

The Relationship Between Sports Practice and Eating Habits Among Third-Year Secondary School Students A Field Study in Ain Smara, Constantine Province

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Abstract

This study sought to explore the level of sports practice and eating habits among third-year secondary school students in Ain Smara, Constantine Province. In order to support the theoretical background and achieve the study's objectives through field research, a descriptive research approach was chosen to address the various aspects of the study. A questionnaire was designed specifically for this study, which contained two sections: Sports Practice (07 Statements) and Eating Habits (47 Statements). It was later distributed to a sample of 80 secondary school students at Ain Smara, Constantine. After collecting the data, responses were analyzed and processed using the Statistical Package for the Social Sciences (SPSS) version 20.

Keywords: Sports practice; eating habits; Third-year secondary students.

1. Introduction and Research Problem

In recent years, a great deal of effort has gone into encouraging people to engage in more physical activity, not just as a way to compete with others but also as a means of preventing disease and healing physical illness. In Algeria, according to the statistics, 55.6% of adults are overweight, which includes 48.3% of men and 63.3% of

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women; that equates to 20 million Algerians, not to mention children, 20% of whom suffer from this condition (Khelas, 2021). This is related to a lack of exercise and the negative effects and psychological damage caused by the stresses of daily life. Studies have also shown that physical activity increases the efficiency of vital organs such as the heart and lungs, and that athletes are more productive and focused at work or school, and may also have a higher level of education than others.

Furthermore, exercise and proper nutrition are closely linked to health because exercise is extremely important in ridding the body of toxins that accumulate through food and inactivity. It also stimulates the mind and relaxes the blood vessels. In short, the benefits of exercise are countless. Likewise, a healthy and balanced diet is essential for good health and growth. As for students, sticking to an exercise program and a healthy diet is somewhat difficult because of their daily commitment to their studies and the fact that they spend most of their time outside the home, which forces them to eat fast food, especially given the widespread availability of quick-service restaurants. On the other hand, the absence of sports clubs within many high schools reduces opportunities for regular physical engagement and causes students to neglect sports. Even though sports are not only beneficial to young people in terms of health, but also provide an outlet for their excess energy and a way to fill their free time, keeping them away from various social ills they may face. Given the importance of both sports practice and nutrition, as well as the need to better understand their relationship among adolescents and their interest in these areas, this study aims to answer the following main question:

- Is there a correlation between sports practice and eating habits among third-year high school students?

From this main question, the following sub-questions emerge:

- What is the level of sports practice among third-year secondary school students?

- What is the level of eating habits of third-year secondary school students?
- Is there a statistically significant correlation between sports practice and eating habits among third-year secondary school students?

Research Hypotheses

- The level of sports practice among third-year secondary school students is moderate.
- The level of eating habits among third-year secondary school students is average.
- There is a statistically significant correlation between sports practice and eating habits among third-year secondary school students.

2. Objective of the Study

Before beginning any research or study and before choosing a topic title, researchers sometimes need to set the goals they hope to achieve at the end of their scientific research in order to put themselves on the right track to achieve them. Accordingly, this study seeks primarily to reveal the extent to which the practice of sports is linked to healthy eating habits among third-year secondary school students in El Khroub, Constantine.

3. Operational Definitions of Key Concepts

Sports Practice: It is considered an integral part of general education and an applied field aimed at developing a well-rounded individual physically, cognitively, emotionally, and socially through structured forms of physical activity. It refers to selected physical activities performed to achieve specific benefits that positively impact the individual as a result of regular engagement (Al-Basyouni et al., 1992, p. 30).

In this context, these are activities that develop the individual or involve normal physical effort and skill, practiced within the educational institution and continued outside it for recreation, competition, enjoyment, excellence, skill development, or strengthening self-confidence or the body. They promote health and

strengthen the body, improve mood, prevent depression, and have countless other benefits.

Eating Habits: They represent a recurring pattern of behavior related to food preparation and consumption. Moreover, they are the behaviors or methods used in the preparation and consumption of food, starting from the production or harvesting of food to its consumption, and depend on a combination of psychological, social, and economic factors (Abdelmoumen et al., 2018, p. 20).

In this study, eating habits refer to the patterns followed by students in choosing, consuming, and utilizing available food. This includes practices related to food production, storage, processing, distribution, and consumption.

4. Research Methodology

4.1 Research Design and Instruments

Research Method

This study employed a descriptive analytical approach, as it is the most appropriate method for addressing the objectives of the research and the nature of its procedures.

Pilot Study

The objective of the pilot study is to identify all the difficulties that may be faced in the future. It also aims to provide the researcher with information that will help him in selecting the sample and understanding the phenomenon under study more accurately in order to assess the material and emotional resources necessary for conducting the research (Abdelkader, 2011, p. 176).

The purpose of the pilot phase in this research was to:
Identify and better understand the phenomenon being investigated, and collect preliminary data about it.

- Explore the conditions under which the research is conducted and identify the obstacles that stand in the way of its implementation.

- Formulate key hypotheses that can be subjected to scientific investigation by deducing them from the data and findings that the researcher is considering.
- To clarify and precisely define the scientific terminology used in the study to avoid confusion between similar terms.
- Assess the clarity and objectivity of the questionnaire items and determine the respondents' ability to comprehend and answer them appropriately.

Population and Sampling Technique

The research population consisted of 357 third-year secondary school students enrolled in three high schools (Al-Mujahid Al-Sadiq Makhlouf Secondary School, Shamashma Ali High School, and Mohamed Najar High School) during the academic year 2023/2024.

A simple random sampling technique was employed to select participants from the target population. On this account, the final sample included 80 third-year secondary school students.

Scope of the Study

Population: This study included third-year secondary school students in the city of Ain Smara in the province of Constantine.

Geographical Scope: The research was conducted in secondary schools located in Ain Smara, Constantine.

Timeframe: The study was carried out from December 2023 to March 2024.

Research Procedures

Research Instrument: In order to understand and examine the relationship between dietary habits and physical activity among students, we sought in our research to adopt a direct investigation method using a questionnaire, which is one of the most important tools for understanding opinions on phenomena. Based on this, this section outlines the procedures used for data collection.

1. Preparing the Questionnaire

During the questionnaire design phase, efforts were made to formulate statements in a clear and simple manner to ensure they were easily understood by participants, who were expected to be familiar with the topic. Moreover, the items were constructed to align directly with the study's hypotheses and were reviewed with supervisors and other teachers to ensure their accuracy. On this basis, the questionnaire was designed using a method of identifying the required question and answering it, and identifying the different expected answers, so that the respondent is asked to choose the correct answer that represents his point of view. One of the advantages of this type of question is to avoid exposing the respondent to unjustified digressions, and it also facilitates the analysis process.

The questionnaire consisted of 56 items divided into two main sections:

Section One: Personal Information

Section Two: Study Dimensions, which are:

First Theme: Students' Eating Habits

Second Theme: Students' Sports Practice

Before distributing the questionnaire to the main sample, it was submitted for expert review to ensure content validity. In addition, a pilot test was conducted with a sample of 07 students to assess the instrument's clarity, reliability, and its ability to measure the ideas for which it was designed. After that, based on the feedback received, adjustments were made and the questionnaire was finalized.

After the questionnaire was finalized, it was distributed to the target sample of students and published on social media. The researcher conducted visits to the schools, contacted participants directly, and shared the electronic version of the questionnaire via email and social media platforms. Due to the diversity of distribution methods, response times varied, ranging from a few minutes to several days.

Table 1
General Framework of the Study

Number	Theme	Item Range	Number of Items
01	Eating Habits	1-47	47 Items
02	Sports Practice	47-53	07 Items

Psychometric Properties of the Instrument

Reliability: Internal consistency reliability was assessed using Cronbach’s Alpha coefficient. The results are presented in Table 2.

Table 2
Cronbach’s Alpha Coefficients for the Questionnaire

Theme	Number of Items	Cronbach’s Alpha
Eating Habits	47	0.821
Sports Practice	07	0.893
Total Questionnaire	54	0.857

Validity: Content validity was established through expert review by presenting the scale to a group of university professors of various academic ranks.

Statistical tools:

To answer the study questions, the data were processed using several statistical methods extracted from the Statistical Package for the Social Sciences (SPSS) Version 20, following data collection, classification, and coding. The statistical techniques employed in this study included:

- 1- Frequency distribution tables and percentages were used to represent the study variables and the demographic and personal characteristics of the study population.
- 2- The arithmetic mean and standard deviation were calculated as measures of central tendency in order to describe the study variables.
- 3- The weighted mean was used to determine the degree of agreement of the study sample and their level of evaluation of the questionnaire statements.

4.2 Presentation and Analysis of the Results

4.2.1 Presentation and Analysis of the First Hypothesis

“The level of sports practice among third-year secondary school students is moderate.”

To test this hypothesis, the mean and standard deviation were calculated for all items of the Sports Practice Scale.

Table 3
Mean and Standard Deviation of All Items of the Sports Activity Section

Item	Mean	Standard Deviation
01	1,810	1.206
02	2,56	1.055
03	1,5	0.874
04	2,48	1.260
05	4,622	2.231
06	2,605	1.201
07	3,143	1.579
Total	2,82	1.37

Source: Prepared by the student using SPSS.

The table above shows the mean scores and standard deviations for all the items of the Sports Practice axis. The highest mean values were recorded for items 5 (4.622), 7 (3.143), and 6

(2.605), which fall within the “Agree” category according to the adopted Likert scale. These items refer to, respectively, the amount of time spent sitting on weekdays (excluding weekends), walking for at least 10 minutes, and time spent walking on one of those days.

The research findings indicate that students exhibit an acceptable degree of participation in physical activity, especially regarding walking as a basic and accessible form of exercise. Although walking may be considered a modest form of physical activity, students are often required to engage in it daily due to commuting and movement within the university environment. Moreover, the findings may also reflect the constraints faced by students, including limited time resulting from academic responsibilities and exam preparation. Despite these pressures, respondents indicated through their answers that they attempt to maintain a certain level of physical activity. Another important consideration is that physical activity measured for students during the academic year may not represent the overall patterns of physical activity for students in their overall lifestyle patterns. Students may have limited time to participate in physical activity due to the demands of the university, financial constraints, and the academic workload associated with their studies. Therefore, the level of physical activity observed in this study can be considered relatively acceptable when evaluated in light of the students’ circumstances.

Table 4
Mean and Standard Deviation of the Sports Activity Scale

Variable	Sample Size	Mean	Standard Deviation	Level
Sports Practice	80	2.82	1.37	High

Source: Prepared by the student using SPSS.

The table above indicates that the arithmetic mean of all physical activity measures for third-year secondary school students in

Ain Smara, Constantine, was 2.82, which is a “high” score according to the Likert scale. The standard deviation of the measure was 1.370. Therefore, the hypothesis stating that “the level of sports practice among third-year secondary school students is moderate” is not confirmed, as the results indicate a high level rather than an average one.

4.2.2 Presentation and Analysis of the Second Hypothesis
“The level of eating habits among third-year secondary school students is average.”

To examine this hypothesis, the mean and standard deviation were calculated for all items of the Eating Habits Scale.

Table 5
Mean and Standard Deviation of All Items of the Eating Habits Section

Item	Mean	Std. Dev.	Item	Mean	Std. Dev.	Item	Mean	Std. Dev.
01	1.763	0.6313	17	1.700	0.8329	33	1.763	0.6413
02	1.663	0.6313	18	1.913	0.7496	34	1.763	0.7159
03	1.813	0.6313	19	2.413	0.5441	35	2.100	0.8359
04	1.750	0.6313	20	2.325	0.7252	36	1.750	0.7204
05	2.325	0.6313	21	1.888	0.8267	37	1.788	0.6693
06	2.200	0.6313	22	2.288	0.7150	38	2.263	0.6702
07	2.038	0.6313	23	2.125	0.7855	39	1.738	0.7915
08	2.625	0.6313	24	1.838	0.8335	40	1.763	0.7994
09	1.925	0.6313	25	1.375	0.6439	41	1.575	0.7920
10	2.113	0.6313	26	2.213	0.7411	42	1.900	0.8359
11	1.738	0.6313	27	2.900	0.3019	43	1.900	0.7730
12	1.900	0.6313	28	2.550	0.6732	44	1.525	0.6746
13	1.900	0.6313	29	1.738	0.6313	45	1.813	0.5973
14	2.188	0.6313	30	1.375	0.5819	46	1.788	0.6879

Item	Mean	Std. Dev.	Item	Mean	Std. Dev.	Item	Mean	Std. Dev.
15	1.625	0.6313	31	2.038	0.7867	47	2.000	0.8568
16	2.263	0.6313	32	2.200	0.7008	Overall Mean	1.960	0.709

Table 6
Mean and Standard Deviation of the Eating Habits Scale

Variable	Sample Size	Mean	Standard Deviation	Evaluation
Eating Habits	80	1.96	0.709	Moderately Agree

The results show that the overall mean score of the Eating Habits Scale for third-year secondary school students was 1.96, which corresponds to a moderate level of agreement according to the three-point Likert scale. Furthermore, the standard deviation of the scale was 0.709; therefore, confirming the hypothesis stating that “the level of eating habits among third-year secondary school students is average.”

4.2.3 Presentation and Analysis of the Third Hypothesis
“There is a statistically significant correlation between eating habits and the level of sports practice among third-year secondary school students.”

Table 7
Mean and Standard Deviation of the Sports Practice Scale

Variables	Sample Size	Mean	Std. Dev.	Pearson Correlation (r)	Regression F-value	Significance Level
Dietary Habits	80	2.82	1.37	0.172	2.036	Less than 5%
Sports Practice		1.960	0.709			

The results indicate that Pearson’s correlation coefficient between dietary habits and physical activity was 17%. Moreover, simple linear regression analysis produced an F-value of 2.036, which was not statistically significant at the 0.05 level. Therefore, the hypothesis stating that “there is a statistically significant relationship between eating habits and the level of sports practice among third-year secondary school students” is not supported.

4.3 Discussion and Interpretation of the Results

4.3.1 Discussion of the Findings of the First Hypothesis

The first hypothesis stated that “the level of sports practice among third-year secondary school students is moderate.”

The findings of the present study contradict those reported by Ziad Issa Ibrahim (2019), who found that the level of physical activity practice was low, with 62% of his study sample not engaging in regular physical activity. Similar results were reported by Al-Osaimi (2020), who also found in his study that physical activity levels were low among students.

The relatively high level of physical activity observed in the current study may be attributed to students’ interest in engaging in physical activity. In addition to being required to walk daily due to commuting to and within the secondary school, many students expressed that they participate in various sports activities despite their commitment to preparing for the Baccalaureate examination. These

findings may reflect an increased awareness of the importance of physical activity compared to previous years.

4.3.2 Discussion of the Second Hypothesis

The second hypothesis states that the level of eating habits among third-year secondary school students is average. The findings of this study are consistent with the results of Yassin's study (2017) and Barzegari et al. (2011). However, they differ from the results of Al-Osaimi (2020) and Hani and Al-Ruoud (2018), which showed that the level of nutritional awareness among students is low. Moreover, the responses of the study sample suggest that students demonstrate a reasonable level of concern regarding their dietary habits. For example, handwashing is considered an essential component of proper eating etiquette, and the students' awareness to do so is evidence of their attention to their health and their keenness to eat their food in appropriate hygienic conditions. Furthermore, students reported refraining from the use of dietary supplements despite the widespread popularity of bodybuilding culture and performance-enhancing products. This may indicate a degree of awareness and caution regarding nutritional choices.

4.3.3 Discussion of the Third Hypothesis

The final hypothesis stated that “there is a statistically significant relationship between eating habits and the level of sports practice among third-year secondary school students”. This hypothesis was not supported by the findings of the present study, since the results differ from the findings of Mohamed El-Arabi (2018), who identified a strong correlational relationship between health awareness, including nutritional awareness, and students' physical activity levels.

The weak relationship observed in the current study may be attributed to the moderate level of nutritional awareness among students. Although students appear to recognize food as a primary source of energy necessary for physical movement, their dietary habits

were not strongly associated with their level of physical activity. Moreover, while engagement in certain sports activities may encourage individuals to adopt specific dietary behaviors or structured eating patterns, the high level of physical activity recorded in this study did not significantly contribute to improving or modifying students' dietary habits.

5. Conclusion

Based on the field investigation of the research problem and the statistical analysis of the collected data, the study reached the following conclusions:

- The level of physical activity practice among third-year secondary school students was high.
- The level of dietary habits among third-year secondary school students was moderate.
- There was no statistically significant relationship between dietary habits and the level of physical activity among third-year secondary school students.

6. Recommendations

This comprehensive study of the subject has yielded some suggestions and recommendations that are considered important. In light of what has been discussed in the theoretical framework and the conclusions reached in the practical section, we can propose the following:

- Creating an environment that encourages the practice of sports activities on campus and in the university.
- Organizing motivational workshops and awareness campaigns to encourage students to engage in various forms of physical activity.
- The need to promote healthy dietary behaviors among students and raise awareness about the risks associated with unhealthy eating habits.
- The need to provide healthy and balanced meals for students within universities and university campuses.

- Conducting further research on physical activity practices and dietary behaviors due to their significant impact on students in particular and society in general.
- Adopting similar studies to discover the importance of practicing all types of physical and sports activities and following healthy eating habits.

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