

## SOME BASIC SKILLS IN GYMNASTICS AND THEIR RELATIONSHIP TO NEGATIVE AUTOMATIC THOUGHTS FOR STUDENTS OF THE FACULTY OF PHYSICAL EDUCATION AND SPORTS SCIENCES

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### Abstract

The purpose of this paper is to preparing a scale of negative automatic thoughts for students of the Faculty of Physical Education and Sports Sciences, and identifying the relationship between some basic skills of gymnastics and negative automatic thoughts for students of the Faculty of Physical Education and Sports Sciences. The researcher used the descriptive method in the survey method, as it is the most appropriate method for the nature of the research problem and the research community represented the students of the second stage, which numbered (120) students and were chosen by the researcher in a deliberate way, to represent his basic research sample. The exploratory experiment sample was (10) students. One of the most important results reached by the researcher is that: The results showed that there is an inverse relationship between negative automatic thoughts and gymnastics skills, and the reason for the inverse proportion between skills and negative automatic thoughts is the motivation of students. One of the most important recommendations recommended by the researcher is that: Developing and strengthening scientific behaviour to get rid of negative automatic thoughts through the introduction of professors in development courses, and helping students to provide the appropriate educational environment in order to increase positive spontaneous ideas.

**Keywords:** Sports sciences. Sports psychology. Sports exercise

### Introduction

The process of learning the skills achieved by athletes in different sports in general and individual games, in particular, did not come by chance but came as a result of the development of various mathematical, physiological and psychological sciences and academics that followed the correct scientific methods in an attempt to invest human energy in its best limits.

As the athlete is affected by the psychological conditions and social situations surrounding him, negative automatic thoughts mean pessimism in analyzing the surrounding matters or what will happen in future events in a negative way. It is expected, and thus leads to an unpleasant result, in the end, causing him to increase his anxiety and lose focus, especially if he is a beginner who does not have the experiences and expertise that give him the ability to adapt to various situations, and here lies the importance of being a study that determines the extent and level of the student psychologically to overcome On difficult feelings that stand in the way of learning difficult skills

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### Research problems

The psychological obstacle is one of the most important problems facing students in the process of learning skills in gymnastics, and it is of high difficulty, especially for students, as it requires high-level compatibility, flexibility and high agility, and from here negative thoughts are generated and greatly affect the student's thinking, which makes him surrender his command For distracting thoughts and tendencies

Q/ Is there a role for negative automatic thoughts in learning basic gymnastics skills?

### Research objective

- Preparing a scale of negative automatic thoughts for students of the Faculty of Physical Education and Sports Sciences
- identifying the relationship between some basic skills of gymnastics and negative automatic thoughts for students of the Faculty of Physical Education and Sports Sciences

### Research fields

- Human field: Students of the second stage, College of Physical Education and Sports Sciences, University of Baghdad
- Time field: (15/3/2021) to (1/5/2021)
- Spatial field: Gymnastics Hall, College of Physical Education and Sports Sciences, University of Baghdad.

### Research Methodology and Field Procedures

#### Research methodology

The method is "the path taken by researcher in solving his research problem, as the nature of the problem imposes a specific approach to reach the truth." ( ). The researcher used the descriptive method in the survey method, as it is the most appropriate method for the nature of the research problem.

#### Community and sample research

The research community represented the students of the second stage, which

numbered (120) students and were chosen by the researcher in a deliberate way, to represent his basic research sample. The exploratory experiment sample was (10) students

#### Means of collecting information:

The researcher made use of some tools and means to achieve the objectives of his research, which are:

- Resolution
- Arab and foreign sources.
- The International Information Network, the Internet.
- Expert opinion survey form.
- Personal interviews.
- A final form (data dump) for the negative automatic thoughts scale.

#### Tools and devices used in the research

- DELL laptop computer
- Sony camera for documentation purpose.

#### Field research procedures

Negative Automatic Thoughts Scale:

The researcher developed the Negative Automatic Thoughts Scale.

#### First: Determine the fields of the scale

The researcher relied on the following considerations in determining the following:

1. Examining the studies and literature related to the concept of negative spontaneous thoughts, including the study (Hani Fahem Jayoul. 2016.), in which the negative spontaneous thoughts scale was adopted.
2. Directing a questionnaire to survey the opinion of experts, which included an open question in which the experts and specialists were asked

to identify the components of negative automatic thoughts for the purpose of obtaining the largest number of opinions related to negative automatic thoughts. Arbitrators and experts, and with the approval of 75%, three areas (inability to help, inconsistency, and indifference) were excluded, in addition to that, the fields of (cognitive anxiety, physical anxiety and social threat) were merged (Table 1).

**Second: Preparing the paragraphs of the scale**

The procedures for preparing the scale items are one of the most important steps in psychological tests, and this process requires the availability of the following conditions for the test or scale designer (Abdel-Moneim et al., 1995).

1. Mastery of the specialized scientific material related to the subjects to be measured.
2. Linguistic fluency and ease of expression in simple language.
3. Knowing the different ways of writing vocabulary so that he can choose from them what suits the purpose of the test.
4. To have the ability to visualize and create situations in which the ability or characteristic to be measured can be measured.

**Third: Drafting the paragraphs of the scale**

To formulate the paragraphs of the scale, the researcher relied on the method of verbal and actual correspondence, as it approaches the mathematical situations that the student passed, which makes the respondent interact with the situation when answering, and the scale is five-graded (never, sometimes, usually, a lot of the time, always all the time) Five points are given for the answer when correcting (5,4,3,2,1) according to the scale, noting that all the paragraphs are formulated in one direction.

**Fourth: The exploratory experience of the scale**

The researcher conducted the exploratory experiment to verify the clarity of the instructions and paragraphs of the scale, their accuracy, the appropriateness of the alternatives, the extent to which the student comprehends the measurement, diagnosing ambiguity and identifying errors in advance before conducting the basic experiment, and to detect unclear paragraphs. This experiment was conducted on a random sample of (10) students, who were excluded When applying the basic experiment of the scale, the time taken to answer the scale was calculated and ranged between (13-15) minutes,

**Fifth: Scale correction**

The degree of spontaneous negative thoughts was calculated for each student from the sample by finding the total scores he obtained through his answers to the scale items.

**Sixth: The main experience of the scale**

The researcher distributed the negative automatic thoughts scale on the research sample, as well as conducting the basic experiment of the scale in order to extract the discriminatory power of the paragraphs and identify the weak or undistinguished paragraphs in order to exclude and delete them, as well as find the correlation coefficient of each paragraph with the total sum of the scale, and the researcher may follow the following steps to achieve this.

**Scientific Coefficients of the Negative Automatic Thoughts Scale**

The researcher identified the psychometric properties of the scale in order to ensure its efficiency and the availability of the scientific conditions for it, namely validity and stability, so the researcher identified and calculated these conditions.

**First: The validity of the scale**

Validity is one of the most important psychometric characteristics that should be available in the psychological scale because it indicates the scale's ability to what must actually be measured, and (Oppenheim 1973) indicates that the honest scale is the scale whose paragraphs measure the trait to be measured and do not measure another trait, regardless that the respondent It applies or does not apply to it, since the scale is based mainly on the validity of its paragraphs.

In the current scale, indicators of validity have been achieved, which are:

**Table 1:** Field of the Negative Automatic Thoughts Scale after adjustment

| No. | Fields                             |
|-----|------------------------------------|
| 1   | Negative expectations              |
| 2   | Fans pressure                      |
| 3   | Low self-esteem                    |
| 4   | Negative perception of competition |

**Logical Validity**

Logical validity is one of the types of validity necessary in the design of the scale and represents the first step in building the scale, as it deals with the study of the scale's vocabulary, its contents and its substance. The relative weight of each fields of the scale, and this type of validity was provided by defining the concept of negative automatic thoughts and analyzing its four fieldss.

**Face Validity**

This was done by presenting the paragraphs of the scale to experts and arbitrators in the fields of general psychology and sports psychology and with experience in field studies, and a percentage of (75%) and above was adopted to estimate the validity of the paragraph for study, rejection or modification.

**Construct Validity**

The construct validity is one of the most important indicators of the validity of psychological scales because it is one of the most representative types of validity of the concept of honesty.

(Gay: LR, 1986). The construction validity was achieved through the procedures of statistically analyzing the paragraphs and calculating the indicators of the validity of the paragraphs and their discriminatory power, as indicated above. Forms and grades are unloaded and thus are ready for statistical analysis.

**Discriminative power of paragraphs**

Statistical analysis of the scale items is a basic and important step in building psychological and educational scales, indicating their ability to measure what is intended to be measured. It is a statistical procedure used to exclude or delete certain types of items.( Al-Ansari. 2000), in order to maintain the good items and reveal their accuracy in measuring what they were set to measure, the researcher analyzed these items statistically to reveal their ability to distinguish and their association with the overall score of the scale and to exclude the undistinguished items. individuals relative to the attribute that the paragraph measures (Shaw, Marvin E. 1967), in the process of analyzing the paragraphs, the researcher relied on the method of discriminatory power, the method of the two extreme groups, and the relationship of the paragraph with the total score of the scale (internal consistency) using (120) forms from the total sample of (120), and after using the (T) test on all the paragraphs of the scale, it became clear to the researcher That (27) items were not significant, through the significance indicators (sig) that he extracts with a level of significance (0.05), which indicates that they are not significant, so they were excluded from the scale, and the items are: (4, 5, 10) for the first field and (16) , 18, 27, 28, 30, 32, 36, 37) for the second field, and paragraphs (40, 41, 43, 46, 56, 57, 58, 73, 74, 75, 79) for the third field, and paragraphs (60, 61) , 63, 64, 65) for the last field, and thus the total number of paragraphs of the scale became (52) (Tables 2-5).

**Internal consistency coefficient (paragraph validity)**

The total score of the field and the total score of the scale are considered immediate spoken measurements (Immediate Criterion Measures) through their correlation with the students' scores on the paragraphs, and then the correlation of the score of the paragraph with the total score of the current scale means that the paragraph measures the same concept that the total score measures (Stanley.1972), Paragraphs whose score correlation coefficients with the total score of the field or scale are low (not significant) are deleted.( Anastasi: A. 1976),

This internal consistency coefficient was extracted using the Pearson Product-Moment Correlation coefficient between the scores of the sample members on each item and their total scores on the scale to extract the correlation between the scores of the items with the total score of the scale based on the sample data that was used in calculating the discriminatory power. For the paragraphs, and as shown in Tables 6, which shows the results of the correlation coefficients between the degrees of the paragraphs, the degrees of the fields, and the total degree of the scale. Significant at a level of significance (0.05), so they were excluded from the scale as well as the items that were excluded in the previous procedure, and the items are (14, 26, 42), and thus the total number of measurement items became (49) items as shown in the tables 6 (Tables 6-9).

**Second: The reliability of the scale**

Calculation of stability is one of the characteristics of a good scale, because it indicates the consistency of the paragraphs of the scale in measuring what it is supposed to measure with an acceptable degree of accuracy. (Muhammad. 2013), the stability coefficient of the current scale was calculated using the alpha-Cronbach method. This method is preferred to measure stability, as it measures the internal consistency and homogeneity between the test items, meaning that all items actually measure the same characteristic. The alpha coefficient was extracted because it provides us with a good estimate of the stability in most situations and this method is adopted On the extent of

**Table 2:** Shows the indicators of the discriminative power of the negative expectations fields items of the Negative Automatic Thoughts Scale.

| Paragraphs | Groups      | Mean | Standard deviation | standard mean error | T value | Level sig | Type sig |
|------------|-------------|------|--------------------|---------------------|---------|-----------|----------|
| 1          | Upper group | 2.9  | 1.423              | 0.26                | 5.996   | 0.000     | sig      |
|            | Lower group | 1.27 | 0.45               | 0.082               |         |           |          |
| 2          | Upper group | 2.4  | 0.855              | 0.156               | 3.869   | 0.000     | sig      |
|            | Lower group | 1.63 | 0.669              | 0.122               |         |           |          |
| 3          | Upper group | 1.97 | 0.765              | 0.14                | 2.766   | 0.008     | sig      |
|            | Lower group | 1.47 | 0.629              | 0.115               |         |           |          |
| 4          | Upper group | 2.13 | 1.167              | 0.213               | 1.124   | 0.265     | Non sig  |
|            | Lower group | 1.87 | 0.571              | 0.104               |         |           |          |
| 5          | Upper group | 2.1  | 1.242              | 0.227               | 1.725   | 0.090     | Non sig  |
|            | Lower group | 1.63 | 0.809              | 0.148               |         |           |          |
| 6          | Upper group | 2.57 | 1.135              | 0.207               | 4.315   | 0.000     | sig      |
|            | Lower group | 1.57 | 0.568              | 0.104               |         |           |          |
| 7          | Upper group | 2.13 | 1.252              | 0.229               | 2.318   | 0.024     | sig      |
|            | Lower group | 1.5  | 0.82               | 0.15                |         |           |          |
| 8          | Upper group | 2.53 | 1.167              | 0.213               | 3.868   | 0.000     | sig      |
|            | Lower group | 1.6  | 0.621              | 0.113               |         |           |          |
| 9          | Upper group | 2.1  | 0.759              | 0.139               | 3.446   | 0.001     | sig      |
|            | Lower group | 1.4  | 0.814              | 0.149               |         |           |          |
| 10         | Upper group | 1.97 | 0.999              | 0.182               | 1.31    | 0.195     | Non sig  |
|            | Lower group | 1.67 | 0.758              | 0.138               |         |           |          |
| 11         | Upper group | 3.17 | 1.177              | 0.215               | 6.705   | 0.000     | sig      |
|            | Lower group | 1.57 | 0.568              | 0.104               |         |           |          |

**Table 3:** Shows the indicators of discriminatory power of the Fans pressure fields paragraphs of the negative automatic thoughts scale

| Paragraphs | Groups      | Mean | standard deviation | standard mean error | T value | Level sig | Type sig |
|------------|-------------|------|--------------------|---------------------|---------|-----------|----------|
| 12         | Upper group | 2.7  | 1.343              | 0.245               | 4.072   | 0.000     | sig      |
|            | Lower group | 1.6  | 0.621              | 0.113               |         |           |          |
| 13         | Upper group | 2.27 | 1.015              | 0.185               | 3.989   | 0.000     | sig      |
|            | Lower group | 1.4  | 0.621              | 0.113               |         |           |          |
| 14         | Upper group | 2.3  | 1.179              | 0.215               | 2.271   | 0.027     | sig      |
|            | Lower group | 1.73 | 0.691              | 0.126               |         |           |          |
| 15         | Upper group | 2.23 | 1.04               | 0.19                | 3.629   | 0.001     | sig      |
|            | Lower group | 1.47 | 0.507              | 0.093               |         |           |          |
| 16         | Upper group | 2.17 | 1.053              | 0.192               | 1.613   | 0.112     | Non sig  |
|            | Lower group | 1.8  | 0.664              | 0.121               |         |           |          |
| 17         | Upper group | 2.73 | 1.461              | 0.267               | 2.188   | 0.033     | sig      |
|            | Lower group | 1.97 | 1.245              | 0.227               |         |           |          |
| 18         | Upper group | 1.7  | 1.368              | 0.25                | 0.359   | 0.721     | Non sig  |
|            | Lower group | 1.6  | 0.675              | 0.123               |         |           |          |
| 19         | Upper group | 2.17 | 1.147              | 0.209               | 3.671   | 0.001     | sig      |
|            | Lower group | 1.33 | 0.479              | 0.088               |         |           |          |
| 20         | Upper group | 2    | 1.114              | 0.203               | 2.14    | 0.037     | sig      |
|            | Lower group | 1.5  | 0.63               | 0.115               |         |           |          |
| 21         | Upper group | 2.5  | 1.253              | 0.229               | 3.407   | 0.001     | sig      |
|            | Lower group | 1.6  | 0.724              | 0.132               |         |           |          |
| 22         | Upper group | 2.8  | 1.627              | 0.297               | 3.049   | 0.003     | sig      |
|            | Lower group | 1.8  | 0.761              | 0.139               |         |           |          |
| 23         | Upper group | 3.5  | 1.48               | 0.27                | 7.629   | 0.000     | sig      |
|            | Lower group | 1.33 | 0.479              | 0.088               |         |           |          |
| 24         | Upper group | 2.57 | 1.251              | 0.228               | 4.464   | 0.000     | sig      |
|            | Lower group | 1.47 | 0.507              | 0.093               |         |           |          |
| 25         | Upper group | 2.37 | 1.402              | 0.256               | 3.062   | 0.003     | sig      |
|            | Lower group | 1.53 | 0.507              | 0.093               |         |           |          |
| 26         | Upper group | 2.53 | 1.408              | 0.257               | 2.012   | 0.049     | sig      |
|            | Lower group | 1.9  | 0.976              | 0.181               |         |           |          |
| 27         | Upper group | 2.1  | 1.242              | 0.227               | 1.557   | 0.125     | Non sig  |
|            | Lower group | 1.67 | 0.884              | 0.161               |         |           |          |
| 28         | Upper group | 2.5  | 1.106              | 0.202               | 1.252   | 0.216     | Non sig  |
|            | Lower group | 2.17 | 0.95               | 0.173               |         |           |          |

|    |             |      |       |       |        |       |         |
|----|-------------|------|-------|-------|--------|-------|---------|
| 29 | Upper group | 2.3  | 1.179 | 0.215 | 2.354  | 0.022 | sig     |
|    | Lower group | 1.67 | 0.884 | 0.161 |        |       |         |
| 30 | Upper group | 2.6  | 1.545 | 0.282 | 1.687  | 0.097 | Non sig |
|    | Lower group | 2.03 | 0.999 | 0.182 |        |       |         |
| 31 | Upper group | 3.07 | 1.596 | 0.291 | 3.899  | 0.000 | sig     |
|    | Lower group | 1.73 | 0.98  | 0.179 |        |       |         |
| 32 | Upper group | 2.87 | 1.548 | 0.283 | 1.984  | 0.052 | Non sig |
|    | Lower group | 2.2  | 0.997 | 0.182 |        |       |         |
| 33 | Upper group | 2.37 | 1.033 | 0.189 | 2.945  | 0.005 | sig     |
|    | Lower group | 1.63 | 0.89  | 0.162 |        |       |         |
| 34 | Upper group | 2.83 | 1.315 | 0.24  | 2.967  | 0.004 | sig     |
|    | Lower group | 1.93 | 1.015 | 0.185 |        |       |         |
| 35 | Upper group | 2.7  | 1.291 | 0.236 | 3.894  | 0.000 | sig     |
|    | Lower group | 1.63 | 0.765 | 0.14  |        |       |         |
| 36 | Upper group | 1.93 | 0.944 | 0.172 | -1.394 | 0.169 | Non sig |
|    | Lower group | 2.27 | 0.907 | 0.166 |        |       |         |
| 37 | Upper group | 1.9  | 0.803 | 0.147 | 1.398  | 0.168 | Non sig |
|    | Lower group | 1.63 | 0.669 | 0.122 |        |       |         |
| 38 | Upper group | 2.17 | 0.928 | 0.172 | 2.868  | 0.006 | sig     |
|    | Lower group | 1.57 | 0.679 | 0.124 |        |       |         |
| 39 | Upper group | 2.23 | 1.006 | 0.184 | 3.562  | 0.001 | sig     |
|    | Lower group | 1.5  | 0.509 | 0.093 |        |       |         |

**Table 4:** Shows the indicators of discriminatory power of the paragraphs of the field of low self-esteem of the negative automatic thoughts scale

| Paragraphs | Groups      | Mean | standard deviation | standard mean error | T value | Level sig | Type sig |
|------------|-------------|------|--------------------|---------------------|---------|-----------|----------|
| 40         | Upper group | 1.93 | 1.172              | 0.214               | 1.750   | 0.085     | Non sig  |
|            | Lower group | 1.5  | 0.682              | 0.125               |         |           |          |
| 41         | Upper group | 1.8  | 0.961              | 0.176               | 1.086   | 0.282     | Non sig  |
|            | Lower group | 1.57 | 0.679              | 0.124               |         |           |          |
| 42         | Upper group | 2.03 | 1.189              | 0.217               | 2.057   | 0.044     | sig      |
|            | Lower group | 1.5  | 0.777              | 0.142               |         |           |          |
| 43         | Upper group | 1.8  | 1.064              | 0.194               | 1.210   | 0.231     | Non sig  |
|            | Lower group | 1.53 | 0.571              | 0.104               |         |           |          |
| 44         | Upper group | 2.5  | 1.456              | 0.266               | 3.737   | 0.000     | sig      |
|            | Lower group | 1.43 | 0.568              | 0.104               |         |           |          |
| 45         | Upper group | 2.83 | 1.533              | 0.28                | 4.463   | 0.000     | sig      |
|            | Lower group | 1.5  | 0.572              | 0.104               |         |           |          |
| 46         | Upper group | 2.33 | 1.47               | 0.268               | 1.868   | 0.067     | Non sig  |
|            | Lower group | 1.77 | 0.774              | 0.141               |         |           |          |
| 47         | Upper group | 2.4  | 1.453              | 0.265               | 2.451   | 0.017     | sig      |
|            | Lower group | 1.67 | 0.758              | 0.138               |         |           |          |
| 48         | Upper group | 3.13 | 1.383              | 0.252               | 5.603   | 0.000     | sig      |
|            | Lower group | 1.53 | 0.73               | 0.133               |         |           |          |
| 49         | Upper group | 2.77 | 1.431              | 0.261               | 4.377   | 0.000     | sig      |
|            | Lower group | 1.5  | 0.682              | 0.125               |         |           |          |
| 50         | Upper group | 2.77 | 1.455              | 0.266               | 3.985   | 0.000     | sig      |
|            | Lower group | 1.6  | 0.675              | 0.123               |         |           |          |
| 51         | Upper group | 3    | 1.509              | 0.275               | 5.564   | 0.000     | sig      |
|            | Lower group | 1.37 | 0.556              | 0.102               |         |           |          |
| 52         | Upper group | 3.07 | 1.484              | 0.271               | 6.088   | 0.000     | sig      |
|            | Lower group | 1.33 | 0.479              | 0.088               |         |           |          |
| 53         | Upper group | 2.23 | 1.278              | 0.233               | 3.908   | 0.000     | sig      |
|            | Lower group | 1.27 | 0.45               | 0.082               |         |           |          |
| 54         | Upper group | 2.5  | 1.196              | 0.218               | 4.802   | 0.000     | sig      |
|            | Lower group | 1.37 | 0.49               | 0.089               |         |           |          |
| 55         | Upper group | 1.97 | 1.066              | 0.195               | 3.138   | 0.003     | sig      |
|            | Lower group | 1.3  | 0.466              | 0.085               |         |           |          |
| 56         | Upper group | 1.87 | 0.9                | 0.164               | 1.594   | 0.116     | Non sig  |
|            | Lower group | 1.57 | 0.504              | 0.092               |         |           |          |
| 57         | Upper group | 1.87 | 0.73               | 0.133               | 1.469   | 0.147     | Non sig  |
|            | Lower group | 1.6  | 0.675              | 0.123               |         |           |          |

|    |             |      |       |       |        |       |         |
|----|-------------|------|-------|-------|--------|-------|---------|
| 58 | Upper group | 1.8  | 0.961 | 0.176 | -0.289 | 0.774 | Non sig |
|    | Lower group | 1.87 | 0.819 | 0.15  |        |       |         |
| 59 | Upper group | 2.07 | 0.944 | 0.172 | 3.061  | 0.003 | sig     |
|    | Lower group | 1.43 | 0.626 | 0.114 |        |       |         |
| 60 | Upper group | 2.63 | 1.52  | 0.277 | 3.012  | 0.004 | sig     |
|    | Lower group | 1.67 | 0.884 | 0.161 |        |       |         |
| 61 | Upper group | 2.73 | 1.66  | 0.303 | 3.355  | 0.001 | sig     |
|    | Lower group | 1.57 | 0.935 | 0.171 |        |       |         |
| 62 | Upper group | 2.77 | 1.104 | 0.202 | 3.874  | 0.000 | sig     |
|    | Lower group | 1.8  | 0.805 | 0.147 |        |       |         |
| 63 | Upper group | 1.93 | 1.172 | 0.214 | 1.507  | 0.137 | Non sig |
|    | Lower group | 1.53 | 0.86  | 0.157 |        |       |         |
| 64 | Upper group | 2.2  | 1.031 | 0.188 | 1.127  | 0.264 | Non sig |
|    | Lower group | 1.93 | 0.785 | 0.143 |        |       |         |
| 65 | Upper group | 2.53 | 1.167 | 0.213 | 3.657  | 0.001 | sig     |
|    | Lower group | 1.6  | 0.77  | 0.141 |        |       |         |
| 66 | Upper group | 2.67 | 1.493 | 0.273 | 1.853  | 0.069 | Non sig |
|    | Lower group | 2.1  | 0.759 | 0.139 |        |       |         |
| 67 | Upper group | 2.43 | 1.223 | 0.223 | 2.596  | 0.012 | sig     |
|    | Lower group | 1.73 | 0.828 | 0.151 |        |       |         |
| 68 | Upper group | 2.4  | 0.968 | 0.177 | 2.408  | 0.019 | sig     |
|    | Lower group | 1.8  | 0.961 | 0.176 |        |       |         |
| 69 | Upper group | 2.03 | 0.964 | 0.176 | 1.505  | 0.138 | Non sig |
|    | Lower group | 1.67 | 0.922 | 0.168 |        |       |         |

**Table 5:** Shows the indicators of the discriminatory strength of the paragraphs of the negative perception fields of competition for the negative automatic thoughts scale

| Paragraphs | Groups      | Mean | Standard deviation | Standard mean error | T value | Level sig | Type sig |
|------------|-------------|------|--------------------|---------------------|---------|-----------|----------|
| 70         | Upper group | 2.2  | 1.095              | 0.2                 | 0.994   | 0.325     | Non sig  |
|            | Lower group | 1.93 | 0.98               | 0.179               |         |           |          |
| 71         | Upper group | 1.93 | 1.048              | 0.191               | 1.586   | 0.118     | Non sig  |
|            | Lower group | 1.53 | 0.9                | 0.164               |         |           |          |
| 72         | Upper group | 2.57 | 1.251              | 0.228               | 4.438   | 0.000     | sig      |
|            | Lower group | 1.43 | 0.626              | 0.114               |         |           |          |
| 73         | Upper group | 2.17 | 1.02               | 0.186               | 1.748   | 0.086     | Non sig  |
|            | Lower group | 1.77 | 0.728              | 0.133               |         |           |          |
| 74         | Upper group | 1.67 | 1.061              | 0.194               | -0.394  | 0.695     | Non sig  |
|            | Lower group | 1.77 | 0.898              | 0.164               |         |           |          |
| 75         | Upper group | 2.1  | 1.062              | 0.194               | 1.620   | 0.111     | Non sig  |
|            | Lower group | 1.73 | 0.64               | 0.117               |         |           |          |
| 76         | Upper group | 2.47 | 1.358              | 0.248               | 3.718   | 0.000     | sig      |
|            | Lower group | 1.47 | 0.571              | 0.104               |         |           |          |
| 77         | Upper group | 2.8  | 1.064              | 0.194               | 5.302   | 0.000     | sig      |
|            | Lower group | 1.5  | 0.82               | 0.15                |         |           |          |
| 78         | Upper group | 2.83 | 1.555              | 0.284               | 3.613   | 0.001     | sig      |
|            | Lower group | 1.6  | 1.037              | 0.189               |         |           |          |
| 79         | Upper group | 2.9  | 1.47               | 0.268               | 4.069   | 0.000     | sig      |
|            | Lower group | 1.53 | 1.106              | 0.202               |         |           |          |

**Table 6:** Shows the correlation coefficients between the item and the fields and the total score of the scale for the items of the Negative Expectations Fields of the Negative Automatic Thoughts Scale.

| Paragraphs | Negative Expectations | Level Sig | Type sig | Overall score of the scale | Level Sig | Type sig |
|------------|-----------------------|-----------|----------|----------------------------|-----------|----------|
| 1          | 0.743                 | 0.000     | Sig      | 0.622                      | 0.000     | Sig      |
| 2          | 0.534                 | 0.000     | Sig      | 0.398                      | 0.000     | Sig      |
| 3          | 0.430                 | 0.000     | Sig      | 0.285                      | 0.003     | Sig      |
| 6          | 0.605                 | 0.000     | Sig      | 0.420                      | 0.000     | Sig      |
| 7          | 0.557                 | 0.000     | Sig      | 0.276                      | 0.003     | Sig      |
| 8          | 0.588                 | 0.000     | Sig      | 0.497                      | 0.000     | Sig      |
| 9          | 0.386                 | 0.000     | Sig      | 0.347                      | 0.000     | Sig      |
| 11         | 0.631                 | 0.000     | Sig      | 0.648                      | 0.000     | Sig      |

**Table 7:** Shows correlation coefficients between the paragraph and the fields and the total score of the scale for the paragraphs of the fans pressure field for the negative automatic thoughts scale.

| Paragraphs | Fans pressure | Level Sig | Type sig | Overall score of the scale | Level Sig | Type sig |
|------------|---------------|-----------|----------|----------------------------|-----------|----------|
| 12         | 0.457         | 0.000     | sig      | 0.394                      | 0.000     | sig      |
| 13         | 0.334         | 0.000     | sig      | 0.318                      | 0.001     | sig      |
| 14         | 0.329         | 0.000     | sig      | 0.150                      | 0.117     | sig      |
| 15         | 0.389         | 0.000     | sig      | 0.280                      | 0.003     | sig      |
| 17         | 0.387         | 0.000     | sig      | 0.206                      | 0.031     | sig      |
| 19         | 0.379         | 0.000     | sig      | 0.342                      | 0.000     | sig      |
| 20         | 0.364         | 0.000     | sig      | 0.288                      | 0.002     | sig      |
| 21         | 0.314         | 0.001     | sig      | 0.390                      | 0.000     | sig      |
| 22         | 0.355         | 0.000     | sig      | 0.347                      | 0.000     | sig      |
| 23         | 0.361         | 0.000     | sig      | 0.524                      | 0.000     | sig      |
| 24         | 0.348         | 0.000     | sig      | 0.299                      | 0.002     | sig      |
| 25         | 0.277         | 0.003     | sig      | 0.199                      | 0.037     | sig      |
| 29         | 0.363         | 0.000     | sig      | 0.202                      | 0.034     | sig      |
| 31         | 0.552         | 0.000     | sig      | 0.366                      | 0.000     | sig      |
| 33         | 0.399         | 0.000     | sig      | 0.316                      | 0.001     | sig      |
| 34         | 0.207         | 0.030     | sig      | 0.387                      | 0.000     | sig      |
| 35         | 0.358         | 0.000     | sig      | 0.353                      | 0.000     | sig      |
| 38         | 0.323         | 0.001     | sig      | 0.188                      | 0.050     | sig      |
| 39         | 0.301         | 0.001     | sig      | 0.265                      | 0.005     | sig      |

**Table 8:** Shows the correlation coefficients between the item and the fields and the total score of the scale for the items of the negative perception fields of competition for the negative automatic thoughts scale.

| Paragraphs | Negative perception | Level Sig | Type sig | Overall score of the scale | Level Sig | Type sig |
|------------|---------------------|-----------|----------|----------------------------|-----------|----------|
| 42         | 0.539               | 0.000     | sig      | 0.370                      | 0.000     | sig      |
| 44         | 0.576               | 0.000     | sig      | 0.086                      | 0.0369    | sig      |
| 45         | 0.514               | 0.000     | sig      | 0.227                      | 0.017     | sig      |
| 47         | 0.614               | 0.000     | sig      | 0.426                      | 0.000     | sig      |
| 48         | 0.470               | 0.000     | sig      | 0.429                      | 0.000     | sig      |
| 49         | 0.551               | 0.000     | sig      | 0.465                      | 0.000     | sig      |

the stability of the individual's performance for all items of the scale, and to calculate the stability with the Cronbach's alpha coefficient for the negative automatic thoughts scale, the researcher relied on the students' data, which amounted to (120) students, and when calculating the value of the stability coefficient it turned out to be (0.850), so this scale can be relied upon due to its high stability.

**Third: the objectivity of the scale**

After the data was unloaded from the test and returned, it became clear that all the statements were clear to the sample, as it is characterized by the fact that the alternatives are multiple-choice and the answer to more than one alternative is not accepted, and there is no statement for the open answer, as the questionnaire is highly objective and there is no difference in the scores obtained sample members.

**Define skills**

Gymnastics skills were determined according to the sequence in force in the

college for the gymnastics subject and with the help of the subject teachers

Description of gymnastics skills (the subject of the research)

- Parallel device
- Standing on the shoulders
- Rolling a slot on a parallel device
- Support on the two rods

**Main experiment**

The main experiment was prepared with the help of the auxiliary work team, which was applied to the research sample and the cameras were installed and came in a row

- Standing on the shoulders
- Rolling a slot

**Table 9:** Shows the correlation coefficients between the item and the fields and the total score of the scale for the items of the fields of low self-esteem for the negative automatic thoughts scale.

| Paragraphs | Low self-esteem | Level Sig | Type sig | Overall score of the scale | Level Sig | Type sig |
|------------|-----------------|-----------|----------|----------------------------|-----------|----------|
| 50         | 0.227           | 0.017     | sig      | 0.181                      | 0.048     | sig      |
| 51         | 0.235           | 0.013     | sig      | 0.099                      | 0.030     | sig      |
| 52         | 0.145           | 0.132     | sig      | 0.077                      | 0.042     | sig      |
| 53         | 0.158           | 0.099     | sig      | 0.154                      | 0.109     | sig      |
| 54         | 0.342           | 0.000     | sig      | 0.316                      | 0.001     | sig      |
| 55         | 0.330           | 0.000     | sig      | 0.371                      | 0.000     | sig      |
| 59         | 0.522           | 0.000     | sig      | 0.428                      | 0.000     | sig      |
| 60         | 0.512           | 0.000     | sig      | 0.363                      | 0.000     | sig      |
| 61         | 0.600           | 0.000     | sig      | 0.496                      | 0.000     | sig      |
| 62         | 0.577           | 0.000     | sig      | 0.513                      | 0.000     | sig      |
| 63         | 0.378           | 0.000     | sig      | 0.261                      | 0.006     | sig      |
| 64         | 0.395           | 0.000     | sig      | 0.306                      | 0.001     | sig      |
| 65         | 0.348           | 0.000     | sig      | 0.250                      | 0.008     | sig      |
| 66         | 0.228           | 0.017     | sig      | 0.161                      | 0.033     | sig      |
| 67         | 0.307           | 0.001     | sig      | 0.232                      | 0.015     | sig      |
| 68         | 0.090           | 0.352     | Non sig  | 0.063                      | 0.012     | sig      |
| 69         | 0.330           | 0.000     | sig      | 0.358                      | 0.000     | sig      |
| 70         | 0.368           | 0.000     | sig      | 0.355                      | 0.000     | sig      |
| 71         | 0.313           | 0.001     | sig      | 0.364                      | 0.000     | sig      |
| 72         | 0.369           | 0.000     | sig      | 0.415                      | 0.000     | sig      |
| 76         | 0.303           | 0.001     | sig      | 0.213                      | 0.026     | sig      |
| 77         | 0.365           | 0.000     | sig      | 0.305                      | 0.001     | sig      |
| 78         | 0.340           | 0.000     | sig      | 0.312                      | 0.001     | sig      |

**Table 10:** Shows the correlation between skills and negative automatic thoughts.

| No. | Skills                       | Skills test     |                    | Negative automatic thoughts |                    | Correlation coefficient | Level Sig | Type sig |
|-----|------------------------------|-----------------|--------------------|-----------------------------|--------------------|-------------------------|-----------|----------|
|     |                              | Arithmetic mean | Standard deviation | Arithmetic mean             | Standard deviation |                         |           |          |
| 1   | Stand on shoulders           | 3.334           | 1.11113            | 299.2500                    | 20.08667           | .443*                   | .032      | sig      |
| 2   | Front Roller Opened Parallel | 4.223           | 2.00000            |                             |                    | -.543*                  | .000      | sig      |
| 3   | Support on the two rods      | 4.222           | 2.81296            |                             |                    | -.224*                  | .023      | sig      |

- Support on the two rods

**Evaluation of the performance of gymnastics skills (the subject of the research)**

The gymnastics skills (the subject of the research) were photographed according to the curriculum prepared for the second stage for students of the College of Physical Education and Sports Sciences, and then presented to the experts in an evaluation form and the highest and lowest degrees will be deleted, then the rest of the grades will be divided and the final grade will be extracted from (10) for each skill

**Statistical means**

- Pearson's correlation coefficient.
- Arithmetic mean.
- Standard deviation.
- T-test for two independent samples
- Percentage.
- Cronbach's alpha coefficient

**Results and Discussion**

The relationship of negative automatic thoughts scale to some gymnastics skills (Table 10).

**Discuss the consequences of negative automatic thoughts among students**

The results indicate that the sample members have a higher degree than the average in negative and negative thoughts with skills, and through a review of research and literature in this field, the internal motivation is more effective and lasting than external motivation, especially with students as one of the opposites of negative automatic thoughts, and that achievement motivation is positively related With the types of behavior that aim to achieve achievement,

which is achieved with the nature of the sports activity practiced by the members of the target sample in the current research (Al-Qaisi, Raja, 2007).

The advantages of the sports activity practiced by the sample members has contributed positively to their high level of motivation, and it leads the students to carry out the behavior and activity they offer and the goals they seek, as the motivation towards sports development motivates the athlete to reach the highest levels of sports, as well as motivates them The practice and continuation of sports activity, as well as the internal situations and forces that move the individual and direct him to achieve a specific goal (Allawi, Muhammad Hassan. 1998). It also enjoys the spirit of competition that qualifies them for the challenge and through it they seek to achieve and fragment the goals and work to encourage and reward effort and activities and set interim goals that the learners can achieve.

On the other hand, physical and sports activities seek to acquire and master motor skills and take care of physical fitness for better health, sound stature and a longer and more active life, as well as the acquisition of knowledge and the development of trends in aspects of his personality, as well as helping to adapt to society and provide it with the ability to make decisions. In the various psychological situations with independent thinking, and it is noticeable that the practice of physical and sports activities in all its many and varied forms in general has a scope for the influence of the players and the development of positive trends towards different issues in life and their self-reliance (Muhammad, Mojbd. 2010).

**Conclusions and Recommendations**

**Conclusions**

- The results showed that there is an inverse relationship between negative automatic thoughts and gymnastics skills
- The reason for the inverse proportion between skills and negative automatic thoughts is the motivation of students

### Recommendations

- Developing and strengthening scientific behavior to get rid of negative automatic thoughts through the introduction of professors in development courses.
- Helping students to provide the appropriate educational environment in order to increase positive spontaneous ideas.

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