

ORIGINAL ARTICLE

STUDY ON FACTORS ASSOCIATED WITH CHRONIC LOW BACK PAIN IN WESTERN INDIA

Vikki J Parikh¹, Pulkit Modi²

Author's Affiliations: ¹Associate Professor; ²Assistant Professor Dept. of Orthopaedics, GMERS Medical College, Dharpur, Patan, Gujarat

Correspondence: Dr. Vikki J Parikh E-mail: drvikkiprkh@gmail.com

ABSTRACT

Introduction: Low back pain is a leading cause of disability. It occurs in similar proportions in all cultures, interferes with quality of life and work performance, and is the most common reason for medical consultations. Few cases of back pain are due to specific causes; most cases are non-specific. Acute back pain is the most common presentation and is usually self-limiting, lasting less than three months regardless of treatment. Chronic back pain is a more difficult problem, which often has strong psychological overlay: work dissatisfaction, boredom, and a generous compensation system contribute to it.

Methodology: This is a retrospective study. The study was conducted in private multispecialty hospital of Ahmedabad, Gujarat. Data from April 2014 to March 2015 was analyzed. Permission was taken from the hospital authority to conduct the study and stringent confidentiality of data was maintained at all levels of the project.

Result: We have analyzed data of 210 patients diagnosed with chronic low back pain. People between age of 36 years to 40 years were most common culprits. Among these, 82 (39.05%) were male and 128 (60.95%) were female. Among males, 65 (79.27) were overweight (BMI \geq 25.00) and among females, 95 (74.22%) were overweight. Disc prolapse was most common diagnosis in both males and females. It was followed by fractures and Lumbar spondylosis.

Conclusion: Females were more affected by Lower back pain. People in age group of 36 years to 40 years were commonly affected. Disc prolapsed was most common the most common diagnosis.

Keywords: Lower Back Pain, Lumbar spondylosis, Disc prolapse

INTRODUCTION

Low back pain is a leading cause of disability. It occurs in similar proportions in all cultures, interferes with quality of life and work performance, and is the most common reason for medical consultations. Low back pain (LBP) is an extremely common health problem and a leading cause of disability.¹⁻⁴ It occurs in similar proportions in all cultures, interferes with quality of life and work performance, and is the most common reason for medical consultations. Low back pain is the leading cause of activity limitation and work absence throughout much of the world, and it causes a great economic burden on individuals, communities and governments.⁵

The point prevalence of LBP is 28.5% found in an Asian country.⁶ The lifetime prevalence of low back pain is reported to be over 70%. But globally, the annual prevalence of LBP has been estimated at 38%. In general, LBP resolves within weeks, but may recur in 24-50% of cases within 1 year. Thus, the

identification of risk factors for LBP is important in the prevention of recurrent and possibly chronic LBP.⁷ The prevalence of LBP in children is low (1%-6%) but increases rapidly (18%- 50%) in the adolescent population.^{8,9}

The prevalence of LBP peaks around the end of the sixth decade of life. Few cases of back pain are due to specific causes; most cases are non-specific. Acute back pain is the most common presentation and is usually self-limiting, lasting less than three months regardless of treatment. Chronic back pain is a more difficult problem, which often has strong psychological overlay: work dissatisfaction, boredom, and a generous compensation system contribute to it. It is generally assumed that overweight and low back pain are related.¹⁰ However, scientific evidence to support this relationship is not fully conclusive.^{11,12} Some studies have reported that subjects who carry excessive abdominal fat mass over a long period may be at

risk of low back pain, as a result of altered posture to counter balance the protruding fat mass.¹³

The present study, is aimed at finding the factors associated with Chronic Low back pain.

METHODOLOGY

The present study was a retrospective study. The study was conducted in a private multispecialty hospital of Ahmedabad, Gujarat. All patients attending orthopedic OPD forms study population.

Data of all patients having history of back pain for last six months or more and not relieved by primary treatment of pain killers and muscle relaxant during April 2014 to March 2015 were analyzed. Permission was taken from the hospital authority to conduct the study and stringent confidentiality of data was maintained at all levels of the project.

Completeness of data were assessed. Basic information like name, age, gender, duration of pain, height, weight, diagnosis etc. details were taken. Patients not having this data were excluded from the records.

Data were entered and analysed by MS excel. Frequency and percentage were calculated for all variables.

Total 236 patients were eligible to be included in the study. Out of these, 26 patients were not having complete information. Data of these 26 patients were excluded from the master dataset. Thus, data of total 210 patients were included and analysed for the study.

RESULTS

There were total 210 patients included in the study.

Table 1 shows age and gender wise distribution of patients having chronic low back pain. There were total 82 (39.05%) males and 128 (60.95%) females among total 210 patients. Age wise distribution of patients shows that maximum number of patients 65(30.95%) were from age group of 36 to 40 years. Among males and females maximum patients were also from age group of 36 to 40 years. (25.61%).

Table 2 shows BMI and gender wise distribution of patients. There were total 160 (76.19%) patients having BMI of ≥ 25.00 . Gender wise distribution of patients also showed that maximum number of patients were having BMI ≥ 25.00 .

Table 3 shows gender wise different diagnosis of patients. It was observed that maximum numbers of patients were having Disc Prolapse. It was followed by Fractures, Lumbar Spondylosis and Spondylolisthesis. Same trend was seen in both male and female.

Table 1: Age group and gender wise distribution of patients

Age (In years)	Male (%)	Female (%)	Total (%)
<=30	8 (9.76)	5 (3.91)	13 (6.19)
31-35	11 (13.41)	19 (14.84)	30 (14.29)
36-40	21 (25.61)	44 (34.38)	65 (30.95)
41-45	14 (17.07)	22 (17.19)	36 (17.14)
46-50	12 (14.63)	12 (9.38)	24 (11.43)
51-55	6 (7.32)	11 (8.59)	17 (8.10)
56-60	7 (8.54)	9 (7.03)	16 (7.62)
>60	3 (3.66)	6 (4.69)	9 (4.29)
Total	82 (100)	128 (100)	210 (100)

Table 2: BMI and gender wise distribution of patients

BMI	Male (%)	Female (%)	Total (%)
<18.50 (Underweight)	6 (7.32)	11 (8.59)	17 (8.10)
18.50-24.99 (Normal)	11 (13.41)	22 (17.19)	33 (15.71)
≥ 25.00 (Overweight)	65 (79.27)	95 (74.22)	160(76.19)
Total	82 (100)	128 (100)	210 (100)

Table 3: Different Diagnosis of Patients

Diagnosis	Male (%)	Female (%)	Total
Lumbar spondylosis	9 (10.98)	19 (14.84)	28
Disc prolapse	29 (35.37)	42 (32.81)	71
Spondylolisthesis	9 (10.98)	18 (14.06)	27
Lumbar spinal stenosis	8 (9.76)	11 (8.59)	19
Fractures	14 (17.07)	23 (17.97)	37
Tuberculosis (Koch's) spine	7 (8.54)	9 (7.03)	16
Nonspecific	6 (7.32)	6 (4.69)	12

DISCUSSION

In present study records of total 210 patients affected with chronic back pain was analysed. Our study shows that Lower back pain was more common among women than men. Age wise distribution of patients shows that maximum number of patients were from age group of 36 to 40 years.

Many studies reported the association between age and LBP among Asian population¹⁴ as well as the western population.^{15,16} Some studies reported that age ≥ 35 years was found to have 9 times more risk as compared to <35 years.^{17,18} In another study found that LBP at age 18 significantly increased the risk of LBP at age 30.¹⁹ It showed a prevalence of 30.8% in the age group (20-30years). Thus, many studies reports the occurrence of back pain at earlier stage of life. The association between gender and LBP had been reported by previous studies. Many studies shows female preponderance in lower back pain.²⁰

Our study shows that 76.19% patients of lower back pain were having BMI of ≥ 25.00 . This was correct for both gender. There are several studies that conform to the pattern that height is not correlated with the occurrence of low back pain in women, though

in men many studies reported a positive correlation.^{21,22} This is consistent with many studies. Overweight and increased waist-hip ratio serves both the predictor and risk factor for Lower back pain.^{23,24,25}

Increased lordosis in obese persons in order to maintain the centre of gravity due to excess weight may be responsible for the complaint of low back pain.²¹ Persons with a high percent body fat had high levels of disability. Some studies showed that association between obesity and LBP has been reported to be stronger among women than among men.^{23,24}

It was observed in our study that maximum number of patients were having Disc Prolapse. It was followed by Fractures, Lumbar Spondylosis and Spondylolisthesis. Same trend was seen in both male and female.

CONCLUSIONS

By this study we conclude that females were more affected by Lower back pain. People in age group of 36 years to 40 years were commonly affected. Disc prolapsed was most common the most common diagnosis.

LIMITATIONS

As it was a record based retrospective study in private hospital, we could not study more factors as records of many patients were not maintained properly. A prospective study is needed to address the issue.

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