

THE EFFECT OF WILLIAMS CORRECTIVE EXERCISES WITH EMPHASIZED THE TRUNK AND ABDOMINAL MUSCLES ON LUMBAR LORDOSIS



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Short Profile

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ABSTRACT:

The purpose of this study was to estimate the effect of corrective exercises with emphasis on stretching and strengthening the muscles that have had the effect of lumbar lordosis, based on the examination of 580 persons of boy extraction and primary athletes in experimental groups of 22 individuals by the experimental control group matched of the trunk (abdomen approach) of 16-13 year old boys ABDANAN been increased lumbar

lordosis. Measuring and gathering data using the checker board, vertical lines and were flexible ruler. During the treatment period of 8 weeks, 3 sessions per week. The test was performed at the end of the treatment period, the descriptive statistics (mean and standard deviation) to describe data and inferential statistics (t independent and dependent) were used to analyze the data. Results showed corrective exercises using Williams significantly contributes to reduce students' lordosis, This practice not only shorten the treatment period, but also to create a continuous stretching and pressure controlled during the exercise Reversible complications delays.

KEYWORDS

lumbar lordosis, Williams corrective exercise .

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PREFACE

Deviation from the desired height is undesirable not only that visually but also had a negative impact on the efficiency of the muscles, causing a risk of development malformations of musculo-skeletal and neurologic disorders (7). Expression that if the body stature is undesirable for a long time, some muscles are stretched and some shortness(8) And with the status of conformity(7). That this is conformity so that the shortened muscle contraction and muscle stiffness and weakness in the muscles and stretch the opposite occurs(9). Obviously, the excessive use of a particular group of muscles in a limited range of motion and muscle imbalance and ultimately lead to unfavorable changes in the height(10,11). The main parts of the spine, lumbar lordosis is due to the unique situation and direct contact with the pelvis of special importance, Any increase or decrease in the arc of the balance of the body and affects various anomalies in the lumbar and pelvic looking(6). Changes in the normal lumbar lordosis is related to several factors that can cause abnormalities leading to muscle imbalance around the waist is named With impaired muscle function in the area of the spine that can be sustained by the muscles under pressure As a result of altered lumbar lordosis. Several studies conducted in the field of physical abnormalities that have produced different results But they all support high rates of abnormalities of the spine, especially among young people(4). Note the emphasis on anomalies of the lumbar lordosis of the spine are the most common in childhood and adolescence has led to numerous studies done on this problem but with reviewing research There is little research into That this relationship between lordosis and the trunk muscle strength and flexibility in adolescence has been(27). This time is more important to note that the period of adolescence, when these anomalies are highly susceptible to infection Therefore, it seems necessary to effect corrective exercises (especially the increased lumbar lordosis) Williams lordosis with teenage boys to have any significant association between these variables ,By providing appropriate solutions through exercise, the onset and progression of these disorders among this age group is prevented.

Doctor Paul Williams the first time in 1937 in response to the observations of the clinical program for patients with chronic low back pain published This is a sport for men under 50 and women under 40 years of age, increased lumbar lordosis and the vertebral disc space loss and pain in the lower grades, was designed The purpose of this exercise, reduce pain and stabilize the lower trunk was considered, and it focuses on the waist flexion. The researchers intend to provide a program of exercises Williams elected to review the effectiveness of these programs.

RESEARCH METHODOLOGY

The study and control groups was performed with pre-test and post-test, Purposeful sampling was performed in 44 patients after informed consent, medical examination and testing during the making were checker board and flexible ruler, After that people are willing to participate in training programs in both control and experimental groups of 22 individuals were replaced. Considering the benefits of flexible ruler, researchers as a tool to evaluate the clinical and noninvasive screening and diagnosing abnormalities in healthy individuals spinal arches have benefited. The device is lightweight, inexpensive and frequent waves, x-rays are not the well as risk. In the present study is to measure lumbar lordosis with a flexible ruler, from S2 to L1 while standing, similar to the method used by some researchers considered (5,13, 24, 28, 29).The test subjects were asked to perform at least cover the torso, Feet shoulder-width, then leaned

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back and put her hands on the table The experimenter then touch the twelfth or in other words the last rib and along it to the back of the spinal cord midline vertebral spinous process of T12 specify Then mark the L1 vertebra below, then subjects were asked to stand to be in the mode of the posterior upper lobes Examiner determined by the midpoint of the line connecting the spinous process of vertebra was marked S2. To mark certain points in order to measure the arches of the spine, the subjects were asked to stand in their natural state were, So that the body weight evenly distributed on the legs and in this situation flexible ruler on the midline of the spine between two specified points Without the interval and after the formation of flexible ruler on the curvature of the vertebral column, the necessary markings on the ruler was obtained without any change in shape ,Ruler and pencil on graph paper, and drag the ruler arch spine was copied on paper. First appendages vertebrae S2, L1 and the deepest point of the lumbar lordosis markings on the paper and then using the formula, lordosis was measured. In order to increase the accuracy of each subject was tested twice and in case of conflict, the third experiment were recorded for statistical. In a study of lumbar curvature of the spine from first to fifth ,61 grade reported (25). However, in another study of lumbar lordosis of the spine to the first and second lumbar vertebra and the first sacral measure 182 subjects back to normal angle of 42 degrees, respectively (21). In another angle of 59.5 degree lordosis declared (15). According to the findings of research conducted, it is difficult subjects LSCR now be considered abnormal or normal For the investigation of different ways and different methods of lumbar lordosis in a wide range of offers So far there is no consensus on a certain size range (8); According to research cited in the examples above was used with a 40-degree angle. For a description of the survey data was used to calculate statistical indicators central tendency and dispersion. The comparison of methods for analysis of variance and the version 19 was used at a significance level of 0/05.

TRAINING PROGRAM:

After the initial screening tests and the formation of two groups, an experimental group exercises Williams in a training program for 8 weeks, three sessions of 60 minutes duration each session attended The control group did not perform any regular exercise. According to the ACSM guidelines prescribed exercise training program includes a warm-up, workout and cool down is the main program Physiologically, heat, increases blood circulation and also bring more blood to the tissues, reduces muscle adhesions (14). It should be noted that the duration of the training principles and progress in increasing the number of iterations of the motion moves 40 minutes to an hour in the meetings of final varies. Cooling of stretching exercises similar but less severe than in the first stage heating is According to the recommendations of the shelf pull, often between 10 and 30 seconds, the tension in the pit shall be taken slowly. So if people during stretching, stretching can reduce the severity of their pain or discomfort The increase in pain after exercise or feel pain during exercise, after exercise, avoiding the (23). Williams flexion exercises for many years been a cornerstone in the treatment of low back pain (18,30), In this study, 9 moves the selection method used by the Williams team was training. No pressure not to enter damaged tissue and while the person continues to exercise that really hurt away.

RESEARCH FINDINGS

Groups of normal data distribution and no significant differences between groups were found in the pre-test of basic information and data distribution was normal ($P=0/05$). To study the dependent

variables at three locations in each group repeated measures analysis of variance and t-student statistical method used to compare the groups and the results in Table 1, provided.

Table 1_ t test to compare the scores of the two groups of lumbar lordosis

| Significant | DOF | t | SD | mean | Phase | Group | Variable |
|-------------|-----|-------|-------|------|----------|--------------|--------------------|
| 0/05 | 21 | 6/641 | 0/174 | 47/7 | Pretest | Experimental | Lumbar lordosis |
| | | | 0/535 | 42/3 | Posttest | | |
| 0/05 | 21 | 2/327 | 0/421 | 49/8 | Pretest | Control | |
| | | | 0/419 | 49/9 | Posttest | | |

According to Table 1, t observed in the experimental group, P = 0/05, There was, therefore, there is a significant difference between the mean scores of the test subjects. The exercise was designed to reduce the lumbar curvature of the subjects in the experimental group were, But t observed in the control node at level 05/0 = P not significant between the pre-test and post-test control group did not show a significant difference.

CONCLUSION

The treatment of skeletal complications - it is important to choose the most effective muscle exercises, so that the efficiency is significantly high. Corrective exercise programs - Williams therapy is effective in improving lumbar lordosis abnormality. As the comparison between the pre-test and post-test in both groups observed In the post-test showed a significant decrease in mean lumbar curvature correction and treatment of post-operative exercises using Williams, Results of t-test, the lumbar lordosis in subjects demonstrated a significant reduction According to Table 1, significant changes, so that the mean curvature of the lumbar lordosis in subjects pre- and post-test, there are significant differences The exercise remedies Williams had a significant impact on the reduction of lumbar lordosis. Also in the experimental group and the control group in addition to sports training reform Williams in their exercise of lumbar lordosis decreased in the control group showed no significant change. The exercise remedies Williams had an effect on the reduction of lordosis. And, as a result of the research shows that the incidence of lumbar curvature of the subjects before and after exercise, there is a significant difference.

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