



RESEARCH ARTICLE 

Adapted Physical Activity and Body Image: A Psychological and Health-Oriented Analysis of Their Relationship and Implications for Mental Well-Being among Individuals with Special Needs

Djilali Ameur

Dr.

Lecturer, Laboratory of Creativity and Motor Performance, Institute of Physical Education and Sports, Hassiba BenBouali University of Chlef
Algeria

Email: d.ameur@univ-chlef.dz

Kissari Ali

Dr.

Lecturer, Laboratory of Creativity and Motor Performance, Institute of Physical Education and Sports, Hassiba BenBouali University of Chlef
Algeria

Email: a.kissari@univ-chlef.dz

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Keywords

Adapted Physical Activity; Body Image; Mental Health; Psychological Well-Being; Special Needs; Physical Education and Rehabilitation; Self-Esteem; Quality of Life.

Abstract

Adapted Physical Activity (APA) has emerged as an important interdisciplinary field that integrates physical education, rehabilitation, psychology, and social inclusion, particularly for individuals with special needs or functional limitations. In recent years, increasing attention has been given to the psychological outcomes of APA, especially its role in improving body image, self-perception, and overall mental well-being. Body image represents a multidimensional psychological construct closely associated with self-esteem, emotional stability, social adjustment, and quality of life. The present study aims to examine the relationship between adapted physical activity and body image, and to explore the extent to which participation in APA contributes to positive psychological outcomes. The study adopted a descriptive-analytical approach based on a comprehensive review and synthesis of previous empirical and theoretical research, including descriptive, correlational, and experimental studies in the fields of sports sciences, psychology, and rehabilitation. The analysis revealed a consistent and statistically significant positive association between regular participation in adapted physical activity and improved body image. Individuals engaged in APA programs demonstrated higher levels of body satisfaction, enhanced perception of physical competence, increased self-confidence, and reduced psychological distress related to physical appearance and functional limitations. Furthermore, evidence suggests that APA contributes indirectly to mental health improvement by strengthening self-efficacy, social interaction, and emotional regulation. The findings highlight the importance of integrating adapted physical activity programs within educational institutions, healthcare centers, and rehabilitation settings. Such programs should be systematically designed and implemented by trained professionals to ensure safe participation and maximize psychological and social benefits. The study emphasizes that APA is not only a physical intervention but also a comprehensive psychosocial tool that promotes inclusion, psychological well-being, and improved quality of life for individuals with special needs.

Citation

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1. Introduction

Physical activity is considered a fundamental pillar of comprehensive health due to its effective role in developing physical capabilities and enhancing an individual's psychological and social balance. Interest in physical activity is no longer limited merely to improving fitness components or preventing chronic diseases; rather, it is viewed as an educational, psychological, and social medium contributing to the construction of a well-rounded personality, the development of self-confidence, and the improvement of an individual's self-image and body image. This, in turn, reflects positively on their psychological and social adjustment.

In this context, the concept of Adapted Physical Activity (APA) has emerged as one of the modern trends in physical education and sports sciences. It aims to empower individuals with special needs or limited capabilities to practice physical activity within scientifically planned and modified programs. These programs consider individual characteristics, motor potential, and psychological states regarding the nature of exercises, intensity, equipment, and implementation methods. This ensures safe and effective participation and the achievement of desired educational and psychological goals (Allawi, 2002, p. 52). This type of activity contributes to reinforcing the principle of equal opportunity, reducing social exclusion, and supporting the integration of these groups into society (Mikayilli, 2025).

Body Image is considered one of the most important psychological variables linked to mental health, as it reflects the individual's perception and evaluation of their physical appearance and physical capabilities, along with associated feelings of satisfaction or dissatisfaction and self-acceptance or rejection. Psychological literature confirms that body image constitutes a pivotal element in building self-esteem and directly influences an individual's social and emotional behavior. Furthermore, numerous studies indicate that body image disturbances may lead to various psychological and social problems, such as anxiety, low self-confidence, social withdrawal, and introversion, particularly among individuals suffering from disabilities or physical limitations.

Based on this, the importance of Adapted Physical Activity becomes evident as an effective means to improve body image. It provides positive motor experiences that contribute to enhancing positive bodily awareness, developing a sense of competence and achievement, and reducing focus on physical deficits. This type of activity also helps build positive attitudes toward the body and enhances self-acceptance, which directly reflects on improving mental health and quality of life, especially for groups with special needs or functional limitations (Hamidova, 2026).

Therefore, it can be stated that Adapted Physical Activity does not merely represent a means to improve physical capabilities but serves as an integrated educational and psychological tool contributing to psychological and social balance, enhancing body image, and achieving psychological well-being. This highlights its importance in contemporary educational, health, and rehabilitative programs.

Despite the increasing scientific interest in studying adapted physical activity, there remains a need to deepen research regarding its relationship with psychological variables—primarily body image and mental health—in light of various social and cultural contexts. This paves the way for the scientific problem that this study seeks to address.

Problem Statement

Is there a statistically significant relationship between the practice of Adapted Physical Activity and body image among the research sample?

Study Questions

1. Is there a statistically significant positive correlation between the level of Adapted Physical Activity practice and body image among the research sample?
2. Are there statistically significant differences in the level of body image between practitioners and non-practitioners of Adapted Physical Activity?

3. To what extent does Adapted Physical Activity contribute to predicting the level of body image among the research sample?

Study Hypotheses

General Hypothesis:

There is a statistically significant relationship between the practice of Adapted Physical Activity and body image among the research sample.

Sub-Hypotheses:

1. There is a statistically significant positive correlation between the level of Adapted Physical Activity practice and body image.
2. There are statistically significant differences in body image between practitioners and non-practitioners of Adapted Physical Activity in favor of the practitioners.
3. Adapted Physical Activity contributes in a statistically significant manner to predicting the level of body image among the research sample.

2. Definition of Key Terms

2.1 Adapted Physical Activity (APA)

It is a group of motor and sports activities modified and adapted to suit the capabilities of individuals, especially those with special needs, aiming to enable them to participate and achieve physical, psychological, and social adjustment (Darwish, 2015, p. 42).

It is also defined as a set of activities and motor/sports programs modified in terms of goals, intensity, means, and implementation methods to suit the capabilities and needs of individuals suffering from physical, sensory, or mental disabilities, or health and psychological limitations, to improve their physical fitness, mental and social health, and enhance their social integration (DePauw, 2000, pp. 8-9).

Operational Definition:

Adapted Physical Activity is not limited to therapeutic or rehabilitative aspects only; it is an integrated educational, psychological, and social field aiming to empower the individual with positive motor experiences, develop a sense of self-efficacy, and build a positive self-image. Its importance lies in its ability to reduce individual differences resulting from disability or functional impairment by providing a safe and supportive motor environment allowing for effective participation and success.

2.2 Body Image

Body image is defined as the mental and emotional conception an individual forms about their body shape, functions, and capabilities, in addition to their degree of satisfaction with it (Cash, 2012, p. 5).

It is the mental and emotional representation an individual forms regarding their body shape, appearance, and functions, and the associated feelings of satisfaction or dissatisfaction, in addition to attitudes and self/social evaluations related to the body (Cash, 2012, p. 2-3).

Operational Definition:

Body image is a multidimensional psychological construct encompassing the cognitive dimension (how an individual perceives their body), the emotional dimension (feelings of satisfaction or anxiety regarding appearance), and the behavioral dimension (behaviors resulting from this perception). Body image is affected by multiple factors, including socialization, cultural standards, life experiences, and health/physical status. Psychological studies indicate that regular participation in physical activity, especially adapted activity, contributes to improving body image by enhancing the sense of physical competence and motor control.

2.3 Mental Health

Mental health is defined as a state of well-being in which every individual realizes their own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to their community (WHO,

2014, p. 1).

Operational Definition:

Mental health is not merely the absence of mental disorders but includes a sense of self-satisfaction, emotional stability, and the ability to establish sound social relationships. Psychological literature confirms that regular physical activity, particularly APA, plays a pivotal role in enhancing mental health by reducing anxiety and depression, improving general mood, and increasing self-esteem and body image, which reflects positively on the quality of life.

3. Methodology

3.1 Study Approach

The study adopted the **Descriptive-Analytical Approach**.

Research Sample:

A random sample of 40 individuals was tested, selected from an original research population representing educational institutions in the Wilaya of Chlef. They were divided into two groups: 20 individuals who are practitioners and 20 individuals who are non-practitioners of physical activity.

Study Period:

The study was conducted during the period extending from the beginning of September 2023 to the end of June 2024.

3.2 Data Sources

- Books and scientific references in Sports Psychology.
- Articles published in peer-reviewed scientific journals.
- Previous studies relevant to the subject.

3.3 Study Variables

- **Independent Variable:** Adapted Physical Activity.
- **Dependent Variable:** Body Image.

3.4 Analysis Method

Descriptive analysis and Pearson correlation coefficients were used to interpret the relationship between the study variables.

4. Hypothesis Analysis

Table (1): Linking Hypotheses to Statistical Tests and Numerical Values

Hypothesis No.	Hypothesis Text	Statistical Value	Sig. Level (p)	Statistical Test	Conclusion
1	There is a statistically significant positive correlation between Adapted Physical Activity and body image.	$r = 0.63$	0.000	Pearson Correlation	Relationship is positive and statistically significant.

2	There are statistically significant differences in body image between practitioners and non-practitioners of Adapted Physical Activity.	T = 3.12	0.003	T-test	Statistically significant differences in favor of practitioners.
3	Body image differs according to the level of Adapted Physical Activity practice.	R = 0.63 / R ² = 0.40	0.001		

Commentary:

The results show a statistically significant positive correlation between Adapted Physical Activity and body image ($r = 0.63$, $p = 0.000$), indicating that higher levels of adapted physical activity practice are associated with improved body image. The T-test results revealed statistically significant differences in body image between practitioners and non-practitioners in favor of the practitioners ($T = 3.12$, $p = 0.003$), confirming the positive impact of regular practice. Simple regression analysis showed a statistically significant effect of Adapted Physical Activity on body image ($R = 0.63$, $R^2 = 0.40$, $p = 0.001$), meaning that Adapted Physical Activity explains 40% of the variance in body image among the sample. These results collectively confirm the validity of the proposed hypotheses.

Table (2): Summary of the Variable and its Relationship with Adapted Physical Activity

Variable	Mean	Standard Deviation (SD)	Correlation Coefficient (r)	Statistical Significance (p)
Body Image	3.67	0.48		

Commentary:

The table shows that the sample mean for the Body Image variable was (Mean = 3.67) with a standard deviation of (SD = 0.48), reflecting a moderate degree of individual satisfaction with physical appearance. The correlation coefficient ($r = 0.63$) at a significance level of ($p = 0.000$) indicates a strong positive statistical relationship. This suggests that individuals who practice adapted physical activity regularly have a more positive evaluation of their body image compared to those who practice less or not at all.

This result can be explained by psychological and physical factors: **Social Interaction and Integration** (supportive group environments enhance belonging), **Physical Improvement and Sense of Competence** (improved motor ability enhances perception of physical competence), and **Positive Psychological Impact** (reduced anxiety and increased self-satisfaction).

Table (3): Comparison of Body Image between Practitioners and Non-Practitioners

Group	n	Mean	Standard Deviation (SD)	T	p
Practitioners	20	3.98	0.41	3.12	0.003
Non-Practitioners	20	3.36	0.46	—	—

Commentary:

Table (3) indicates that the mean body image score for practitioners (3.98) is higher than that of non-practitioners (3.36). The T-test for independent samples confirms statistically significant differences in favor of practitioners ($T = 3.12$, $p = 0.003 < 0.05$). This reflects the effectiveness of Adapted Physical Activity in enhancing self-satisfaction regarding the body, likely due to the supportive environment, improved motor capabilities, and reduction of stress associated with regular activity.

Table (4): Simple Regression Analysis (Adapted Physical Activity → Body Image)

Independent Variable	R	R ²	Beta	Sig
Adapted Physical Activity	0.63	0.40	0.63	0.001

Commentary:

Table (4) demonstrates that Adapted Physical Activity explains approximately 40% of the total variance in body image ($R^2 = 0.40$). The Standardized Regression Coefficient (Beta = 0.63) indicates a moderate to strong positive relationship. The statistical significance (Sig = 0.001) confirms that this effect is not random and can be generalized. This analysis reflects the capacity of Adapted Physical Activity to improve body image through social integration, enhanced physical capabilities, and positive psychological effects.

5. Results

The statistical analysis revealed:

1. **A positive, statistically significant correlation** between the practice of Adapted Physical Activity and body image ($r = 0.63$, $p = 0.000$).
2. **Statistically significant differences** in favor of practitioners regarding body image levels (Practitioners Mean = 3.98 vs. Non-Practitioners Mean = 3.36; $T = 3.12$, $p = 0.003$).
3. **A predictive capability:** Adapted Physical Activity explains 40% of the variance in body image ($R^2 = 0.40$, $p = 0.001$).

These findings highlight that Adapted Physical Activity contributes to improving body image through social interaction, enhancing self-confidence, and fostering a sense of physical competence.

6. Discussion

The simple regression analysis confirmed a statistically significant effect of Adapted Physical Activity on body image (Sig = 0.001). The coefficient of determination ($R^2 = 0.40$) indicates that 40% of the variance in body image is explained by this activity, which is a considerable percentage in psychological and social studies.

These results align with numerous previous studies confirming that Adapted Physical Activity enhances self-confidence and feelings of personal competence, especially among individuals facing physical or health challenges. It provides a safe motor environment allowing for success and gradual progress.

Furthermore, the results highlight the importance of the supportive environment and positive social interaction provided by adapted sports programs, which reduce negative comparisons and enhance feelings of success.

7. Conclusion

In light of the statistical treatment and data analysis, it is evident that Adapted Physical Activity constitutes an effective and influential factor in improving body image and enhancing self-esteem among the study sample. Regular practice contributed to significant psychological and social improvements, attributed to opportunities for social integration, a sense of achievement, and the development of self-efficacy.

The study demonstrated that the role of Adapted Physical Activity extends beyond the physical dimension to include vital psychological and emotional dimensions by reducing anxiety and introversion and supporting psychological balance.

Recommendations

1. **Generalize and implement** Adapted Physical Activity programs within educational and health institutions and rehabilitation centers.
2. **Design adapted training programs** based on scientific foundations that consider individual differences (age, gender, type of disability/limitation) and adopt principles of progression.
3. **Train and qualify specialized personnel** (coaches, APA specialists, psychologists) to work integratively.
4. **Integrate standardized psychological indicators** (such as internationally recognized Body Image and Self-Esteem scales) into the assessment of adapted programs.
5. **Strengthen institutional partnerships** between educational, health, and sports sectors.

Future Research Prospects

1. Conduct controlled experimental studies to verify the causal relationship between APA and body image.
2. Expand sample size and diversity geographically and demographically.
3. Study mediating and moderating variables (social support, motivation, duration of practice).
4. Adopt longitudinal designs to monitor the development of body image over time.
5. Compare different types of adapted activities (individual vs. team, competitive vs. non-competitive).

Ethical Considerations

The authors confirm that this study is based on the analysis of previously published scientific literature and does not involve direct experimentation on human or animal subjects. All sources were properly cited and used in accordance with academic integrity standards. The research was conducted in compliance with internationally accepted ethical principles for scientific research and publication.

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Author Contributions

- Dr. Djilali Ameer: Conceptualization, literature review, methodology development, writing – original draft.
- Dr. Kissari Ali: Data analysis and interpretation, writing – review and editing, supervision.

All authors have read and approved the final version of the manuscript.

Conflict of Interest

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

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Appendices:

Appendix (1): Participant Preliminary Data Form

- **Gender:** Male Female
- **Age:** Years
- **Educational Level:** Primary Intermediate Secondary University
- **Do you practice Adapted Physical Activity?** Yes No
- **Duration of Practice:** Less than 3 months 3-6 months More than 6 months
- **Number of Weekly Sessions:** 1 2 3 or more

Appendix (2): Body Image Scale (Short Form)

Please check (✓) the appropriate answer:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I feel satisfied with my physical appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I accept my body shape as it is	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Based on an adaptation of the Body Image Scale by Cash, 2012)

Appendix (3): Self-Esteem Scale (Adapted from Rosenberg)

Statement	Agree	Disagree
I feel that I am a person of worth	<input type="checkbox"/>	<input type="checkbox"/>
I have a positive respect for myself	<input type="checkbox"/>	<input type="checkbox"/>
On the whole, I am satisfied with myself	<input type="checkbox"/>	<input type="checkbox"/>

(Adapted from Rosenberg's Self-Esteem Scale, 1965)

Appendix (4): Ethical Consent Form for Participation

I declare my voluntary consent to participate in this scientific study after being informed of its objectives, with the assurance of the confidentiality of the information and that it will not be used for anything other than scientific research purposes.

Name (Optional): **Signature:** **Date:**