

# Psychological flow and its relationship to visual focus and crushing skill accuracy of volleyball

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## **Abstract**

*The current study was conducted in order to find the relationship between psychological flow, visual focus, and the accuracy of the crushing skill of volleyball, as the researcher used the descriptive approach in the manner of correlations. Their number is (35) players. (5) players from the main sample were excluded. They participated in the exploratory experiment. (2) players were excluded due to injury. (12) players were chosen randomly to represent the main sample of the experiment. To achieve the objectives of the research, the researcher adopted the psychological flow scale and the visual focus test. According to the tests of the computerized Vienna system of the Austrian Schofred Company and the crushing hitting test with volleyball, which are standardized tests and applied to the Iraqi environment, and after processing the data statistically, the researcher concluded that there is a significant correlation between psychological flow, visual focus, and the accuracy of the crushing hitting skill with volleyball, and that the research sample enjoys psychological flow and self-awareness As a result of the interest in the psychological aspect of the players and the regular training of psychological skills, and that the use of measurement and testing methods a Modern and computerized has a positive role in obtaining accurate measurement results..*

**Keywords:** *psychological flow, visual focus, accuracy of the crushing skill of volleyball*

## **Introduction**

Sports psychology is one of the sciences concerned with studying the psychological state of the athlete and finding objective treatments for the problems facing the players. Therefore, developed countries sought to find the best methods and scientific solutions in order to raise the level of sports and achieve achievement and the continuous pursuit in order to bring the player to the level of psychological flow through integration and feeling Positive performance and enjoyment of sports activity and access to optimal psychological energy, integration, focus and accuracy in performance, so psychological flow is defined as “a state of absolute focus and integration and a sense of happiness when practicing activity” (Muhammad Al-Sayed, 2013: 6) and it is “a subjective state of the athlete that is announced when he integrates wholly in the activity and the attention is concentrated in the performance that he performs with all his energies and capabilities.” MihályK, 1975 :10). Among the mental skills and visual abilities that volleyball players need is visual focus, as it is “the ability to fix attention on a chosen stimulus for a period of time” (Mahmoud Abdel Hassan, 2008: 33), and it also means “training the eye to see the smallest details” (Hassan Ali, 2016: 51), and being one of the fast games that require the player to perform quickly and focus on empty points during the game to drop the ball in them in order to achieve an expense. With one hand, forcefully over the upper edge of the net and directing it to the opposing team’s court in a legal manner” (Nahida et al., 2015: 63) and it is considered the basic skill through which the team achieves a point on the opposing team, which requires psychological flow and high concentration of its performance at a high and successful level in order to Winning.

□ Hence the importance of research in the study of psychological flow and its relationship to visual focus and the accuracy of the skill of crushing volleyball.

As for the research problem, it was formulated with the following question:

Is there a relationship between psychological flow, visual focus, and the accuracy of the crushing skill of the players of the Department of Sports Talent Nurturing - Specialized Volleyball School, Diyala Branch?

The research aims to:

1. Identifying the psychological flow of the players of the Department of Sports Talent Care - Specialized Volleyball School, Diyala Branch.
2. Recognizing the visual focus of the players of the Department of Sports Talent Care - Specialized Volleyball School, Diyala Branch.
3. Identifying the accuracy of the crushing hitting skill for the players of the Sports Talent Nurturing Department - the Specialized Volleyball School, Diyala Branch.
4. Finding the relationship between psychological flow, visual focus, and the accuracy of the crushing skill of the players of the Department of Sports Talent Nurturing - the Specialized Volleyball School, Diyala Branch.

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## **Research methodology and field procedures:**

### **Research Methodology :**

The researcher used the descriptive approach in the style of correlational relations due to its suitability to the research problem, as it is "an attempt to determine the relationship between two or more measurable variables, and the degree of this relationship" (Allawi, 1999: 103.)

### **Research population and sample:**

The research community was chosen by the intentional method, and they are the players of the Sports Talent Nurturing Department - the Specialized Volleyball School, Diyala Branch, with ages below (16 years), and are detailed as follows: The total number of the research community is (35) players, and (5) players were excluded from the main sample who participated in the exploratory experiment, and (2) players were excluded due to injury, and (12) players were randomly selected to conduct the main experiment on them.

### **Variables used in the research:**

#### **Psychological Flow Scale:**

After examining the research on the sources and studies, the researcher adopted the psychological flow scale prepared by (Azhar Kamal, 2017: 123-125), which is a standardized scale and applied to the Iraqi environment, as the scale consisted of (33) paragraphs with five alternatives to the answer, which are (strongly agree, agree), somewhat agree, disagree, strongly disagree) and the answer is in degrees (1, 2, 3, 4, 5) as the lowest score for the scale is (33) degrees, the upper score is (165), and the hypothetical mean is (99) degrees.

#### **Visual focus test:**

The researcher relied on the visual focus test, which is one of the tests of comprehensive periphery perception due to the Austrian Schuhfried test system, which is a sophisticated and computerized system with multiple uses for accurate and objective psychological and cognitive measurement, which consists of a screen that contains digital (optical) side arms and a comprehensive control panel that contains Numbered and colored buttons and digital pedals are placed on the ground in front of the tester, as this test is designed to assess the perception and processing of external visual information. Exactly in the middle of the device, and at the start of the examination, a light stimulus will move that occurs by emitting signals that appear at a specific speed) and by looking at the computer screen and focusing the tester's sight on the center of the screen from which he should move a distance between (40-60 cm) and when the subject moves less or more than the permissible distance, an alert will appear on the computer screen to alert the laboratory to return within the standard range for the examination, noting that the Vienna test system has indicators of validity, stability and clarity It is accurate, comprehensive, and has a very high accuracy, and holds the international quality certificate. A detailed standard score is given after the laboratory finishes the test. It can be withdrawn for the purpose of conducting statistical treatments for the measured variables, noting that the total time for the test is (15 minutes.)

The test is done by giving instructions to the laboratory, then the exercise phase for a period of (5) minutes by applying actual illustrative examples, after that the actual testing phase takes place, and one of the variables that can be measured within the news of peripheral perception is the visual focus, as a good visual focus is a necessity for many events practiced by humans, especially in sports, through the laboratory tracking the degree of deviation of the two intersection lines controlled by the laboratory by controlling a rotating disk (in white) on the comprehensive response board of the Vienna Test System, by tracking a moving target at a constant speed that is variable in direction From right to left and vice versa, shown on the computer screen in front of the laboratory, which indicates the strength of the visual focus, as shown in Figure (1). (Schuhfried GmbH, 2010: 3).



**Figure 1** shows the overall response panel

#### **Smashing Accuracy Test:**

The name of the test: the accuracy of the crushing hit in the diagonal and linear direction (Hassanin and Abdel Moneim, 1997: 208-09)

### Test purpose:

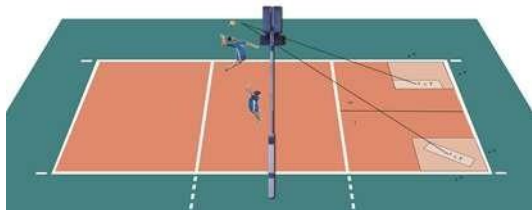
- Measurement of crushing accuracy in diagonal and rectilinear direction.

### Tools:

(30) Volleyball, legal volleyball court, two ranks placed as in Figure (2).

### Performance specifications:

- Beating from center No. (4) so that the coach prepares the ball for him from center No. (3) On the laboratory to perform (15) crushing attempts towards the diagonal direction (the rank in the center (5) and another (15) crushing blow towards the straight direction arranged located in the center (1).
- Register:
- 4 points for each correct smash in which the ball lands on the mattress.
- 3 points for each correct smash in which the ball lands in the planned area.
- Two points for each valid smash in which the ball lands in area (a) or (b).



**Figure (2)** Demonstrates the method of performing the diagonal and straight crushing accuracy test

### Exploratory Experiments:

#### The first reconnaissance experiment:

The researcher conducted the first exploratory experiment on Monday, corresponding to 7/8/2019, on a sample of (5) players from the research community, by applying the psychological flow meter and testing the accuracy of crushing beating in the closed sports hall of the Diyala Youth Directorate. The aim was:

- Ensure the validity and suitability of the paragraphs of the psychological flow scale and test the accuracy of the overwhelming multiplication of the research sample.
- Identify the difficulties that the researcher may encounter during the experiment and verify the tools used in the application of the test.
- Ensuring the efficiency of the auxiliary work team and the extent of accuracy in implementing the tests.

#### The second reconnaissance experiment:

The second exploratory experiment was conducted on Monday 15/7/2019 on the same sample consisting of (5) players on whom the first exploratory experiment was conducted in the Psychological Research and Studies Laboratory / University of Baghdad. The aim of the experiment was:

- Identify the difficulties and problems that the researcher may encounter.
- Suitability of the test for the research sample.
- Test time for each player.

#### The main experiment:

The researcher applied the main experiment on a group of (12) players by measuring the psychological flow and the crushing beating test on Saturday corresponding to 7/20/2019 by distributing the questionnaire to the players and then conducting the crushing beating test in the closed gymnasium / Diyala Club Then, the visual focus test was conducted according to the Vienna system, Psychological Studies and Research Laboratory / University of Baghdad, on Wednesday 7/24/2019, and then the data were extracted for statistical processing.

### Statistical Methods:

The statistical bag (spss) was used to process the statistical data and extract the results, which are the arithmetic mean, the standard deviation, and the correlation coefficient (Pearson).

**Presentation, analysis and discussion of the results:**

**Table (1)**

It shows the arithmetic mean and standard deviations of the psychological flow, visual focus, and the accuracy of the skill of hitting the crushing volleyball

variants	Arithmetic mean	standard deviation
psychological flow	116.22	16,962
visual focus	56.06	7,712
Smashing accuracy	67.44	11,268

From Table (1), it was found that the arithmetic mean of the psychological flow was (116.22) and the standard deviation (16.962), and the arithmetic mean of the visual focus was (56.06) and the standard deviation (7.712), while the accuracy of the multiplication skill was (67.44) and the standard deviation (11.268)

**Table (2)**

It shows the values of the correlation coefficient and the level of significance for the psychological flow, visual focus, and the accuracy of the skill of crushing the volleyball

variants	psychological flow	indication
visual focus	0.713**	moral
Smashing accuracy	0.584 *	moral

It was shown from Table (2) that there was a significant correlation between the research variables, as the value of the correlation coefficient between psychological flow and visual focus was (0.713\*\*), and the value of the correlation coefficient between psychological flow and the accuracy of the crushing skill reached (0.584\*), thus achieving the goals of the research.

The researcher attributes the existence of a significant correlation to the process of selecting the players according to accurate scientific bases in terms of physical, skill and psychological aspects, and good psychological preparation during the training stages, making the players in a state of positive emotions, renewing psychological energy, and reaching a state of psychological flow that makes the player in a state of integration, a feeling of happiness and focus. In achieving the best performance, and this was confirmed by (Akla Al-Houri, 2019) that psychological flow is “a state of emotional flow and integration during the game to the point of self-forgetfulness and achieving a high level of motor creativity and focus on performance” (Akla Al-Houri, 2019: 142) and that the player’s feeling is in a state of Excitement and suspense in performance leads to an increase in visual focus, and this is confirmed by (Osama Kamel, 2007) “The motor duties that are characterized by excitement and suspense lead to an increase in the retention period of attention and visual focus during the motor duty” (Osama Kamel, 2007: 366), as well as for visual focus The high has a fundamental role in achieving accuracy in implementing the skill of crushing hitting and focusing on weaknesses and voids in the opposing team’s court in order to score points, and this was confirmed by (Sabah Nouri et al. 2011) My high vision among the players works to implement offensive skills with high accuracy, and helps to achieve a good reaction and then a good motor response” (Sabah Nuri et al. 2011: 37), and the crushing skill is one of the offensive skills that is distinguished from other skills that require the player The attacker should have a strong personality characterized by self-confidence, intuitive speed, and positive emotions that work to achieve the best performance, as the offensive strike is one of the important means to score points in volleyball, so the attacker must be distinguished by strong observation, good behavior, intuitive speed, self-confidence, speed of movement and timing appropriate for performance” (Tariq and Hussein, 2011: 55-56), and it also requires high visual concentration, as it plays an effective role in mobilizing positive psychological forces, achieving motor performance and mastering skill in order to win the attack by achieving a correct point in the opposing team’s play. Effective in mastering motor skills and mobilizing the psychological forces associated with the skill” (Wissam and Samer, 2013: 54).

**4- Results**

In light of the results achieved, the researcher concluded the following:

1. There is a positive correlation between the variables of the study, which are psychological flow, visual focus, and the accuracy of the crushing skill of volleyball.
2. The research sample enjoys psychological flow and self-awareness as a result of the interest in the psychological aspect of the players and the regular training of psychological skills.
3. The use of modern and computerized measurement and testing methods has a positive role in obtaining accurate measurement results.

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**Accessory (1)**

Psychological flow scale for volleyball players

Dear Player..... Respected

The researcher intends to conduct a study to identify the psychological flow. In front of you is a set of paragraphs that measure the psychological flow. Each paragraph has five alternatives (strongly agree, agree, somewhat agree, disagree, strongly disagree). Being a volleyball player, I put in your hands this questionnaire, asking you to answer. With all honesty and sincerity, it is a service for scientific research and the sport of volleyball, noting that the information will be confidential, and only the researcher can see it, taking into account the following:

1. Read each paragraph well.
2. Do not leave any statement unanswered.
3. Answer with a (correct) mark in the appropriate field.

Player Name:

Date of birth:

Date of joining the team:

Academic achievement:

T	paragraphs	Strongly Agree	OK	Somewhat ok	not agree	Strongly Disagree
<b>Balance between challenges and skills :</b>						
1	I am not sure of my abilities and athletic skills.					
2	I can achieve my goals despite the tough competition					
3	I can't adapt to unforeseen competition circumstances.					
4	I didn't feel competent enough to meet the high demands of the event.					
<b>Focus in the current activity:</b>						
5	My attention was completely focused on my performance.					
6	I didn't focus well on my performance at times.					

7	I had a pretty good idea of my level of play and how good I was at it.					
8	The crowd sounds distract me.					
Loss of self-awareness:						
9	I wasn't interested in other people's evaluation of me.					
10	I feel like my body is tense.					
11	I make more mistakes the more important the competition.					
12	I get nervous when some important people watch my performance.					
13	I wasn't worried about how I would perform.					
Sense of control:						
14	I didn't have a strong sense of what I was doing.					
15	I felt I could control what I was doing.					
16	I felt in total control of my body.					
17	I lost control of things sometimes.					
Clarity of goals:						
18	My goals were clear and well known.					
19	It wasn't clear how I was doing.					
Fusion of action and consciousness:						
20	I felt completely immersed in the performance.					
21	I didn't fully blend in with my team mates.					
22	Something was distracting me during the performance.					
shift time:						
23	It seemed to me that time had changed (accelerated or slowed down).					
24	I felt that time passed quickly.					
25	I felt that time passed slowly.					
Purpose of the experiment:						
26	I loved the feeling of performing and would like to do it again.					
27	The experience made me feel very happy.					
28	I was disappointed by the experience.					
29	I follow the coach's instructions to the letter.					
Quick feedback:						
30	I could tell from my performance that I was doing well.					
31	The picture was clear of how my performance was going.					
32	My performance was subjective and I didn't think much of it.					
33	I think a lot about correcting my movements and how to perform them.					