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RESEARCH ARTICLE

The Importance of Adapted Physical Activity in Promoting the Mental Health of Students with Special Needs: A Field Study from Teachers' Perspectives

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Keywords	Adapted physical activity; Mental health; Special needs students; Psychological well-being; Inclusive education.

Abstract

Adapted physical activity has gained increasing recognition as a fundamental educational and therapeutic approach for enhancing the psychological well-being of individuals with special needs. The present study aims to examine the effectiveness of adapted physical activity in promoting mental health among students with special needs, with particular emphasis on stress reduction, self-confidence enhancement, and social integration. A descriptive research design was employed using a survey method. The study sample consisted of twelve (12) teachers and educators working at the Psycho-Pedagogical Center for the Physically Disabled in the province of Laghouat, Algeria. Participants were randomly selected and asked to complete a structured questionnaire developed to measure perceptions regarding the psychological and social impacts of adapted physical activity. Statistical analysis of the collected data revealed that adapted physical activity plays a significant and positive role in improving the mental health of students with special needs. The findings highlight its effectiveness in alleviating psychological stress, strengthening self-confidence, and fostering social harmony. The study underscores the necessity of integrating adapted physical activity programs into educational and rehabilitation settings to support the holistic development and psychological well-being of students with special needs.

Citation

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1. Introduction

The matter of caring for individuals with special needs has become a modern concern, prompting every country to seek ways to offer support to this group that is consistent with its capabilities and the cultural values of the society in which they live. This is because they constitute a valuable asset in terms of their right to a decent life on one hand, and the attempt to

benefit from the compensatory abilities in all areas of life on the other. Therefore, caring for this group begins with recognizing the causes of disability and preventing them, followed by providing comprehensive medical, psychological, educational, and physical care (Taher, 2017, pp. 136-154).

Algeria stands at the forefront of these countries since it pays great attention to this group. This attention starts from early childhood, with the combined efforts of all those within their social environment, especially schools, which have adopted a range of educational reforms and approaches aimed at supporting students with special needs.

For young people, physical activity and sports are considered one of the most widespread activities, as they are an important factor in establishing the physical, psychological, and overall well-being of individuals with special needs. Moreover, physical education is a crucial component of general education, contributing to the development of individuals in sensory, motor, emotional, cognitive, and social aspects. For students with special needs, this is paramount because they frequently experience deprivation, anxiety, withdrawal, and social isolation. Numerous studies, such as Sdeira (2014, p. 45), attribute a therapeutic role to physical activity as a complementary treatment option for children with disabilities alongside medical care, given its proven ability to help them overcome the psychological and social challenges resulting from their sense of disability.

In addition, adapted physical activity is a part of educational physical activity that caters to people with special needs by adjusting and modifying various sports and programs to suit the type and severity of the disability. This is accomplished in accordance with their interests and within the limits of their disabilities (Laila, 1998, p. 81). That being said, the objectives of adapted physical activity are derived from the general objectives of physical activity and sports and, subsequently, from the objectives of general education in terms of achieving sensory-motor, mental, emotional, and social development, which is achieved by developing a program of sports and games that is compatible with the abilities and interests of special needs children. Tailoring these activities according to their condition maximizes potential, builds confidence, reduces isolation, promotes inclusion, and strengthens relationships with their peers. Furthermore, mental health is a relatively stable state in which the individual is psychologically well-adjusted in personal, emotional, and social dimensions, both with themselves and with others. It also involves feeling happy and content. A good state of mind helps achieve self-fulfillment and utilize one's potential to the fullest, as well as help cope with life's challenges and develop a balanced personality (Al-Salam, 2005, p. 09).

In this regard, Ben Sayeh (2018) found in her study "The Role of Adapted Physical Activity in Promoting Mental Health among Hearing-Impaired Individuals" that adapted physical activity plays a significant role in improving mental health, and that is achieved with the inclusion of hearing-impaired participants with their peers. Similarly, Abbas Lakhder and Kihal Ismail (2019) in their research "The Role of Physical Activity in Promoting Mental Health among Deaf and Mute Children" revealed that sports play a crucial role in achieving the mental health of the deaf and mute children between the ages of 9-12, showing a positive correlation of 84% between sports and happiness in their lives.

From the above presented information, it is evident that adapted physical activity is key to improving mental health among children with special needs, a group that differs from the rest of society and faces clear psychological challenges. Therefore, the following question is asked:

Research Question

Does adapted physical activity have a role in promoting the mental health of individuals with special needs?

This main question leads to the following sub-questions:

- Does adapted physical activity help reduce psychological stress among individuals with special needs?
- Does adapted physical activity promote self-confidence in individuals with special needs?
- Does adapted physical activity foster social harmony for individuals with special needs?

General Hypothesis

Adapted physical activity has an effective role in promoting the mental health of individuals with special needs.

Specific Hypotheses

- Adapted physical activity contributes to reducing psychological stress among individuals with special needs.
- Adapted physical activity promotes self-confidence in individuals with special needs.
- Adapted physical activity fosters social harmony among individuals with special needs.

2. Objectives of the Study

The study aims to explore the extent to which adapted physical activity contributes to promoting the mental health of individuals with special needs by:

- Highlighting the role of adapted physical activity in alleviating psychological stress.
- Addressing the role of adapted physical activity in enhancing self-confidence.
- Demonstrating the impact of adapted physical activity on social harmony among special needs individuals.

3. Definition of Key Concepts

3.1 Adapted Physical Activity

Adapted physical activity refers to sports and games that have been modified or adjusted to allow participation from people with special needs. This means the various developmental and preventive programs, which include sports activities and games that are modified to suit the type and severity of the disability, based on the interests, abilities, and capacities of the impaired participants (Al-Sayed, 1998, p. 48).

3.2 Mental Health

It is a relatively optimistic state in which the person is emotionally and socially compatible with himself and the environment, and also feels happy with himself and the people around him. In addition, he is able to utilize his abilities and potential to the fullest extent and effectively manage the rigors of life, thus having a strong, well-integrated, and complete personality (Al-Elballah, n.d., p. 279). In other words, it is the absence of any psychological disorders or mental illnesses within which the individual displays healthy behavior that leads to psychological equilibrium.

3.3 Individuals with Special Needs

They are a group of people who possess special psychological, physical, and mental characteristics that necessitate provision and care tailored to their abilities and capacities, enabling them to achieve optimal psychological, social, or personal adjustment (Ghabari, 2003, p. 14).

Alternatively, they are individuals who are unable to live an ordinary life without special care due to permanent intellectual, neurological, or physical impairments or a mixture of all.

4. Exploratory Study

The exploratory study is one of the most important stages that the researcher performs in order to ensure the suitability of the research setting and verify the validity of the research tools. Therefore, an exploratory study was conducted at the Psycho-pedagogical Center for the Physically Disabled in the province of Laghouat. Teachers were contacted and visited to gather data pertaining directly to the study's variables, as well as to assess the current state of adapted physical activity for this population. Through this phase, questionnaires were distributed to a random sample of teachers at the center to gather insights and test the study's hypotheses.

5. Research Methodology

A key aspect of every scientific study is the use of a scientific method, which is a set of systematic steps or procedures that the researcher follows to achieve certain objectives. Additionally, the nature of the research method varies depending on

the type of topic investigated. Angers (2006, p. 60) defines the scientific research method as “research through which the researcher aims to reach a conclusion.”, as each phenomenon requires a methodology that is in line with its nature and its variables. For that reason, in the current study, the experimental method was adopted because it was the most appropriate method of investigating the research problem.

6. Research Variables

6.1 Independent Variable

It is an instrument in which any change in its values results in changes in the values of other related variables. It serves as the cause in a cause-and-effect relationship, meaning the independent factor that increases through the measurement of outcomes. Therefore, the independent variable of this study is: Adapted physical activity.

6.2 Dependent Variable

It is the factor whose value is influenced by the changes in the values of other variables. Any modification or adjustment to the independent variable is reflected in the values of the dependent variable (Al-Shafei, 2004, p. 424). Therefore, in this study, the dependent variable is: Mental Health

7. Research Population and Sample

7.1 Research Population

It refers to all the elements to be studied that meet specific characteristics that distinguish them from other societies (Mohsen, 2010, p. 23). In this study, the population consists of all teachers and trainers working in the Psycho-pedagogical Center for the Physically Disabled in the province of Laghouat.

7.2 Research Sample

The sample represents the prototype that the researcher relies on to conduct the field work, as it is considered part of the whole. This means taking a smaller group to be representative of the whole population. Thus, a research sample can be defined as “a subgroup from the elements of a specific research population” (Sahraoui, 2006, p. 298).

Therefore, the researchers' selection of the research sample is one of the most critical steps and stages in achieving the desired goals and implementing the right procedures. The sample will determine whether the study requires a broad or specific sample, and whether it should include all members of the population or only a subset of it. In this study, the sample consisted of 12 teachers and trainers who were selected randomly from the Psycho-pedagogical Center in Laghouat.

8. Research Tools

To address the research problem at hand and test the hypotheses, it was essential to rely on scientific methods, which use a set of tools to collect data that aligns with the study's objectives and a set of statistical tools to analyze it. The primary tool used was:

9. The Questionnaire

The questionnaire was chosen because it is one of the most effective methods for collecting information. It facilitates the gathering of data needed to test the hypotheses and to answer the problem raised. Furthermore, the questionnaire is regarded as a set of questions that are connected systematically to obtain information directly from its original source. Moreover, these questions are compiled into a form and distributed to the participants associated with the study.

The questionnaire employed in this research was directed toward middle school students to be formulated to find solutions to the research problem effectively. It was created following scientific guidelines and incorporated feedback from the supervisor, along with suggestions from experts. The final version consisted of several questions organized into three thematic sections.

9.1 Psychometric Properties of the Instrument

9.1.1 Validity

After the exploratory phase, the questionnaire was tested and underwent a psychometric assessment, which consisted of tests for validity, reliability, and objectivity. Face validity was used for this study. The questionnaire was reviewed by a group of qualified experts in the field to assess how clear and relevant the instrument was.

9.1.2 Reliability

To assess reliability, the questionnaire was distributed to the sample and collected after completion. One week later, it was distributed to the same sample, and then the results were analyzed to determine whether they were consistent or not.

9.1.3 Objectivity

Objectivity means that the tool provides the same result regardless of who evaluates it. The questionnaire employed was clear, straightforward, and easy to understand. Additionally, it was reviewed by experts who assured it was free of complications and ambiguities; on that basis, the questionnaire yields high objectivity.

10. Scope of the Study

- **Timeframe:** From October 1, 2024, to October 31, 2024.
- **Setting:** The fieldwork was conducted at the Psycho-pedagogical Center for the Physically Disabled in Laghouat.

11. Statistical Tools

In this research, the following statistical techniques were used:

Frequencies and Percentages: to analyze the answers of the study sample and identify their attitudes toward the items of the questionnaire.

Chi-Square Test: Used to determine statistical significance of differences in the sample's answers to the questions of the study tool.

$$\chi^2 = \sum \frac{(fo - fe)^2}{fe}$$

- **Fo:** Observed frequencies.
- **Fe:** Expected frequencies, calculated by dividing the total observed frequencies by the number of categories of the qualitative variable, and it is the same for all cells.

Arithmetic Mean: It is the average of a set of values or the sum of the studied values divided by their number in order to determine the average responses of the participants to the questionnaire (teachers).

Standard Deviation: Used to identify the extent to which the participants' responses deviate from the mean and to show the level of dispersion in their answers. The closer the value is to zero, the more it means that the answers are concentrated and not dispersed, which increases the credibility of the results.

Range (for class interval length): To calculate the mean range.

The general rule when analyzing the answers of the study sample or determining the statistical significance of differences in the questionnaire items is as follows:

The result is considered significant if the calculated value is lower than the tabulated value.

The degree of freedom for the (Yes/No) items is: (Number of Alternatives) - for example:

The tabulated value at 1 degree of freedom and a significance level of 0.01 is 3.84.

The tabulated value at 2 degrees of freedom and a significance level of 0.05 is 5.99.

12. Research Findings

12.1 Presentation and Analysis of the Findings

First Theme: Adapted physical activity reduces psychological stress among students with special needs.

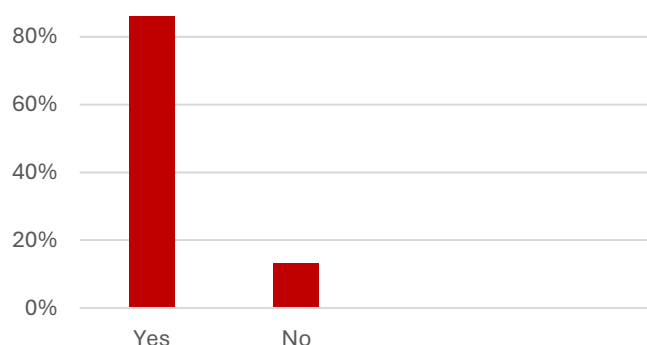
Table 1

Frequencies, Percentages, Calculated Chi-square Values, Tabulated Chi-square Values, Degree of Freedom, and the Significance Level 0.05 for the First Theme

Response	Frequency	Percentage	χ^2 (Calculated)	χ^2 (Tabulated)	df	Statistical Significance
Yes	10	80%	13.60	3.841	1	Significant
No	2	20%				
Total	12	100%				

Figure 1

Percentage Distribution for the Results of the First Theme



From the results of Table 1, we observe that the majority of the sample (10 teachers and trainers), representing 80% agreed that adapted physical activity has an effective role in reducing psychological stress for students with special needs. The respondents mentioned that it helps lower the tension and pressures faced by this group due to their disability and sense of inferiority, which makes it challenging to integrate and harmonize with other peers. Thereby, adapted physical activity can alleviate these psychological barriers and reduce anxiety, at the same time provide emotional relief and reassurance. On the other hand, 2 teachers (20%) stated that adapted physical activity does not play a role in reducing psychological stress for individuals with special needs.

Additionally, when examining the calculated Chi-square value (13.60), we find that it is greater than the tabulated value (3.84) at 1 degree of freedom and a significance level of 0.05. Thus, there is a statistically significant difference in favor of teachers and trainers who state that adapted physical activity does assist in the reduction of psychological stress for individuals with special needs.

Second Theme: Adapted Physical Activity Enhances Self-Confidence Among Individuals with Special Needs.

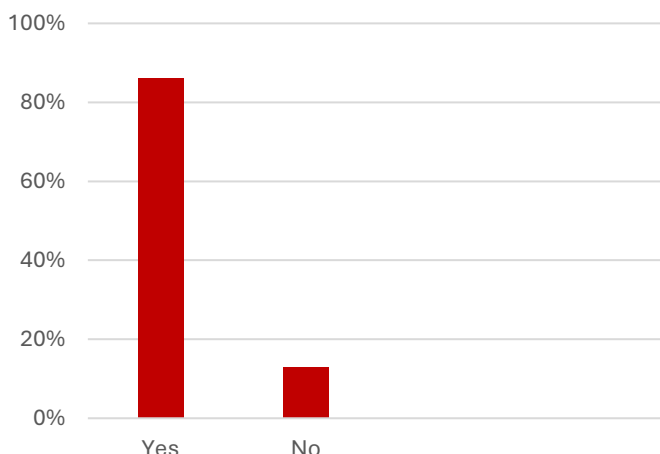
Table 2

Frequencies, Percentages, Calculated Chi-square Values, Tabulated Chi-square Values, Degree of Freedom, and the Significance Level 0.05 for the Second Theme

Response	Frequency	Percentage	χ^2 (Calculated)	χ^2 (Tabulated)	df	Statistical Significance
Yes	8	60%	32.13	3.841	1	Significant
No	4	40%				
Total	12	100%				

Figure 2

Percentages of the Second Theme's Results



According to the results of Table 2, 60% of the teachers believed that adapted physical activity develops the self-confidence of people with special needs. In contrast, 40% of the participants stated that it does not contribute to improving their self-confidence. In this case again, the calculated Chi-square value (32.13) is greater than the tabulated value (3.84) at 1 degree of freedom and at 0.05 level of significance; therefore, the difference is statistically significant in favor of the teachers who thought adapted physical activity does help in increasing the self-confidence of students with special needs.

Third Theme: Adapted physical activity fosters social harmony for individuals with special needs.

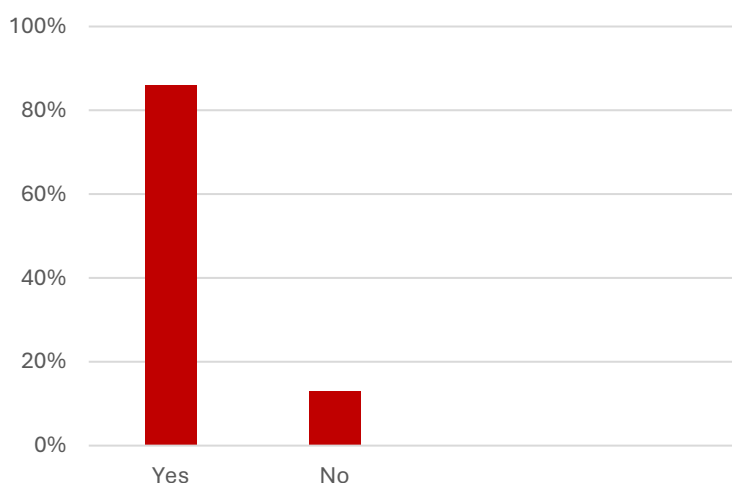
Table 3

Frequencies, Percentages, Calculated Chi-square Values, Tabulated Chi-square Values, Degree of Freedom, and the Significance Level 0.05 for the Third Theme

Response	Frequency	Percentage	χ^2 (Calculated)	χ^2 (Tabulated)	df	Statistical Significance
Yes	9	85%	26.51	3.841	1	Significant
No	3	15%				
Total	12	100%				

Figure 3

Percentages of the Results of the Third Theme



Based on the findings presented in Table 3, it is noted that 90.00% of teachers agreed with the statement that adapted physical activity helps people with special needs to obtain better social harmony and adjustment, while 10.00% reported that adapted physical activity does not benefit in achieving social harmony for this population. When observing the calculated Chi-square value (26.51), the value is higher than the tabulated value (3.84) at 1 degree of freedom and a significance level of 0.05, meaning there is a statistically significant difference in favor of the teachers who believe that adapted physical activity fosters social harmony among students with special needs.

13. Discussion

In this research, we examined and shed light on the importance of adapted physical activity in promoting the mental health of students with special needs from teachers' perspectives through a field study. After presenting and analyzing the results, we now discuss them in relation to the research hypotheses.

13.1 Testing the Hypotheses

First Hypothesis: Adapted physical activity helps reduce psychological stress among individuals with special needs.

The collected responses from teachers and trainers indicate that adapted physical activity plays an important role in reducing psychological pressures experienced by students with special needs. This supports the initial hypothesis, as the latter works to reduce the tensions and pressures that stem from their disability and feelings of inadequacy, which can hinder their ability to associate and socially integrate with other people. In this way, adapted physical activity helps reduce these barriers and anxiety, encouraging emotional relief and reassurance. This statement is strongly supported by the results presented and interpreted above.

Second Hypothesis: Adapted physical activity promotes self-confidence in individuals with special needs.

From the results of the questionnaire, the majority of teachers' responses revealed that they agree with the statement of the second hypothesis. This proves that adapted physical activity enhances self-confidence for individuals with special needs, as the students at the Psycho-pedagogical Center for the Physically Disabled in the province of Laghouat do not feel a lack of self-confidence and accept their disability in a healthy manner. However, a couple of participants disagreed. Their responses could relate to psychological challenges that some of them experience, which lead to their lack of self-esteem and difficulty accepting their disability. These findings are consistent with the gathered data presented and analyzed in the table above.

Third Hypothesis: Adapted physical activity fosters social harmony for individuals with special needs.

Responses from teachers and trainers mostly confirmed this hypothesis. They indicated that the Adapted Physical Activity Program implemented at the center significantly contributes to promoting social harmony and balance, as it helps impaired students to adapt and interact with their colleagues, find a place among them, and assert themselves by overcoming the social gaps created by their disability.

14. Conclusion

After analyzing the data related to each hypothesis, which contains various statistical information about the variables of the study, addressing the following research problem:

“Does adapted physical activity have a role in promoting the mental health of individuals with special needs?”. Based on the findings obtained from the questionnaire on self-confidence, psychological stress, and social harmony, it was concluded that adapted physical activity has a positive effect on the mental health of students with special needs on account of the fact that it increases self-confidence, helps them cope with their disability, and promotes social integration.

Altogether, the general hypothesis, which states that adapted physical activity has an effective role in promoting the mental health of individuals with special needs, has been strongly confirmed.

Ethical Considerations

The study was conducted in accordance with established ethical standards for educational and social research. Participation was voluntary, informed consent was obtained from all participants, and confidentiality and anonymity were strictly maintained. The data were used solely for academic research purposes.

Author Contributions

All authors contributed equally to the conceptualization, data collection, analysis, and writing of the manuscript. All authors reviewed and approved the final version of the article.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

15. Recommendations and Suggestions

1. Provide support and care for individuals with special needs and promote their integration within society.
2. Offer specialized training programs for teachers and trainers working with this group, delivered by experts and specialists.
3. Design structured, adapted sports programs and include students with special needs in sports clubs.
4. Conduct additional research on different types of disabilities by Algerian universities in collaboration with relevant Special Needs institutions.
5. Provide training sessions and workshops for directors of medical-pedagogical centers on adapted physical activity.

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