ( [[S_1]]^2 + [[S_2]]^2 ) / S^2 )$  where:

- $[[S_1]]^2$  : variance of the first half,  $[[S_2]]^2$  : variance of the second half,  $S^2$  : total variance.

- Pearson's correlation coefficient r: A measure of linear association used to calculate simple correlations and internal consistency of a questionnaire.

- T-test: A measure of statistical significance used to compare the means of two groups. It is calculated using the following formula:  $t = (\bar{x}_1 - \bar{x}_2) / (\bar{s}\sqrt{(1/n_1 + 1/n_2)})$

After entering the questionnaire data into the computer, we used the statistical program SPSS27 to calculate the statistical relationships used in the study.



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## 1-Statistical validity:

### 1-1-Internal consistency:

**Table No. (01)** shows the internal consistency coefficient of the questionnaire

Dimension	Pearson's coefficient	Significance level
The first dimension: Social value	0.440	Significant
The second dimension: Ethical value	0.654	Significant
The third dimension: Cognitive value	0.776	Significant

**Source:** prepared by Bentirache Rebhia with SPSS 27 software, 2023.

In this case, the **Pearson's coefficients** for all three dimensions are positive and significant. This indicates that there is a significant and positive relationship between the total score and the scores of the questionnaire items for all three dimensions. In other words, the higher the total score, the higher the scores of the questionnaire items for all three dimensions.

Therefore, the **internal consistency** of the questionnaire is **acceptable**.

### 1-2-Discriminative validity:

#### **Table No. (02) Discriminative Validity Coefficient**

Application	N	Mean	Standard deviation	Difference between means	Degrees of freedom	T	Sig
Upper grades	6	59	2,28	08	06	8,00	0,00
Lower grades	6	67	0,89				

**Source:** prepared by Bentirache Rebhia with SPSS 27 software, 2023.

In the table above, we see that the difference between the mean of the upper grades and the mean of the lower grades of the study sample members on the questionnaire grades was equal to 8 points. This is a significant difference that indicates the existence of differences between the two groups. This is supported by the value of T, which

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was equal to 8 at the probability value of 0.00. This indicates that the questionnaire is valid for what it was designed for.

### Reliability of the questionnaire:

#### Alpha Cronbach method:

Table (03) Shows the reliability coefficient using the Alpha Cronbach.

Questionnaire	Alpha Cronbach coefficient	Significance level
reliability	0.707	Significant

Source: prepared by Bentireche Rebhia with SPSS 27 software, 2023.

#### 2-1- Guttman split-half method:

Table (04) Shows the reliability coefficient using the Guttman.

Questionnaire	Guttman method	Significance level
reliability	0.825	Significant

Source: prepared by Bentireche Rebhia with SPSS 27 software, 2023.

### Interpretation:

We note from the tables above that the Alpha-Cronbach and Guttman coefficients are all high coefficients. This indicates that the value of reliability is high for the study tool. This means that the questionnaire has a high reliability, which gives us complete confidence in the validity of the questionnaire and its suitability for analyzing and interpreting the study results and testing its hypotheses.

## 4-2 Presentation and Analysis of Results:

### Presentation and analysis of the results related to the first partial hypothesis:

There are statistically significant differences in social values between students who participate in physical sports activities and those who do not, among high school students.

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**Table (05)** presents the Independent Samples Test

Social values	Paired differences		t	df	Sig.
	Mean	Standard deviation			
participate	21,6	0,12	8,5 2	29 8	0,000
not participate	18,91	0,38			

**Source:** prepared by Bentirache Rebhia with SPSS 27 software, 2023.

**The results indicate the following:**

- “t” is the t statistic, which is used to test the alternative hypothesis that the two means are not equal. Your t value is 8,526.
- “df” is the degree of freedom, which determines the statistical shape of the distribution. Your df value is 298.
- “Sig. (bilatérale)” is the p-value for the t-test, which indicates the probability that the observed differences could have occurred by chance. Your Sig. (bilatérale) value is 0,000, which means the differences are statistically significant.

Based on these results, we can say that there are statistically significant differences in social values between students who participate in physical sports activities and those who do not, among high school students. This suggests that participation in physical sports activities may have an impact on students' social values.

**Discussing and interpreting the results of the first hypothesis:**

Many studies support the findings that I have found, including:

- A study published in the Systematic Reviews journal found that participation in sports (at the community and elite level) is associated with better mental health, including improved psychological well-being (such as improved self-confidence and life satisfaction) and reduced mental disorders (such as reduced levels of depression, anxiety, and stress), and improved social outcomes (such as improved self-control, positive social behavior, interpersonal communication, and enhanced sense of belonging. (Eather, N, Wade, L, pankowiak;2023)

- Another study published in Sports Medicine - Open found that there is a notable positive impact of school-based physical activity interventions on children’s mental health, including improved endurance, positive mental health, well-being, and reduced anxiety (Andermo, S., Hallgren, M., Nguyen .2020).

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• According to an article published in Jamaica Gleaner, a set of studies showed that participation in sports increased students’ general interest and commitment to education, as well as more communication between students and teachers, more positive attitudes towards education, and more communication between parents and the school<sup>1</sup>. Based on these studies, we can say that the findings you have found align with the current literature, indicating that participation in physical sports activities may positively impact students' social values. (Jennifer Ellison Brown, 2016)

**Discussing and interpreting the results of the second hypothesis:**  
 There are statistically significant differences in ethical values between students who participate in physical sports activities and those who do not, among high school students.

**Table (06)** presents the Independent Samples Test

Ethical Values	Paired differences		t	df	Sig.
	Mean	Standard deviation			
participate	20,83	0,14	7,14	298	0,000
not participate	18,59	0,32			

**Source:** prepared by Bentirache Rebhia with SPSS 27 software, 2023.

**The results indicate the following:**

- “t” is the t statistic, which is used to test the alternative hypothesis that the two means are not equal. Your t value is 7,144.
- “df” is the degree of freedom, which determines the statistical shape of the distribution. Your df value is 298.
- “Sig. (bilatérale)” is the p-value for the t-test, which indicates the probability that the observed differences could have occurred by chance. Your Sig. (bilatérale) value is 0,000, which means the differences are statistically significant.

Based on these results, we can say that there are statistically significant differences in ethical values between students who participate in physical sports activities and those who do not, among high school students. This suggests that participation in physical sports activities may have an impact on the ethical values of students.

**Discussing and interpreting the results of the second hypothesis:**

The findings of my study are supported by many studies, including:

A study published in the Journal of Sports Medicine in 2022 found that students who participated in sports activities had higher levels of ethics and good social behavior than students who did not participate in sports activities.

The study, conducted by researchers at the University of California, Los Angeles, surveyed 1,000 students from public high schools in the Los Angeles area. The students were asked to complete a survey assessing their ethics and good social behavior.

The study results showed that students who participated in sports activities scored significantly higher on the ethics and good social behavior survey than students who did not participate in sports activities.

The researchers suggested that the positive impact of sports on ethics and good social behavior could be due to several factors, including:

- Learning through experience: Students who participate in sports learn the importance of cooperation, teamwork, fairness, and respect.
- The positive influence of coaches: Coaches can play a role in teaching students ethical values and modeling good behavior.
- A sense of belonging: Students who participate in sports feel a sense of belonging to a team or community, which can promote prosocial behaviors.

The findings of this study suggest that participation in sports can be a valuable way to promote ethics and good social behavior in young people. ( Jiayu Li and Weide Shao, 2022)

Based on these studies, we can say that the findings you have found align with the current literature, indicating that participation in physical sports activities may positively impact students' ethical values.

**Presenting and analyzing the results of the third hypothesis:**

There are statistically significant differences in cognitive values between students who participate in physical sports activities and those who do not, among high school students.

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**Table (07) presents the Independent Samples Test**

Cognitive Values	Paired differences		t	df	Sig
	Mean	Standard deviation			
participate	20,07	0,17	9,36	298	0,000
not participate	16,82	0,32			

**Source:** prepared by Bentirache Rebhia with SPSS 27 software, 2023.

**The results indicate the following:**

- “t” is the t statistic, which is used to test the alternative hypothesis that the two means are not equal. Your t value is 9,366.
- “df” is the degree of freedom, which determines the statistical shape of the distribution. Your df value is 298.
- “Sig. (bilatérale)” is the p-value for the t-test, which indicates the probability that the observed differences could have occurred by chance. Your Sig. (bilatérale) value is 0,000, which means the differences are statistically significant.

Based on these results, we can say that there are statistically significant differences in cognitive values between students who participate in physical sports activities and those who do not, among high school students. This suggests that participation in physical sports activities may have an impact on the cognitive values of students.

**Discussing and interpreting the results of the third hypothesis:**

- A study published in the International Journal of Environmental Research and Public Health found that participating in sports in late childhood is beneficial because it positively affects cognitive and emotional functions. However, few studies have investigated the impact of sports on the cognitive functions of pre-adolescents or explored which cognitive functions are developed by which sporting disciplines. Such knowledge could be useful in developing training programs for pre-adolescents aimed at improving cognitive functions important for a given sporting discipline, (Bidzan-Bluma et al. ,2018)

Based on these studies, we can say that the findings you have found align with the current literature, indicating that participation in

physical sports activities may have a positive impact on the cognitive values of students.

### **Conclusion**

Our study on sports practice and its effects on high students' lives and educational values, society in general, and educational institutions, in particular, aims to gain value among students through the goals and nature of their activities as a core subject in educational institutions, as they are based on the individual's physical life as well as their intellectual, psychological, and social development. Since sports practice is the mediator's right in the educational process, its significance in higher education is very important. Based on these findings, we can draw the following conclusions:

- There are statistically significant differences between practitioners and non-practitioners of physical sports activities concerning the social value of high students. This indicates that participation in physical sports activities may positively impact students' social values.
- There are statistically significant differences between practitioners and non-practitioners of physical sports activities concerning the moral value of high students. This suggests that participation in physical sports activities may positively impact students' moral values.
- There are statistically significant differences between practitioners and non-practitioners of physical sports activities concerning the cognitive value of high students. This suggests that participation in physical sports activities may positively impact students' cognitive values.

Thus, it is reasonable to conclude that engaging in sports and physical activities helps students develop their educational values.

### **Suggestions and Recommendations**

In the light of the findings, we recommend and propose the following:

- The requirement for attention in order to foster beneficial educational values in students.
- Raising students' interest in sports and using it to improve and shape their behavior.
- Engaging in physical activities and sports is considered an essential component of education and deserves consideration.
- Offering a range of opportunities for students to participate in sports within educational institutions to fulfill their goals.
- Increasing attention to physical and sporting activities at the high level and studies involving other educational values.

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