

The impact of psychological compatibility and its relationship to some basic motor skills
in handball among fourth-year middle school students

تأثير التوافق النفسي وعلاقته ببعض المهارات الحركية الأساسية في كرة اليد بين تلاميذ السنة
الرابعة متوسط

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Abstract : This study aims to investigate the relationship between dimensions of psychological adjustment and the learning of basic motor skills in handball among fourth-year middle school students. The researcher relied on a correlation descriptive approach, selecting a sample of 32 students from the fourth-year middle school department. A four-axially oriented psychological adjustment scale, each dimension consisting of 20 items, was used in this study, in addition to field tests to measure the level of some basic handball motor skills. Data were statistically processed using Pearson's coefficient correlation, arithmetic mean, standard deviation, and analysis of variance (t-test). The results revealed a statistically significant correlation between dimensions of psychological adjustment and the learning of basic motor skills. The effect of personal-emotional adjustment was strong across all skills studied (passing and receiving, dribbling, and shooting). Social adjustment was observed to have a correlation with passing, receiving, and shooting skills, as was the case with family adjustment, where a correlation appeared with passing, receiving, and dribbling skills. Health adjustment had a limited effect, with a correlation appearing only with shooting.

Keywords: psychological adjustment; basic motor skills; handball; adolescence; fourth year of middle school

الملخص :

تهدف هذه الدراسة إلى بحث العلاقة بين أبعاد التكيف النفسي وتعلم المهارات الحركية الأساسية في كرة اليد لدى طلاب الصف الرابع الإعدادي. اعتمد الباحث على المنهج الوصفي الارتباطي، حيث اختار عينة مكونة من 32 طالبًا من قسم الصف الرابع الإعدادي. استُخدم في هذه الدراسة مقياس التكيف النفسي ذو المحاور الأربعة، ويتكون كل بُعد من 20 بندًا، بالإضافة إلى اختبارات ميدانية لقياس مستوى بعض المهارات الحركية الأساسية في كرة اليد. خضعت البيانات للمعالجة الإحصائية باستخدام معامل ارتباط بيرسون، والمتوسط الحسابي، والانحراف المعياري، وتحليل

التباين (اختبار t). كشفت النتائج عن وجود ارتباط ذي دلالة إحصائية بين أبعاد التكيف النفسي وتعلم المهارات الحركية الأساسية. كان تأثير التكيف الشخصي والعاطفي قويًا في جميع المهارات المدروسة (التمرير والاستلام، والمراوغة، والتسديد). لوحظ وجود ارتباط بين التكيف الاجتماعي ومهارات التمرير والاستلام والتسديد، وكذلك الحال بالنسبة للتكيف الأسري، حيث ظهر ارتباط بينه وبين مهارات التمرير والاستلام والمراوغة. كان لتعديل الحالة الصحية تأثير محدود، حيث ظهرت علاقة ارتباطية فقط مع الرماية.

الكلمات المفتاحية : التكيف النفسي؛ المهارات الحركية الأساسية؛ كرة اليد؛ المراهقة؛ السنة الرابعة من المرحلة المتوسطة

- The methodological steps followed in a scientific paper:

- Theoretical chapter :

* Introduction and problematic of the study:

School sports are a fundamental pillar of the educational process, playing an effective role in developing students' physical, mental, and psychological abilities, especially during middle school, which is experiencing rapid physiological and psychological changes. Handball is a team sport taught as part of the school curriculum, due to its essential motor skills that contribute to enhancing physical fitness, kinesthetic intelligence, and social interaction among students.

Through field observation, it is evident that there is a clear disparity in the level of skill performance among students, despite receiving the same educational content. This disparity may be due to several factors, including psychological factors, particularly psychological compatibility, which is an important factor that can directly impact motor achievement through its impact on concentration, motivation, and emotional control.

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Psychological adjustment refers to an individual's ability to adapt to themselves and their surrounding environment in a way that helps them achieve psychological and social balance. Previous studies confirm that low psychological adjustment among students may lead to poor motor performance due to high levels of anxiety or low self-esteem.

Based on these data, the following problem is raised:

What is the effect of psychological adjustment on some basic motor skills in handball among fourth-year middle school students?

In light of this problem, the following general hypothesis was formulated:

There is a statistically significant relationship between psychological compatibility and some basic motor skills in handball among fourth-year middle school students.

sub-hypotheses also emerged from it:

- There is a relationship between psychological compatibility and passing skill in handball
- There is a relationship between psychological compatibility and shooting skill in handball
- There is a relationship between psychological compatibility and dribbling skill in handball

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Referring to previous studies, we find that Ben Issa's study (2020) addressed the relationship between psychological compatibility and academic achievement among middle school students, concluding that there is a strong correlation between psychological compatibility and academic performance. Zarrouki's study (2021) , which addressed the impact of psychological compatibility on athletic performance in school soccer, showed that students with high psychological compatibility achieve better results in the skill aspect. Awad's study (2019) , on the other hand , focused on motor skills in handball, but did not address the psychological aspect, limiting it to physical and technical aspects. It is clear from this that previous studies have addressed some aspects of the subject, but they have not directly integrated psychological compatibility with motor skills in handball among fourth-year middle school students. This makes this study an attempt to bridge this gap by employing a scientific approach to

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measure the relationship between psychological compatibility and the performance of some basic motor skills in handball.

Study objectives:

This study aims to examine the relationship between psychological well-being and some basic motor skills in handball among fourth-year middle school students. This study analyzes the extent to which a student's general psychological state affects the quality of their skill performance within school sports activities. The study seeks to identify the level of psychological well-being among this age group, given that middle school is one of the most sensitive periods in terms of psychological, social, and emotional changes. It also aims to measure the level of performance in the most commonly used basic motor skills in handball, such as passing, shooting, and dribbling, and to determine the extent of their interaction with psychological variables.

This study also aims to contribute to the development of approved educational programs in physical education, by proposing intervention mechanisms based on psychological support for students to improve their physical and skill performance. Additionally, it aims to raise awareness among physical education teachers and educational staff of the importance of integrating the psychological dimension into the educational process within sports classes, and not limiting it to the physical or technical aspects. It is also an attempt to highlight the importance of mental health as a contributing factor in improving interaction, motivation, and achievement inside and outside the classroom.

The importance of the study:

The importance of this study is evident in its combination of two fundamental dimensions of a student's life: the psychological dimension and the motor/skill dimension, within the context of school sports practice, particularly in handball. Understanding the relationship between psychological adjustment and skill performance is an interdisciplinary area that rarely receives sufficient attention in the school environment, despite the direct impact this relationship has on student outcomes and interactions both inside and outside the classroom.

Theoretical importance :

Theoretically, this study contributes to the scientific literature in the field of sports psychology and physical education, particularly in the Arab/Algerian context, where the relationship between mental health and athletic performance is still often addressed in elite and competitive sports contexts, while being neglected in school-based educational settings. The study also attempts to understand how psychological adjustment—with its emotional and social components—affects skill performance in a team sport that requires high concentration and coordination, such as handball.

Practical importance :

From a practical perspective, the study's results provide practical indicators that can be used by physical education and sports teachers and school psychologists to design intervention programs aimed at improving students' psychological well-being and enhancing their skill performance. For example, incorporating stress management or self-confidence-boosting exercises into

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sports classes may help improve passing accuracy or a student's decision-making ability in playing situations.

Educational importance

This study is important from an educational perspective because it suggests that motor achievement is not isolated from a student's psychological state, but rather an extension of it. It also suggests that differences in performance are not solely related to physical or cognitive factors, but may also be due to a student's level of psychological stability and ability to adapt to school and social pressures. This calls for a reconsideration of the method of assessing physical performance in schools and the inclusion of the psychological dimension in monitoring criteria.

Psychological importance

This study demonstrates that concern for psychological adjustment within schools is not solely the responsibility of guidance counselors, but should be a concern for all educational stakeholders, especially physical education teachers who deal with students in various emotional states. Furthermore, a deeper understanding of this adjustment can help detect early signs of psychological disorders or poor integration, contributing to a safer and more effective school environment.

Mathematical importance:

From a sporting perspective, this study highlights that performance in handball—which requires quick decision-making, accurate passing and shooting, and mental stamina during play—cannot be separated from a student's psychological preparation. Therefore, investing in psychological

aspects is just as important as skill or physical training in improving student outcomes.

Study methodology

Method: Descriptive correlational method.

- Study tools: School Psychological Adjustment Scale (standardized), and skill tests (passing, shooting, dribbling)
- Study sample: 60 students (males) from the fourth year of middle school were randomly selected from [Soula Ghouar] Middle School in the municipality of Henchir Toumghni , [Oum El Bouaghi] Province.
- Statistical analysis: Pearson correlation coefficients were used to analyze the relationship between variables

Analyze the results And discuss it

Results

- There is a statistically significant positive relationship between psychological compatibility and passing skill.
- There is a statistically significant positive relationship between psychological compatibility and shooting skill.
- There is a statistically significant positive relationship between psychological compatibility and dribbling skill.

Statistical results:

Table 1: Means and standard deviations of variables

standard deviation	arithmetic mean	variable
8.45	75.30	compatibility psychological
3.90	22.10	skill Passing
4.12	18.75	skill shooting
3.45	19.60	skill Bouncing

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These values indicate normal variation in sample scores, with no significant deviations affecting the correlation results.

Table 2: Pearson's correlation coefficient between psychological adjustment and motor skills

Statistical significance	Sig) Significance level (.)	(r) coefficient	relationship
Function at 0.01	0.000	0.61	Psychological compatibility × passing skill
Function at 0.01	0.001	0.57	Psychological compatibility × shooting skill
Function at 0.01	0.000	0.63	Psychological compatibility × dribbling skill

The results indicate a statistically significant positive correlation between psychological adjustment and all basic motor skills. The higher a student's psychological adjustment level, the better their performance in passing, shooting, and dribbling.

Analysis of results:

- The strongest relationship emerged between psychological adjustment and dribbling ($r = 0.63$), indicating that skills requiring concentration and neuromuscular coordination are most influenced by psychological state.
- Passing skill ($r = 0.61$) is also strongly related to psychological compatibility, as it is a team skill that requires good visual and sensory communication.

- Shooting skill ($r = 0.57$) also showed a strong relationship, but slightly lower than the previous two skills, and this may be attributed to the fact that shooting is also affected by other technical and physical factors (such as muscle strength and accuracy.)

Conclusions and suggestions

In light of the statistical processing and discussion of the results, the following can be concluded:

- The study results showed a statistically significant positive correlation between psychological adjustment and some basic motor skills in handball, indicating that students with a high level of psychological adjustment achieve better skill performance.
- relationship appeared between psychological adjustment and dribbling skills, followed by passing and shooting, indicating that skills that require high concentration and emotional stability are directly influenced by a student's psychological state.
- The results of this study confirm that the psychological aspect, especially psychological compatibility, represents a complementary and necessary element alongside physical and technical abilities in developing motor performance among middle school students.
- These results are consistent with the findings of some previous studies (such as Ben Issa, 2020, and Zarrouki, 2021), which in turn demonstrated

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the importance of psychological factors in improving athletic performance, both at the individual and group levels.

- The study demonstrates the importance of not neglecting the psychological aspect of school sports activities, especially in team sports such as handball, which require simultaneous psychological, physical, and social interaction.

Suggestions:

Based on the study findings, the researcher proposes the following:

- ❖ Integrating psychological and educational support programs into school sports activities, aiming to raise students' psychological well-being through workshops on self-confidence, emotional management, and social integration.
- ❖ Training physical education teachers and educators on the psychological and behavioral aspects of students, with the aim of improving their ability to observe and interpret certain psychological indicators that may affect skill performance.
- ❖ Reconsidering methods for evaluating motor performance, by taking into account psychological and social aspects, and not relying solely on physical and technical indicators.
- ❖ Encouraging scientific research in the field of educational sports psychology, particularly in the early stages of education, where early psychological interventions can positively impact a student's athletic and academic career.

- ❖ Expanding the scope of field studies to include different age groups and multiple nationalities (males and females), in addition to applying the study to other team and individual sports for the purpose of generalization and comparison.
- ❖ Improving the overall school climate by stimulating positive interaction within educational institutions, as this has a direct impact on students' psychological stability and, consequently, their participation in sports activities

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