

Effectiveness of Selected Interventions on Low Back Pain Among Patients At Selected Hospitals In Lucknow

Dr. Sherin P.K

Principal

Shri K. L. Shastri Smarak Nursing College, Mubarakpur, Mutkkipur, Uttar Pradesh

I. INTRODUCTION

When it comes to musculoskeletal disorders, low back pain (LBP) is one of the most common. Back pain affects as many as 80% of the general public. The prevalence of LBP peaks in the third decade of life and gradually decreases after the age of 60 to 65 years. An injury or disease that causes significant pain and suffering is listed as among the top ten most burdensome in the Global Burden of Disease 2010. Back pain accounts for more disability-adjusted life years (DALYs) than HIV, road injuries, tuberculosis and lung cancer. Preterm birth complications are also included in this group.

Chronic low back pain was ranked 11th in the global burden of disease in 1990 with an estimated 58.2 million DALYs (years lost to premature death or ill health). It was estimated that low back pain contributed 83 million DALYs to the overall disease burden in 2010. 5

There is a huge impact on quality of life, productivity, and absenteeism from low back pain.

A significant economic burden is placed on individuals, families, and society as a result of LBP's impact on the number of working days.

Low back pain has been studied extensively in Europe to determine its social and economic impact. More than 100 million working days are lost each year in the UK due to low back pain, which is the most common cause of disability among young adults. 4 For every year, an estimated 149 million American workers suffer from LBP, which costs the country between \$100 billion and \$200 billion in lost productivity.

Until about a decade ago, the majority of the research on low back pain (LBP) focused on the developed world. However, more recent studies have shown that LBP affects people in developing countries as well. According to a systemic review of 27 epidemiological studies conducted across Africa, the prevalence of LBP among Africans is

similar to that found in developed countries, ranging from 28 to 74%.

LBP is a problem for healthcare workers because of the physical and emotional demands of their job. Workers in the healthcare industry are more likely to suffer from lower back pain than those in the construction, mining, and manufacturing industries. The repetitive manual patient handling activities, which often involve heavy lifting, repositioning, and working in extremely awkward positions, are the primary cause of these injuries.

Nurses and operating room staff have the highest rate of back pain among healthcare workers, with an annual prevalence of 40% to 50% and a lifetime prevalence of 35% to 80%. Several studies around the world have shown that the health-seeking behaviour of individuals and communities is influenced by the perceived cause(s) and severity of disease. It is critical for healthcare workers to have a clear understanding of any disease condition, as members of the community frequently rely on them for advice and treatment. Healthcare workers' perception and opinions of low back pain will invariably affect their health-seeking behaviour, compliance with preventive measures, patient education on these preventive measures, and invariably the general perception of the disease by the general population. As a result, many healthcare workers believe that lower back pain is caused by their job.

Despite the fact that some work-related activities may cause or exacerbate low back pain in healthcare workers, this does not mean that all LBP is caused by work-related activities.

Admins may be forced to place workers who have or are at risk of developing LBP in units where their services may not be required, resulting in a decrease in healthcare system efficiency. Identification and correction of incorrect perceptions through sensitization and health education are of critical importance in the fight against chronic disease.

II. METHODOLOGY

To conduct the study, researchers gathered data from 100 patients with mild to moderate back pain. In this study, the independent variable is the use of back strengthening exercises, and the dependent variable is the level of back pain that is experienced by the participants. Purposive sampling was used to select 50 subjects for the experimental and control groups. The Aberdeen Low Back Pain Scale was used in the research. Using the Aberdeen Low Back Pain Scale, the experimental and control groups were both tested on the first day. The experimental group was given back strengthening exercises for 14 days. a 30-day follow-up test was administered to participants in both the experimental and control groups. According to the aforementioned goals, the collected data was analysed using descriptive and inferential statistics. The study found that both the experimental and control groups experienced a decrease in back pain. After back strengthening exercises, the experimental group experienced a significant decrease in pain compared to the control group. $T=7.33$, $df=98$, $P<0.05$ was the "t" value of the difference in mean reduction of low back pain tabulated.

III. REPORTS AND COMMENTS

The study's results and conclusions are based on the statistical analysis's findings.

The study's first goal was to see if back strengthening exercises could reduce low back pain in both the experimental and control groups. It was successful. The distribution of a few of the study subjects' individual characteristics. Both the experimental and control groups had the same gender, age, education, occupation and body type demographic variables. Before and after back strengthening exercises, patients' levels of low back pain were measured. When comparing the two groups' pre- and post-test levels of low back pain, it was found that the study group had a reduction of 38.2 ± 3.44 S.D. to 32.6 ± 1.41 , with a mean score reduction of 5.6 ± 0.3 . The control group's level of low back pain decreased from 38.7 ± 3.46 to 37.2 ± 2.66 from pre- to post-test, with a mean score reduction of $1.5 \pm 0.8\%$.

Study participants reported significant differences in the mean reduction in back pain between the experimental and control groups, with 5.6 ± 0.3 . $> 1.5 \pm 0.8$. being the difference between the experimental and control groups, respectively. $T=7.33$, $df=98$, $P<0.05$). TABLE 1. Experimenters who received back exercises saw a significant decrease in their level of back pain, and this reduction was more pronounced than in those who did not receive back exercises. As a result, H1 is considered a valid research hypothesis. Low back pain

can be alleviated by strengthening the back muscles. (Back strengthening exercise and conventional physiotherapy have similar effects on postural control parameters when perturbed with movement and control impairment in chronic low back pain patients, according to a study by Ram Prasad Muthukrishnan, Shweta.D.Shenoy, Sandhu.S. Jaspa, Shankara Nellikunja, and Svetlana Fernandes (2010) in Karnataka. Based on the sub-groups of chronic low back pain, interventions were used. In this study, researchers used sequential and pragmatic control trial methods to collect data. Participants were divided into three groups and tested while undergoing postural perturbations: To determine whether or not conventional physiotherapy would be more effective for CLBP patients with movement impairment ($n = 15$ in the MI group), A randomised controlled trial was conducted on fifteen patients with CLBP who had control impairment and fifteen healthy controls (HC). However, after the intervention period, neither the disability scores nor the fear avoidance belief questionnaire work score improved significantly in the MI group ($P < 0.05$), according to the study's findings. A week of back-strengthening exercises yielded statistically significant improvements in the CI group's scores with effect sizes greater than or equal to one (Hedges' $g > 0.9$). The HC group's postural control parameters were compared to those of the CI and MI groups' pre and post postural control parameters. As a result, this study found that the CI group had significantly better postural control parameters than the MI group, suggesting that the CI group had specific adaptations to the back strengthening exercises. While disability scores were significantly reduced in CI and MI groups ($p < 0.001$), post intervention scores between groups were found to be significant ($p < 0.288$), according to the findings of the study. The CI group saw a 20% absolute reduction in flare-up rates during treatment (95 percent CI: 0.69-0.98). Back strengthening exercise group showed significant improvements after intervention, the study's findings concluded.

Similarly, a study conducted in Brazil by Machado.L A, AzevedoD C, Capanema M B ; Neto T N ; Cerceau D M (2007) found that the exercise group showed greater improvement than the psychotherapy group and the difference between groups were statistically and clinically significant for the patients with chronic non specific low back pain (-4.9 points,95 percent CI-9.08 to -0.72). An investigation found that short-term disability reduction was more effectively achieved through client-therapy than through exercise.

Another goal of the study was to examine the relationship between the level of back pain and demographic variables in the experimental and control groups. – Select demographic variables had no significant effect on the

prevalence of back pain. In this way, H2 is ruled out as an option for investigation.

IV. CONCLUSION

Back strengthening exercises are found to be an effective nursing intervention in reducing back pain among patients with low back pain. When compared to other forms of treatment, strengthening exercises are found to have no negative side effects. Exercising as a cost-effective nursing intervention for back pain has been revealed by the findings of this study. Both groups showed no correlation between demographic variables and back pain.

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