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The effect of a therapeutic program on correcting deformities and shoulder rotation in young people aged 14-18 years

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Abstract
The purpose of this paper is to identifying the effect of the therapeutic program on correcting shoulder rotation deformities in young people aged 14-18 years. The researcher used the experimental method to suit the nature of the study. The research sample was selected from young people aged 14-18 years. The total sample was 28 young people who suffer from shoulder rotation deformity. One of the most important results reached by the researcher is that: The program to correct deformities has a positive effect on improving the level of shoulder rotation for young people aged 14-18 years, and the earlier the defect occurs than the functional dysfunction in posture, the better and easier the treatment. One of the most important recommendations recommended by the researchers is that: Need for early detection of postural deformities in young people, and conduct health education courses for good health habits.

Keywords: therapeutic, shoulder rotation, young people

Introduction

Schools and youth centers play an important and prominent role in developing physical fitness among the community and students in particular, which relates to physical problems caused by incorrect daily habits, which continually create distortions or differences in physical coordination that increase the individual's health and psychological state.

The general appearance of the body is considered one of the components of an individual's personality, as the more his body shows features of a good figure, the higher his self-confidence, and the more sound the body's figure is, free of defects and deformities, the higher is the individual's standing in some or most societies. Therefore, all individuals are keen to have a good figure by maintaining general health and following healthy habits, such as walking, sitting, and performing daily duties. This is done by practicing sports activities, which are considered a means of preventing the occurrence of posture deformities and moderating the figure (Tawfiq Faraj 2005: 87) (Banwan Hasan, B., & Awed, R., 2024) [5, 7].

From the above, it is clear that there are several reasons that may lead to postural deformities at this age stage, the most important of which are:

A. **Wrong habits:** This occurs through the individual adopting a wrong position when sitting, walking, or carrying any object.
B. **Rapid growth:** The human body in this stage (adolescence) is growing rapidly, so the individual cannot control his movements at times.
C. **Injury:** The individual may suffer at this stage through imbalance if the injury continues for a long time and the body assumes the wrong position.
D. **Disease:** There are diseases that affect the bones and muscles, causing the joints to lose their normal function and causing physical disorders, such as rickets.

Defined deformity as a type of deviation that occurs in one or more parts of the body. These deformities usually begin to appear in adolescence, as the body's organs grow faster at this stage than in others, which leads to the individual not using these organs in the correct manner of the body's parts and lack of moderation in stature. (Abdel Aziz 2009: 25) [3] (Hasan, B. B., 2023) [8].

Research problem

From the above, through coexistence with society, looking at the problems, and observing many individuals at this stage who suffer from deformities of rounded shoulders, I therefore conducted a scientific study and worked to correct these postural deformities that affect young people aged 14-18 years.

Through living within the community, I noticed the presence of many postural deformities, such as knocking of the knees, falling of the head, lateral deviations, falling of the shoulders, lateral deviations, and falling of the shoulders. It was noted that these deformities are functional deformities that can be treated if they are followed up by specialists, so I created a treatment program. Preventive and applied to individuals who suffer from posture problems, and working to follow up these programs through periodic measurements of these posture deformities.

Research objective

- Identifying the effect of the therapeutic program on correcting shoulder rotation deformities in young people aged 14-18 years.

Research hypotheses

- What is the effect of the therapeutic program on correcting shoulder rotation deformities in young people aged 14-18 years?

Research fields

- **Time field:** (22/1/2024) to (22/3/2024).
- **Spatial field:** In sports halls and homes.

Research methodology and field procedures

Research Methodology

The researcher used the experimental method to suit the nature of the study.

Community and sample research

The research sample was selected from young people aged 14-18 years. The total sample was 28 young people who suffer from shoulder rotation deformity.

Table 1: Shows the arithmetic means, standard deviations, and skewness coefficient for the homogeneity of the research sample in the variables (Length, weight, and age)

Variables	Measuring unit	Mean	Std. Deviations	Skewness
Age	Year	16.57	0.66	-0.38
Length	Cm	165.14	4.78	0.51
Weight	Kg	63.41	7.98	-0.14

Rehabilitation programmer

The proposed rehabilitation program was designed for eight weeks at a rate of (3) units or sessions per week per day / two morning sessions and the other evening sessions.

Present and discuss the results

Measurement between the two shoulder points on the front side

Table 2: Results of the paired t-test for the significance of the differences between the pre- and post-measurements and the percentage of change in the measurement between the two shoulder points for youth

Measurement	Measuring unit	Pre-measurements		Post-measurements		T value calculated	Level Sig	Percentage of change
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Measurement between the two shoulder points on the front side	CM	28.16	2.03	31.09	1.98	11.32	0.000	7.86

Statistically significant at the significance level (0.5), tabular t (2.10), degree of freedom (18)

It is clear from Table. (1) That there are statistically significant differences at the function level (0.5) between the pre- and post-measurement between the two points of the shoulder on the front side for young people aged 14-18 years, and the percentage of change was (7.86%).

Table 3: Results of the paired t-test for the significance of the differences between the pre- and post-measurements and the percentage of change in the measurement between the shoulder blades for young people (14-18 years old)

Measurement	Measuring unit	Pre-measurements		Post-measurements		T value calculated	Level Sig	Percentage of change
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Measure between the shoulder blades	cm	13.22	1.17	8.83	1.41	10.013	0.000	-24.20

Statistically significant at the significance level (0.5), tabular t (2.10), degree of freedom (18)

It is clear from Table No. (2) that there are statistically significant differences at the function level (0.5) between the pre- and post-measurement between the shoulder blades from the front side among young people aged 14-18 years, and the percentage of change was (-24.20%).

Table 4: Results of the paired t-test for the significance of the differences between the pre- and post-measurements and the percentage of change in the measurement from the ear nipple to the middle of the back between the shoulder blades for young men (14-18) years old (n. 18)

Measurement	Measuring unit	Pre-measurements		Post-measurements		T value calculated	Level Sig	Percentage of change
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Between the ear nipple to the middle of the back between the shoulder blades	cm	27.06	2.97	23.84	1.96	5.02	0.000	-9.02

Statistically significant at the significance level (0.5), tabulation (2.10), degree of freedom (18)

It is clear from Table No. (2) that there are statistically significant differences at the function level (0.5) between the pre- and post-measurements between the measurement from the ear nipple to the middle of the back between the shoulder blades on the front side for young people aged 14-18 years, and the percentage of change was (-9.02%))

Discuss the results

The results showed in Table No. (1) that there were statistically significant differences at the significance level (0.05) between the pre- and post-measurements between the two points on the shoulder from the front side among young people aged (14-16) years, where the percentage of change was (7.87)%.

The direct reason for this change is due to the implementation of the reform and treatment programme. These exercises had a significant impact on improving shoulder extension and reducing the extent of shoulder extension

This is consistent with (Abdel Aziz's) study in that the program used works to reduce the roundness of the shoulders. (Abdel Aziz 2009: 47) [4].

The results also showed in Table (2) that there are statistically significant differences in the pre-post measurements between the shoulder blades and that the shoulder percentage is (-24.20) %.

The results also showed in Table (3) that there were statistically significant differences in the pre- and post-measurement of the measurement from the ear cup to the middle of the back between the shoulder blades, the percentage of change was (-9.02)%.

The researcher believes that the direct reason for this change is due to the application of the program to correct the deformities used in the research, from the content of the exercises that the researcher worked on in their various settings. These exercises worked to increase the distance between the two points of the shoulder from an anatomical perspective and worked on pulling back and rotating the shoulder, and these results are consistent. With the results of the study (Al-Hawari Mahmoud, 2014) [1] (Al-Shahat 2004) [2].

Conclusions and Recommendations

Conclusions

According to the results of the study and its discussion, it was concluded.

- The program to correct deformities has a positive effect on improving the level of shoulder rotation for young people aged 14-18 years.
- The earlier the defect occurs than the functional dysfunction in posture, the better and easier the treatment.

Recommendations

- Need for early detection of postural deformities in young people.
- Conduct health education courses for good health habits.
- Creating programs to correct posture deformities and working on following them up.

References

1. Al-Hawari M. A sports program to improve shoulder rotation deformity and its effect on some psychological functions for people with special needs for the age of 15-18 years [Master's thesis]. Menoufia University, Egypt; 2014.
2. Al-Shahat MM. The prevalence of posture deviations for the age group (6-11) in Dakahlia Governorate and the diagnosis and treatment of them. Mansoura: Research and Publishing Unit; 2004.
3. Abdel Hamid TFA. The importance of physical exercises in treating posture deformities. Iraq: Dar Al-Wafa for Printing and Publishing; 2005.
4. Abdel Aziz T. The effect of the weight of the school backpack on the neck strength of Saudi female students; 2009.
5. Banwan BH, Awed R. Blood Flow Restriction Exercises (BFR) an Effect on Strength Rehabilitation and Muscle Atrophy for Patients with Multiple Femur Fractures Aged 40-50 Years. Int J Disabil Sports Health Sci. 2024;7(1):86-93. https://doi.org/10.33438/ijdshs.1354715
6. Allawi MH. Tests and Measurement. Alexandria: Dar Al-Fikr Al-Arabi; 1997.
7. Hasan B. The Effect of Preventive Exercises And Electrical Stimulation On Developing Muscle Strength And Range Of Motion To Reduce Wrist Joint Injuries In Handball Players. Wasit J Sports Sci. 2023;13(1):447-465. https://doi.org/10.31185/wjoss.375
8. Hasan B, Hilal E. Rehabilitation exercises and a specially designed device (Laser Balance) and their effects on muscle strength, range of motion, and motor balance for football players after undergoing anterior cruciate ligament surgery. Wasit J Sports Sci. 2023;16(3):10-34. https://doi.org/10.31185/wjoss.369

Appendix (1)

A model training unit from the rehabilitation program

Sunday The first week	Exercise	Repetitions	Performance time	Sets	Rest between Sets	Rest between exercise	Intensity
	The pressure Prone, raising the arms Shoulder roll Raise the arms high alternately	10 times 10 times 10 times 10 times	20 seconds 20 seconds 20 seconds 20 seconds	3	30 seconds	20 seconds	50-60%

Research tests

The following tests were done

1. Measuring the distance between two anatomical points of the shoulder

- The purpose of the test. Know the distance between the two shoulder points.
- **Tools used:** Measuring tape - pen - paper
- **Method of performance:** The tester stands on the wall, measuring in centimeters from the two anatomical points of the shoulder
- **Registration:** Measuring the distance between the two anatomical points of the shoulder (Allawi 1997: 57) [6].

2. Measure the distance between the two palm plates

- The purpose of the test: Know the distance between the shoulder blades
- Tools: pen, paper, measuring tape
- Method of performance: The tester stands on a smooth wall, and then raises the tester to the correct anatomical position for the figure, placing the tape on the shoulder blades and measuring.
- Registration: measuring the distance between two anatomical points of the shoulder blade. (Allawi 1997: 54) [6].