

Effectiveness of Kinetic Games and Their Impact on Learning Some Basic Basketball Skills for Middle School Students

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Abstract

This study aims to identify the effectiveness of kinetic games and their impact on learning some basic basketball skills for middle school students. The hypotheses of this study suggest that there are statistically significant differences between the experimental and control groups in the post-tests, favoring the experimental group. The research problem was identified through monitoring and reviewing the teaching methods used in middle school physical education classes. It was found that most lessons lack variety in teaching methods and rely on traditional approaches, which do not cater to the individual differences among learners. Consequently, the learning outcomes among students vary, and mastery of skills is not achieved. This issue must be addressed, and solutions must be found.

After thorough research and review, it was concluded that kinetic games are the best approach to solve this problem, as they are engaging and stimulating for learning skills. The experimental method was used for the experimental and control groups with pre-tests and post-tests, suitable for the sample and the research problem. The research population consisted of second-grade students at Al-Waseela Boys School, totaling 127 students divided into three sections (A, B, C). Section B was intentionally chosen (by lottery), comprising 42 students, from which 25 students were selected to form the experimental group, with 17 students excluded for statistical reasons. Section A represented the control group with 41 students, from which 25 were selected similarly. A pilot study sample consisted of 10 students from the research population but outside the main sample.

After conducting the pilot study, the pre-tests were carried out, followed by the main experiment, which involved applying kinetic games to the experimental group for two

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months, with two educational units per week (Monday and Wednesday), totaling 16 units. After the main experiment, post-tests were analyzed statistically using SPSS software. The conclusion was that kinetic games play an effective role in learning some basic basketball skills for middle school students. Using kinetic games in skill learning is necessary due to their stimulating and engaging nature for learners

Keywords : Kinetic Games, Basketball, Middle School Students.

Introduction

Play is a manifestation of human activity a natural phenomenon and a basic need that drives an individual to work, move, and be active. It is an internal or external orientation that satisfies an inner desire to utilize mental and physical energy in an integrated activity consisting of a series of actions (Abdul Sahib et al., 2022). Many researchers have addressed the topic of play, with some defining it, and all definitions share characteristics focused on activity and motivation. Defined play as a natural exercise for the various powers of man and a means to develop these powers comprehensively and balanced (Khalifab & Jabbar, 2023). (Adnan et al., 2024).It is not limited to children and youth but also includes adults of both genders. Hence, play has become one of the essential and pressing factors in modern life, with its fundamental value lying in the vitality and enjoyment it adds to human life. Defined play as the key to the treasure of knowledge and its social, mental, moral, physical, and emotional growth, and the guidance of a child's motor performance (Mahmood et al., 2023) (Salman et al., 2022)

The research problem is that most curricula have received attention from specialists in the Ministry of Education, who are constantly working on their development. However, the physical education class has remained unchanged, with no efforts to develop or pay attention to it, especially in the primary and middle stages, which are considered the foundation for the sports talents and raw materials needed by sports clubs in the future. This depends on the methods and approaches, the way of selecting specific exercises for sports, and how they are performed and taught (Mohammed Khalid Awad, Khulood Juma Qasim, 2024). Therefore, it is required to gradually transition from easy to difficult according to a well-studied scientific plan so that the transition is not sudden, which would nullify the benefit and reduce the students' enthusiasm for playing. (Yasir & Sikhe, 2020)

As is known, the physical education class, in its traditional and monotonous way, lacks a lot of enthusiasm and excitement for the students, neglecting individual differences, leading to ineffective performance and a lack of response to the lesson's content (Al-Ibraheemi et al., 2019). Hence, the researcher chose an alternative to the routine physical exercises in the lesson, aiming to increase the learning process among the students, making

a humble effort in the service of science and education (Abdul-Gani et al., 2024). Thus, the importance of the research lies in identifying the significance of kinetic games at this age stage by preparing a program of kinetic games aimed at learning some basic basketball skills (Matar & Faeq, 2020).

Methods

The researcher used the experimental method to solve the problem, defined as the deliberate and controlled alteration of certain conditions of a specific phenomenon, followed by the observation and interpretation of the resulting changes in the phenomenon (Muttib et al., 2024). The design of two equivalent groups (experimental and control) with pre- and post-tests was chosen to suit the nature and objectives of the research.

Table (1)

Shows the design of the experimental and control group with pre-test and post-test

Groups		Number of sample members	Steps				
			The first	The second	Third	Fourth	Fifth
sample	Experimental group	25	Pretest	kinetic games	Posttest	The difference between pre-test and post-test	The difference between the two groups in the posttests
	Control group	25	Pretest	The approach followed	Posttest	The difference between pre-test and post-test	

Research Population and Sample:

The research population consisted of second-grade students at Al-Waseela Boys School, totaling 127 students divided into three sections (A, B, C). Section B was intentionally selected (by lottery), comprising 42 students, from which 25 students were chosen to form the experimental group, with 17 students excluded statistically. Section A represented the control group with 41 students, from which 25 students were similarly selected. A pilot study sample consisted of 10 students from the research population outside the Main sample (Mahmood et al., 2023).

Table (2)

The research community and its sample

Population and sample	Total number	Percentage
Origin community	127	%100
Research sample	60	%47
Experimental sample	25	%19.68
Control sample	25	%19.68
Exploratory sample	10	%7.87

Tools Used:

Arabic and foreign references and sources

Result recording form

10 basketballs

Whistle

Stopwatch

Stationery

Test Used in the Research:

One-Hand Overhead Pass Test (Long) (Abdulhussein et al., 2024):

Purpose: To measure the accuracy of the one-hand overhead pass at a target.

Equipment: Basketball, a wall with three concentric circles (different centers) with radii of 45 cm, 98 cm, and 50 cm respectively. The lower edge of the largest circle is 90 cm above the ground. A line is drawn on the ground 6 meters from the wall.

Performance: The tester stands behind the drawn line on the ground with the ball, performing passes to the circles using a one-hand overhead pass. Several practice attempts are allowed before the test. The tester has the right to perform ten passes.

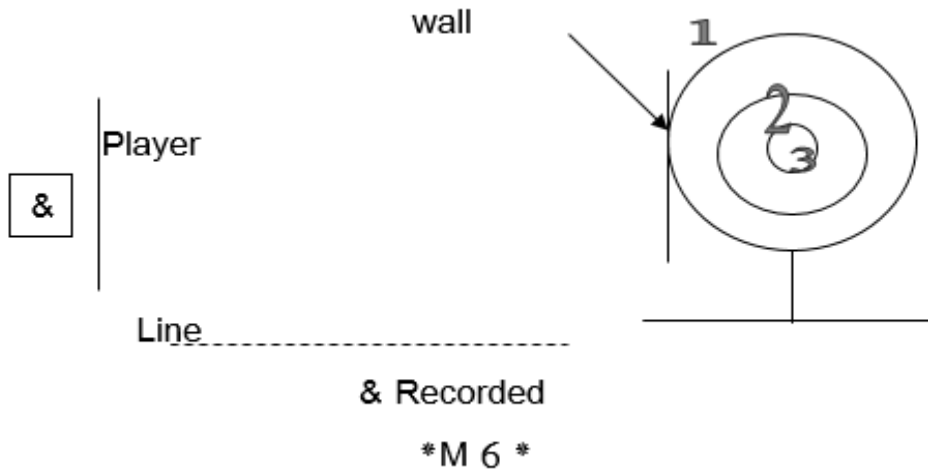
Scoring:

One point for hitting the largest circle.

Two points for hitting the middle circle.

Three points for hitting the smallest circle.

The maximum score is 30 points.



Chest Pass Test (Ahmed Amer Abdul Hussein, 2020):

Purpose: To measure the speed of the chest pass and catch.

Equipment: Smooth wall, flat ground, measuring tape, two legal basketballs, electronic stopwatch, chalk, whistle for start and end signals.

Procedure:

Draw a line on the smooth wall 90 cm from the ground.

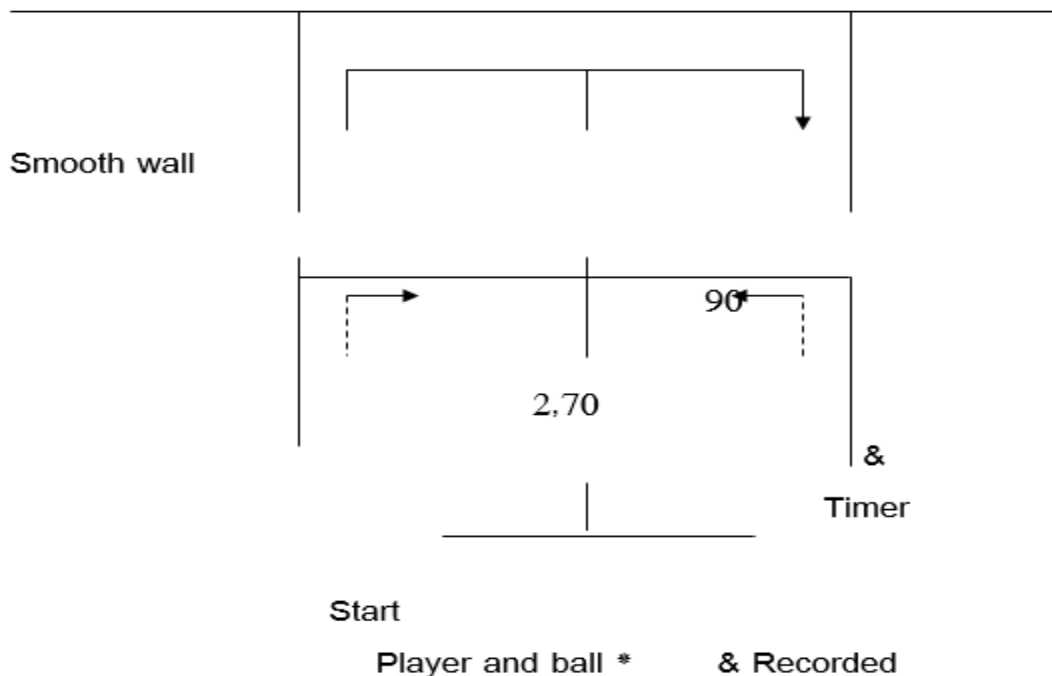
Draw a starting line parallel to the wall 2.70 meters away.

Performance Description:

The player stands directly behind the starting line holding the ball.

A start signal is given, and the player performs rapid chest passes to the smooth wall and catches the ball after it rebounds.

The player continues this performance for 10 consecutive passes.



Instructions:

The player must not cross the designated line during the performance.

The ball must not touch the ground during the 10 passes.

If the ball falls, the player can retrieve it and continue the performance from behind the line, but only correct chest passes are counted.

It is allowed for the ball to touch the smooth wall above the drawn line.

The ball must be caught before making the next pass.

Each player gets only one attempt.

The score is announced to the player to ensure competitiveness.

Administration:

Recorder: Calls out names, observes the performance, and records results.

Timer: Gives start and end signals, timing, and counting.

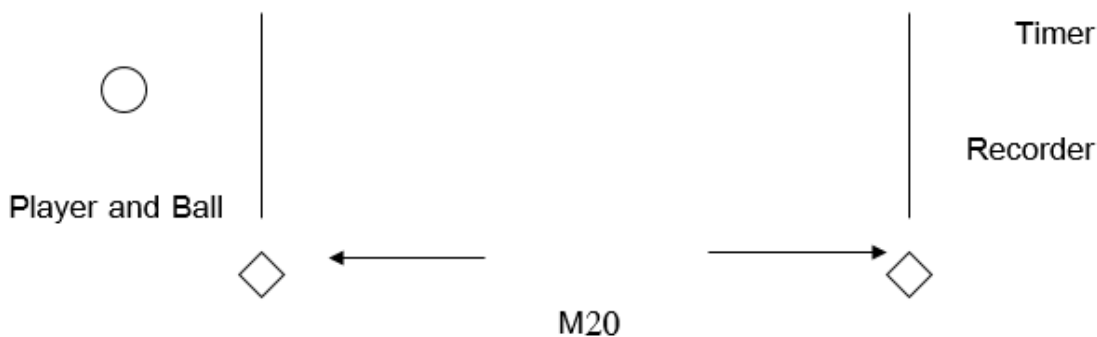
High Dribble Test: (Abdulkareem et al., 2024)

Purpose: To measure the speed of high dribble over 20 meters with the dominant hand.

Equipment: Basketball court, electronic stopwatch, basketball, measuring tape, whistle for start signal.

Attempts: Each player is given only one attempt.

Scoring: The player's score is the time to complete the test from the start signal to cover the full distance.



Exploratory experiment:

The Exploratory experiment was conducted on Monday, February 19, 2024, at 8:45 AM at the Al-Waseela Boys School playground. Its purpose was to identify the suitability of the kinetic games and the tests used in the research for the sample.

Pre-Test:

The pre-tests for the research sample were conducted on Monday, February 22, 2024, at 8:45 AM at the Al-Waseela Boys School playground. The tests related to the research topic were carried out, and the researcher ensured to stabilize all test-related conditions, such as time, place, equipment, and execution method, to create similar conditions during the post-test.

Main Experiment:

After reviewing scientific references, a set of exciting and engaging kinetic games was prepared. The main experiment started on Monday, February 26, 2024, and continued until Wednesday, April 17, 2024. The program included 16 educational units, two per week (Monday and Wednesday), with each unit lasting 40 minutes, the duration of a physical education class. The educational units were implemented by the school teacher under the

researcher's supervision and guidance, applying the kinetic games program to teach basic basketball skills.

Post-Test:

The post-tests for the research sample were conducted on Monday, April 22, 2024, at 8:45 AM at the Al-Waseela Boys School playground. The researcher, with the help of the assisting team, ensured similar conditions to the pre-test to obtain highly reliable results.

Statistical Methods:

The statistical package (SPSS) was used to extract the results.

Results:

Presentation of the Results of the Experimental Group for the Pre- and Post-Tests:

Table 3:

shows the arithmetic means and standard deviations for the pre-and post-tests of the experimental group

	Variables	Measuring unit	Pretest		Posttest	
			α	μ	α	μ
1	Long handling	Degree	15,15	1,663	22,10	2,125
2	Pectoral handling	T	11,210	1,296	7,018	0,692
3	High plumpness	T	5,903	0,489	4,568	0,437

Table 4

The values of the differences of the arithmetic mean, their deviations, and the calculated t-value between the pre-and post-tests for the experimental group

Skills	f	df	h	t
Long handling	6,950	2,892	0,646	10,74
Pectoral handling	4,192	1,638	0,366	11,44
High plumpness	1,335	0,607	0,135	9,821

Displaying the results of the control group for the pre-and post-tests.

Table 5

Shows the arithmetic means and standard deviations for the pre-and post-tests of the control group

	Variables	Measuring unit	Pretest		Posttest	
			α	μ	α	μ
1	Long handling	Degree	15,25	1,208	19,0	1,747
2	Pectoral handling	T	11,572	1,471	7,964	0,710
3	High plumpness	T	6,017	0,333	5,292	0,215

Table 6

The values of the differences of the arithmetic mean, their deviations, and the calculated t-value between the pre-and post-tests for the control group

Skills	f	df	h	t
Long handling	3,750	1,888	0,422	8,881
Pectoral handling	3,608	1,785	0,399	9,040
High plumpness	0,725	0,420	0,094	7,707

Displaying the results of the experimental and control groups in the post-tests of the research variables:

Table 7

Shows the values of the arithmetic mean and standard deviations for the post-test and the T value calculated for the research tests for the experimental and control groups.

	Variables	Measuring unit	Pretest		Posttest		t	SE
			α	μ	α	μ		
1	Long handling	Degree	15,25	1,208	19,0	1,747	30,165	0.000
2	Pectoral handling	T	11,572	1,471	7,964	0,710	26,280	0.000
3	High plumpness	T	6,017	0,333	5,292	0,215	16,922	0.000

Discussion

The results indicated significant differences between the pre-test and post-test of the experimental group in the research variables. The researcher attributes this to the fact that this skill is simple and not complex in terms of motor performance, and the key role of the learner in demonstrating cooperation, interaction, and engagement during the lesson (Idrees et al., 2022). This led to skill mastery, (Kadhim, 2024) as the teacher followed the proper steps in teaching the skill. Natural phenomena of the learning process must result in learning progress as long as the teacher follows proper learning, teaching, and correct performance training steps, focusing on repeated attempts until performance is ingrained. Learning this skill through group cooperation increased its learning and development positively, as the spirit of cooperation, cohesion, peer assistance, and direct correction led to progress (Kadhim, 2023). The cooperative learning strategy increases learners' participation and reduces their fatigue, in addition to achieving greater benefits when they help each other rather than learning in isolation (Mohsen et al., 2024).

The educational curriculum's inclusion of organized educational units, the effective preparation of the learning environment, and the reliance on actual practice and repetition in the games included in the unit's motor phrases also played a significant role (Hammood et al., 2024). Kinetic games are considered one of the best methods for developing and raising the performance level in defensive and offensive skills, which is reflected in the skill performance level during the competition (Atiyah et al., 2024). Regarding the control

group, the strategies and exercises followed by the specialized teacher affected the skill-learning progress (Yusri, 2020) and (Easa et al., 2022)

The significant differences observed between the experimental and control groups in the post-tests, favoring the experimental group, are attributed by the researcher to the effectiveness of kinetic games (Mohammed Khalid Awad, Khulood Juma Qasim, 2024). These games helped improve the research variables' performance and sense of time and movement. Students at this age enjoy playing in its various forms, which generates motivation and desire to learn and improve the research variables. Jameel (108) indicates that playing in its various forms is preferred and loved by primary school children, matching their inclinations and maintaining its place with them even into adulthood (Mandoob Makki Ati et al., 2024). Additionally, the kinetic games included various activities and movements performed in different forms, speeds, and repetitions, which were engaging, leading to students' desire to repeat most games, especially competitive ones (Zahraa Adnan, 2022). The role of repetition is fundamental to learning, and determining the number of repetitions of basic movement performance is important (Abdulkareem et al., 2024). It largely depends on the teacher's insight and experience in determining the optimal number of repetitions suitable for each age stage (Ali et al., 2023) (Ahmed Fadhil Farhan Mohammed Jawad Kadhim, 2016)

Conclusions

The results provided a comprehensive picture of the importance of kinetic games and their effective role in the training process, showing that they developed the experimental research sample excellently. This success is attributed to their scientific and proper design, as well as their engaging and progressive nature from easy to difficult, and their variety and combination of multiple skills. These factors led to significant differences in the students of the experimental group. These games are used to learn different sports skills for different age groups.

References

- Abdul-Gani, M. Y., Jamil, S. M., Hassan, M. F. A., & Fadhil, A. H. (2024). RESISTANCE TRAINING IN THE WEIGHT OF DIFFERENT BODY PARTS AND THEIR EFFECT ON SOME MECHANICAL BIO VARIABLES AND THE ACHIEVEMENT OF THE HIGH JUMP FOR YOUNG PEOPLE. *International Development Planning Review*, 23(1), 1319–1336.
- Abdul Sahib, M. A., Ali, A. F., & Easri, H. J. (2022). Measurement of cognitive performance of students of the Faculty of Physical Education and Sports Sciences in wrestling. *Journal of STEPS for Humanities and Social Sciences*, 1(3), 83.
- Abdulhussein, A. A., Dheyab, A. S., Abdulkareem, O. W., mutar Albadri, E. H., Hammood, A. H., Musa, M. F. A. H., Kadhim, M. J., & AbdulMageed, T. S. (2024). AN ELECTRONIC SYSTEM ACCORDING TO THE COOPERATIVE METHOD AND ITS IMPACT ON DEFENSIVE MOVEMENTS IN YOUTH BASKETBALL. *International Development Planning Review*, 23(1), 1253–1266.
- Abdulkareem, O. W., Hassan, M. F. A., Fadhil, A. H., Abdulhussein, A. A., Atiyah, H., Taher, F. R., Hammood, A. H., AbdulMageed, T. S., faris Mohsen, Y., & Adnan, Y. (2024). A COMPARATIVE STUDY OF THE MOST IMPORTANT PERSONALITY TRAITS BETWEEN PRACTITIONERS AND NON-PRACTITIONERS OF SPORTS ACTIVITY. *Proximus Journal of Sports Science and Physical Education*, 1(5), 152–163.
- Adnan, Y., Atiyah, H., & Neamah, I. H. (2024). THE EFFECT OF THE IMPERATIVE METHOD IN TEACHING PHYSICAL EDUCATION CURRICULA FOR THE PRIMARY STAGE. *International Development Planning Review*, 23(1), 1337–1353.
- Ahmed Amer Abdul Hussein, M. D. A. S. S. (2020). The use of the electronic system with special exercises and its impact in the development of shooting on the basketball for young people. *Journal Mustansiriyah of Sports Science*, 2(4), 24–29.
- Ahmed Fadhil Farhan Mohammed Jawad Kadhim, G. M. S. (2016). The effectiveness of injury prevention program on reducing the incidence of lower limb injuries in adolescent male soccer players. *Injury Prevention*, 22(Suppl 2), 346.
<https://www.proquest.com/openview/fd995719bc359d2e05fa6fe346bed0f6/1?pq-origsite=gscholar&cbl=2031963>
- Al-Ibraheemi, D. H. E., Alhasan, A. M. A., & Abdulameer, F. I. (2019). *The use of the electrical stimulation device for the muscles in the limit determines the elbow joint during the lifting of the disabled weightlifting players.*
- Ali, Y. S., Abdulhussein, A. A., & Jassim, A. H. (2023). EMPLOYMENT OF RESISTANCE EXERCISE IN ACCORDANCE TO VARIABLE

BIOMECHANICAL MARKERS TO DEVELOP THE STRENGTH AND THE SPEED OF ARM MUSCLES OF WATER POLO PLAYERS. *International Development Planning Review*, 22(2), 589–605.

- Atiyah, H., MakkiAti, M., Faris Abdul Alhamayd, Q., QasimKhalaf, S., AmerAbdulhussein, A., JawadKadhim, M., Koh, D. C. L., HashimHammood, A., Faris Mohsen, Y., & MuayadShihab, G. (2024). EXTRAPOLATION OF THE MACHINE AND ITS EFFICIENCY IN DEVELOPING THE SKILL PERFORMANCE AND ACCURACY OF DRIBBLING IN YOUTH FOOTBALL. *International Development Planning Review*, 23(1 SE-Articles), 1037–1047.
- Easa, F. A. W., Shihab, G. M., & Kadhim, M. J. (2022). the Effect of Training Network Training in Two Ways, High Interval Training and Repetition To Develop Speed Endurance Adapt Heart Rate and Achieve 5000 Meters Youth. *Revista Iberoamericana de Psicologia Del Ejercicio y El Deporte*, 17(4), 239–241.
- Hammood, A. H., Qasim, K. J., Atiyah, H., Abdulhussein, A. A., FARAJ, L. F., SALAH, A., Munshed, A. H., AbdulMageed, T. S., Hasib, N. R., & Fadhil, A. H. (2024). STUDYING THE REALITY OF ADMINISTRATIVE PROBLEMS FOR MEMBERS OF THE ADMINISTRATIVE BODIES OF FIRST-CLASS FOOTBALL CLUBS FROM THE PLAYERS' POINT OF VIEW. *Proximus Journal of Sports Science and Physical Education*, 1(5), 23–34.
- Idrees, M. T., Yasir, A. M., & Rashied, J. M. (2022). Effect of resistance training on the biomechanics and accuracy of serve receiving skills in volleyball. *Sport TK*, 11, 1–8. <https://doi.org/10.6018/sportk.517131>
- Kadhim, M. J. (2023). Evaluation Of The Existence Of Gender Disparities In Iraq. *International Journal of Social Trends*, 1(1), 10–16.
- Kadhim, M. J. (2024). Digital Literacy and Its Importance in the Modern Workforce. *International Journal of Social Trends*, 2(2), 44–50.
- Khalifab, M., & Jabbar, R. H. (2023). The effect of an electronic device designed to measure the degree of bending of the knee angle in developing the skill of catch and Clearance the high ball for football goalkeepers under (15 years). *J Xi'an Shiyou Univ Nat Sci Ed*, 19(11), 751–764.
- Mahmood, H. A., Mohammed, P., & Kadhim, J. (2023). Special exercises for some physical , kinetic and electrical abilities accompanied by symmetrical electrical stimulation in the rehabilitation of the muscles of the legs for patients with simple hemiplegic cerebral palsy. *Pakistan Heart Journal*, 56(01), 580–595. <http://pkheartjournal.com/index.php/journal/article/view/1291>
- Mandoob Makki Ati, Teba Saleem Abd Almajed, Qatada Hisham Abdulghafoor, Halah Sinan Atiyah, Sabah Qassem, Mohamed Hassan, Ahmed Quinn Dawood, Mohamed

- Abdel Hussein, Thamer Hamed, Ahmed Farhan, Hussein Khamis, Mohamed Qusay, Ahmed Thamer, Abbas Fadhil, Salah Mahdi, Mubasher Harith, Ghassan Adeb, Muwafaq Obayes, Saad Abbas, ... Ali Sadiq. (2024). The effect of suggested exercises on improving the kinesthetic response of soccer goalkeepers. *TechHub Journal*, 7(1 SE-Articles), 28–41.
- Mohammed Khalid Awad, Khulood Juma Qasim, & S. H. A. (2024). Using an educational method according to special exercises to perform the skill of bow and develop flexibility for cub wrestlers in Iraq. *Eximia*, 13(1), 38–50.
<https://doi.org/10.47577/eximia.v13i1.423>
- Mohsen, Y. F., Makttof, A. M., Sami, M. M., Hikmat, T. Z., Hammood, A. H., Abed, N., & Abdulhusein, A. A. (2024). EVALUATING THE EFFECTIVE CREATIVE LEADERSHIP ROLE OF THE DEAN AND HEADS OF SCIENTIFIC DEPARTMENTS IN THE COLLEGE OF PHYSICAL EDUCATION AND SPORTS SCIENCES AL-MUSTANSIRIYAUNIVERSITY. *International Development Planning Review*, 23(1), 321–337.
- Muttib, F., Hamzah, M., & Fadhel, M. (2024). Psychological Toughness and its Relationship to Some Coordination, Physical Abilities and Accuracy of Some Basic Skills Performance Among The Iraqi Junior National Handball Team Players. *International Journal of Disabilities Sports and Health Sciences*, 7(Special Issue 2): The Second International Scientific Conference: Sports for Health and Sustainable Development,(SHSD, 2024)), 330–336.
- Salman, S. M., KADHIM, M. J., & SHIHAB, G. M. (2022). The effect of special exercises in the rehabilitation of the shoulder muscle for the youth wrestling category. *International Journal of Early Childhood Special Education*, 14(5).
- Yasir, A. M., & Sikhe, H. S. (2020). The Effect of Special Weight Exercises Using Auditory Apparatus According to Kinematic Indicators For Developing Auditory Response and Accuracy of Spiking in Volleyball. *International Journal of Psychosocial Rehabilitation*, 24(04), 9684–9691.
- Yusri, A. Z. dan D. (2020). 濟無No Title No Title No Title. *Jurnal Ilmu Pendidikan*, 7(2), 809–820.
- Zahraa Adnan, H. A. (2022). Individual analysis of kinetic response variables according to the measurement of the H7 system for the best jumping players in the national basketball team 2021. *Sciences Journal Of Physical Education*, 15(8.5.2017), 2003–2005.