

PREPARING A PSYCHOLOGICAL STRESS SCALE FOR STUDENTS OF THE FIRST STAGE OF THE FACULTY OF PHYSICAL EDUCATION IN FREE SWIMMING

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Abstract:	Keyword
The search goal is to: 1- Preparing a psychological stress scale for students of the College of Physical Education - University of Baghdad. 2- To identify the level of psychological stress among students of the College of Physical Education - University of Baghdad. The researcher used the descriptive survey method in measuring the psychological stress characteristic of the students of the College of Physical Education, University of Baghdad. He used the scale of (Huda Jalal) for psychological stress after preparing it by applying it to a sample of (120) students from the Faculty of Physical Education (first stage). The data was processed statistically using the statistical bag for social sciences (spss), and the most important conclusions reached by the researcher are: 1- There is a psychological tension among the students of the first stage in the College of Physical Education - University of Baghdad towards performing the skill of the effectiveness of free swimming. 2- Reducing psychological tension had a positive effect on improving the performance of the free swimming activity skill among students of the Faculty of Physical Education. 3- Following the correct methods in learning the skill of free swimming and the visualization and mental recovery procedures had a direct impact on increasing the skillful performance mechanism. In light of the conclusions reached by the researcher, he recommended the following: 1- Benefiting from the measure of psychological tension in measuring the psychological hesitation of other societies in other sports. 2- Conducting a study dealing with the relationship between psychological stress and other psychological variables. 3- The need to develop educational (psychological) curricula to treat some players who suffer from high psychological tensions.	Psychological tension, swimming ,the students , Motor skills

INTRODUCTION

1-1 Introduction and the importance of the research:

Psychological tension is one of the most important psychological manifestations that students face as a result of the various pressures of life, including the environment in which they live and the circumstances surrounding them, this tension may be internal and affect the students' internal and organic systems and thus affect performance, or this tension may be external and inferred from some external indicators and psychological tension is one of the most complex psychological manifestations accompanying human behavior because it

overlaps with other alternative concepts used in different life situations such as stress, anxiety, conflict and aggression⁽¹⁾, Therefore, the degree of psychological tension for beginners should be known and work to reduce this psychological tension, because the effectiveness of swimming is one of the sports in which the use of a frightening environment for the beginner, which negatively affects the degree of tension and thus leads to the ability of the learner to understand the subtleties of movement and its interdependence, except through the use of advanced methods, methods and programs. It works positively to reduce stress, including programs to learn the skill of free swimming, the aim of which is to make the learner (beginner) understand the minutes of movement through presentation and explanation of each skill, films and pictures of those skills outside the water environment, and then training on them inside the swimming pool. Hence, the importance of research and the need for it is manifested in examining the preparation of the psychological tension scale for free swimming among students of the College of Physical Education - the first stage - University of Baghdad, and the use of the results of this research to serve the educational and training process in the effectiveness of free swimming in terms of application, which students benefit from in learning skills Movement, including free swimming skills and getting rid of psychological stress is one of the most important problems that most students face in various activities and sports, including swimming. This aspect has many negative effects, such as wasting physical energy and depriving them of moments of enjoying their activities. In addition, it weakens the athlete's self-confidence.

1-2 Research Problem:

Through the follow-up of the researcher and his observation of methods of learning and training for a swimming lesson for junior college students who face great difficulty in learning free swimming skills properly because of the psychological disorders and tensions that they face while entering the swimming pool, and this requires the teacher and the coach to spend extra time and effort, knowing that the time of the lecture is limited, therefore, the researcher decided to find a way to help reduce these tensions, and thus the learning process is easy and does not require additional effort and time to reduce tension.

1-3 Research Objectives:

1- Preparing and adjusting the measure of psychological stress among the students of the first stage in the College of Physical Education - University of Baghdad and its impact on them in learning the skills of free swimming.

2- To identify the level of psychological stress among first-stage students in the College of Physical Education - University of Baghdad.

1-4 research areas:

1-4-1 The human field: students of the College of Physical Education - the first stage - University of Baghdad for the academic year 2022-2023

1-4-2 Time range: 2/11/2022 to 5/3/2023

1-4-3 Spatial field: College of Physical Education - University of Baghdad.

1-5 Define terms:

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1- Psychological tension: “a state of general sense of imbalance on the biological or psychological level, accompanied by alertness and willingness on the part of the individual to change his behavior in order to confront a factor that threatens him in his real or imagined state⁽ⁱⁱ⁾).

Chapter two

2- Research methodology and field procedures:

2-1 Research Methodology:

The researcher used the descriptive approach due to its suitability to the nature of the research problem in reducing psychological tension and thus learning the skills of free swimming for first-stage students in the College of Physical Education - University of Baghdad.

2-2 Research Community:

Determining the research community is one of the important steps and stages in the process of conducting the research, and the research community is "all the individuals, events, or things who are the subject of the research problem ⁽ⁱⁱⁱ⁾. On the basis of that, the research community included students of the first stage of the College of Physical Education - University of Baghdad, whose number is (200) male students for the academic year 2022-2023 AD.

2-3 Research Sample:

The sample is that part taken from the community that the researcher wants to conduct his study on, and that it is representative of all the vocabulary of that community, and that this representation is supposed to be true ^(iv), and accordingly the researcher chose a random sample from the original community of (277) students for the first stage of college Physical education, divided into (7) divisions, and through a survey study of the psychological stress scale, the sample was selected from those who had high tension and did not learn the skill of free swimming, and the sample was divided randomly as follows:

1. The exploratory sample and the stability sample consisted of (7) students.
2. The sample of preparing the scale, numbering (120) students.
3. The sample of the final application of the scale (150) students.

2-4 Tools and devices used in the research:

2-4-1 The methods used:

Arabic and foreign sources and references. Psychological stress scale. Tests and standards. Forms distributed to experts.

2-4-2 Tools and devices:

- Swimming pool of the College of Physical Education, University of Baghdad.
- (1) Sony camera.
- (1) ACER computer.
- Display device (Da to Show)

2-5 Field Research Procedures:

2-5-1 Procedures for preparing the psychological stress scale:

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The researcher adopted Huda Jalal's^(v) measure of psychological stress, which she designed on a sample of advanced players in team games (football, basketball, volleyball, and handball), where the scale consists of (31) items distributed over three domains, namely (field physiology, mental domain, emotional domain) and the scale was corrected according to (five) alternatives to the answer (applies to me completely, applies to me, applies to me sometimes, does not apply to me, does not apply to me completely).

Because the scale was designed on a sample that differs from the current research sample, and to make it appropriate for it, the researcher took the following procedures:

1. All paragraphs of the scale have been modified in line with the nature and effectiveness of swimming and the level of the research sample.
2. To ensure the validity of the items of the psychological stress scale and its suitability for students of the Faculty of Physical Education, it was presented to a group of experts and specialists in the field of sports psychology and educational psychology (see Appendix 2), who numbered (12) experts, and they were asked to express their opinions and suggestions on the validity of the scale items for the level of the research sample.

By processing the results of the performance of experts and specialists statistically using chi-square, the validity of all paragraphs was found, as the calculated chi-square values were higher than their tabular value of (3.84) at a degree of freedom (1) and a level of significance (0.05), as shown in Table (1).

Table (1) It shows the opinions of the arbitrators on the validity and appropriateness of the paragraphs of the psychological stress scale

Paragraph numbers in the scale	The number of paragraphs	number of experts		Ca2 square value		indication
		Who agree	Who don't agree	calculated	Tabular	
6,22,23,28,30 3,5,7,9,4,12,1	13	12	0	12	3.84	indicator
2 25,15,11,13,18 27,29,24	9	11	1	8.33		indicator
16,19,31 ,4 ,21,20,26,10,8	9	10	2	5.33		indicator

In light of the experts' answers and after completing the steps, the items of the psychological stress scale for students of the College of Physical Education - University of Baghdad became (31) items distributed in three areas, with (11) items in the physiological field, (8) items in the mental field, and (12) items in the mental field. The emotional domain, and the paragraphs were distributed on the domains of psychological stress in the form of positive and negative expressions, as in Table (2), which shows:

Table (2)

Shows the areas of psychological tension and the number of positive and negative paragraphs after taking into account the opinions of experts

N	the field	negative paragraphs	positive paragraphs	The number of paragraph
1	Physiological	3	8	11
2	mental	6	2	8
3	emotional	7	5	12
total summation		16	15	31

3. The validity of the paragraphs from the linguistic point of view: After the researcher finished amending the wording of the paragraphs, he presented all the paragraphs to a specialist in the Arabic language (^{vi}). To be sound and free from linguistic errors, and the researcher has taken into account the observations he made on those paragraphs, and with these procedures, linguistic integrity has been achieved in the scale and it has been free from linguistic errors.

4. Distribution of the items in the scale: The researcher distributed the items in the scale deliberately, in order to hide the real purpose of the scale and to change the pattern of the questions, as each paragraph represents a different field from the paragraph that preceded it, and the one that follows it in the areas that measure psychological tension, as in Table (3).) which shows the distribution of the items of the psychological stress scale that was distributed to the students.

Table (3)

Shows the paragraph numbers for each area in the psychological stress scale

the field	positive paragraphs	negative paragraphs
Physiological	2,5,24,27,22,12,13,3	8,26,20
Mental	31,21	23 ,6,9,11,14,16
Emotional	25,30,29 ,10,18	28,4,7,15,17,19,1
total summation	15	16

2-5-2 Exploratory experience of the scale:

The aim of the exploratory experiment is to find out the clarity of the instructions and the paragraphs in terms of their formulation, the extent to which the students understand the items of the scale and the answer alternatives, as well as to identify the difficulties facing the application process and to know the time required to answer, It was found from the exploratory experiment that the instructions were clear to the students, that the time it took to answer ranged between (7-10) minutes, and that the answer alternatives were appropriate

for the level of the students. This experiment was conducted on 11/1/2023 on a sample of (7) students.

2-5-3 Applying the scale to the preparation sample:

The researcher applied the scale to a sample of preparing the scale, which numbered (120) students, for the purpose of statistically analyzing the paragraphs, selecting the valid ones and excluding the invalid ones, depending on the discriminatory power and the coefficient of internal consistency, and to extract the validity and stability of the scale. This was done on (28/1/2023).

2-5-4 Statistical analysis of the items of the scale:

Statistical analysis aims to calculate the discriminatory power and internal consistency of the scale items, as the discriminatory power refers to the ability to differentiate or distinguish between individuals who get high scores and individuals who get low scores on the same scale, while internal consistency refers to the extent of the homogeneity of the items in their measurement of the trait. That is, paragraph analysis means keeping good paragraphs in the test^(vii)

The researcher followed two methods in analyzing the paragraphs of the scale:

First: The two extreme groups:

The researcher used the two end groups method to detect the discriminatory power of the items of the psychological stress scale, as this method is one of the appropriate methods for distinguishing paragraphs. After correcting the scale, the total scores obtained by the students were arranged in descending order, and then (27%) of the higher scores (equivalent to 32 students) and (27%) of the lower scores (equivalent to 32 students) were chosen to represent the two extreme groups and exclude the percentage (46%) middle, "as the research of Kelly (1939) and Mehrns and Lehmann (1973) confirmed that the adoption of (27%) gives the largest size and differentiation^(viii).

For the purpose of calculating the discrimination coefficient for each paragraph of the scale, which is (31) paragraphs, the t-test was used for the independent samples by the statistical bag for social sciences (spss), and the t-value was statistically significant as an indicator of item discrimination. And as in Table (4), which shows the results of the t-test for all items.

Table (4)

Shows the results of the t-test to calculate the discriminatory power of the items of the scale

N	(t) value	The power of discrimination
1	10,212	discriminator
2	14,322	discriminator
3	10,111	discriminator
4	13,612	discriminator
5	11,901	discriminator

6	12,340	discriminator
7	9,990	discriminator
8	14,245	discriminator
9	14,001	discriminator
10	12,270	discriminator
11	13,108	discriminator
12	11,645	discriminator
13	10,320	discriminator
14	10,814	discriminator
15	11,607	discriminator
16	11,840	discriminator
17	13,111	discriminator
18	12,461	discriminator
19	10,315	discriminator
20	11,221	discriminator
21	11,301	discriminator
22	11,021	discriminator
23	12,531	discriminator
24	11,811	discriminator
25	10,385	discriminator
26	11,145	discriminator
27	10,653	discriminator
28	13,121	discriminator
29	13,45	discriminator
30	10,128	discriminator
31	12,310	discriminator

The tabular value of t is equal to (2.01) at a degree of freedom (62) and a level of significance (0.05).

From Table (4) it is clear to us that the calculated t -values ranged between (14,322-9,990) and when compared with the tabular value of t amounting to (2.01) at a degree of freedom (62) and a level of significance (0.05), we find that it is greater than Tabular This indicates that all paragraphs are distinct.

Second: internal consistency coefficient:

The researcher used the Pearson correlation coefficient to extract the value of the internal consistency coefficient between the score of each paragraph and the total score of the scale for all the sample (120) students using the statistical bag for social sciences (spss). And as in Table (5), which shows the results of the correlation coefficients.

Table (5)

It shows the correlation coefficient between the paragraph score and the total score of the scale (internal consistency).

Paragraph number	correlation coefficient	Paragraph number	correlation coefficient
1	0,381	18	0,431
2	0,345	19	0,454
3	0,322	20	0,384
4	0,433	21	0,368
5	0,386	22	0,401
6	0,315	23	0,472
7	0,301	24	0,309
8	0,325	25	0,425
9	0,314	26	0,311
10	0,466	27	0,423
11	0,371	28	0,412
12	0,411	29	0,455
13	0,422	30	0,413
14	0,485	31	0,399
15	0,411		
16	0,449		
17	0,377		

The value of the tabular correlation coefficient is (0.20) at a degree of freedom (118) and a level of significance (0.05).

By observing Table (5), it is clear to us that the correlation coefficients ranged between (0.486-0.301). It was found that all paragraphs are statistically significant at a degree of freedom (118) and a level of significance (0.05).

2-5-5 Scientific foundations of the psychological stress scale:

Measurement literature indicates that there are a number of scientific bases that can be used as indicators of the accuracy of psychological measures, as psychometricians and specialists in it almost unanimously agree that the characteristics of validity and reliability are among the most important scientific foundations for psychological measures.

2-5-5-1 The honesty of the scale:

Honesty is one of the important characteristics that must be taken into account in the construction of psychological scales, and the honest scale is the one that achieves the function for which it was developed. The scale achieved two types of honesty :

First: apparent honesty:

This kind of honesty was achieved when the psychological stress scale was presented to a group of experts and specialists in the field of educational psychology and sports psychology to establish the honesty of the scale items.

Secondly, the honesty of the construction:

The constructive honesty was verified through two indicators:

Discriminatory ability using the method of the two end groups, internal consistency by finding the strength of the correlation of the score of each paragraph with the total score of the scale.

2-5-5-2 Stability of the scale:

In order to extract the stability of the scale, the researcher relied on two methods:

First: Re-test:

This method is one of the most important methods of calculating stability because it reveals the stability of the results. The researcher adopted the exploratory experiment as the first application of the scale on (10) students. After two weeks, the scale was re-applied on the same sample and under the same conditions in which the scale was applied the first time.

After calculating the Pearson correlation coefficient between the results of the first and second tests, it was found that the value of the stability coefficient was (0.84), which is a good indicator of the stability of the students' answers to the items of the scale.

Second: - Cronbach's alpha coefficient:

This method relies on calculating the correlations between the scores of all the paragraphs and calculating stability using Cronbach's alpha method. All student questionnaires were subjected to analysis, then the researcher used the alpha coefficient. The alpha coefficient for the scale as a whole reached (0.88), which is significant and internally consistent.

2-5-6 Scale Correction:

It is intended to put a score for the student's response to each paragraph of the scale, then collect these scores to find the total score for each questionnaire using the correction key. The highest total score that can be obtained is (155) and the lowest score is (31), and table (6) shows Weights of answers on the negative and positive paragraphs.

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Shows the weights of the answer to the positive and negative paragraphs

Paragraph direction alternatives	applies to me completely	applies to me	applies to me sometimes	does not apply to me	does not apply to me completely
negative paragraphs	5	4	3	2	1
positive paragraphs	1	2	3	4	5

2-5-7 Final application of the scale:

After completing all procedures for preparing the scale and extracting its honesty and reliability, the scale became composed of (31) items, including (15) negative items and (16) items, noting that the highest score for the scale is (155), the lowest score (31), and the hypothetical mean for the scale (93). The researcher counted the degree that is equal to or greater than the degree of the hypothetical average as an indication of the existence of psychological tension, and the scale was applied to a sample of (160) students.

2-6 Statistical Methods:

To extract the results of the research, the researcher used the statistical bag for social sciences spss

Chapter three

3- Presentation, analysis and discussion of the results:

In order to achieve the objectives of the research and its hypotheses in knowing the extent of the effect of the mental visualization program on reducing psychological tension and learning free swimming skills, it is necessary to shed light on the nature of the level of the research sample through the results obtained.

3-1-1 View the results of the first goal:

The first objective (preparation of a scale of psychological stress among students of the College of Physical Education - University of Baghdad - the first stage in the swimming lesson) has been verified. It has met the standard characteristics of this type of psychological scale, as explained in detail in Chapter Three through the procedures for preparing a scale of psychological stress on students The first stage, College of Physical Education - University of Baghdad, and the scale is one of the main variables in the research, along with the mental perception program, and by completing them, we have achieved the start to achieve the other goals.

3-1-2 Presentation and analysis of the results of the second objective:

Table (7) Shows the results of the psychological stress scale for the students of the research sample

variable	Sample volume	hypothetical mean	X	Z	The value of calculated (t)	Statistical significance
Psychological tension	150	93	156	6,53	4.57	incorporeal

The second objective aims to identify the level of psychological stress among students of the College of Physical Education, University of Baghdad, the first phase, this goal was achieved by applying the measure of psychological stress on (160) students from the College of Physical Education - University of Baghdad - the first stage, as the results showed that the value of the arithmetic mean amounted to (156), which is greater than the hypothetical mean of (93), and this indicates that The students of the College of Physical Education - University of Baghdad do not have psychological stress, and Table (7) shows this

3-1 Discussing the results of the psychological stress scale:

Table (7) indicates that there is a development in the results of the experimental group in the stress reduction test, and there was also a statistical significance in the control group in the aforementioned test, but to a lesser extent than the experimental group, which the researcher attributes to this development in reducing psychological tension in the experimental group. This is due to the persistence of the research sample members on using the mental visualization program and what it contains of paragraphs and new advanced scientific methods, which led to a reduction in psychological tension among the beginner students among the group members, as mentioned in the study (Huda Jalal 2005)^(ix), about the existence of psychological tension among advanced players in team games, and this is what the researcher found among the students of the first stage in the College of Physical Education - University of Baghdad, and the researcher attributes this to not learning the swimming skill while they are at this advanced stage of life.

The researcher believes that the reason for the existence of psychological tension among students (the research sample):

- The difficulty of free swimming skill movements and the new water environment that the student has never entered, in addition to the lack of protective and safe equipment, all of which increase the students' psychological tension.
- Fear of drowning and being hurt and anxiety about performance makes the student tense.
- Weak desire and negative thinking among students towards swimming.
- Poor physical qualifications required by students for swimming.
- Lack of good psychological preparation for students.
- Lack of swimming pools, which led to the lack of opportunity for members of the community to practice swimming and to get acquainted with this type of physical activity.

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Chapter four

4-1 Conclusions:

In the light of the results obtained by the researcher through the field experience and his use of the most appropriate statistical methods that were used in analyzing the results, the researcher reached the following conclusions:

1. The failure to learn the skills of free swimming for a group of first-stage students in the Faculty of Physical Education (the research sample) affected their psychological state.
2. There are two sides to the psychological tension that the learner experiences, the first is positive and makes the learner carry out what is required of him accurately, while the negative side makes the learner unable to implement the skill correctly
3. The use of a psychological stress program before entering the swimming pool contributed effectively to preparing the sample members psychologically to learn free swimming skills.

4-2 Recommendations:

In light of the findings, the researcher recommends the following:

- 1- Benefiting from the psychological stress scale in measuring the psychological tension of other societies in other sports.
- 2- Conducting a study dealing with the relationship between psychological stress and other psychological variables.
- 3- Teachers and trainers should use all advanced means, methods and methods in which physical exercises are used in addition to mental exercises.
- 4- Not allowing the learner to practice swimming while he is in a bad psychological state.

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FootNotes

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