

LEVEL OF DECISION MAKING IN SOME VOLLEYBALL SKILLS (SERVE, RECEPTION, PREPARATION) FOR SECONDARY STAGE STUDENTS

A Descriptive Study on the Secondary 2nd Grade Students of Mestghanim City (16 – 17)

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Abstract

The importance of research to identify the skill level to take decision in some volleyball skills and had assumed the existence of researcher statistically significant differences between the decision-making skill and volley-ball ones with the low level of each skill. 148 pupil of the second level of secondary on the city of mostaganem, have been chosen as the researcher has concluded that there are significant differences between the decision-making skills.

The researcher recommended the need to use new methods focus on mental skills in teaching volley-ball skills, and this in order to raise the level of learning according to the phases of the age, sex, and potential, it also recommended that the harmful conduct periodic tests and ongoing mental abilities in order to recognize their reality and then work on developing them.

Key words: decision-making, volley-ball, high school.

1. INTRODUCTION :

Factors of success in sports require adopting the correct scientific method that achieves what is needed by specialists including trainers or teachers. This is in order to reach the best results. Volleyball is considered one of the games that need research, study, analysis and evaluation as this game is characterized by high level of technical performance of skills. Lately, there was a notable development in this game which asserts the concern of trainers and researchers in the use and development of means of measurement and evaluation for the purpose of identifying status and condition of players or learners. This is in order to prepare training or educational programs on the light of results of measurement and evaluation to raise performance level from skill and mental aspects. Volleyball is considered one of the forms of ball games which are characterized by dynamism and thrill which gave it a special nature that differs from other team games. This is evident in the way of using the ball through a set of various and different skills. In addition, volleyball has its basic various principles that depend in mastering and raising their levels on optimal achievement level. This is done by adopting the right style of methods of teaching, learning and training with the choice of the latest among them. A lot of specialists in volleyball workers (trainers or teachers of this game and academics) in their studies and researches agreed that the success of any team in volleyball is determined to a great extent by the extent of mastering the game's basic principles of skills (Al Bek, 1984: p. 122).

However, this success cannot be reached except for mastering total complex mental skills that are considered as essence of tactical strategies in volleyball. Among these mental skills, there is decision making skill which is considered the core of achieving results in performance. So this mental skill should have important and great concern of teachers, trainers and players themselves. This is done only through intensifying exercises which include multiple various mental skills and develop them in order to reach a high degree of distinction, accuracy and consistency. In addition, volleyball is one of the team sports that are characterized by continuous observation of situations, continuous concentration and preparation for decision making suitable in acting at anytime. The nature of this game also makes it as a scenario which is full of continuous events and changes. This encourages us to use total mental and physical abilities to cope with these changes through good and right employment of these abilities in order to reach a good level of playing and competition (Ali, 2004: p. 12).

Problem of the Study:

There is no doubt that the importance and effectiveness of basic skills in volleyball represent the main base for effective performance and achieving good results. Evaluation of these skills is a helping aspect, so decision making is very important in individual's educational process if connected with volleyball as it is one of the games which require great mental and movement concentration. Significance of the study comes in determining the performance of some important and effective skills in skilled and technical performance of this game. The tactic which builds aesthetics of this game is built if the game is connected with decision making and showing the level of this skill for learners. It is the decision making which makes teachers able to know determine optimal way and pattern of raising the game's level and considering points of strength and weakness in preparing

teaching programs. Individuals are characterized by individual differences and attributes. Therefore, physical education teachers are suffering from some problems when they evaluate their demand or players. Among them, there are those who believe that they know their students well and able to evaluate them based on many impressions formed by improvised scenes, but this knowledge and experience is not different from other scientific methods of evaluation.

Since the researcher works in the sport field and a good watcher of volleyball, he noticed that most teachers focus on skilled performance, ignore mental aspect or they lack experience in this field especially when it comes to mental skills including decision making skill which is considered one of the updated and modern terms which tackles optimal mental ability of learners in an accurate way for good preparation, exert efforts and excel in competition. Therefore, the researcher studied the level of decision making in serving, reception and preparation skills by posing the following essential question: What is the level of decision making in some volleyball skills for secondary stage students?

Goals of the Study:

Identifying the level of decision making in serving, reception and preparation skills

Hypothesis of the Study:

- There are statistically significant differences between decision making and some volleyball skills (serving, reception and preparation).
- There is a low decision making level for secondary stage students in serving, reception and preparation skills.

Terminology & Concepts:

Decision-Making:

In language: It is means what we need to be empowered to control.

Terminology: Decision is selection among different alternatives. Not making a decision towards a certain condition is considered a decision in its own sake.

Volleyball: It is considered one of the most widespread team sports around the world and practiced by various ages and ethnics. It is played between two teams, each team consists of 6 players on a playground with a length of 18 m and width of 9 m. The single volleyball match consists of 4 halves; each round consists of 25 points and it is run by referees. This game depends on fast movement and fast reactions using motor skills such as serving, passing and reception, etc.

2. RELATED STUDIES:

Al Hawary, 2011 conducted a study aimed to determine emotional intelligence level for students at Moata University, the relation between emotional intelligence of students and decision making and determining significance of differences in both emotional intelligence and decision making due to variables of social gender, specialization and educational level. The sample of the study consisted of 897 male and female students from the first academic stage from various specialties and grades. They were chosen in strata randomly. The researcher applied on them both emotional intelligence scale and decision making scale. The study reached the following results: students of Moata University have an average degree of emotional intelligence, there is an effect of total aspects of emotional intelligence on the ability of decision making for university students and there are no differences between emotional intelligence and decision making for university students due to social type and specialization, but there were differences for the sake of the fourth grade in decision making.

In addition, Al Karaan, 2003 conducted a study aiming to determine the effect of the educational program that is based on "Sternberg's Ternary Method" in order to enhance decision making level and gender and specialization at the level of decision making for first secondary stage students (literature / scientific). The sample of the study consisted of 222 male and female students from governmental schools at Jarash governorate. They were divided into two groups: empirical group (120 male and female students) and a control group (102 male and female students). Decision making scale was applied on the sample of the study and results found that: there is a statistically significant effect on the education program for the sake of the empirical group, there is a statistically significant effect for the sake of scientific section's students and there is no statistically significant effect in the gender variable. The researcher recommended conducting studies to determine the level of decision making for university students.

Holt & Sparkes, 2011 conducted a study aiming to determine the ability of female players in decision making skills and implementation during the game after participation in training overlaps lasted for five weeks. The sample of the study consisted of 14 female students of the university team in the Faculty of Sport Education at Charles University, New Zealand. The researcher conducted pre and post tests as follows: cognitive test (30 paragraphs about football and a standard test about technical football skills evaluation). After the end of application period in terms of tactical aspects, results of the study showed that: students of the empirical and control groups had a notable improvement in decision making, both groups were equal in improving ball passing rate, successful execution rate, shooting rate and positive changes in knowing tactics for the empirical group.

How Far the Benefit of Studies:

The researcher's review of these prior studies led to benefit from them in both theoretical and practical aspects as this benefit is represented in:

- Determining the steps to be followed in research procedures from technical or administrative aspects.
- Determining the suitable methodology for the study as the researcher used the descriptive approach to achieve the goal of the study.
- Determining suitable tests to measure variables of the study and suitable method to estimate decision making level.
- Knowing how to use statistical processing, confirm or reject any results of the study through results of related studies.

Field Procedures of the Study:

3. METHODOLOGY:

The researcher used the descriptive approach with a survey as it is suitable to the nature of the study.

Sample of the Study: The sample of the study consisted of 148 students (7% of original population which is 2279 students).

Fields of the Study:

- **Human Field:** This study included students of the 2nd secondary grade for some secondary schools of Mestghanim city.
- **Temporal Field:** The study started from 20/01/2014 till 20/02/2014.
- **Spatial Field:** This study was applied in the volleyball playground at all secondary schools.

The Tools of the Study:

- Arabic & foreign references and sources.
- A computer device including the electronic program.
- Scientific observation.
- Skill tests.

The Used Devices:

Volleyball hall, volleyballs, volleyball net, measuring bands, measuring watches and assistant crew

The Used Tests:

The researcher designed a form concerned with basic skills and determined the most important tests that measure the accuracy of these skills. After presenting the form to a group of experts, the most important of these tests were determined as shown in table (1). All tests were taken from the book of scientific basics of volleyball, measuring and testing methods. (Al Moneim, 1997: p. 209, 211, 236, 239, 241 and 243)

Table (1): Basic Skills of Volleyball and the most important tests chosen by experts

Serial	Skill	Proposed test	Purpose of the study
1	Serving	Test. 1: long serve accuracy	Measuring long serve accuracy
		Test 2: hard points serve accuracy	Measuring specific hard points serve accuracy
2	Serving	Test. 1: serve reception test (1)	Measuring player's skill in serve reception
		Test 2: serve reception test (2)	Measuring player's skill in serve reception
3	Serving	Test. 1: test of preparation close to net	Measuring preparation close to net accuracy
		Test 2: test of preparation from above with fingers	Measuring readiness of the tested in close preparation skill

The Electronic Program:

The used program was test of decision making skill using simulation of playing postures in volleyball using computer program called "Super Lab (Version 4.04)". It presents images as visual attention for choice. This programming presents pictures and records answers of the search and time of answer during different experiments used on the computer. A group of images used representing different playing positions in volleyball chosen by a group of referees and then they were presented to the samples of the study (96 3D pictures) ordered according to name and number using a lottery. The tested respondents answered correct and quick balls during presenting pictures on the computer screen to answer them through choosing the correct decision.

Test Design:

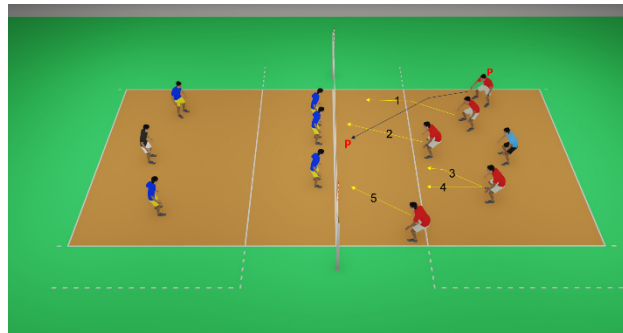
The sample of the study was put before the computer screen, pictures of different positions were presented in the said playing cases and then they choose decisions in each case in good and quick answers by choosing the correct playing position (each playing position has five choices to choose from “from 1 to 5”). Each attempt was made as follows: preparation signal (!): 1500 ml / second showing the picture of a certain playing position and followed by the correct chosen picture after pressing any of the five buttons (1, 2, 3, 4, 5) by your index finger.

Pictures presentation before the tested respondents:

1500 on the screen



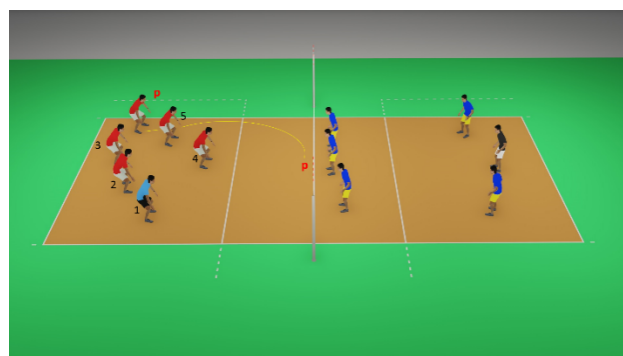
Still on the screen till the answer



1500 on the screen



Still on the screen till the answer



Exploratory Trial:

After the researcher determined the most important basic attacking skills and their related proposed tests, he performed the exploratory trial on 01/01/2014 on a sample of second secondary stage students among those who are not included by the main exploratory trial (10 students). The aim of this trial was to identify the difficulties which may face the researcher during performance of tests, the efficiency of the assistant working team and the lasted time to execute these tests.

Scientific Bases of the Tests

- **Test-Retest (Reliability):** Test reliability is known as giving the same results if repeated on the same persons and under the same conditions. The researcher conducted tests and re-performed them on an exploratory sample of 8 players out of the sample of the study.
- **Test Validity:** It means correct testing of what was measured (Mokaddem, 1993: p. 146). In order to ensure test validity, the researcher used self-validity which is measured by counting the square root of test reliability coefficient: self validity

$$= \sqrt{\text{reliability coefficient}}$$

Table (2): Reliability and Validity Coefficients of the Test:

Serial	Test items	Reliability	Significance	Validity
1	Serving	0.87	0.05	0.93
2	Reception	0.91		0.95
3	Preparation	0.95		0.97
4	Decision-making	0.85		0.92

Table (2) shows that all items of the test gave results with high reliability and validity as we recorded statistically significant correlations in all tests at significance level 0.05 which asserts success in measuring the study variables.

Objectivity: Tests of the study are the most objective as they are proper for the sample of the study and volleyball and they are derived from prior studies, Arabic and foreign references asserting their importance and objectivity. They were chosen based on their effectiveness, easy application and result validity.

Statistical Study:

The researcher used arithmetic mean, Standard deviation, contrast analysis, good compatibility testing and percentage as shown in table (3).

Discussion of Results: First Hypothesis:

- There are statistically significant differences between decision making and some volleyball skills (serving, reception and preparation).

Second Hypothesis:

- There is a low decision making level for secondary stage students in serving, reception and preparation skills.

Table (3): A. Means, Standard deviations, F test of decision making tests in some volleyball skills (serving, reception and preparation)

Tests		Category no.	Mean	S.D	F Counted	F Tabulate	Significance level	significance		
Serving	Test 1	148	27.1	11.82	3.80	3.06	3.05	Significant		
	Test 2		18.8	3.6						
	Decision making		12.35	3.84						
Reception	Test 1		27.25	7.5	5.94			3.06	3.05	Significant
	Test 2		26.15	6.45						
	Decision making		7.85	2.79						
Preparation	Test 1		27	7.40	4.46			3.06	3.05	Significant

	Test 2		26.4	6.70				
	Decision making		7.85	2.79				
Total decision making	Good	18	12.16%					
	Average	40	27.02%					
	Weak	90	60.81%					

In table (3) which shows results of decision making tests in some volleyball skills, we notice that means of serving, reception and preparation are as follows:

Serving: (12.35 / 18.8 / 27.1), reception: (7.85 / 26.15 / 27.25) and preparation: (7.8 / 26.4 / 4.27) and with standard deviations as follows: serving: (3.84 / 3.6 / 11.82), reception: (2.79 / 6.45 / 7.5) and preparation: (2.79 / 6.7 / 7.4).

Accordingly, there were statistically significant differences between decision making level and some volleyball skills as the F counted values for (serving, reception and preparation) were (4.46 / 5.94 / 3.80) which are better than the tabulated one (3.06) under significance level (0.05).

Decision Making: through the table which shows results of decision making tests in some volleyball skills, we notice that there were statistically significant differences between decision making levels (good, average and week) with percentages at all decision making levels ((good, average and week) as: (12.16 / 27.02 / 60.81), so they achieved the hypothesis which says that decision making level is low at each skill (serving, reception and preparation). Results reflected a clear weakness in respondents in decision making as well as their poor performance in volleyball skills performance which asserts that they need follow-up and development in mental skills. Students who use their mental skills well will reflect positively on using their basic volleyball skills which means that skilled performance is connected to abilities. Rayan, 1971 found that the physical and skill conditions do not only express general level of players, but what we need to know is the degree of mental recognition accuracy in their abilities and potentials. Sakhi, 2006 found that continuous use of mental skills training is as important as training on using physical and skill abilities, which means that performing skills with high level leads to increase muscular and nervous compatibility, movement control and good skill performance.

The researcher found that lower levels of decision making skill for the sample of the study is due to the educational content which is almost empty of training related to develop mental abilities of students. It can be said that the best results that can be reached through good execution of basic skills should be related to the student's ability to use his/her mental potentials, especially decision-making which is based on good expectation and timing and ability to follow the ball.

4. CONCLUSIONS:

Through results of the study, the researcher reached some results as follows:

- There are statistically significant differences between decision making and some volleyball skills.
- There are statistically significant differences between total decision making levels.
- Sample of the study has a low decision making level.
- Most individuals of the sample are at weak level.

5. DISCUSSING RESULTS:

Through statistical treatment of the study results and results at above tables, it can be said that:

Discussing Results of the First Hypothesis:

The researcher proposed that there are statistically significant differences between decision making and some volleyball skills. This was found in table (3) as it showed statistically significant differences between decision making and some volleyball skills (serving, reception and preparation). The researcher found that these differences are due to lack of experience and practice in students in performing skills as well as lack of mental and cognitive maturity. Each skill needs repeated physical training in addition to mental skills. Skills in general need from learners high and successful consistency and perception and they need high degree of accuracy, attention, intelligence and recognition.

Discussing Results of the Second Hypothesis:

Results in table (3) showed low decision making level for students in (serving, reception and preparation) skills. The researcher found that most respondents of the sample were at weak and average levels due to the difficulty of this mental skill which needs high consistency between concentration, speed and accuracy in performance. Decision making is one of the most important abilities of players in higher sport levels. Its success depended on basic factors such as information speed, accuracy, and level of

activity, knowledge, skills and prior experiences which are not found in the sample of the study. Fathy, 2008 referred that skill o creative abilities through the ability to take suitable decisions with experience represented in repetition.

6. RECOMMENDATIONS:

- Asserting the use of various teaching methods based on a modern technique that make the teacher's role effective in educational process.
- Performing periodic and continuous tests of mental abilities of students with the aim of identifying their reality and them work on developing them.
- Performing similar researches on students for the other volleyball skills and other sport games' skills to know the importance of decision making on different sport events.
- The necessity of making teachers aware how to develop variables of decision making skill for sport movements through practical experiences using different senses.
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