"The effect of mental training in the development of rhythmic gymnastics information for female students"

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Abstract

Throughout the ages, scientists have been interested in the subject of knowledge and its impact on learning in the sense that learning needs to be developed through knowledge. Often female students are faced with difficulties in their educational process, as the storage and retrieval of this information is of great importance in learning and the value of research has been decided by the need to pay attention to the acquisition of knowledge, which is one of the important factors affecting the information of the students, through this study we aim to identify the role of mental training in acquiring information in gymnastic rhythm .

The aims:

1. Creating a knowledge test in rhythmic gymnastics on third stage students from physical education and sports science colleges at the University of Karbala, Qadisiyah.
2. Preparation of a program using mental training to increase female students ' knowledge of rhythmic gymnastics.
3. Learn about the effectiveness of mental exercises in increasing knowledge of information on rhythmic gymnastics.

The Hypothesis:

- It is hypothesized that the mental training program has an effect on increasing knowledge of the information about rhythmic gymnastics. the researcher used the descriptive method in the survey method and the experimental approach in the manner of the two identical control groups and experimental groups.

The following findings were established in light of the research results and the statistical analysis of the data, the findings listed below:

1. Students in physical education and sports science clearly suffer from a lack of information.
2. There were significant differences between experimental and control groups after use of rhythmic gymnastics information mental training exercises.

Keywords: mental training, rhythmic gymnastics, students of physical education and sports science department.

Introduction:

Throughout the ages, scientists have been interested in the subject of knowledge and its impact on learning in the sense that learning needs to be developed through knowledge. Often female students are faced with difficulties in their educational process, as the storage and retrieval of this information is of great importance in learning and the value of research has been decided by the need to pay attention to the acquisition of knowledge, which is one of the important factors affecting the information of the students, through this study we aim to identify the role of mental training in acquiring information in gymnastic rhythm .

Research problem:

In light of the enormous amount of information and data, knowledge must organize information in order to improve development, particularly in the sport performance of the multiplicity of performance-related information, and in view of the role of memory in humans in retaining a great deal of information and data that allows the person to retrieve it, through the role of the researcher as a specialist in sports education and teachers of rhythmic gymnastics, it was found that there is a problem in the diffusion among students due to the lack of information gained and the lack of focus on mental aspect training while learning, but the time of the lesson was controlled by relying solely on fitness exercises and learning the fundamentals of skills, And so this problem came to be explored using mental training to improve awareness and its role in the context of rhythmic gyms for women students.

The aims of the research:

1- Construct the knowledge test of rhythmic gymnastics on third-stage students of physical education and sports sciences faculties at the University of Karbala, Qadisiyah.

2- Preparing a program for female students using mental training to improve awareness of rhythmic gymnastics.

3- Identify the efficacy of attitude exercises in increasing awareness of rhythmic gymnastics details

The Hypothesis of the research:

The mental training program has influenced increased awareness of details on rhythmic gymnastics.

research fields:

1- Human domain: Female students of the third stage of the faculties of physical education and sports sciences at Babylon University.

2- Spatial domain: Technical Gymnastic Hall at the Faculty of Physical Education and Sports Sciences at the University (Babylon, Karbala and Qadisiyah).

3- Temporal domain: 25/12/2018 until April 7/4/2019.

Definition of terms:

- Knowledge : Acquiring and retrieving information, ideas and experiences that were previously learned in life. Or is it the gradual strengthening of the information and experience already gained by the individual' (Allam.2010.p55).

- Mental training : Learning kit required for any reasoning process. (Maamar, 2006, 54).

Research Methodology:

The problem of the study defines the type of method used, since the nature of the research problem is descriptive and experimental, the researcher uses the descriptive method of surveying in the construction of rhythmic gymnastics information and its evaluation of physical education students, and the experimental method in the style of the two equivalent group, control and experimental use of the mental training program with its pre- and post-test to determine the efficacy of the system in the acquisition of knowledge.

Research community and data:

The research community is a third-level student for the academic year (2018-2019) , in the faculties of physical education and sports sciences at the University of Babylon, Karbala and Qadisiyah, and according to the registration lists, is 126 graduates. The random study sample collection was for 100 students(79.4).

Instrument of the research:

- Instruments of this study
- Scientific sources and references, interviews with the professors of rhythmic gymnastics, knowledge test in rhythmic gymnastics, for the absence of a standardized test of rhythmic gymnastics, mental training measure to determine sample homogeneity, laptop.

Techniques for the construction of rhythmic gymnastics knowledge test:

1- **Determining the objective of the test**: Determine the purpose of constructing the rhythmic gymnastics test to assess the knowledge of students in physical education and sports sciences

2- **Determining the theoretical framework**: upon reviewing the theoretical studies and the gymnastic books, the researcher focused on the theory of social learning being more practical and detailed in constructing the rhythmic knowledge test.

Preparation of an initial version of the test terms (phrases):

The initial version of the test terms was prepared using a variety of procedures, beginning with the identification of the terms according to the study sample and the level of educational achievement and the creation of guidance on how to respond to them and the method of correction as follows:

- Individual and group interviews with third-year students at the Faculty of Physical Education and Sport Sciences, including discussions on the reasons for success and failure in the rhythmic gymnastics class, taking into consideration the difficulties they face in the motor learning process of this sport.
- A sample from the same research community was submitted an open questionnaire to answer the following questions:

  • Express situations that increase and decrease your information during the rhythmic gymnastics lesson.

  • What are the good and bad outcomes you felt you related to the learning process?

  •

Determining the way test phrases are drafted:

Taking into account that the phrases are not too long or too short and that the expression is straightforward and its definition interpretation in the formulation of the test phrases on the response approach from two alternatives.

Determining the validity of the test phrases:

The prison terms were sent in their initial form to a group of experts and specialists on the subject of rhythmic gymnastics (number 5), to demonstrate their validity in evaluating the purpose for which it was set, and to offer their views on its validity, by marking (√) before each phrases and under the correct alternative (valid, not valid, valid after amendment, with the appropriate justification). The virtual honesty of the test was derived by percentages and was based on (80) as a percentage of the agreement, and it was found that the paragraphs earned a percentage (100% and 80%) and were obtained in an acceptable manner.

The key to correct the test:

The degree is given according to the type of phrase and the position of the answer, the phrase with the correct answer being given (1) and the phrase with the wrong answer being given (0), so that the highest score achieved by the student is (26) and the lowest score is (0), and the hypothetical average of the test is (13) degrees, if the score is the metric before carrying out the program further is performed, more than the hypothetical medium suggests a high level of information for the sample although after the program there is little knowledge of the law of rhythmic gymnastics and vice versa.

Equal study classes focused on a standard of scientific law:

To recognize between the three study sample amounts at the Babylon, Karbala and Qadisiyah universities, the comparison analysis was based on the results as shown in table (1) the following:

Table (1) shows equal using contrast analysis between search groups

Source of contrast	df	variance	(f) Cal.	(f) Tab.	Sig. type
Between groups	2	18.55	2.17	3.11	Sig. No
Within groups	97	34,86			

There is no disparity between the research groups, because the statistical significance is not normative, since the measured (f) value is less than its expected value at a degree of freedom (2.97) and this means that the female students ' knowledge in the rhythmic gymnastics is similar and does not imply discrepancies between the numbers, this indicates that the students ' knowledge in the rhythmic gymnastics is similar and does not suggest any variations between the totals.

Statistical analysis of the phrases test:

This application is aimed at selecting the required paragraphs and at neglecting invalid paragraphs based on their distinct intensity. The statistical analysis was conducted in two ways:

A. The two peripheral groups (the distinct force of phrases):

The distinct force means ' the ability of the phrase to differentiate between high-level individuals and lower-level individuals in relation to the attribute calculated by the phrase, which is proof of the integrity of the construction '

(Hanna.2011. p. 55), All groups were used in the construction of the rhythmic gymnastics knowledge test, used a ratio (27) in each group, with the number (27) of the students in the upper group and the same number in the lower group, and after using the test (T) of two separate samples equal in number to determine the significance of the statistical differences, results appeared The (T) value is a feature of the paragraph's discriminatory power, since the measured (T) value was greater than (2) the indication amount (0,05) and the degree of freedom (25).

Table (2) showing coefficient of distinction of the two groups

N.	Coefficient of distinction	Sig. type	N.	Coefficient of distinction	Sig. type	N.	Coefficient of distinction	Sig. type
1	6.732	Sig.	10	4.904	Sig.	19	6.654	Sig.
2	5.189	Sig.	11	4.781	Sig.	20	4.782	Sig.
3	5.664	Sig.	12	5.336	Sig.	21	5.945	Sig.
4	4.799	Sig.	13	5.338	Sig.	22	6.048	Sig.
5	6.046	Sig.	14	6.157	Sig.	23	5.057	Sig.
6	5.551	Sig.	15	4.493	Sig.	24	5.950	Sig.
7	4.531	Sig.	16	3.512	Sig.	25	5.511	Sig.
8	5.316	Sig.	17	6.180	Sig.	26	5.722	Sig.
9	4.860	Sig.	18	4.612	Sig.			

B. Internal Coefficient of Consistency:

The correlation between the phrases score was measured to the overall degree of the study, using the Pearson correlation coefficient to derive the correlation between the scores of each phrase and the overall test score, after obtaining and comparing the results with the scheduled coefficient value of 0.44 and all phrases were used at the level (0.05) , as show in table 3.

Table (3) shows coefficients of correlation for paragraphs of the total degree of the scale of the oblivion

N.	(R) value	Sig. type	N.	(R) value	Sig. type	N.	(R) value	Sig. type
1	0.478	Sig.	10	0.486	Sig.	19	0.444	Sig.
2	0.474	Sig.	11	0.474	Sig.	20	0.442	Sig.
3	0,545	Sig.	12	0.492	Sig.	21	0.474	Sig.
4	0.505	Sig.	13	0.455	Sig.	22	0.481	Sig.
5	0.474	Sig.	14	0.443	Sig.	23	0.451	Sig.
6	0.505	Sig.	15	0.447	Sig.	24	0.481	Sig.
7	0.482	Sig.	16	0.498	Sig.	25	0.480	Sig.
8	0.491	Sig.	17	0.465	Sig.	26	0.484	Sig.
9	0.464	Sig.	18	0.484	Sig.			

psychometric knowledge features in rhythmic gymnastics:

A. **Scale honesty**: Use virtual honesty as the test was presented to a number of experts and specialists in the specialization of rhythmic gymnastics, and the ratio of consent of experts and specialists on the test paragraphs by percentage (80 and 100) after the results of the questionnaires were collected.

B. **Stability of the scale**: The half-segmentation process, which is based on the division of the test into two equal parts, the first part includes the grades of the

phrases representing the individual numbers, the second part includes the grades of the phrases representing the pair numbers and after that the difference of the phrases between them was measured and (t) compared The calculated value of (1.06) with the tabulated value of (1.83). We consider that the difference is not statistically significant, meaning that the variance between the two halves of the test (individual and pairs) is homogeneous, after which the correlation coefficient (Spearman-Brown) was determined between the two halves of the test, And the Full test stability was determined using the Pearson coefficient and the total stability factor of the test (0.80) became a consistent high stability factor.

C. **The Equation of Kuder and Richardson**: Kuder and Richardson method is a constant measure, with the coefficient of stability value (0.79) also being a good indicator of test stability.

Preparing the Program for mental skills:

Upon evaluating the scientific sources and through interviews, a questionnaire was distributed to experts and professionals in assessing mental training (numbered 8). In the proposed program (relaxation, mental perception, concentration, attention) the exercises that obtained an agreement ratio (75 per cent) are more adopted. The application of the program ended up taking (12) two units of education each week and that the programme's aspects was allocated to the main section of the experimental group's educational unit under the supervision and guidance of the researcher. While ,the control group applied the curriculum vocabulary adopted by the teacher's school.

Exploratory experiment :

The exploratory experiment was conducted on 25 January 2019 on a group of (10) female students from Al-Qadisiyah University's Faculty of Physical Education and Sports Sciences who were randomly selected throughout the rhythmic gymnastics lesson at 8:30 p.m. in the morning. The exploratory experiment showed that mental conditioning assessments and awareness phrases were performed in rhythmic gymnastics. The exploratory analysis showed that the measures of mental training and the phrases of rhythmic gymnastics expertise are clear and understandable in the students as well as the skill of the assistant team, and that the time taken to respond to the test was calculated between (15-20) minutes.

Research procedures:

Preceding tests:

Until performing the previous test, two rhythmic gymnastics recognition units were used to provide comprehensive information, and the preceding tests were carried out on Tuesday (4/2/2019) at (10:00) in the rhythmic gymnastics hall at the faculty of physical education and sports sciences at the university of Babylon.

Parity:

To assess the importance of the information variable differences in the rhythmic gymnastics , using (t) test of two independent samples before and after two description units are conducted to ensure equality of the control and experimental groups. As shown in table (4).

Table (4) Shows The equality of the rhythmic gymnastics skills test sample

Knowledge in rhythmic gymnastics	Exp. G.		Con. G.		T Value		Result
	Mean	Std.	Mean	Std.	Cal.t	Cro.ta	
Before the two modules	7.1	0,9	9.5	0,8	1.3	2.00	Sig. No
Immediately after the two units	18.4	0.6	19	0.7	1.8		Sig. No

Application of the mental skills program:

On 13 February 2019, the mental skills program started with 12 educational units, using only two educational units per week, and each educational module contains one focus skill, one for imagination and relaxation exercises, these exercises are performed in the main section of the educational unit, and each mental exercise occurs six times, and then these exercises are repeated again to enhance the role of the mental aspect until the end of the number of units. The program ended on 22 March 2019.

Posterior tests:

The post-test was carried out in the technical gymnastics hall (27) and the rhythmic gymnastics lesson was distributed after the completion of the program.:

Statistical means:

Data was processed by using SPSS.

Presentation, analysis and discussion of the technical gymnastics legislation results:

Presentation, assessment and review of previous and subsequent test results in the experience of rhythmic gymnastics of the control and experimental groups:

A comparison was made between the female student test results to recognize the rhythmic gymnastics. the sample test (t) between the preceding and posterior tests was used in each group, according to the table below.:

Table (5) shows computational circles, standard deviations and calculated and scheduled t values of the two research groups

Knowledge in rhythmic gymnastics							
Group	Pretest		Posttest		T value		Result
	Mean	Std.	Mean	Std.	Cal.t	Tab.	
Exp.g.	16.9	0.7	20	Sig.	3.5	2,09	Sig.
Con.g.	15.4	0.6	20.4	0.8	4.2		Sig.

The table (5) shows that there are statistically significant moral differences between the preceding and subsequent tests in the experimental and control groups, with the value of (t) calculated (3.5) of the experimental group and (4.2) of the control group exceeding its planned value of (2.09) at the degree of freedom (19) Indication level (0.05), which is normal since a person acquires information when learning, or when different additional information overlaps during the learning process.

Presentation, analysis and discussion of the results of the posterior tests of the control and experimental groups in the rhythmic gymnastics :

here shows the difference between the two groups in the posterior test in the amount of rhythmic gymnastics information in order to know the effectiveness of mental training in obtaining information .As shown in the table.6

Table (6) shows the arithmetical mean, standard deviation, and the calculated and scheduled (t) values of the posterior test of the experimental and control groups in the rhythmic gymnastics.

	Knowledge in rhythmic gymnastics				
Group	Posttest		T value		Result
	Mean	Std.	Cal.t	Cro.t	
Exp.g.	16.4	0.8	4.5	2.02	Sig.
Con.g.	14.9	1.1			

There was a significant statistical difference in favor of the experimental group because the score was higher than the control group. This indicates the effect of the mental training program on information development within the experimental group members ' rhythmic gymnastics. It refers to physical education students during the multiplicity of practical and theoretical lectures and the study of many activities, which facilitate information gathering and thus increase knowledge . Since the learning password is "energy and attention" and takes some training in order to be learned, attention allows the brain to remember the information correctly, making it easier to recover the information when it is needed. For this purpose it is advisable not to do two tasks at the same time when there is a need for attention and not to boycott when learning a new piece of information, as well as dealing directly with anxiety and pressure and not giving those feelings the opportunity to affect our lives and then our minds and memories.

Conclusions and recommendations:

Conclusions:

1. A knowledge test was built in the rhythmic gymnastics for physical education and sports sciences students
2. Physical education and sports science students clearly suffer from a lack of information.
3. There were significant differences between the experimental and control groups after using mental training exercises in rhythmic gymnastics knowledge.

Recommendations:

1. Use of the program's phrases and generalize its findings in the curricula of physical education and sports science colleges to be developed by rhythmic gymnastics teachers to benefit from them in the creation of expertise.
2. Encouraging teachers use behavioral training programs, in their lectures.
3. Conducting similar studies in other games for male and female students.

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Mental training measurement

s	Phrases	Answer alternatives					
		1	2	3	4	5	6
1.	I can train my sport in my mind						
2.	I train skill in my mind before I actually practice it						
3.	It is difficult to form a mental image of skill						
4.	I find it easy to feel the movement						
5.	I always set my goals on training						
6.	My goals are always very specific						
7.	I evaluate my performance after finishing the lecture						
8.	Determine the goals achieved						
9.	I feel less confident about my performance						
10.	Get in to the classroom with a confident thinking						
11.	As my ability time approaches, my faith slowly disappears						
12.	During the lecture period I keep a positive attitude						
13.	I often suffer from fear of injury						
14.	I wonder what may have caused me to fail to perform the skill						
15.	Leave my mistakes free to cause anxiety while performing						
16.	I am very concerned about performance						
17.	I cannot focus on my thoughts while performing the skill						
18.	My thoughts give me up as I perform						
19.	The unexpected noise effect my performance						
20.	my mind quickly distracts is an issue for me						
21.	I can relax before performing the skill						
22.	I am very nervous when performing difficult skills						
23.	one of my strengths is my capacity to relax						
24.	I know how to relax in difficult situations						
25.	I am preparing myself for a high score on tests						
26.	I really enjoy the lesson						