

The Association between physical fitness and psychological disorders primary school students with learning disabilities in Jeddah, Saudi Arabia

Seham M. Khan

¹Department of Movement Science & Health, College of Sport Science, University of Jeddah, Jeddah, Saudi Arabia

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Abstract

The current research aims to clarify the association between fitness and mental disorders among male and female students with learning difficulties at the primary school of downtown Jeddah schools. To achieve research goals was conducted on a random sample of students in the second and third grades of a primary school of both sexes on a sample of 20 students with learning difficulties enrolled in resource rooms. The research was conducted using the descriptive survey method, which was primarily suitable for it. In this paper, we built a scale to measure mental disorders comprising 31 paragraphs. We conducted fitness tests to measure four elements of fitness (respiratory cyclic endurance, flexibility, muscle strength) and the body mass index. Results were reached using a statistical analysis program (SPSS). The One-Samples T-Test of students with learning disabilities came with an average score with an arithmetic average of 1.72. The level of mental disorders among them came with an average score with an arithmetic average of 1.93. The results approved the validity of the proposed questions, as there is a conflict between fitness and mental disorders among tested students (the Pearson correlation coefficient reached a value of -0.763**).

Keywords: Fitness; Psychological; Scale Stability, learning disabilities

العلاقة بين اللياقة البدنية والاضطرابات النفسية لدى طلاب المرحلة الابتدائية ذوي صعوبات التعلم في جدة، المملكة العربية السعودية

د. سهام م. خان

قسم علوم الحركة والصحة، كلية علوم الرياضة، جامعة جدة، جدة، المملكة العربية السعودية.

ملخص البحث:

هدفت الدراسة الحالية إلى توضيح العلاقة بين اللياقة البدنية والاضطرابات النفسية لدى الطلاب والطالبات ذوي صعوبات التعلم في المرحلة الابتدائية بمدارس وسط مدينة جدة. ولتحقيق أهداف الدراسة، أجريت على عينة عشوائية من طلاب الصفين الثاني والثالث الابتدائي من الجنسين، بلغت (20) طالبًا وطالبة من ذوي صعوبات التعلم الملتحقين بغرف المصادر. واعتمدت الدراسة المنهج الوصفي المسحي لملاءمته لطبيعة البحث. طوّرت الباحثة مقياسًا لقياس الاضطرابات النفسية اشتمل على (31) فقرة، كما أجرت اختبارات لقياس أربعة عناصر من عناصر اللياقة البدنية، وهي: التحمل الدوري التنفسي، والمرونة، والقوة العضلية، بالإضافة إلى قياس مؤشر كتلة الجسم. وتم تحليل البيانات باستخدام البرنامج الإحصائي (SPSS). أظهرت نتائج اختبار (One-Sample T-Test) أن متوسط مستوى اللياقة البدنية لدى الطلاب ذوي صعوبات التعلم بلغ (1.72)، في حين بلغ متوسط مستوى الاضطرابات النفسية (1.93). كما أكدت النتائج صحة فرضيات الدراسة، حيث تبين وجود علاقة ارتباط عكسية ذات دلالة إحصائية بين اللياقة البدنية والاضطرابات النفسية لدى أفراد العينة، إذ بلغ معامل ارتباط بيرسون (-0.763**).

الكلمات المفتاحية: اللياقة البدنية، الاضطرابات النفسية، صعوبات التعلم، المرحلة الابتدائية، مقياس الاضطرابات النفسية.

Introduction

Physical fitness has become a concern for many because improving individuals' physical and social situations is essential¹. It became an interest of non-athletes as well as athletes. In developed countries, many people practice various sports appropriate for their ages to achieve fitness¹. It focuses significantly on fitness for non-athletes to improve health, activity, and vitality. Kraus Roper's tests pointed to the tendency of America's children to softness, so discussions have spread in artistic circles and among many business bodies on "how to improve fitness"². The President of the US (Eisenhower)'s interest in this problem has gotten the Americans' attention. Meanwhile, he established an official fitness week from June 1-7,³ Sports help reduce anxiety and depression. It also improves mood and gives self-confidence and self-esteem^{5,6}. It makes the child more able to endure and feel good. It also reduces

stress and mental disorders and helps him sleep well⁸. However, one of the reasons for the low level of fitness is limited space. Rural children are more active than urban residents⁹. About 450 million people suffer from mental disorders and a quarter of people will develop one or more of these disorders later¹⁰. They affect adults and children alike. Many psychologists believe that children suffer from mental disorders more than adults because of not having the ability to face problems. Mental disorders in children are often created in school because of abilities in school, scores, non-acceptance, or unfair treatment. The study by the Health Insurance Organization, University of Manchester in Germany, indicated that 70% of children in primary school suffer from mental disorders because they are always under school pressure. In addition, they have too much evening school work to do, so they are always under time pressure with no time to play¹¹. Stress is every day in

schools. Children often start school with unrealistic expectations about their abilities, and some frustrations make them feel worse. For people with learning disabilities, frustrations and anxiety increase too much and cause mental disorders¹². Groups with mental disorders usually suffer from learning difficulties. Also, a child with learning difficulties suffers from psychological, and social issues that affect his development. As a result, he often became unable to interact because of low self-confidence, which caused him to feel isolated and lonely.

In this paper, the research issue is that people with learning disabilities lose self-confidence after failures, leading to a loss of motivation to learn. They are depressed by the difficulties they face, which delay them not only academically but also psychologically. To help them, focus on the social and psychological skills with educational challenges.¹³ The study conducted by Al-Qubtan¹⁴ In Muscat, the government recommended early detection of mental disorders. Anxiety is one of the most prevalent mental disorders. This usually happens during childhood, with an annual prevalence rate of 5.7 to 17.7%¹². Mental disorders decrease among children who have higher fitness than their peers, so we will try to reveal the relationship between fitness and cognitive disorders.

The current research declares the relationship between fitness and levels of mental disorders among male and female students with learning disabilities at the primary level. Through the following:

- Identify the levels of health-related fitness elements in people with learning disabilities.
- Identify the levels of fitness elements associated with performance in people with learning disabilities.
- The relationship of fitness elements to the level of psychological stress in people with learning disabilities.
- Reveal the impact of fitness on the psychological aspect of people with learning disabilities.

The importance lies in enriching the scientific content of fitness, psychological, and pedagogical through identifying mental disorders among people with learning disabilities. Current research codifies the measure of mental disorders and identifies the strengths and weaknesses of fitness levels. It also focuses on the relationship between fitness elements and the level of stress.

- The applied importance of research is to take advantage of the data to be reached by focusing on the following points:

- Codifying a measure-to-measure mental disorder
- Identifying the basic parameters of mental disorders in people with learning disabilities contributes to providing a database on disorders and ranking their prevalence.
- Developing strategies to reduce the causes that lead to mental disorders among people with learning disabilities.

Substantive boundaries, the relationship between fitness and mental disorders, relied on students with learning disabilities at the primary level. Human boundaries: the study is applied to a sample of students with learning disabilities. Time limits: The research was conducted in February and March 2021. Spatial boundaries: The research was conducted in rehabbing some schools in the central region of the city of Jeddah for primary schools.

Materials and Methods

It is "a survey focused on one of the phenomena as it exists in the present to diagnose it, reveal its aspects, and determine the relationships between its elements or between them and other phenomena." The research community is all individuals, objects, or persons who are the subject of the research problem⁵. Table 1 shows the distribution of the study community in primary schools in the Central Jeddah area.

The current research sample included students with learning disabilities. Table 2 shows the sample distribution in some primary schools in the Central Jeddah area.

The search variables, the independent variable, Fitness, and the dependent variables are mental disorders - gender - age - class - and people with learning disabilities. In this paper, the research materials and tools, the current research has the following tools:

- First – Fitness Tests: this measure aims to obtain a quantitative estimate of the dimensions of fitness tests in students with learning disabilities

- Mental Disorders Scale (Anxiety) (Researcher Numbers), the metrics used are summarized below:

From the results of the previous Table 3, we find that all Pearson's correlation coefficients between fitness tests and the total score of fitness tests are statistically significant at the level of significance (0.05), where the minimum correlation coefficients were (0.491*) and the upper limit (0.782**). Therefore, all physical fitness tests are internally consistent with the overall score of the physical fitness tests, which proves the validity of the internal consistency of the physical fitness tests. In the scale stability, in this paper, we calculated the test stability coefficient when applying the tests and re-application on a sample of people with learning difficulties (20) male and female students from central Jeddah primary schools.

This measure aims to obtain a quantitative estimate of the dimensions of psychological disorders (anxiety) among people with learning disabilities of both sexes. The scale is built according to the Likert method in the correction method.

Modulus of Honesty

1. The authenticity of the content: The researcher used the honesty of the content by reviewing previous studies that were interested in applying.

2. The sincerity of the arbitrators: The honesty of the arbitrators was found by presenting the tests to 6 arbitrators with doctoral degrees who specialize in sports sciences and sports psychology.

Honesty

From the results of Table 4 & 5 and figure 1, we find that all Pearson's correlation coefficients between the paragraphs of the first axis and the total score for the first axis are statistically significant at the level of significance (0.01), where the minimum correlation coefficients came (0.632*) and the upper limit (0.973**), we also find that all correlation coefficients Pearson between the paragraphs of the second axis and the total score for the second axis are

statistically significant at the level of significance (0.01), where the minimum correlation coefficients were (0.638*) and the upper limit (0.953**).

Accordingly, all the paragraphs of the first and second axes are internally consistent with the total score of the first and second axes, which proves the validity of the internal consistency of the paragraphs of the first and second axes. Accordingly, through the results of the stability and internal consistency in the previous table, and after deleting the inconsistent paragraphs, the stability of the study tool (the questionnaire) becomes clear to us with a high degree and the sincerity of its internal consistency, which makes us apply it to the entire sample.

All paragraphs of Axis I and II are internally consistent with the overall grade of Axis I and II, which proves the sincerity of the income consistency of Axis I and II paragraphs.

From the results of Table 6, we find that the correlation coefficients for the first time in the axes (separation anxiety, school refusal, general anxiety) and the total score of the scale are statistically significant at the level of significance (0.01), where the minimum correlation coefficients came (0.719) and the upper limit (0.929). In contrast, we find that the correlation coefficients for the first time for the axis (fears) and the scale's total score are statistically significant at the significance level (0.05).

Scale Stability

In this paper, we calculated the scale's stability coefficient using the Cronbach's alpha coefficient for all the items of the scale, and the Cronbach's coefficient was calculated for each axis from the previous axes with the total score.

The value of the Alpha Kronbach coefficient ranged from (0.719 – 0.895), indicating that the questionnaire has a high degree of stability that enables the researcher to conduct the current study.

Results

The results related to the central question of this paper is whether there is a statistically significant correlation between the elements of fitness and mental disorders in children with learning difficulties. The results of the research sub-questions: what is the fitness level of children with learning disabilities? To answer this question, the results of the fitness tests were divided into three levels according to the Likert triple scale. Then, we conducted the one-sample t-test to determine the fitness level of students with learning difficulties. After confirming the hypotheses and conditions of the test, the results were as follows:

Table 7 shows the values of arithmetic averages and standard deviation around fitness tests, where the body mass index came in the first place with a standard deviation (0.786) and an arithmetic average of (2.25) with an intermediate level, the flexibility test with a standard deviation (0.768) and arithmetic average (1.70) at an intermediate level, while, as can be seen from Table 10, the weighted average fitness scale was 1.7250 with a standard deviation (0.40474), which corresponds to the average level in the Likert triple scale.

Are there statistically significant differences in some fitness elements in people with learning disabilities

depending on the gender variable? To answer this question, we conducted the Independent-Samples T-Test to show the differences between fitness tests depending on the gender variable.

It is evident from Table 8 that there are statistically significant differences between the averages of some physical fitness tests for male and female students with learning difficulties according to the gender variable, where the differences appeared in the 250 flexibility test in favor of males, where the average flexibility test reached (2.20) with a standard deviation (0.789), which is higher than The average flexibility test for females of (1.40) with a standard deviation (0.516), and the value of the result of the T-test (2,683) with a probability value of (0.015) less than the significance level (0.05), and accordingly we decide that there are statistically significant differences when Significance level (0.05). At the same time, there are no statistically significant differences between average body mass, cyclic respiratory endurance, and muscle strength.

What is the level of mental disorders for people with learning disabilities? To answer this question, we conducted a one-sample t-test to find out the level of mental disorders caused by students with learning disabilities. After confirming the hypotheses and conditions of the test, the results for the Mental Disorders Scale were as follows:

Table 9 shows the arithmetic averages and standard deviations of the axes of the Psychological Disorders Scale, where the weighted arithmetic means of the Psychological Disorders Scale appeared (1.9323) with a standard deviation (0.30797), which corresponds to the average level in the Triple Likert Scale in Table 9. Table 12 shows the values of the arithmetic mean and the standard deviation of the mental disorders scale, where the (particular concerns) axis came in the first place with a standard deviation (0.36864) and the arithmetic mean (2.6750) at a high level, and the (general anxiety) axis came in the second place with a standard deviation (0.33705) and an arithmetic mean (1.8531) at an average level, while the three axes (rejection of school) came in the third place with a standard deviation (0.30042) and an arithmetic mean (1.7188) at an average level, and in the last place came the axis (separation anxiety) with a standard deviation (0.32658) and an arithmetic mean (1.4250) at a low level. The preceding makes it clear that the most common disorder is the axis (concerns), which came to a high degree.

Is there a statistically significant correlation at 0.05 between some anthropometric measurements (height, weight, body mass index, age) and some fitness element tests in students with learning disabilities?

Is there a statistically significant correlation between fitness elements and mental disorders in children with learning disabilities? To confirm this hypothesis, we used the Pearson correlation coefficient to illustrate the relationship between fitness and mental disorders in students with learning disabilities.

Table 10 shows that the chi-squared value amounted to (138,065) with a statistical significance (0.000), which is a value smaller than (0.01). This means that there is a strong statistically significant relationship between physical fitness and psychological disorders among people with

learning difficulties. Then, we conducted a one-way test of variance (ANOVA) to discover the differences in the relationship between psychological disorders and the level of physical fitness.

Table 11 shows the results of the one-way analysis of variance. From it, we conclude that there are statistically significant differences in the relationship of psychological disorders to the level of physical fitness, where the F values (11.755) with a probability value of (0.001) are less than (0.05) statistically significant. The previous table also shows the high value of the arithmetic averages, where the highest value for the low fitness category came with a value of (2.25) and a standard deviation of (0.50) for the same category, and to find out the reason for the differences, the dimensional comparisons were tested (Multiple Comparisons Scheffe).

It is clear from Table 12 that the reason for the statistically significant differences in the relationship of psychological disorders to the level of physical fitness is due to the difference between high physical fitness and medium and low levels of physical fitness with a significant difference (1.25) from the level of low fitness and a significant difference (1.07) from the level of medium fitness, where the probability value (0.001) is less than ($P > 0.05$). At the same time, the difference between medium fitness and low fitness was not statistically significant, as the probability value (0.61) was greater than ($P > 0.05$).

Discussion

Findings related to the relationship between fitness and mental disorders in students with primary learning disabilities showed the following:

Q1: What is the fitness level of children with learning disabilities?

The statistical results indicated the levels of some elements of fitness in people with learning disabilities, where the body mass index came in first place at an intermediate level.

Q2: Are there statistically significant differences in some elements of fitness in people with learning disabilities depending on the gender variable?

The statistical results indicated statistically significant differences in the flexibility test in favor of males. The researcher attributes these results to the fact that males have superior energy in play and motor achievement of some motor skills that exceed females.

Q3: What is the level of mental disorders for people with learning disabilities?

The statistical results showed the spread of mental disorders among students with learning disabilities with an average degree of 1.9323.

Q4: What are the most prevalent axes of mental disorders in children with learning disabilities?

The results showed that the axis of special concerns is the most widespread axis among male and female students with learning disabilities. The researcher attributes the reason for the decrease in mental disorders in the axis of (separation anxiety) to the families to which the sample belongs.

Q5: Is there a statistically significant correlation

between the elements of fitness and mental disorders in children with learning disabilities?

It was noted that players who have a very high fitness have a low degree of anxiety, and most players who have high fitness have a moderate degree of anxiety. It was found that players who have moderate fitness have high and mild anxiety, while players who have low fitness have high anxiety.

Q6: Is there a statistically significant correlation at (0.05) between some anthropometric measurements (height, weight, body mass index, age) and some fitness element tests in students with learning disabilities?

The relationship between fitness and anthropometric measurements helps achieve correct motor performance. The researcher believes that the opposite relationship appears because weight gain increases the time it takes to take a test.

The researcher believes that the inverse relationship emerges because weight gain increases the time it takes to take a test, increasing the additional burdens on the respiratory and circulatory systems and Hassanein.⁸ It confirmed that weight plays an important role, negatively or positively, in physical performance depending on the type of activity. The results also showed no relationships with the rest of the anthropometric measurements and the test of flexibility and muscular strength, and the current results differed from the study results.² There was no statistically significant relationship between weight and most fitness tests. Still, there was a direct statistically substantial relationship between Height, muscle strength test, and flexibility test, as well as an inverse relationship with statistical significance between height and endurance test.

According to Alatani, et al.,¹⁶ adolescence is a crucial time for psychological development, characterized by rapid maturation without maturity and self-contradiction. Psychosocial issues can significantly impact academic achievement, social skills, and mental growth. Researchers have recently explored the link between physical activity and psychological wellness. This study attempts to determine if teenagers who are physically inactive or marginally active have higher rates of psychosocial difficulties than those who are active. Methods: A school-based, cross-sectional questionnaire was distributed to teenagers in Saudi Arabia between January and April 2023. Multi-level linear regression was used to investigate the link between physical activity and psychological issues. According to Neville et al.,¹⁷ and Alsulaiman & Abu-Saris¹⁸, the weighted average Strengths and Difficulties Questionnaire score of active adolescents was lower than that of inactive adolescents. Inactive adolescents had 12% ($\beta = 1.12$; 95% CI: 1.10–1.14; $P < 0.001$) more psychosocial problems compared with active adolescents. Further, inactive adolescents had a higher score on the subscales of emotional issues ($\beta = 1.19$; 95% CI: 1.17–1.22; $P < 0.001$) and problems with peers ($\beta = 1.16$; 95% CI: 1.14–1.19; $P < 0.001$).

There was no statistically significant difference in the Strengths and Difficulties Questionnaire score between active and slightly active adolescents. Conclusion:

Physically active adolescents have fewer psychosocial problems than physically inactive adolescents. Not only is this association significant, but there is also an indication that it is clinically relevance¹⁹.

Another study revealed a statistically significant variation in physical activity questionnaire summary scores (PAQ-C) among household count groups. A higher PAQ-C was detected with <5 households compared to a higher number of households (5-10 persons). Parents in larger families may have less time and assistance to help their disabled children participate in physical activity. Insufficient time has been noted as a barrier to physical activity in children with impairments [20]. This could also be an indicator of inadequate facilities and assistance available for families caring for children with disabilities in the country, particularly those who have additional obligations and may require extra care⁸.

Furthermore, while there was no significant difference in impression of area safety and PAQ-C, most parents (37.6%) in the research, including more moms (86.4%), felt unsafe strolling alone in the neighborhood. Shields et al. [21] conducted a systematic review and found that fear was considered a barrier.

In another study, there were no significant differences between children and parents regarding gender, age, educational level, parents' marital and job status, household income, child's disability form, having siblings, and residency location compared to PAQ-C. However, low parental education, low socioeconomic status, and single-parent families have all previously been linked to lower participation rates. Studies have found that environmental and familial support may be more important determinants of physical activity participation [9]. The number of siblings was not previously connected with engagement level, which supports the findings of this study [22].

Although there was no significant relationship between type or form of disability and degree of engagement in this investigation, a recent metanalysis revealed a differential in participation levels based on type of disability, with participation being lower in individuals with multiple impairments [23].

Conclusion

After presenting the research data and discussing its results in light of the answer to the relationship between the elements of fitness and psychological disorders in students of primary education difficulties, several facts were reached as follows: the percentage of mental disorders among the sample members reached the total sample, and the number of females 10 and the number of males 10, there is a statistically significant correlation between the disturbances of the elements of physical fitness and psychological disorders with a value of correlation ($p < 0.001$), which indicates the existence of an inverse correlation at the level of significance.

Use the scale prepared by the researcher in scientific and experimental research, and then use the current research results as the basis for research. Conduct similar studies in different regions and compare their results with current research. Establish a specialized center for

psychological disorders for people with learning difficulties in the Kingdom of Saudi Arabia. Disorders Early detection of mental disorders is necessary. Conduct similar studies of multiple segments of society to discover the reality of psychological disorders. Apply guidance and awareness programs for male and female students at various stages to summarize the level of hidden disability among people with learning disabilities. Educational counselors in schools participated in training courses to identify mental disorders. Urge people with learning disabilities to participate and interact in school activities. Raise health awareness of the importance of exercise positively. Activate physical education classes in girls' and early childhood schools. The research suggestion is to conduct similar studies using new methods and guidance techniques to reduce mental disorders, conducting experimental studies on the impact of sports land in reducing psychological disorders, and conducting studies on psychological disorders in students with learning disabilities and their relationship to some severe variables.

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Tables with Captions**Table 1. The Distribution of the Study Community in Primary Schools in Jeddah City.**

Classification of primary schools affiliated with the central Jeddah region to which the learning Disabilities program is attached	Number of Schools	Number of Students with Learning Difficulties	
		Girls	Boys
Girls School	5 Schools	45	-
Schools of Early Childhood	7 Schools	62	18
Boys Schools	16 Schools	-	112
Total	28 Schools	107	130

Table 2. The Distribution of the Sample in Some Primary Schools in the Central Jeddah Area.

Variables		Repetition	Percentage
Sex	Male	10	50%
	Female	10	50%
	Total	20	100%
Age	9	14	70%
	10	6	30%
	Total	20	100%
Grade	Second Stage	2	10%
	Third Stage	18	90%
	Total	20	100%

Table 3. Values of Correlation Coefficients Between the Score of Each Test and the Overall Score of the Full Fitness.

	Fitness Tests	Correlation Coefficient	Indicative Value	Correlation Coefficient	Fitness Tests
1.	BMI	.491*	.028	.533*	.016
2.	Cyclic Respiratory Endurance Test	.594**	.006	.727**	0.000

	Fitness Tests	Correlation Coefficient	Indicative Value	Correlation Coefficient	Fitness Tests
3.	Muscular Strength Test	.674**	.001	.700**	0.001
4.	Flexibility Test	.782**	.000	.732**	0.000

Table 4. Correlation Coefficients of Scale Axes with its Overall Reconnaissance Sample Score (1) and Replay (2).

Axis	First Time Correlation Coefficient	Statistical Signs	Correlation Coefficient of Return	Statistical Signs
Anxiety of Separation	.735**	.002	.695**	.001
Special Concerns	.632*	.011	.638**	.002
School Rejection	.814**	.000	.825**	.000
General Anxiety	.973**	.000	.953**	.000

**D statistically at the significance level $\alpha \leq 0.01$ *D statistically at the significance level $\alpha \leq 0.05$

Table 5. Values of Correlation Coefficients Between the Score of Each Phrase and the Total Score of Each Scale Axes of the Second Reconnaissance Sample.

	Axis/sentences	Correlation Coefficient	Indicative Value	Indicative Value of Return	Indicative Value
First: Separation Anxiety					
1.	First Phrase	.785**	0.001	.815**	0.000
2.	Second Phrase	.832**	0.000	.509*	0.022
3.	Third Phrase	.802**	0.000	.847**	0.000
4.	Fourth Phrase	.718**	0.003	.608**	0.004
5.	Fifth Phrase	.578*	0.024	0.608**	0.004
6.	Sixth Phrase	.819**	0.000	0.833**	0.000
Second: Special Concerns					
7.	First Phrase	.839**	.000	.823**	.000
8.	Second Phrase	.710**	.003	.724**	.000
9.	Third Phrase	.805**	.000	.786**	.000
10.	Fourth Phrase	.839**	.000	.823**	.000
11.	Fifth Phrase	.832**	.000	.825**	.000
12.	Sixth Phrase	.621*	.013	.530*	.016
Third: School Rejection					
13.	First Phrase	.533*	.041	.536*	.015
14.	Second Phrase	.605*	.017	.347	.134
15.	Third Phrase	.756**	.001	.783**	.000
16.	Fourth Phrase	.791**	.000	.837**	.000
17.	Fifth Phrase	.462	.095	.383	.095
18.	Sixth Phrase	.787**	.000	.805**	.000
19.	Seventh Phrase	.699**	.004	.740**	.000
20.	Eighth Phrase	.443	.098	.257	.273
Fourth: General Anxiety					
21.	First Phrase	.633*	.011	.448*	.048
22.	Second Phrase	.679**	.005	.690**	.001
23.	Third Phrase	.679**	.005	.703**	.001
24.	Fourth Phrase	.842**	.000	.613**	.004
25.	Fifth Phrase	.641**	.010	.803**	.000
26.	Sixth Phrase	.817**	.000	.470*	.037
27.	Seventh Phrase	.572*	.026	.666**	.001
28.	Eighth Phrase	.370	.175	.015	.949
29.	Nineth Phrase	.485	.067	.355	.125
30.	Tenth Phrase	.674**	.006	.485*	.030

	Axis/sentences	Correlation Coefficient	Indicative Value	Indicative Value of Return	Indicative Value
31	Eleventh Phrase	.701**	.004	.692**	.001
32	Twelfth Phrase	.659**	.008	.634**	.003
33	Thirteenth Phrase	.615*	.015	.741**	.000
34	Fourteenth Phrase	.789**	.000	.576**	.008
35	Fifteenth Phrase	.818**	.000	.812**	.000
36	Sixteenth Phrase	.802**	.000	.767**	.000

** Statistically significant at significance level $\alpha \leq 0.01$ / * Statistically significant at significance level $\alpha \leq 0.05$

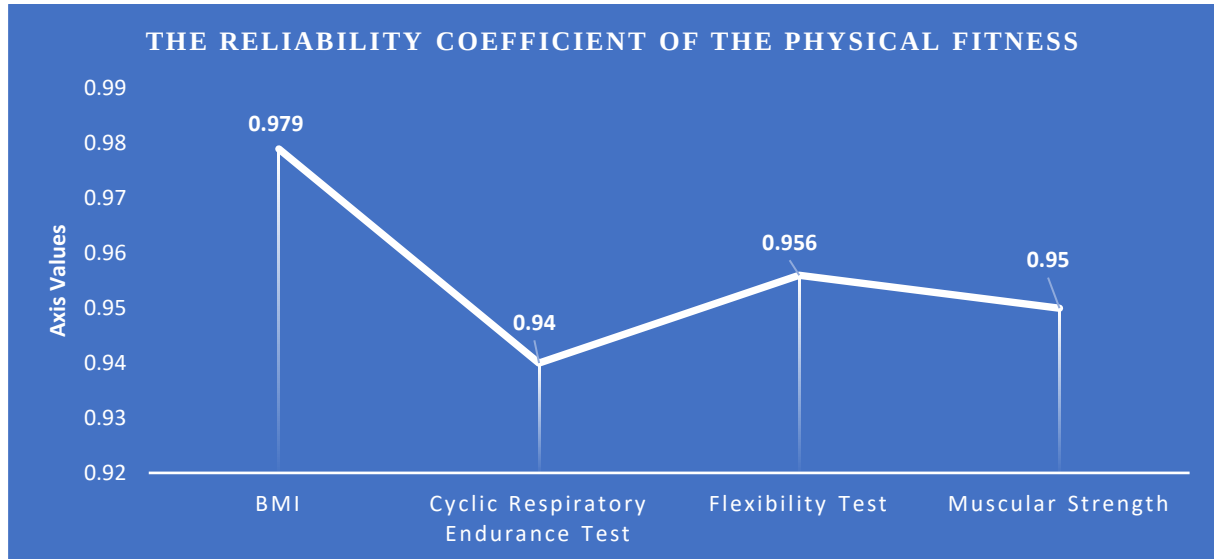


Figure 1. The Reliability Coefficient of the Physical Fitness Tests Ranged Between (0.940-0.979), and these Values are an Indication of the Reliability of the Test.

Table 6. Stability of Mental Disorders Scale (Anxiety).

Axis	Number of Paragraphs	Cronbach's Alpha Coefficient
Separation Anxiety	6	0.719
Special Concerns	6	0.829
School Rejection	5	0.838
General Anxiety	14	0.895
Overall Psychological Disorders Scale	36	0.929

Table 7. Standard Deviations and Arithmetic Averages of Fitness Level Result.

Scale of Fitness Level	SMA	Standard Deviation	Indicative Level	Level
BMI	2.25	.786	.000	Mid
Respiratory Cyclic Endurance	1.55	.686	.000	Low
Muscular Strength	1.30	.571	.000	Low
Flexibility	1.70	.768	.000	Mid
Overall Fitness	1.7250	.40474	.000	Mid

Table 8. The Arithmetic Standard Means of the Total Level of Physical Fitness M/F Students with Learning Difficulties.

Fitness	Sex	Repetition	SMA	Standard Deviation	Degree of Freedom	T-Value	Level of Meaning
BMI	Male	11	2.20	.919	18	-.277	.785
	Female	11	2.30	.675			
Respiratory Endurance	Male	11	1.50	.707	18	-.318	.754
	Female	11	1.60	.699			
Flexibility	Male	11	2.20	.789	18	2.683	.015
	Female	11	1.40	.516			
Muscular Strength	Male	11	1.30	.483	18	.000	1.000
	female	11	1.30	.675			

Table 9. Standard Deviations and Arithmetic Average Level of Mental Disorder.

Psychological Disorder	SMA	Standard Deviation	Level of Meaning	Level
Separating Anxiety	1.4250	.32658	.000	Low
Special Concerns	2.6750	.36864	.000	High
School Rejecting	1.7188	.30042	.000	Mid
General Concern	1.8531	.33705	.000	Mid
Overall Psychological Disorders Scale	1.9323	.30797	.000	Mid

Table 10. Value of the chi-squared Test to Clarify the Relationship Between Fitness and Mental Disorders.

Variable		Fitness	Repetition		Total	Percentage	Statistical Signs
			High	Low			
Psychological Disorders	Separation Anxiety	Low	11	3	1	65%	.035
		High	2	5	7	35%	
	Special Concerns	Low	5	-	5	25%	.035
		High	7	8	15	75%	
	School Rejection	Low	7	1	8	40%	.040
		High	5	7	12	60%	
	General Anxiety	Low	7	1	8	40%	.040
		High	5	7	12	60%	
Total						100%	
Hi-Squared Test Value		138.065 ^a	Degree of Freedom		84	Statistical Signs	0.000

Table 11. Results of the ANOVA Single Contrast Test for Fitness and Mental Disorders.

Psychological Disorders	SMA	Standard Deviation	F Value	Probability Value	Statistical Indication
Low Fitness	2.25	.50*	11.75	.001*	Statistically Significant
Mid Fitness	2.07	.2*			
High Fitness	1.00	.00*			

Table 12. Schiffic Dimensional Comparison Results.

Psychological Disorders	Average Difference	Value of Probability	Statistical Significance
Mid → Low	.17857	.614	Non-Function
High → Low	1.25000*	.001	Function
High → Mid	1.07143*	.001	Function