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The Effect of 8 Weeks of Treatment Chosen, the Amount of Pain and Disability and Flexor Muscle Strength, and the Trunk is Straight, in Patients with Chronic Low Back Pain.

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ABSTRACT

The aim of this study was to evaluate the effectiveness of the selected treatment, the intensity of pain, disability and flexor muscles and extensor endurance, flexibility and body of bank employees with chronic pain, 15 patients with chronic low back pain in an experimental respectively, for 8 weeks, the experimental group selected treatment received. Variable of pain, disability and endurance, trunk extensor and flexor muscles, and trunk flexibility as measured by indicators of pain, functional disability questionnaires Astostry, Ito test and spinal mouse devices, measurement data analysis is. for , paired T-test at the $0/05 = a$. Results showed that, after 8 weeks of treatment, the mean pain (15/11) and disability (9.26) in the experimental group, the test is less than the pre-Also test out the strength of muscles and trunk opener experimental group than in the post-test post-test design ($0/000 > P$). According to the findings, the selected treatment in improving pain, disability, and increased flexor muscle strength, and the trunk is more effective than conventional therapies for patients with chronic low back pain..

Keywords: Flexor Muscle Strength, 8 Weeks of Treatment, Chronic Low Back Pain

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INTRODUCTION

Chronic low back pain, especially medical science is today one of the challenges. Despite the high prevalence, the main cause of back pain is not clear, and there are various treatment methods, because the absence of an identifiable cause for the back pain. Back pain or back pain, the most common musculoskeletal disorder [1]. About 50 to 80 percent of individuals who experience back pain in their lifetime, and about 80% of the problems associated with the spine, lumbar occur [2]. It is said that more than 80 percent of people suffering from back pain at least once in their lifetime, and after treatment occurred, reversal is about 60_80 percent [3]. Research shows that when people are first experiencing back pain, the pain usually goes away, to a place where they can exercise their business. But the deep muscles that protect the spine, does not improve [4]. Many studies, extensively and internationally in Europe and America, and the Scandinavian countries were taken, showed that the prevalence of back pain among a population of 0/15 to 0/30, during the month 0/19 to 0/43, and a lifetime 0/60 to 0/70 population, including [5-7] factors such as a sense of deep, deep stabilizers of the spine and trunk muscle performance, muscle strength and endurance, pain in patients undergoing changes. Therefore Clinically, increased levels of muscle co-activity level, as well as reduced and delayed stabilization of deep trunk muscle activity and spine stability as an objective marker system dysfunction in patients with chronic low back pain. Research shows that good correlation between the occurrence of back pain, and lower back muscle endurance there [8]. The proper muscle endurance, and coordination of the muscles in action, an important factor in the prevention and cure of many musculoskeletal disorders, including back pain is. Back pain usually a mild disease and limiting the random people caught it. Many different ways to treat back pain is to rest and physical therapy, exercise, and weight are variable. Exercise is also a lot of diversity lay therapists, the use of passive exercises, and other flexible working practices, or weight training prefers is. with diversity practices, physical therapy, still Documentation scientific literature about the superiority of one method over another there, and practitioners with the experience and personal opinions, get feedback from the patient or a trial and error type, severity and duration of exercise therapy to treat every person set [9]. The reason for this is that there is not yet a complete understanding of the mechanisms of back pain, and even examinations to diagnose back pain clinic for back pain in a very simple and limited is. Despite many studies on the treatment of back pain is the most appropriate method of intervention is controversial [10]. However, the usefulness of the active participation of the patient, the treatment of low back pain, acute and chronic stages, there is an agreement [11].

Some of General Practice, useful for the treatment of back pain knows. [12] A number of other flexion exercises Williams have suggested, but after a while it was proven that these exercises raise the pressure inside the disc, therefore, their popularity waned, and replace it with isometric exercises prescribed is. the McKenzie showed that the extensor exercises beneficial effects on low back pain referral (Recurrent LB P) are considered the training of doctors and physiotherapists, was [13], it is said, frequently used to treat back pain exercises, including moves are generally trunk flexion and extension, abdominal muscles (rectus and oblique abdominal), and spinal extensors (as measured), the progressive resistance exercise activates and that, in order to increase the strength of the muscles used in the treatment of low back pain chronic effect [14-15]. Eshik and colleagues showed that, McKenzie, useful in the treatment of back pain and increase spinal flexibility, improve and Santeralasion pain [16]. Peterson & Associates, a comparison of McKenzie, and strengthening exercises in patients with chronic low back pain in a 14-month tracking period, showed that there was no difference between the two types of exercises [17] Considering the high prevalence of back pain, and importance of movement Therapy, known as an active treatment, and the absence of a specific training program, this is going to impact the selected treatment for 8 weeks, on pain and disability and flexor muscle strength, and the trunk of the right people with chronic back pain, check.

MATERIALS AND METHODS

Study was a clinical trial. The respondents of the survey, all employees is. From the West Bank city of Islamabad, 15 volunteer patients (age range 25 to 50 years), who gave their consent in writing and orally, to participate in the study were recruited from and purposefully with the doctor, the patient and opinion, movement therapy in a group of 15 people (doing exercise movement therapy) were inserted. Then move the selected treatment group participants, the training program for 8 weeks, 3 sessions per week, for about 45 minutes now is. have be noted that, although the area of 3 to 5 sets of 8 reps (with interval of rest between each set) were performed. In this program, a general warm-up exercises with stretching exercises for 10 minutes, flexor muscle strengthening exercises to increase strength, and the trunk is straight, as well as

exercises to increase range of motion in the lumbar region, for 30 minutes, and cool-down exercises for the reset, for 5 minutes is. Condition included in this study were: a history of low back pain for more than three months, no structural abnormalities of the spine, without surgery or other diseases affecting the variables studied.

EXERCISE PROTOCOL

Exercise 1



Figure 1: Pelvic tilt: a person lying on his back, and while the hands are placed next to the body, and the knee is flexed posterior pelvic tilt. So that the contraction of the abdominal muscles and bend your back pressing into the floor, to the posterior pelvic tilt.

Exercise 2



Figure 2: Bringing up the side legs of the person lying on her side, and while one hand behind the head, the other from the front to support the body, and legs stretched along the body, the foot is pulled over to the state, roughness from far and near our feet

Exercise 3



Figure 3: Bridging the shoulder: a person lying on your back, arms alongside the body, and the knee is flexed. In this case, tries, her hips up from the ground

Exercise 4



Figure 4: Moving the upper side man lying on his back, and while the hands are pulled to the side of his body and the knees bent, without separating the arms from the ground, or lifting the head and neck, above his tract alternatively, it can flank movement the movement in the prone position, well done

Exercise 5,6

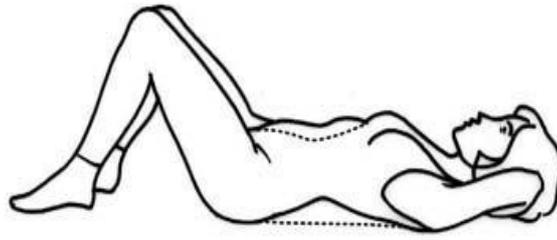


Figure 5: Tighten lower stomach muscles and buttocks to flatten back

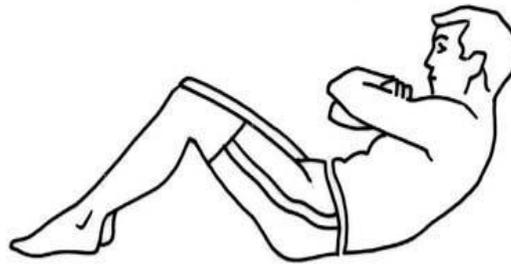


Figure 6: Fold arms across chest, flatten back by tightening lower abs, and raise head and shoulders from floor
Exercise 7



Figure 7: Lifting the upper body: one facedown, arms, chest located next to, and in this case the head and neck with your hands from the ground

Exercise 8



Figure 8: Back—Single knee to chest stretch

Exercise 9,10

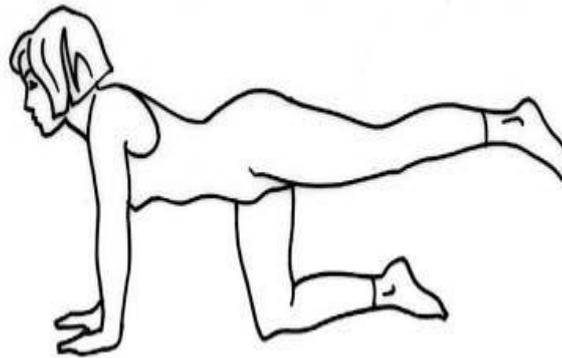


Figure 9: Raise one leg behind with knee slightly bent, keeping neck and back straight

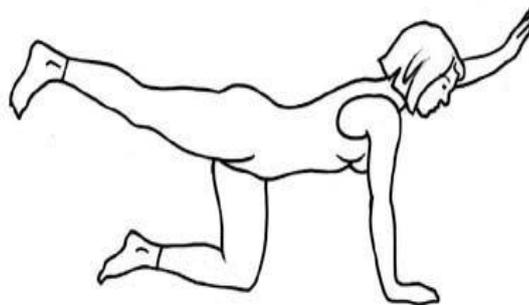


Figure 10: Raise one leg and opposite arm—with knee slightly bent—keeping neck and back straight

To measure pain, the pain visual scale (in pain) Using These scale, horizontal bar length is 100 mm or 10 cm, one end of zero means no pain, and the other end of that number, 10 the worst pain possible intended is. from was asked, while looking at the continuum, the pain I felt at that moment as it determines the internal is. Reliability these comparisons, based on research Previous 0/91 = ICC, has been reported.[18] *Karimi* (2004).To measure morbidity, functional disability questionnaire Astostray, These questionnaires used in the study of disability from chronic low back pain, and acute applications, including 10 part 6 was an option. Each section, the failure to yield, respectively, from zero (optimal performance without pain) to 10 (inability to perform activities due to pain), The. So ranked higher score means greater functional disability It is. Total obtained disability rating (zero to 100), were recorded as disability rating.[19] *Mousavi* et al.(2006). to measure the strength of the trunk flexor muscles of the trunk flexor endurance test static (Ito test) was used. Subjects were asked to be placed in the supine on the bed, and his lower extremities while, completely vertical leg, and the leg was completely horizontal, hold. Also, while bending the head and neck in the front and above his upper limbs, the abdomen (Figure 1). Length of time that a person could hold this position, with a timer, in seconds, measured by the tester, and the isometric muscle strength of trunk flexion, It was. Test long ceased to be considered, examiner was not able to maintain the state or its internal Said. Reliability muscle contraction and release test for healthy subjects (0/97 = ICC), and for patients with low back pain 0/93 = ICC, has been reported [20]. In order to measure trunk extensor muscle strength, static endurance tests of trunk extensor (Ito test) was used.

The subjects were asked to, the bed is placed in a prone position, and a small pillow under her abdomen and pelvis, reduction of lumbar lordosis was given. The upper extremities, and palms on either side of his body to the outer surface of the thighs, remain. Subjects were asked to keep your head and neck in a neutral position, the mattress is separated from his sternum (Figure 2). Time to maintain this situation, by timer or by the tester and measuring the isometric endurance of trunk extensors, is. this recorded when the test was

stopped, the patient was able to maintain the status either, muscle contraction and release the internal is. reliability test for healthy individuals $0/97 = ICC$, and for patients with low back pain $0/93 = ICC$, have been reported. *Christophe* (2006). to measure the motion of the mouse spinal devices used is. without that is, the subject is placed in a flat position, so that your feet shoulder-width apart, and your knees straight and your hands on the side of the body, and the person on the spot where he was eye level, the focus of it is. so attempted to identify two points of seventh cervical vertebra and sacral vertebrae is. without second case, the person was asked, his head bent, and the most prominent vertebral spines, thorns as the seventh cervical vertebra, Mark Then hit the posterior superior iliac spines, the sides or the bottom of the troughs are identified, and are connected by a line is. Point middle of the line, as the second sacral vertebra, spine checked. After identifying the above, rolling the mouse, the seventh cervical vertebra to the sacral vertebrae pulled is. For measure range of motion, flexion of the trunk of the initial straight-forward as far as possible, as far as may be bent , where it can cause the head to the knees, while the knees are quite smooth, and the mouse rollers is. so extension of the seventh cervical vertebra to the sacral vertebrae, is. for pulled open the trunk range of motion measurements, the original flat state, and placing hands on the chest and head in a neutral position, the extension of his body as much as possible, while the knee is perfectly flat is. Roller mouse, the seventh cervical vertebra to vertebra the second sacral is. First drawn by the examiner, it was explained, and then the subject was asked to move out and end position for at least 3 seconds to keep the measure.[21] Mannion et al.(2003). For data analysis, T-test correlated significantly in all statistical analyzes is. level $0/05 = \alpha$, considered is. It noted that restrictions beyond the control of researchers, including psychological arousal, lack of control daily operations, lack of control feed, the lack of control do the same exercises the selected treatment among all participants, and limitations of the research will include the age range 25 to 50 years, lack of regular exercise, and no history of surgery for lumbar respectively.

RESULTS AND FINDINGS

Table 1: shows the mean and standard deviation of participants' characteristics, such as age, height, weight, in each of the groups listed.

Mean±standarddeviation.	Variable
34.12 ± 9.3	Age (years)
176.3 ± 6.34	Height (cm)
74.19 ± 8.23	Weight (kg)

Table 2: Comparison of patients with chronic back pain, before and after the training period

Degrees of freedom	Significance level	T-test.	After treatment Mean ± SD	Before treatment Mean ± SD	Variable
14	0.000	7.48	29.23±8.57	44.34 ± 11.65	Degrees of Pain

T-test results show that, in terms of pain, people with chronic low back pain, there are significant differences in pre-and post-test ($p < 0/001$, $t = 7.48$)

Table 3: Comparison of functional disability in patients with chronic low back pain, before and after the training period

Degrees of freedom	Significance level	T-test.	After treatment Mean ± SD	Before treatment Mean ± SD	Variable
14	0.000	5.37	27.6± 7.13	36.86± 12.43	Degree of functional disability

T-test results show that, in terms of functional disability in pre-and post-test, there was a significant difference ($p < 0/001$, $t = 5.37$)

Table 4: Comparison of trunk muscle strength to persons with chronic low back pain, before and after the training period

Degrees of freedom	Significance level	T-test.	After treatment Mean ± SD	Before treatment Mean ± SD	Variable
14	0.000	4.81	23.41 ±6.67	19.54 ±6.23	Flexor muscle endurance

T-test results show that, in terms of the number of sit-ups, pre-and post-test, there are significant differences ($p < 0/001 \cdot 4.81 = t$)

Table 5: Comparison of trunk muscle endurance in patients with chronic low back pain right at the beginning and end of the period

Degrees of freedom	Significance level	T-test.	After treatment Mean ± SD	Before treatment Mean ± SD	Variable
14	0.000	6.23	22.23 ±4.89	15.54 ± 5.67	Right endurance supplier (s)

T-test results show that, in the right amount of trunk muscle endurance in pre-and post-test, there was a significant difference ($p < 0 / 001, t = 6.23$)

Table 6: Comparison of patients with chronic low back pain flexibility, before and after the training period

Degrees of freedom	Significance level	T-test.	After treatment Mean ± SD	Before treatment Mean ± SD	Variable
14	0.000	4.08	17.72 ±2.12	15.66 ±2.44	Level of flexibility (cm)

T-test results show that, in terms of flexibility, people with chronic low back pain, before and after the test, there is a significant difference ($p < 0/001, t = 4.08$)

DISCUSSION AND CONCLUSIONS

In this study, the influence of motion exercises selected treatment on pain intensity, disability and flexor muscle endurance, and flexibility of the trunk and bank employees, patients with chronic low back pain Survey Results indicated that the degree of pain and disability in the experimental group, the pre-test and post-test, there are significant differences. Findings are consistent with research findings Tavafian et al (2008), Igor (2012), epidural (2010) is consistent. Their research also showed that exercise therapy on pain reduction in patients with chronic low back pain, has been effective. The research findings, based on reducing the amount of pain after a medical practice with research findings Manin (2001), is a paradox, because in our results, no significant difference in reduction of pain in patients with before and after exercise did not care. It seems, in medical practice, in addition to strengthening the muscles in static conditions, they reinforce the dynamic conditions also occur. The patient's condition style exercises, with the heavy training, and ultimately to improve the situation, and the balance goes missing. So we can conclude that this form of training, in addition to strengthening muscles, improved mental condition, and ultimately reduce the pain of back pain are. The results showed that the degree of functional disability in patients with chronic low back pain, exercise therapy after a period of dramatically compared to the previous period, the practice has declined. Findings are consistent with research findings Metaleh (2005), Rayegani(2002), Marshall and Murphy (2008), based on reducing functional disability, after the period of treatment, in a direction So we can infer that, reduced trunk muscle strength can be an important factor in functional disability and therefore considered of low back pain. The results showed that the level of endurance, and the right of people with chronic low back pain after exercise therapy, dramatically, compared to the prior practice has increased. Findings are consistent with research findings, Igor (2012), Farahpoor et al (2005), is consistent. They also pointed to the fact that patients with chronic low back pain, with weakness of the flexor muscle mechanical function, and the trunk is facing right, the results showed that the degree of flexibility of the lumbar muscles in patients with chronic low back pain in the after the training period, there is a difference. Oliver (2009) and Kovakz and colleagues (2007)

showed that the degree of flexibility of the lumbar muscles in patients with chronic low back pain, after a course of medical practice, there are significant differences, the findings, the research findings consistent. So it seems that exercise therapy to reduce the pain associated with lumbar, this in turn would increase the range of motion of muscles in the area, and ultimately increase the flexibility of the muscle stiffness, they showed that exercise therapy, it strengthens the muscles of the trunk, resulting in improved pain and disability in patients with CLBP. The nature of chronic low back pain, and with it, the disability is influenced by several factors, and it has been shown that psychosocial factors, a better understanding of disability used as the most important factor preventing success in the treatment of chronic low back pain Studies have proven that, movement therapy, improvement in pain and disability in patients with chronic low back pain, followed by [22]. Maul et al. (2005). Several clinical study, the treatment for chronic low back pain have suggested, it could be good therapy for the relief of pain and disability [23] Eyigor and sertpoyraz (2009)..stability muscle, the key ingredient to show the level of physical fitness and functional capability of the human body is the role of trunk muscles to protect the

spine against the adverse impacts most of the research was conducted. Arab and Ebrahimi (2005). These muscles to keep the body's control of the body when standing and bending, [24] help. According trunk muscle endurance decreases, causing muscle fatigue and increase pressure on the soft tissues, and the structure of passive lumbar spine, is [25] Kim (2006). As well as muscle endurance capacity, an indication of the capacity is exhausted, it is thought that people with less muscle strength of the trunk muscles, which are more subject to structural constraints, it may be inappropriate pressure on the spine and lead to low back pain [26-27]. Arab and Ebrahimi (2005). Lee (1999). In this case, in patients with low back pain, more or flexor muscles of the trunk, or both muscle groups are involved, there is controversy [28] Bajdi (2008). According to Williams, because the man is more likely to be seated, this means that, during the daily activity of the dorsal muscles are more susceptible to pressure, and the abdominal muscles are at rest, and suffered Depending Accordingly, he seems to be the trunk flexor muscles trained in contrast, Mackenzie believes that, for patients with back pain due to a bad situation, trunk extensor muscles and ligaments, stretching too much to bear, and they suffered which can lead to back pain. As a result, he says, should the trunk extensors, exercises to be [28] Bajdi (2008).

CONCLUSION

Considering the results obtained, it can be considering the circumstances, the investigation concluded that the examples, exercises, movement therapy on low back pain subjects, had a positive impact, and no pharmacological or electrical intervention analgesic reducing pain and disability is also the subject of the selected treatment improves trunk strength and is. with However, more research, to determine the specific parameters of the prescribed exercise therapy in patients with chronic low back pain, as well as the long term effects of this treatment, the more samples are needed.

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