

An analytical study of the levels of psychological stress in volleyball for second-year students, College of Physical Education and Sports Sciences, Al Ain University

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Summary of the research

The importance of this research and the need for it lies in knowing the levels of students of the College of Physical Education and Sports Sciences at Al Ain University, and since the researcher did not find a scale that measures psychological stress in volleyball, the researcher decided to build a measure of psychological stress for students, to be a ready tool for identifying levels among students, and the problem of the research is In the fact that psychological stress plays an important and influential role on students' behavior, however, the researcher, to the best of his knowledge, did not find a tool to measure it among students, which means that there is a lack of attention to the psychological aspect in the volleyball lesson, so the researcher decided to address this problem and develop appropriate solutions to it through During the construction of a psychological stress scale to be a clear indicator for workers in this field, the research objectives were to build a psychological stress scale and apply it to students, and to identify the levels of psychological stress among students. The researcher used the descriptive approach using the survey method due to its suitability and the nature of the current study.

1- Introduction to the research:1-

1-1 Introduction to the research and its importance:

In light of global openness and the amazing scientific progress witnessed by nations and peoples in various fields of life, psychology has emerged, which is considered one of the important and vital sciences in the sports field. Sports psychology comes at the forefront of sciences that help the success and development of sports performance in various sports, and it is concerned with studying and understanding many... Among the psychological variables that players are exposed to are fear, anxiety, stress, and low self-



confidence, given that the future development of players' athletic performance and their ability to excel and achieve the best athletic levels depends on increasing attention to their psychological aspects.

Psychological factors are of great importance in determining the outcome of students' efforts in practical lessons in general, especially the volleyball lesson, as it has an important role in improving and developing skill performance, and the presence of any defect in the psychological state has a direct impact on their abilities and performance in general. Therefore, psychological stress is an important psychological factor, which can be observed through the individual's behavior in his responses to new sporting situations during the skillful performance of the lesson. Progress in the sporting level is an expression of functional and psychological adaptations that occur in the internal systems, and accordingly, the individual's functional capabilities increase, which vary in degree. The effect depends on the nature of each activity, the time of practice, and the style of performance in the game of volleyball.

From the above, the importance of this study and the need for it in knowing the psychological stress levels of students of the College of Physical Education and Sports Sciences, Al Ain University, in the volleyball lesson is highlighted. Therefore, the researcher decided to build a psychological stress scale for students, to be a ready tool to identify their levels.

1-2 Research problem

Through the researcher's experience in the field of volleyball and through her question to the volleyball professor at the College of Physical Education and Sports Sciences, Dhi Qar University, she noticed that there are psychological problems facing students during the volleyball lesson, and among these problems is the presence of psychological tension in them when performing basic skills, which reflects negatively on the level of Learning and performing these skills is the root of the research problem, which requires decisiveness and determination in determining the decision to perform the required performance. It is one of the psychological emotions that must be studied and analyzed until its reality and concept become clear.

1-3 Research objectives



1- Building, codifying, and applying a volleyball psychological stress scale for students of the College of Physical Education and Sports Sciences, Al Ain University, for the academic year 2023-2024.

2- Identifying the level of psychological stress and psychological stress in volleyball for students of the College of Physical Education and Science

1-4 areas of research

1- 4-1 Human field: Second stage students in the College of Physical Education and Sports Sciences, Al Ain University for the academic year (2023-2024)

1-4-2 Time range: 10/15/2023- 12/1/2023

1-4-3 Spatial area: Classrooms at Al Ain University, College of Physical Education and Sports Sciences

3-1 The research population and its samples:

3-2-1 Research community:

The research community was determined by the second stage students at the College of Physical Education and Sports Sciences, Al Ain University, for the academic year 2023-2024, who number 150 students.

3-2-2 Research samples:

1- Construction sample: - (80) students were selected to sample the psychological stress scale

2- The exploratory experiment sample: The exploratory experiment sample included (10) players

3- Application sample: It included (60) students

3-3 Methods, devices and tools used in the research:

“It means the means or method by which the researcher can solve a problem, whatever it may be

Tools, data, samples, or devices” (1).



1- Research methods: These include:

- Scientific observation.
- Statistical methods.
- Arab and foreign sources and references.

2- Devices used in the research:

- (1) HP computer - (1) laser printer.
- Manual electronic calculator, type (CASIO), number (1).
- (1) electronic watch.

3- Tools used in the research:

- Stationery and office tools (paper and pens).
- Laser discs (DVD) (3).

3-4 Field research procedures:

3-4-2 Procedures for constructing a psychological stress scale:

3-4-2-1 Determine the goal of constructing a psychological stress scale:

The first step in building any scale is to clearly define the purpose of the scale and what is the intended use for this scale. The goal of the current scale is to arrive at a scale that shows the psychological stress of volleyball coaches.

3-4-2-2 Determine the phenomenon to be measured:

In defining the theoretical concepts related to the phenomenon to be measured, the researcher relied on two scientific theories, the first (Haider's theory) () and the second (Bernard Wiener's theory) () as a perspective for constructing a measure of psychological stress for volleyball coaches.

3-4-2-3 Determine the areas of the (psychological stress) scale:

Three areas of psychological stress were identified (physiological - emotional - mental) with implicit items within one scale.

3-4-2-4 Determine the validity of the proposed fields:

After the main areas of the scale were identified, the researcher worked to identify the validity of the representation of these areas, and it was presented to a group of experts and specialists in educational and psychological sciences, sports psychology, measurement and evaluation, who numbered (11) experts, and by analyzing the experts' opinions statistically, the researcher used (K2) test to determine the agreement of the opinions of experts and specialists regarding the two areas of the scale

3-4-2-5 Determine the method and principles of drafting the items of the psychological stress scale:

The researcher used a common method of measurement, the Likert method, in constructing a measure of psychological stress for trainers, as "the Likert method is one of the best methods in predicting behavior or phenomenon" (3) for the following reasons (4)

- 1- Ease of use.
- 2- The scale has a high degree of reliability and validity.
- 3- It reduces the degree of guesswork and the factor of chance.

3-4-2-6-1 Preparing and compiling the psychological stress scale items:

The researcher prepared phrases for each field of the scale after reviewing Arab and foreign sources and references and the theoretical framework, as well as a group of multiple psychology scales that are researched in other fields in order to benefit from the meanings of the phrases in light of the theoretical definition of causal attribution and its fields, where the researcher developed (46) An introductory paragraph, divided into the three areas.

The researcher used the following alternatives (always agree - often agree - sometimes agree - rarely agree - never agree).

3-4-2-4-2 Determining the validity of the psychological stress scale items:

The researcher presented the scale items to an expert to evaluate them linguistically so that they were sound and free of linguistic errors, before identifying the validity of the

scale items. The researcher took into account the observations made by the linguistic evaluators about the scale items and thus the paragraphs were linguistically sound. These paragraphs were presented with a questionnaire to determine their validity to a group of (11) experts and specialists in the educational and psychological sciences, sports psychology, and testing and measurement, for the purpose of judging their validity in terms of wording and suitability for measuring areas of psychological stress, as well as making whatever modifications, evaluations, and rewording they deem appropriate. Merging, deleting, and adding to the items, while determining the validity of the paragraph or not by placing a mark (✓) to the left of the statement, in addition to taking their opinion on using the five-point scale to estimate grades. Finally, the experts were assured of confirming their observations and suggestions about the general form of the scale, as the researcher analyzed The opinions of experts and extracting the value of (Ka2), and after the researcher analyzed the specialists' responses by using the law (Ka2) at a significance level of (0.05) to compare between those who agree and disagree, it was found that (12) items were excluded from the list, becoming (44) paragraphs that obtained complete agreement in its validity in measuring psychological stress, and the researcher took into account all the observations made by experts and specialists, for the purpose of applying the scale to the construction sample.

8-2-4-3 The exploratory experiment for the psychological stress scale:

The scale was applied to a survey sample of (10) students from the study population, and they were asked to read the instructions and phrases, inquire about any ambiguity, and mention the difficulties they face while answering regarding the scale's items. After completing the application, it became clear that the instructions are clear and the phrases are understood by the respondents.

3-4-2-12 Statistical analysis of the items of the psychological stress scale:

3-4-2-12-1 Calculating the discriminatory power of the paragraphs (the two peripheral groups):

Discriminatory power means the extent to which the items are able to distinguish between those with high levels and those with lower levels of players in relation to the field that the items measure (1), and to reveal the discriminatory ability of the items on

the psychological tension scale, the researcher used the two extreme groups method, as it is

2-12-2-4-3 Internal consistency coefficient for the psychological stress scale:

First: The correlation between the score of the item and the total score of the psychological stress scale:

It became clear from the results that the value of all items ranges from 0.686-0.987. It is a high stability indicator

3-4-2-13 Psychometric properties of the psychological stress scale:

3-4-2-13-1 Validity of the scale (psychological stress):

The researcher relied on two types of validity to ensure the validity of the psychological stress scale, which are:

A- Apparent honesty (expert honesty):

This type of validity was achieved when the psychological stress scale, with its fields, alternatives, instructions, and paragraphs, was presented to a group of experts and specialists in the field of sports psychology, testing, measurement, and scientific meetings with the experts to confirm the validity of the fields and paragraphs of the scale nominated for use.

B- Construct validity (validity of hypothesis formation):

It is considered one of the most types of validity due to its suitability for constructing standards. It is called the validity of the concept or the validity of the hypothesis formation because it depends on experimental verification of the extent to which the scores of the items match the characteristic or concept to be measured, and the methods of analyzing the items are indicators of this type of honesty (). Validity was calculated through:

1- The two-group method: The discriminatory power of the items was extracted when analyzing the items statistically, in light of which the items capable of distinguishing between individuals with high scores and those with low scores were identified.

2- The relationship of the score of each item to the total score of the scale (internal consistency): The researcher verified this validity by extracting the correlation coefficients of the score of each item to the total score of the scale.

3- The relationship of the score of each item to the total score of the domain (internal consistency): The researcher verified this validity by extracting the correlation coefficients of the score of each item to the total score of the domain.

3-4-2-13-2 Reliability of the psychological stress scale:

Reliability is an essential element in constructing tests and is defined as “accuracy in estimating the individual’s true score on the item that the scale measures, or the extent of consistency in the individual’s relationship if he takes the same scale several times in the same circumstances.” (). To verify the stability of the psychological stress scale, the researcher chose two methods: :

Firstly, half-division: in which the items of the scale are divided into two halves, the first half includes the individual items and the second half includes the even items. In this way, we obtain two scores for each individual and find the correlation coefficient between the two scores to obtain the reliability coefficient and half the reliability coefficient ().

The researcher adopted the construction experiment sample questionnaires amounting to (80). The researcher divided the items of the scale into odd and even items. The Pearson correlation coefficient was calculated between the scores of the two groups using the SPSS statistical package. The degree of reliability was (0.876). To find a complete degree of reliability, I used The researcher used the equation (Jathman), as the degree of reliability reached (0.933), which is a high value indicating the stability of the scale.

Second: Cronbach’s alpha equation: It is one of the most common reliability measures and is most suitable for scales with a graduated scale, as this method depends on the extent to which the items are related to each other within the scale, as well as the correlation of each item with the scale as a whole, as the “rate of internal correlation coefficients Between the paragraphs is what determines the alpha coefficient (). To calculate the reliability of the scale, the researcher relied on the data of the application

experiment sample, which amounted to (80) trainers, using the statistical package (SPSS). It was found that the value of the reliability coefficient is equal to (0.943), which is a high stability indicator.

3-4-2-14 Finding standard scores and levels for the psychological stress scale and its areas:

First: Normal distribution:

Most sampling distributions are not completely symmetrical and may lean towards one side of the maximum value more than the other. If the values of the variable are centered towards small values more than they are centered towards large values, then the distribution of this variable is skewed towards the right and it is called positive skewness. If it is the opposite, it is negative. Convolution to identify how close and far the sample answers are from the normal distribution. As shown in Table (1)

Table (1)

It shows the arithmetic means, standard deviations, and skewness coefficient for the psychological stress scale

skewness coefficient	standard error	standard deviation	Test arithmetic mean
0.972	0.764	19.538	162.21

Table (2)

It shows the standard levels and the standard and adjusted scores

The raw scores, frequencies, and their percentages for the psychological stress scale for the construct sample

percentage	the number	Raw grade	Standard score	Standard score	Levels
5%	4	80-68	+3_+1,8	175-210	very high
50%	40	68-56	+1,8_+0,6	140-174	high

33.75%	27	56-44	+0,6_-0,6	106-139	middle
6.25%	5	44-32	-0,6_-1,8	73-105	low
5%	4	32-20	-1,8_-3	42-72	very low

By completing the previous procedures that were followed to build a measure of psychological tension, the researcher will have achieved the first goal of his research, which is to build a measure of psychological tension for students.

3-5 The main experience of the application sample:

After completing the procedures for constructing the psychological stress scale, the researcher applied the scale, which has (42) items, to the main application sample of volleyball coaches, which numbered (60) students.

3-6 Statistical methods:

Statistics is “the science that investigates the collection, presentation, tabulation, and analysis of data and the use of the results in prediction, report, or investigation” (). The researcher used Excel and the Statistical Package for the Social Sciences (SPSS).

4-1 Presentation, analysis and discussion of the results of the psychological stress scale levels:

Table (3)

Shows the statistical indicators for the application sample in the psychological stress scale

Level	Skewness	Standard Error	Standard Deviation	sample	mean	Scale
Psychological stress	0.2867	0.563	12.08	60	109.166	

The table above shows us that the level of the application sample of the Psychological Stress Scale obtained an arithmetic mean of (109.166), a standard deviation of (13.321), and a hypothetical mean of (126). As for the skewness coefficient, it reached (0.341) and

it fell at the (average) level. As for the error The standard reached (0.231), which is a small value that indicates the internal consistency of the sample results. We see from this that the psychological stress scale is distributed on several levels, which are (very high), (high), (medium), (acceptable), and (weak). This indicates that there is a difference in the levels of psychological stress among students, and the table () shows this.

Table (4)

Shows the raw scores, levels, frequency, and percentage of the application sample for the Psychological Stress Scale

percentage	the number	Raw grade	Standard score	Standard score	Levels
80-68	0%	0	175-210	80-68	very high
68-56	6.66 %	2	140-174	68-56	high
56-44	40%	12	106-139	56-44	middle
44-32	36.66 %	11	73-105	44-32	low
32-20	16.66%	5	42-72	32-20	very low

Through the results presented in table (4), it was shown that the psychological stress among members of the research sample falls within the average level

The researcher believes that the student, like all other individuals, becomes increasingly stressed as a result of facing various frustrations and pressures that result in not satisfying his psychological needs. He is in need of appreciation, in need of a happy family life, and in need of self-actualization like other people who are subject to the same behavior dynamics, but he is demanding. He has a great deal of commitment in everything, and this commitment puts pressure on him at home, the club, and society.

As for Murray, he used the concept of need as a compound that represents a force in an area of the brain that regulates perception, understanding, reasoning, inclination, and



action, and where the unsatisfied situation is transformed in a certain direction and the need is aroused as a result of internal pressures or as a result of external factors, and its impact depends on the locus of control. It is a term that indicates whether the individual believes that he is responsible for the success or failure that happens to him in his life, or that this is due to luck, charity, fate, or the power of others. In the first case, control is internal, and in the second case, the center of control is external. Murray defined approximately Twenty things he concluded through his studies.

Murray also discussed the mutual relationships between these needs, pointing out that there is a hierarchy whereby these needs take priority over others.

In this regard, the term “prepotency” is used to indicate the most urgent needs. If two or more needs are consulted in a situation, the priority is given to the greater need. Although psychological tension is part of a person’s life, it does not necessarily have to be a negative phenomenon, and therefore the person must get rid of it. Including.

We need it to a reasonable extent to stimulate activity and motivation in us to carry out our work and achieve our goals, as whenever tension increases beyond this level, the negative or harmful effect on the individual begins.

This is what was indicated by the study (Al-Mulla), where it was found that stress is linked to creativity and motivation, as it leads to an increase in the level of motivation to a certain extent. If stress decreases or increases beyond this limit, it will lead to a delay in the level of performance and will be an obstacle to it.

Pynoss's study indicated that slight stress is a natural part of learning processes, and the amount of stress depends on how individuals perceive their abilities to cope with the difficult situations they are experiencing

Robert also found that stress has a clear effect on individuals who perform tasks that require unusual mental efforts. When they are exposed to a problem, complex processes occur in the brain. One of the hormones stimulates an area responsible for remembering and learning, which solves the problem, but the presence of these hormones occurs in a negative manner. Continuing to the brain leads to adverse results, which leads to poor memory.



In team games, the coaches working in them seek to know the levels of psychological stress among the players through the use of special measures. The coach can reduce the negative effects of stress and help players achieve excellence and victory in the sports field by using appropriate methods to deal with players.

The most urgent .

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Psychological stress scale

It does not apply to him at all	It applies to a small degree	It applies to a moderate degree	It applies to a large extent	It applies to a very large extent	الفقرات	ت
					I feel completely relaxed before the lecture.	1
					My heart beats hard when I enter the lecture	2
					I sweat when I am exposed to embarrassing situations during my performance.	3
					I feel comfortable when the professor talks to me about my private affairs.	4
					On the day of the volleyball lecture, I feel very tired.	5
					I can make a decisive decision quickly in sudden situations.	6
					I find it difficult to regain my calm after the reason for my excitement has disappeared.	7
					I am bothered by the discrimination between students in treatment by the professor.	8
					I get angry quickly for trivial reasons when talking about my mistakes in front of students	9
					My heart rate increases when the professor calls me during a performance to give me specific directions.	10
					I can imagine what would happen when performing the preparation skill before performing it.	11
					I feel dryness in my throat and pharynx when my subject teacher watches my performance.	12

المجلد (١) العدد (٢) الجزء (٢)

					I feel calm, relaxed, and have regular breathing when I perform the skill alone before the lecture begins.	13
					I feel that I am able to perform the preparation skill at a high level.	14
					I feel happy when the professor points out my mistakes frankly.	15
					I lose the ability to concentrate when performing the skill in front of students	16
					I speak calmly and confidently with the professor, even when my performance is wrong.	17
					When I sit down to rest and relax, I find myself preoccupied with negative thoughts related to skill	18
					I control all my movements, no matter how embarrassing or surprising the situation is.	19
					I feel that I have enough energy to carry out the task with preparation skill.	20
					I lose the ability to concentrate when performing in front of colleagues.	21
					It is easy for me to distinguish the stages of performance when performing the preparation skill.	22
					My body temperature rises unusually when I am assigned to perform the preparation skill	23
					I feel that I have increased sensitivity to external stimuli (sound, light,...)...	24
					I grind my teeth when I repeat the same mistake in performing a skill	25
					Before performing the number skill, I feel sudden muscle pain (spasms, cramps)	26
					I tend to bite my nails when performing a skill.	27
					I feel pressure in my head as if it will explode when I perform the skill incorrectly.	28
					I feel that I overreact when I make a mistake in performing a skill.	29
					I find it difficult to focus attention when performing the preparation skill.	30

					I involuntarily chew my lip when the professor scolds me for my performance	31
					I feel annoyed when my colleagues perform the skill correctly	32
					I will be smiling and optimistic in all circumstances.	33
					I am very pleased with the start of the lecture	34
					I always feel uncomfortable if I make a mistake in a match	35
					I want to continue performing, even if mistakes are repeated	36
					I feel that I exaggerate my reactions when I repeatedly make mistakes in a skill	37
					I am often exhausted in lecture	38
					I constantly feel under pressure	39
					I feel like my nerves are tense for no real reason	40
					I feel that I am very hesitant in making my decisions	41
					I often postpone performance until the next time	42