



The effect of qualitative exercises with bodily-kinesthetic intelligence activities on developing accuracy the skill of the undulating serves from the jump (flotter) in volleyball among first-class players for the 2022/2023 season

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Abstract

Volleyball is considered one of the most important team sports, which is practiced by women and men for different age groups. Specific exercises contributed to the type of body kinetic intelligence activities clearly at the level of this sport, as it is considered the ideal, fastest, and most applicable solution, as the researcher found his problem in the lack of interest in these exercises. In proportion to its importance for effectiveness, the research aims to prepare specific exercises for bodily kinetic intelligence activities, the importance of the research lies in developing the skill accuracy of the undulating serve skill of jumping (flutter), the researcher used the experimental method with two groups, control and experimental, with pre- and post-tests. The tests were conducted to measure the accuracy of the skill (serving from the top (flutter)) and the research population consisted of first-class players for the 2022/2023 season, which are (6 clubs). Al-Hussein Club was chosen by a deliberate random method, and the research sample consisted of (12 players) after excluding two players (liberos). They were divided into two equal groups and the bag was used. Statistical analysis (SPSS) was used to extract the results and after presenting and discussing the results, it was concluded that there is a positive effect of specific exercises with bodily kinetic intelligence activities on the accuracy skill of the undulating serve from jumping (flutter) with a volleyball between the pre- and post-tests for both groups, as well as between the control and experimental groups, and in favor of the experimental group and the researchers recommended the necessity of using these exercises and conducting future studies and other on and other samples and for different skills.

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Introduction

Specific exercises are considered one of the best modern methods for reducing effort, time, and costs in order to reach the best results. They are defined as “ a group of exercises that are similar in motor path to the accuracy of specialized skill performance (Khattab et al., 2006) and differ from other general exercises that can be applied to all games and special ones that specialize in activities only (Fahmy, 1990). Grander suggested that every individual possesses at least seven Intelligence at a minimum, but in varying proportions, and thus the concept of intelligence expands to include many abilities, and the types of these seven intelligences become clear as follows: (linguistic intelligence, logical/mathematical intelligence, spatial/visual intelligence, physical/kinesthetic intelligence, musical intelligence, social intelligence, personal intelligence (Al-Fattah, 2011). Bodily-kinetic intelligence is considered “ the ability to control bodily movements and deal with movement skillfully ”. Such as using the ball ” (Amer, 2008) and that volleyball is one of the activities that most requires intelligence and excellence in the sense of movement in accordance with the requirements of movement and the physical, skillful and psychological capabilities the body possesses . “Since the motor sensitivity of the muscles is the main component of sensory-motor perception, the development of this characteristic in the fine muscles of the palm is a very important matter for the volleyball player, as a good player outperforms his average counterpart by two and a half times in the characteristic of motor sensitivity of the muscles of the palms in particular ”(Hassanein and Abdel Moneim, 1997), and since the ball is the tool that the volleyball player controls, developing feeling and developing control of the ball is among the most important skills in this game (Al-Qaisi, 2002). The wavy serve performed from jumping has a great peculiarity as it requires high precision in the movements of the hands and a very high compatibility between the movements of the legs and hands . Here the importance of the research lies in the fact that the use of a huge amount of specific exercises clearly contributes to the advancement of the skill level of the serve “ ,as it is considered the ideal, quickest, and most applicable solution ”(Mohamed, 2009)... The serve is considered the beginning of success in volleyball, and according to this research study, there is a clear weakness in the use of specific exercises with high skill specialization. This research contributes to reaching the provisions for implementing the skill in particular and improving the collective performance of the entire team, as the applications of multiple intelligences are considered training. An ideal solution for rapid skill development.... And here the researcher found his main problem in the lack of attention to these exercises in proportion to their importance to the effectiveness and to the specific skill, as the skill of the wavy serve from jumping is considered one of the modern forms of applying the



skill of serving from above, and the principles of jumping and ripple serve are combined in it, and the majority of current exercises lack high quality in dealing with these two principles.. The aim of the research is to prepare specific exercises with physical-motor intelligence activities and to know the effect of these exercises on Developing the accuracy of the wavy serve skill from jumping (flutter) in volleyball among first-class players for the 2022/2023 season. As for the research hypotheses, it was that there Statistically significant differences between the pre- and post-tests in the level of accuracy of performing the wavy serve skill from jumping (flutter) for the research sample.

And I aimed A study by (Hashim, 2017) to prepare a special study for differentiated education and find out its effect on students 'sensory-motor intelligence and peaceful shooting skills. The researcher used the experimental method and his sample was students from the College of Physical Education and Sports Sciences / University of Karbala. The researcher concluded that the presented strategy was effective in achieving its goals and the researcher recommended the necessity of using similar strategies for other activities and skills only and the available samples and applying them to higher samples .While a study by (Shehayeb, 2019) to prepare measures of psychological flow and bodily-motor intelligence and to identify the relationship between them and the accuracy of the technical performance of goalkeepers in elite handball league matches. The research assumed that there is a statistically significant relationship between them. The researcher used the descriptive approach using the survey method and correlational relations. His sample was of goalkeepers in elite handball league matches, which consisted of (21) goalkeepers. He used appropriate statistical methods for his research, and the researcher concluded the variation in skill level and flow. Psychological and kinetic intelligence for them, and he recommended adopting a special program for goalkeepers that includes research vocabulary and the possibility of including other vocabulary.

Method and tools

The researcher used the experimental method to suit the nature of the problem, and the research population was determined by the volleyball players participating in the first division for the 2022/2023 season (the middle group), and they are (6 clubs) (Al-Hussein - Al-Dhuluiya - Al-Tarmiyah - Hit - and Al-Samoud - Habhab). Al-Hussein club was chosen intentionally and the research sample consisted of (14 players). After taking into account that there are players who do not perform the serving skill, two players (libero) were excluded. The number became (12) players and they were divided into two equal groups, an experimental group and a control group. The players were randomly divided into two groups: the experimental group and the control group. This was done using a random drawing method based on odd numbers

(experimental group) and even numbers (control group). The experimental group consisted of 6 players, and the control group included 6 players. The two groups were equivalent, as shown in (Table 1).

Table (1): Shows the equality of the experimental and control groups in the wavy jump transmission accuracy test (flutter)

Indicator	Unit of measurement variable	Experimental group		Control group		Calculated T value	Tabular T value	Moral
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Accuracy test Transmission performance Flutter	degree	11.33	1.032	10.83	0.752	0.89	2.23	Insignificant

Under a degree of freedom (12-2=10) and a probability of error of 0.05

Tests used

The researcher, using his personal experience as a former player and current volleyball coach, as well as reviewing some similar research and expert opinions, chose the appropriate test to measure the required skill. Secondly, the researcher used the following test

Testing the accuracy of wavy jump transmissions (Al-Sumaidaie et al., 2010)

- Test name: Testing the accuracy of wavy jump transmissions (flutter)
- The aim of the test: to measure the accuracy of the wave transmission from the jump (flutter)
- Tools used: a legal volleyball court, (30) volleyballs, tools for recording test results, a recorder.
- Test specifications: The player stands in the middle of the end line of the court (the half facing the planned half of the court at a distance of (9 meters) from the net). The player performs the serve facing the designated areas (1-4) as in Figure.(1)

•Test conditions: Each player has (10) attempts and the ball must be sent to one of the specified areas.

•Scoring: 4 marks for each attempt inside the zone(4)

3marks for each attempt inside the zone(3)

2marks for each attempt within the zone(2)

1mark for each attempt within the zone(1)

Zero score when the ball falls outside the court or does not cross the net

When the ball falls on a common line between two areas, the higher area score is counted

The attempt will be canceled if a legal error is committed.

The maximum score for the test is 40.

Figure (1) shows the accuracy test of the wavy jump transmission (flutter)

Exploratory experience:

The researcher, accompanied by the assistant work team, conducted a pilot exploratory study on 9/9/2022 at 10:00 am on 5 players from a community of one of the first-class clubs who did not belong to the research sample. The following observations were recorded:

•The suitability of the jump serve test and the ease of its application to measure the level of skill performance in order to complete the test in the best way.

•Identify the suitability of qualitative exercises for the selected research sample and evaluate the efficiency of the assistant team or work team.

Pre-test

Pre-tests were conducted on the research sample with the help of the assistant team, and under the supervision of the researcher, at three o'clock in the afternoon on Sunday, 9/11/2022. The wavy jump transmission test was conducted and all test results were recorded with high professionalism and professionalism after benefiting from the comments of the assistant work team after the reconnaissance experiment, which contributed to overcoming the difficulties and making the tests successful.

Main experience:

The researcher, in agreement with the training staff, took time between (10-15) minutes from the total of the main part of the training unit, which amounts to (120) minutes, to perform some special specific exercises that the researcher prepared by preparing the training units for the main experiment, starting on Tuesday, corresponding to 9/13/2022, and ending on Tuesday, corresponding to 10/25/2022. The training units were held on Saturdays, Tuesdays, and Thursdays, with 3 sessions per week, with a total of 18 training units over a period of a month and a half during the special preparation phase of the team before the competitions. The researcher focused on the physical aspects on one side and the motor aspects on the other related to the skill and in the main section of the training unit, where he identified, in consultation with experts and specialists, the muscles that should be focused on in this skill (the palm, the forearm, the bilateral brachial muscle, the triceps muscle, the golf, The anterior quadriceps muscle) in addition to creating combined physical-motor exercises, and after determining the time for the main section of the physical aspect, the researcher used the interval training method, as it is more appropriate to the needs of the players, as effort and rest are distributed according to the physical ability of the players, using clear signs of fatigue and exhaustion, such as a high pulse and high respiratory output of the body's circulatory system.

Post test:

The post-test was conducted on the research sample with the help of the assistant team at three o'clock in the afternoon on Thursday, 10/27/2022. The wavy jump transmission test was conducted in the Al-Hussein Club Hall, and one of the important conditions that the researcher emphasized was that the atmosphere and conditions of the pre-tests were identical, and he succeeded in this.

Statistical methods:

The researcher used statistical methods from the SPSS program to extract the statistical results, which are (arithmetic mean - standard deviation - (t-test) for independent samples - - (t-test) for linked samples - Pearson simple correlation coefficient).

Results

Table (2): shows the arithmetic means, standard deviations, standard error of the differences, the calculated (t) value, and the probability value for the experimental and control groups and for the pre- and post-tests for the results of the jump serve skill test.

Tests	lonlines s Measurement	Pretest		Posttest		f"	F" H	Calcu lated t value	Tab ular (t) valu e	Signifi cance level
		Avera ge Arith metic	Stan dard devia tion	Avera ge Arith metic	Stan dard devia tion					
Femal e office r	degree	10.83 3	0.75 2	12.33	0.81 6	0.8 62	1.4 858	2.83	2.57	spiritu al
empiri cism	degree	11.33 3	1.03 2	14.00	1.41 4	0.5 06	1.8 777	375	2.57	spiritu al

Under a degree of freedom (6-1=5) and a probability of error of 0.05

Table (3): shows the arithmetic means, standard deviations, standard error of the differences, average differences, calculated (t) value, and probability value for the experimental group for the pre- and post-tests for the results of the jump serve skill test.

Variable s	Pretest		Posttest		F	FH	value(v) Calculat ed	value(v) Tabulati on	Significa nce level
	Q	A	Q	A					
Totals									
empiri cism	11.3 33	1.03 2	14.0 0	1.41 4	9.31 2	3.75 6	2.679	2.57	spiritual

Under a degree of freedom (6-1=5) and a probability of error of 0.05

Discussing the results.

The results presented in Table (2) showed that using the t-test, a significant effect was observed in the results of the wavy serve skill test from jumping between the results of the pre- and post-test in favor of the post-test in the control group (and in small percentages). The researcher attributed these results to coordinating daily training and controlling the accuracy of performance due to the presence of research and the general atmosphere it provides for the sport of progress and development“. This improvement was achieved by increasing the team’s quick movements when moving to the competitive atmosphere during training ”(Kazim, Hussein, and Hamza, 2024). These concepts have been confirmed by many scholars, as“ the player will not achieve a high level of physical fitness or accuracy of skill performance for the requirements of the tournament through dreams, but rather the player must train ”.(Al-Damad, 2000) Especially in an activity such as volleyball, which is characterized by wide variables and stimuli, the player faces, during the accuracy of the performance, many stimuli such as the opponent, the ball, the net, and the teammate (Hussein, The effect of special exercises in developing some aspects of attention and coordination abilities with accuracy in the skills of smashing and blocking among volleyball players aged (15-17) years, 2017)..

The use of diverse and variable training methods often needs to be changed with difficulty to ensure that the level of development is achieved, and this is what was confirmed by (Kamel and Amer, 2008)“ :In order to progress in a training program, the exercises must become more difficult as the program progresses to maintain the body’s adaptation, challenge it, (Kadhim, 2024) and achieve progress ”. This was also confirmed by Muhammad Reda Ibrahim and Mahdi Kazem Ali“ ,Introducing various exercises accurately into training programs helps maintain athletes ’desire to perform difficult training requirements and transforms them from boredom to a state of joy and enjoyment during training ”(Reda and Kazem, 2013).

The results presented in Table (3) showed a comment on the results of the performance accuracy test shown in Table (3). It was observed that there was a significant effect on the performance of the serve in the experimental group between the pre- and post-tests, in favor of the post-test, and in a greater percentage than in the control group... (Salman et al., 2022) The researcher attributed this improvement to the special specific exercises that the researcher prepared, as the opinion of experts and specialists had an important role in constructing these exercises, in addition to the researcher’s previous experience as a volleyball player and a specialist in blocking, which made It helped him a lot in building these exercises, and he benefited greatly from the progression of training and the transition from easy to difficult¹ ⁱIf the difficulty of the exercises is“ the training is increased during the same training session,

and this should be followed by a progression from easy to difficult, and from the known to the unknown) ”.Ibrahim, 2009).

In addition, it was proven to the researcher that the development of the experimental group’s performance at a higher level than that of the control group is due to the type of varied and special training that combined many of the vocabulary and principles of modern training, which led to keeping the players highly motivated as well as reducing boredom and monotony. He emphasized the importance of diversity in training to maintain the athlete’s participation, as pointed out by (Al-Mahdi, 2008).

The researcher also attributes the superiority of the experimental group in the post-test to the changes that occurred in the players as a result of the changes in weights and measurements and the very short time that the player has to perform the movement before landing outside the service area, which requires him to act quickly and thus improve the accuracy of the performance (Hussein, master’s thesis, 2010), and that the subject of change during training in all aspects of the accuracy of sports performance can have a positive impact on the skill performance during competition and that the accuracy of the player’s motor performance includes body movement supported by various thinking processes to make the appropriate decision, which On their basis, movement occurs, as“ intelligence is a potential related to the ability to solve problems and provide good performance outcomes during situations ”(Al-Hamid, 2003).

The researcher also attributes this development in level to the fact that the accuracy of sports performance has been greatly influenced by the overall diversity, change, and bodily movements that have been affected by bodily-motor intelligence exercises. (Kadhim & Mousa, 2024) This is what many scholars and thinkers have expressed, stating that one of the traits and characteristics of individuals with bodily-motor intelligence is“ the ability to use their mental abilities to coordinate the physical movements they possess and deal skillfully with things through movement, as they possess the ability to coordinate between the sense and movement organs in performing motor skills ”(Amer, 2008)

Conclusions and recommendations

First: Research conclusions:

- 1- Specific exercises for physical-motor intelligence activities had an impact on the skill of the jump serve (flutter).
- 2- Using bodily-kinesthetic intelligence activities is important to improve the player's intelligence in various game skills.

secondly. Research recommendations:

- 1- The researcher recommends that club and national team coaches use body-motor intelligence exercises in their training to develop the skill of the undulating serve from jumping.
- 2- The researcher recommends that club and national team coaches use body-motor intelligence training in their training to develop all volleyball skills due to the effective need for intelligence.
- 3- The researcher recommends conducting other experiments using physical-motor intelligence activities training on different activities.

(Appendix 1)

Topics included in the special specific exercises

- 1- Use balls of various sizes, hold the ball and throw it at a specific place on the wall, alternating between different sizes and specifying the same place.
- 2- Use a few weights in the form of short sticks and control the movement of the sticks from the wrist joint and place them in the palm.
- 3- Using specific areas on the wall (5-6 areas), holding the ball with one hand and switching between hands or two, using the sense of sight to help determine the places, pushing the ball with the fingertips to the specific place, and switching between areas.
- 4- Move in different directions (front - back - right - left) with one or two steps, making a single jump, then moving.
- 5- Move in different directions (front - back - right - left) with one or two steps, making a single jump, then a move, and the player holds the ball in one or both hands.
- 6- Take a step forward or backward with both feet and move sideways to the right or left, and the player moves according to the guidance of the coach.
- 7- Take a step forward or backward with both feet and move sideways to the right or left while the player holds the ball and the player moves according to the guidance of the coach.
- 8- Controlling the front and back quadriceps muscles, tightening them, raising the body up, and standing on the tiptoes without jumping.
- 9- Controlling the front and back quadriceps muscles, tightening them, raising the body up, standing on the tips of the toes, and performing light jumps to various sides.
- 10- Raising the body by jumping, carrying the ball and throwing it with one or both hands to a specific place above the net.
- 11- Using varying directions, heights, force used, and other force control principles used for accuracy of performance.



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