

The Effect Of Semi-Sport Games On Developing Attention Skills Among Preschool Students

أثر الألعاب الشبه رياضية في تنمية مهارة الانتباه لدى تلاميذ المرحلة التحضيرية

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ملخص:

تهدف هذه الدراسة إلى فحص فعالية الألعاب شبه الرياضية في تنمية مهارات الانتباه لدى 108 تلميذ من المرحلة التحضيرية بولاية المسيلة (الجزائر). تم توزيع المشاركين إلى مجموعة تجريبية (ن=54) تلقت برنامج الألعاب شبه الرياضية من 26 حصة، ومجموعة ضابطة (ن=54) واصلت الأنشطة العادية. أظهرت النتائج تحسناً كبيراً في المجموعة التجريبية من القياس القبلي (18.24) إلى القياس البعدي، بينما لم تظهر المجموعة الضابطة أي تحسن كبير. تثبت هذه النتائج أن الألعاب شبه الرياضية تعزز بفعالية مهارات الانتباه لدى تلاميذ المرحلة التحضيرية، ويستحسن تطبيقها في برامج تعليم الطفولة المبكرة للحد من صعوبات الانتباه.

الكلمات المفتاحية:

الألعاب الشبه رياضية، مهارات الانتباه، مقياس قائمة الكشف المبكر، تلاميذ المرحلة التحضيرية، منهج شبه تجريبي.

Abstract:

This study investigated the effectiveness of quasi-sport games in developing attention skills among 108 preparatory stage pupils in M'sila province, Algeria. The experimental group (n=54) received a 26-session quasi-sport games program while the control group (n=54) continued regular activities. Results showed significant improvement in the experimental group from pre-test to post-test, while the control group showed no significant improvement. These findings demonstrated that quasi-sport games effectively enhance attention skills among preparatory stage pupils, supporting their implementation in early childhood education programs to reduce attention difficulties.

Keywords:

Attention skills; Early Detection chekist Scale ; preparatory stage pupils; Quasi-experimental methodology ;Quasi-sport games

1. INTRODUCTION

The preparatory stage is considered one of the most crucial phases in a child's development due to its vital educational role in shaping the foundations of their personality, and establishing their cognitive and emotional dimensions. During this stage, children acquire basic concepts, knowledge, experiences, tendencies, and attitudes. They are also characterized by a strong inclination toward play and learning through sensory and concrete experiences, as well as a growing need to interact socially, transitioning from individual play to group interaction.

At this stage, children seek to communicate with others by expressing their ideas and emotions through various experiences, which can help alleviate challenges such as speech articulation issues and reduce linguistic delays. Opportunities for verbal participation in-group settings whether through play or discussion further enhance their cognitive development and learning outcomes. As a result, play becomes a vital contributor to the development of cognitive, social, and creative skills. Thus boosting the overall learning process (Al-Azza, 2002, p. 2).

Kirk (1963) was among the first to address learning difficulties in children, especially those experiencing significant challenges in reading, writing, hyperactivity, or solving mathematical problems, despite the absence of intellectual disabilities, sensory impairments, or emotional disorders. He introduced the term "learning difficulties" to describe children with developmental disorders in areas such as language, speech, reading, and related communication skills (Al-Zayat, 1998, p. 52).

Physical activity encompasses all motor and sports related actions adapted to individual abilities and needs, especially for children with learning difficulties. These activities are implemented by trained professionals particularly educators specializing in physical and sports education and aim to achieve educational, health, and social objectives (Boukrâa, 2016).

Unlike terms such as "disability" or "intellectual disability," the concept of "learning difficulties" refers to a specific deficit in one or more processes such as speech, language, perception, behavior, reading, spelling, writing, or arithmetic that is often linked to brain dysfunction, emotional or behavioral disorders, cultural influences, or ineffective teaching methods. These difficulties are not caused by intellectual limitations or sensory impairments (Salam, 2015, p. 6).

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Today, physical activity is recognized as a key developmental approach and is often referred to by terms such as “sports,” “physical education,” “motor expression,” “recreational activity,” “educational play,” or “psychomotor and sensory education.” For specialists in this field, physical activity is more than mere recreation it is an intentional, structured educational tool.

Sports activities aim to identify and address physical, psychological, motor, and social challenges through individualized educational programs, motor support, training, and therapeutic teaching. These services help children with learning difficulties reach their full potential and live healthier, more fulfilling lives, provided they are delivered by qualified professionals.

The increasing prevalence of attention difficulties among preparatory stage pupils, combined with the limited effectiveness of traditional interventions, necessitates the exploration of innovative therapeutic approaches. While physical activity has shown promise in supporting cognitive development, the specific effects of quasi-sport games on attention skills remain understudied. This research addresses the central question of how quasi-sport games impacts the development of attention skills among preparatory stage pupils.

2.HYPOTHESES

Quasi-sport games have a positive effect on the development of attention skills among preparatory stage pupils. This means that:

- There are no statistically significant differences in the mean scores between the experimental and control groups in the pre-test.
- There are statistically significant differences in the mean scores of the experimental group between the pre-test and the post-test.
- There are no statistically significant differences in the mean scores of the control group between the pre-test and the post-test.
- There are statistically significant differences in the mean scores between the experimental and control groups in the post-test, in favor of the experimental group.

3.RATIONALE FOR STUDY

This study aims to advance scientific understanding in the field by building upon existing research foundations. The investigation seeks to develop comprehensive insights into attention skill development among preparatory stage pupils, providing systematic assessment and documentation of attention capabilities within this specific age cohort. The research addresses a critical gap in the literature by examining children with learning difficulties and evaluating the efficacy of quasi-sport games as a targeted intervention approach. Furthermore, the study endeavors to generate evidence-based recommendations that will inform practice among professionals in physical education and child development domains.

4.OBJECTIVES

The primary objective is to evaluate the positive influence of quasi-sport games on attention skill development among preparatory stage pupils. Specifically, the study seeks to:

- Establish baseline comparability by identifying statistically significant differences in pre-test mean scores between experimental and control groups.
- Examine the intervention effect by analyzing statistically significant differences in mean scores within the experimental group across pre- and post-test measurements.
- Assess control group stability through evaluation of statistically significant differences in mean scores between pre- and post-test phases.
- Determine intervention efficacy by comparing post-test mean scores between experimental and control groups for statistically significant differences.

5. DEFINITION OF KEY CONCEPTS

5.1 Quasi-sport Games:

Terminological Definition: Quasi-sport games are simple, easy-to-implement activities that do not require advanced motor skills or fixed rules. The instructor may establish rules appropriate to the players' age, abilities, and educational goals. These games can be played in any setting, with or without basic equipment, and they do not demand complex organization (Faraj, 2002, p. 26).

Operational Definition: Organized or semi-organized motor activities that share some characteristics with formal sports, such as rules, objectives, or skills, but do not reach the level of competitive or professional sports. These games are typically used for educational, recreational, or training purposes in schools or community settings.

5.2 Attention Skill:

Terminological Definition: Hertz defines attention as a skill and a regulatory process that involves directing, monitoring, and adjusting movement. It enables the athlete to conserve energy in both predictable (patterned) and unpredictable (adaptive) motor situations, allowing for faster acquisition of sport-related movements (Jadoua ,2007 p. 299).

Operational Definition: A cognitive ability defined as the individual's capacity to deliberately and systematically focus conscious awareness on a specific stimulus or task for a sufficient duration, while filtering out irrelevant external or internal distractions. It is measured through indicators such as accuracy, response speed, and sustained concentration during educational or evaluative tasks.

6. PREVIOUS AND SIMILAR STUDIES

6.1 Jallab Misbah (2016): "The Effectiveness of a Cognitive Educational Program in Treating Attention and Memory Difficulties among Pupils with Developmental Learning Difficulties"

This study aimed to implement a cognitive educational program designed to address attention and memory difficulties in pupils with developmental learning challenges. The effectiveness of the program was demonstrated through the post-test performance of the experimental group, which significantly surpassed that of the control group. These results confirm the success of the program in achieving its intended goals.

6.2 Khoukhali Ahlam (2016): "A Study of the Effectiveness of a Physical-Sports Activity Program in Treating Emotional and Social Learning Difficulties within the Emotional Theory Framework"

This study evaluated the impact of a physical and sports activity program grounded in Goleman's emotional intelligence theory. The program targeted the treatment of emotional and social learning difficulties among elementary school pupils. Results revealed statistically significant improvements in emotional intelligence, reductions in social and emotional challenges, and enhanced academic achievement in the post-test, all attributed to the effectiveness of the proposed intervention.

7. METHOD

The researcher adopted the experimental method due to its appropriateness for addressing the research problem. This method allows for a structured investigation of the causal relationship between the implementation of quasi-sport games and the development of attention skills in preparatory stage pupils.

7.1. STUDY SAMPLE:

The fieldwork was conducted in four elementary schools in the city of M’sila. The overall study population consisted of 1,508 pupils. The main study sample was constituted following the administration of a pre-test based on the Early Detection Checklist for Developmental Learning Difficulties, applied to 252 first-year preparatory pupils. This screening procedure enabled the identification of 108 pupils presenting attention difficulties, while 154 pupils exhibited no such difficulties, thereby establishing a differential distribution within the studied cohort for subsequent comparative analyses.

Primary School, M’sila	First Grade	Regular Students	Students with Learning Difficulties	Control Group	Experimenta l Group
Joudi Al-Miloud	62	42	20	10	10
Bouqra Mohamed	34	18	16	8	8
Shnihath Mohamed	76	44	32	16	16
Arabiya Dahman	90	50	40	20	20
Total	252	154	108	54	54

Table 1: Distribution of the Study Sample (Attention Skill Difficulties)

Primary School, M’sila	First Grade	Regular Students	Students with Learning Difficulties	Control Group	Experimental Group
Joudi Al-Miloud	62	42	20	10	6
Bouqra Mohamed	34	18	16	8	4
Shnihath Mohamed	76	44	32	16	2
Arabiya Dahman	90	50	40	20	2
Total	252	154	108	54	14

Table 2: Distribution of the Study Sample after Activity Implementation

7.2. INSTRUMENTS

Study Test

The Early Detection Checklist for Developmental Learning Difficulties in Children at the Primary Education Stage represents a comprehensive assessment instrument designed to identify developmental learning difficulties in preschool and early primary education children, enabling the implementation of timely intervention programs that become increasingly effective with earlier detection. Originally grounded in the theoretical framework established by Mersi (1983), the checklist encompasses three fundamental dimensions of developmental learning difficulties: linguistic difficulties, cognitive difficulties, and visual-motor difficulties. The instrument's psychometric properties were initially validated through discriminant validity analysis comparing high-performing and low-performing children, with reliability assessed using Pearson's correlation coefficient yielding 0.895 and an overall reliability coefficient of 0.809 at $p < 0.05$, demonstrating statistically significant reliability (Awad, 1995). Bahloul (2015) subsequently modified this checklist to focus specifically on attention-related difficulties, structuring the adapted version to include 48 statements evaluated by teachers using a four-level frequency scale (Always, Often, Sometimes, Rarely) with scores ranging from 1 to 4 points, establishing a maximum possible score of 40 points where scores below 68% (fewer than 24 points) indicate preliminary developmental learning difficulties in attention skills. The present study adopted Bahloul's modified version as the primary assessment instrument, with reliability measures confirming a Pearson correlation coefficient of 0.805 and self-validity calculated at 0.897, indicating robust internal consistency and psychometric soundness.

Quasi-sport Games Program Implementation

The intervention program consisted of 26 weekly instructional sessions incorporating quasi-sport games. By the end of the program, the researcher observed improved engagement and quicker responses to game-related tasks. The post-test was administered one week after the completion of the program.

8. RESULTS AND DISCUSSION

To measure the differences in attention skills between the experimental and the control group before starting the program implementation, we used an independent samples t-test, and the results were as follows:

Group	Mean	St. D	T-test	df	Sig	Significance	Effect Size	Magnitude
Control	17.72	2.60	0.936	106	0.35	Not significant	0.1658	Small
Experimental	18.24	3.12						

Table 3: The differences in the mean scores between groups in the pre-test.

Although the experimental group had a slightly higher mean score, the P-value (0.352) indicates that the difference between the groups in the pre-test is not statistically significant. The effect size of 0.1658 further confirms that the effect is small, suggesting no meaningful difference in attention skills before the intervention began.

To measure the differences in attention skills between the experimental and the control group before starting the program implementation, we used an independent samples t-test, and the results were as follows:

The differences in the mean scores of the experimental group between pre-test and post-test.

Measurement	Mean	St. D	T-test	df	Sig	Significance	Effect Size	Magnitude
Pre-test	18.24	3.12	22.22	53	0.00	significant	0.318	large
Post-test	30.61	2.86						

Table 4: Mean score differences of the experimental group between the pre-test and post-test.

The mean score for the experimental group increased significantly from 18.24 (pre-test) to 30.61 (post-test). The P-value of 0.00 indicates that this difference is statistically significant at the 0.01 level. Furthermore, the effect size of 0.3187 reflects a small impact, affirming the effectiveness of the quasi-sport games program in improving attention skills.

The differences in the mean scores of the control group between pre-test and post-test.

Measurement	Mean	St. D	T-test	df	Sig	Significance	Effect Size	Magnitude
Pre-test	17.72	2.60	1.17	53	0.20	Not significant	0.16	small
Post-test	18.37	3.13						

Table 5: The differences in the mean scores between groups in the post-test.

The mean score of the control group increased slightly from 17.72 (pre-test) to 18.37 (post-test). The P-value (0.20) is not statistically significant. The effect size of 0.20 indicates a small effect. This suggests that the improvement observed in the control group was limited and may not be practically meaningful.

The differences in the mean scores between the experimental and control groups in the post-test.

Group	Mean	St. D	T-test	df	Sig	Significance	Effect Size	Magnitude
Control	18.37	13.13	21.18	106	0.00	significant	0.427	Moderate
Experimental	30.61	2.86						

Table 6: The differences in the mean scores between groups in the post-test.

The experimental group achieved a significantly higher mean score (30.61) compared to the control group (18.37) in the post-test. The P-value of 0.000 confirms that the difference is statistically significant. Additionally, the effect size of 0.4273 indicates a moderate effect, demonstrating the effectiveness of the quasi-sport games program in enhancing attention skills among preparatory stage pupils.

It can be concluded that there are no statistically significant differences in the mean scores of the experimental and control groups in the pre-test. The researcher notes that the lack of physical activity negatively affects overcoming developmental learning difficulties. This finding is supported by Ofard and his colleagues, who proposed the hypothesis of a lack of physical activity during regular and holiday periods, which impacts learning difficulties.

Furthermore, the results support previous studies, including the study by Misbah (2016), which aimed to apply a cognitive educational program to treat attention and memory difficulties among students with developmental learning difficulties. The study concluded that the therapeutic program had a positive effect on students' achievement, as the experimental group achieved higher scores on the post-test compared to the control group.

Similarly, the study by Bahloul (2015), titled "The Effect of Using Educational Games on Developing Perception, Attention, and Memory Skills among Preparatory Stage Pupils," agrees with these findings. The researcher used the experimental method with a sample of 80 pupils, divided into groups, and applied a diagnostic test to detect primary developmental learning difficulties. The study concluded that there are statistically significant differences between the mean scores of the experimental group in the pre- and post-tests for perception, attention, and memory skills at the 0.05 significance level.

9. CONCLUSION

Educators and psychologists unanimously agree that early childhood represents the most critical period of human development. During this stage, physical and sports activities play a vital role. While such activities may not entirely resolve all developmental challenges, they can significantly alleviate or prevent their escalation in the future. Based on this understanding, the present study implemented a therapeutic program targeting developmental learning difficulties specifically attention, perception, and memory—among children in the early years of elementary education. The aim was to mitigate future academic challenges by addressing these issues early.

The study successfully achieved its primary objective: improving attention skills among preparatory stage pupils through the use of quasi-sport games. Furthermore, the results offer promising insights into the role of these games as effective educational tools. The findings highlight the importance of cooperation between special education professionals, teachers, and parents in supporting children with learning difficulties.

10. Bibliography List

Al-Azza, S. H. (2002). Introduction to special education for people with special needs. *Dar Al-Maaref for Publishing and Distribution*.

Al-Zayat, F. (1998). Learning difficulties: Theoretical, diagnostic, and therapeutic foundations. *Dar Al-Nashr Al-Jami'at*.

Awad, A. A. (1995). A diagnostic introduction to learning difficulties in children—Tests and scales. *Scientific Office for Computers, Publishing, and Distribution*.

Bahloul, H. (2015). The effect of using educational games on developing perception, attention, and memory skills among preparatory stage pupils [Master's thesis, Mohamed Lamine Debaghine University]. *University Repository*.

Faraj, E. W. (2002). Experiences in games for children and adults. *Dar Al-Maaref*.

Khoukhali, A. (2016). The effectiveness of a physical-sports activity program in treating emotional and social learning difficulties within the emotional theory framework [Doctoral dissertation, University of Algiers]. *University Repository*.

Kirk, S. A. (1963). Behavioural diagnosis and remediation of learning disabilities [Conference presentation]. *Conference on Exploration into Problems of the Perceptually Handicapped Child, Chicago, IL*.

Misbah, J. (2016). The effectiveness of a cognitive educational program in treating attention and memory difficulties among pupils with developmental learning difficulties.

Salam, H. A. W. (2015). Common learning difficulties in kindergarten. *Dar Amjad for Publishing and Distribution*.

Saad, M. A (1983). *Pre-school Child Education*. Cairo: Alam Al-Kitab.

Jadua;Y, E (2007). Learning Difficulties. *Jordan: Al-Yazouri Scientific Publishing and Distribution House*.

Boukraâ, R algerie-apa.blogspot.com 2016 (Rachid Boukraâ)

Kawthar; K. (1983). *Pre-school Child Education*. Cairo: Alam Al-Kitab.