
**EFFECTIVENESS OF BACK EXTENSOR AND ILIOPSOAS STRENGTHENING
EXERCISES IN CHRONIC LOW BACK PAIN HAVING FLAT BACK**

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ABSTRACT:

Backache which was known as an ancient curse is now known as a modern international epidemic. Low back pain is the pain felt in lower back which may come from spine, muscles, nerves or other structures that region of back. It may radiate from other areas like mid or upper back. Among the causative factors, both spinal and extra spinal, the most common cause of low back pain seems to be lumbar disc disease. Bad posture plays a very significant role in the genesis of this disease.

INTRODUCTION:

Flat low back posture is characterized by a decreased lumbosacral angle, in these potential sources of pain is lack of the normal physiologic lumbar curve, which reduces the shock absorbing effect of the lumbar region and predisposes the person to injury, stress to the posterior longitudinal ligament, and increase the posterior disk space, which allows the nucleus pulposus to imbibe extra fluid and under certain circumstances, may protrude posteriorly?

In that cases muscle imbalances observed the stretched and weak lumbar extensor and hip flexor muscle and possibly tight trunk flexor and hip extensor muscles.

Low back pain is the pain felt in lower back which may come from spine, muscles, nerves or other structures that region of back. It may radiate from other areas like mid or upper back.

Among the causative factors, both spinal and extra spinal, the most common cause of low back pain seems to be lumbar disc disease.

Bad posture plays a very significant role in the genesis of this disease. So, much is the contribution of bad posture towards this problem that one can categorically conclude that low backache is all about disc degeneration predisposed by poor posture.

Backache which was known as an ancient curse is now known as a modern international epidemic. 80% of the populations are affected by this symptom at sometime in life.

Impairments of back and spine are ranked as the most frequent cause of limitation of activity in people younger than 45 years 21% of the population backache is the presenting complaint in the general practitioner's clinic. In 78% men an 89% women specific cause was not known. It was believed that bad posture was responsible for most of these cases. The cost to the society and the patient for treatment, compensations, etc. is very high.

Each year 3% to 4% of the population is temporarily disabled and 1% of the working age population is totally disabled from low back problem.

Most of the low back pain is related to ligamentous sprains or to muscular strains, usually due to poor body mechanics when lifting. Lifting 10 pounds with the back straight and the knees flexed results in a 73% increase in force on the lumbar spine whereas lifting the same amount of weight with the back bent and the knees straight applies 169% more pressure on the back. It is no wonder, then, that any activities will require lifting will eventually result in low back pain and with poor body mechanics.

Physiotherapy plays a major role in the management of low back pain. As many as ¼ of the total number of patients referred to physiotherapy are of low back pain. Thus low back pain has become a cause of great economic as well as clinical significance and concern.

Properly controlled programmed of physiotherapy, based on the sound knowledge and skill, can provide excellent relief to most of the patients even with the structural abnormalities.

EXPERIMENTAL HYPOTHESIS:

There is improvement in chronic low back pain having flat back when given back extensors and iliopsoas strengthening exercises.

NULL HYPOTHESIS:

There is no improvement in chronic low back pain having flat back when given back extensors and iliopsoas strengthening exercises.

STATEMENT OF QUESTION:

Whether the back extensor and iliopsoas strengthening exercises reduces pain in patients with chronic low back pain having flat back.

NEED OF THE STUDY:

Chronic low back pain having flat back is one of the commonest problem .It disturbs the freedom of the working. Study is needed to find out the effectiveness of back extensor and iliopsoas strengthening exercises in patient having chronic low back pain having flat back.

PURPOSE AND SIGNIFICANCE:

The purpose of the study was to test the efficacy of a physiotherapy program including back extensor and iliopsoas strengthening exercises, compared with back extensors with patient in control group having chronic low back pain having flat back.

AIMS AND OBJECTIVES OF THE STUDY:

To find out the effectiveness of back extensor and iliopsoas strengthening exercises in patient having chronic low back pain having flat back.

SAMPLING:

A sample of convenient random sampling was chosen for study. A detailed description of the study, including title purpose and subject's inclusion and exclusion criteria were submitted to the clinics and hospitals.

SAMPLE SIZE:

Thirty subjects were assigned to either an experimental group or a control group, using convenient random sampling.

STUDY DESIGN:

The study is an experimental design study Pre test and Post test subject design.

INCLUSION CRITERIA:

- Primary complaints should be LBP with straitening of lumber spine without leg pain symptoms should be of duration of more than 3 months.
- Age group 25 yrs to 45yrs

EXCLUSION CRITERIA:

- Receiving concurrent physiotherapy treatment from another department or hospital for back pain.
- Neurologic referred pain.
- Pre existing deformities
- Infective
- History of arthritis or tuberculosis
- Diagnosis of tumour, infection, inflammation diseases affecting spine.
- Had spinal or lower limb surgery.
- Had spinal or pelvic fracture.

- X-Ray changes suggesting spondylolisthesis.
- Traumatic
- Osteoporosis

PROTOCOL:

The duration of the program for each subject is 60 days with 24 therapy session treatment given thrice a week .Total number of subjects taken were 30 .Patients were divided into 2 groups.15 subjects were taken in experimental group and other 15 patients were taken in control group. Patients were divided into two groups on the first come first basis.

PROCEDURE:**GROUP- A:**

Patient in Group A will be treated with back extensor and iliopsoas strengthening in Flat Back having pain. The entire subjects with initial measurement of the pain at rest, functional disability were measured at day 1.

Subject in experimental group were asked to exercise three times a week for eight weeks at physiotherapy department.

GROUP- B:

Patient in Group B treated with hot packs.

DATA ANALYSIS:

All analysis were obtained using SPSS version 16. Demographic data of patient including sex, age were descriptively summarized. The dependent variable for statically analysis was back pain. ODI and VAS based data was taken at the binging of the study at 0 day and after the 30 days, 60 days completion of the treatment protocol the post test reading were taken to analyze the deference between the two treatment groups student T-test was used.

RESULT:

According to t critical and t calculated, the value of t (calculated) of day 1 and day 30 (VAS) for Experimental Group A is 9.165 and the value of t (calculated) of day 1 and day 30 for control Group B is 4.190 and, the value of t (calculated) of day 1 and day 60 (VAS) for Experimental Group A is 11.930 and the value of t (calculated) of day 1 and day 60 for control Group B is 6.963 standard t critical value is 1.761 these results shows significant improvement in pain in both group but more in Experimental Group.

DISCUSSION:

Through this study only pain variable taken, the result of study shows improvement in both group slightly more in experimental group but result is not only the outcome of the analysis, the coefficient is very high in both group it shows that the result is not equal for all patient, some patient got more relief and some do not.

In this study a hidden result may be there that if follow up taken of both group after one month and then again data collected then there is chance to get significance difference in experimental and control group.

LIMITATION OF THE STUDY:

- Some patients were not willing to do exercises.
- Patient of group B were not welling to come for treatment as they want hot fermentation to do at home only.

FUTURE RESEARCH:

- Team work should there for best protocols of the study and for making the concept more clear and evident, study should be in large group with clear theoretical as well as practical investigated based.

- Lumber curvature should be taken in variable, time for study should be more to come in conclusion in reference to curve, proper X-ray should be taken time to time for knowing the curvature status.

CONCLUSION:

Through this study only pain variable taken, the result of study shows significant improvement in both group slightly more in experimental group but result is not only the outcome of the analysis, the coefficient of variation is very high in both group it shows that the result is not equal for all patient, some patient got more relief and some are not get.

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