





GENDER DIFFERENCE IN FUNCTIONAL DISABILITY AMONG PATIENT WITH NON-SPECIFIC CHRONIC LOW BACK PAIN

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ABSTRACT

Background of the Study: LBP is a common condition that can be specific or non-specific. Non-specific LBP, which has no known cause, is responsible for 90% of cases and causes pain in the back from the 12th rib to the inferior gluteal folds.

Methodology: The study utilized a cross-sectional design in which both males and females completed the Oswestry low back questionnaire. The data was entered and analyzed using SPSS version 21.

Results: 85 patients participated in the study with a mean age of 38±9.603. Pain levels varied among patients, with 23 reporting no pain, 29 with light pain, 23 with moderate pain, and 10 with pretty severe pain. Patients had varying degrees of self-care ability with 13 able to care for themselves without

triggering pain and 4 requiring daily assistance. Most patients (75 out of 85) had minor disabilities, while 10 had moderate disabilities. The relationship between the ODI score and the question was found to be similar.

Conclusion: The data suggest that individuals with non-specific chronic low back pain have only a limited impairment, and only a few suffer from moderate sickness that affects their social lives. Non-specific persistent low back pain is not connected with gender differences in functional impairment.

Keywords: *Functional disability, non-specific, sex factor, quality of life, gender identity, low back pain.*

Introduction

Low back pain has considered one of the world's most serious public health issues¹. It is the major cause of functional limitations and job absence^{2,3}, resulting in major medical and financial costs⁴. Low back pain (LBP) is characterized by discomfort in one or both legs, and some persons with LBP also experience neurological symptoms in their lower limbs. The location of pain typically sits between the buttock creases and the boundaries of the lower ribs^{5,6}. LBP is linked to lumbar disc degeneration and its related alterations, such as disc space narrowing^{7,8}. Lumbar disc degeneration is a typical musculoskeletal issue that becomes worse as people get older⁹. The mean point prevalence was judged to be 18.3%, with a 30-day prevalence of 30.8%. 1 Low back pain was most prevalent in women than in men, and among those aged 40 to 69 years was more common than other age groups because radiculopathy affects 12–40% of people with low back

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pain, it gets a lot of attention^{10,11}. It has been noted that between 13.5 and 39.8% of those between the ages of 18 and 24 report having back discomfort, despite the fact that it is uncommon for young people to seek medical assistance for back pain¹². In the last several decades, low- and middle-income nations, such as Middle East, Africa, and Asia have seen the highest increases in disability caused by low back pain¹³. Previous back pain episodes, low job satisfaction, high physical workload, back weakness, age, and smoking are all low back pain major risk factor¹⁴. Sciatica, persistent non-specific LBP and Inflammatory back pain, such as spondylarthritis, is commonly diagnosed by magnetic resonance imaging (MRI). However, there are still some questions about the diagnostic utility of these degenerative diseases¹⁵. High-intensity aerobic activity, low-to-moderate intensity aerobic exercise, core stability and muscle strength exercises, and flexibility programmed have all been used to treat LBP¹⁶. Low back ache LBP has a link to posture and affects one's capacity to control it, and posture, as previously said, has an impact on low back pain. Although there is minimal evidence that gender differences in non-specific chronic LBP patients effect functional impairment, it affects men and women of all ages, however this study found that most static and functional disabilities had little or no gender difference. However, cross-sectional research of it reveals that females with impaired dynamic balance and non-specific chronic LBP have higher dread of movement, pain intensity during activities, and are more common in females than males. However, the distinction is insignificant¹⁷.

Methodology

Patients with NSCLBP were studied in cross-sectional research. Data was gathered from participants at Lahore's various hospitals. The study was finished in 6 months after the summary was approved. Using Epi-tool, a sample size of 85 persons was computed with a 90% confidence level, and the overall sample size is 85, with 42 men and 43 females. A non-probability convenient sampling technique was used to calculate the sample. Patients from various hospitals in Lahore were used in the study. The study was carried out with ethical considerations in mind. Written informed consent was obtained. A Performa was employed, along with the Oswestry Low Back Pain Scale, a validated questionnaire. The Oswestry Low Back Pain Scale is used. Researchers and disability evaluators use the Oswestry Incapacity Index (also known as the Oswestry Low Back Pain Incapacity Questionnaire) to measure a patient's long-term functional disability. In terms of determining low back functional outcomes, the exam is considered the "gold standard.". SPSS v.24 was used to analyze the data. Quantitative factors such as age, height, and weight were represented by mean and standard deviation, but qualitative variables such as gender were represented by frequency and percentage. The Chi-square test was performed to look for a link between gender and disease status.

Results

The total number of patients was 85, with a mean age of 38 ± 9.603 . The minimum and maximum ages were 26 and 65 years, respectively. There were 42 men and 43 women among the 85 Patients. Out of 85 Patients, 23 had no pain at the time, 29 had light pain, 23 had moderate pain, and 10 had pretty severe pain at the time. Out of 85 Patients, 13 were capable of looking after themselves generally without triggering pain, 38 were ready to interpret themselves usually but with additional pain, 20 were able to look after themselves commonly but it was painful and I was slow and careful, 10 required some assistance but managed most of their personal care, and four required daily assistance in most elements of self. The relationship between the ODI score and the question is pretty similar. 75 of the 85 individuals had minor disabilities, while 10 had moderate disabilities

Sr.	Correlation ODI questions	ODI total score		
		Males	Females	P-value
1	Pain intensity	1.90	1.91	0.00
2	Personal care	1.34	1.35	0.01
3	Lifting	1.72	1.87	0.33
4	Walking	1.35	1.46	0.004
5	Sitting	1.59	1.65	0.05
6	Standing	1.40	1.45	0.01
7	Sleeping	1.11	1.21	0.20
8	Social life	.88	.98	0.00
9	Travelling	1.33	1.43	0.004

Table: 1 Correlation of ODI total score with its questions in males and females.

Sr.	Correlation ODI questions	ODI total score		
		Males	Females	P-value
1	Pain intensity	10.51±13.02	10.75±13.02	0.00
2	Personal care	8.76±12.67	8.91±11.34	0.01
3	Lifting	8.42±11.54	8.61±12.67	0.33
4	Walking	6.91±11.34	7.11±9.64	0.004
5	Sitting	9.78±12.43	8.8±11.34	0.05
6	Standing	7.16±12.54	7.31±13.02	0.01
7	Sleeping	6.69±9.64	6.91±9.68	0.20
8	Social life	5.55±13.35	5.91±12.67	0.00
9	Travelling	7.21±12.34	7.71±11.34	0.004

Table: 2 Comparison of ODI total score with its questions in males and females

Discussion

Rather than proof of a link between LBP and functional impairment, the impact of sexual orientation on functional disability in people with nonspecific CLBP is unknown at this time. According to the findings, this was the first study to consider functional disability in female and male patients with nonspecific (chronic low back pain) CLBP, and the findings suggested that females had a much slower response time than men. In terms of other static and functional impairment variables, however, there was no significant difference between female and male people with ambiguous CLBP. In 2016, Hussain et al conducted a study to determine if excessive levels of television viewing were linked to a higher prevalence of LBP impairment in women, regardless of physical activity levels. (18) When compared to a study done in 2020 by Zahra et al, healthcare professionals are at risk of developing LBP because of the emotional and physical components of their profession, and it may have a substantial influence on their career and quality of life¹⁹. Mohamed et al conducted a study in 2017 to evaluate that prevalence of LBP have higher in male Physiotherapists (P.Ts) population compared to females P.Ts population²⁰. When compared to a research done in 2016 by Al-shareef et al, the results revealed a pain reduction and functional impairment, as well as an improvement in trunk flexion range of motion after two weeks. In support of the Kinesio Taping, these benefits sustained at an identical magnitude during a four-week follow-up²¹. Fernandes et al. performed a research in 2015 that found a preponderance of lumbar spine symptoms among female schoolchildren aged 12 to 14 and those who watched television more than three times a week and up to three hours a day²². When compared to a study performed in 2015 by Zhang et al to examine the efficacy of Chinese massage in releasing spasms, reducing edema, improving circulation and antiseptic inflammation of the local tissues, relieving nerve compression, and thus improving the symptoms of non-specific low back pain, Chinese massage was found to be more effective²³. Kanas et al conducted a study in 2018 showed that

After 8 weeks of therapy, the quality of life evaluation, functional ability, pain criteria, and physical features all showed considerable improvement²⁴. In comparison, Meints et al. investigated sex and racial variations in pain sensitization among patients with CLBP, as well as the involvement of catastrophizing as a possible mediator of those differences, in a research published in 2018²⁵.

Conclusion

The data suggest that individuals with non-specific chronic low back pain have only a limited impairment, and only a few suffer from moderate sickness that affects their social lives. Non-specific persistent low back pain is not connected with gender differences in functional impairment.

AUTHORS' CONTRIBUTION:

The following authors have made substantial contributions to the manuscript as under:

Conception or Design: Fareeha Amjad and Adnan Hashim

Acquisition, Analysis or Interpretation of Data: Amna Bashir and Shaista Sunbal

Manuscript Writing & Approval: Shaista Sunbal and Fareeha Amjad

All authors acknowledge their accountability for all facets of the research, ensuring that any concerns regarding the accuracy or integrity of the work are duly investigated and resolved.

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