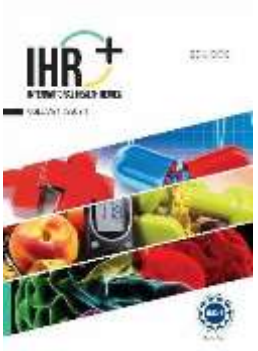

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Article: **Prevalence of Lower Back Pain Among Doctors Working in Jinnah Hospital, Lahore**

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Prevalence of Lower Back Pain Among Doctors Working in Jinnah Hospital, Lahore

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Abstract

Doctors are health practitioners responsible for the patients' overall health and well-being. They are at a remarkably high risk of developing a variety of occupational health conditions as a result of their workplace setting and workload. Among the many conditions of musculoskeletal issues, lower back pain (LBP) is the most prevalent. To determine the prevalence of LBP among doctors. A questionnaire was given to doctors that sought information regarding their social and demographic characteristics, job history, pattern of symptoms, frequency and severity of LBP and factors predisposing to LBP. A total of 97 doctors participated in the study. The prevalence of LBP among doctors was 51.55%. Its prevalence was higher in female doctors as compared to male doctors. Health education regarding appropriate sitting posture and correct lifting techniques can be introduced to reduce the burden of LBP among the affected population.

Keywords: doctors, Jinnah hospital, lower back pain (LBP), risk factors

Introduction

Lower back pain (LBP) is a common health and socioeconomic problem in developed countries. It is usually defined as the pain located between the twelfth rib and the inferior gluteal folds. It can be associated with leg pain. If back pain persists less than six weeks, then it is classified as acute pain. Further, pain is regarded as sub-acute in nature if it continues for six weeks to three months and becomes chronic when it continues for more than three months [1].

Most people experience an episode of LBP at some instance in their lifetime. Its prevalence is greater in females of age 21-44 years than in

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males. The incidence of LBP has increased over the last two decades in all populations. This has led to an increased level of disability and a large number of patients seeking health care and consulting health care professionals. In the United States, it is the second leading cause of disability [2].

Occupational factors having an association with LBP are direct impact, lifting and transfer, low job latitude and low level of job satisfaction. Its prevalence is greater in respondents with more work load [3]. Causes of LBP include spondylolysis and spondylolisthesis, disk herniation, sciatica, spondylitis, spinal stenosis, Scheuermann's disease and neoplasms. It is also caused by the degeneration of intervertebral discs, which is the most common mechanical cause of back pain,. It is caused when the rubbery disc loses its integrity with age. Herniated or ruptured discs can occur when intervertebral discs become compressed and bulge outward causing LBP. Radiculopathy is a condition caused by compression, inflammation and injury to the spinal nerve root and it causes LBP. Skeletal irregularities include scoliosis, lordosis and other congenital anomalies of the spine [4].

Risk factors associated with back pain include an increasing age. The first attack usually occurs between 30-50 years of age and the pain becomes more common with advancing age. Regular smoking increases the risk of back pain. Fitness level can be a risk factor for back pain. A weak abdominal and back extensor may not support the supine and causes back pain. Sedentary lifestyle, psychological problems and mental health status also cause back pain. Some people are genetically predisposed to back pain and suffer from disorders such as ankylosing spondylitis, a form of arthritis that involves the fusion of spinal joints leading to the immobility of the spine. Pregnancy is also a risk factor in which abdominal muscles are stretched. Being overweight causes the compression of lumber vertebra that, in turn, causes back pain [5].

The purpose of this study is to investigate the prevalence of LBP among doctors working in Jinnah Hospital, Lahore. Moreover, it is aimed to analyze how individual and occupational characteristics contribute towards increasing the risk of LBP.

Materials and Method

This study was conducted at Jinnah Hospital, Lahore, Pakistan. It is a 1250 bed hospital. A descriptive cross-sectional study was conducted over a period of 03 months on doctors working in the said hospital to find out the prevalence of LBP among them. Using an estimated proportion of 50%, 05% margin of error and Confidence Interval (CI) of 95%, a sample size of 97 was calculated [6, 7].

Doctors with ages 28-59 years and having at least one year of work experience were included in the sample. However, pregnant doctors and those with serious pathological diseases were excluded. Using the convenient sampling technique, a questionnaire consisting of consent form, socio-demographic information and the modified Nordic questionnaire for LBP was distributed among the 92 participants. Data was entered and analyzed using IBM SPSS (Statistical Package for Social Sciences) version 23. Categorical values were expressed by calculating frequency and proportion. Appropriate statistical tools were applied to analyze the data.

Results

A total of 97 questionnaires were distributed among the doctors and all of them returned the questionnaires after filling them correctly. So, a response rate of 100% was recorded. Of these 97 doctors, 60 (61.85%) were male and 37 (38.15%) were female. Furthermore, 63 (64.95%) doctors were married, while 34 (35.05%) were unmarried. Body Mass Index (BMI) of the respondents showed that 11 doctors (11.3%) were underweight, 50 (51.5%) had a normal weight, 28 (28.8%) were overweight and 07 (7.2%) were obese.

The prevalence of LBP during the last six months was reported for 50 (51.5%) out of 97 respondents, while 47 (48.5%) did not suffer from LBP.

The results showed that 8 doctors who worked for 6 hours a day suffered from LBP during the last 6 months, while 10 did not. Similarly, of all the doctors who worked for 8 hours per day 16 suffered from LBP during the last six months, while 18 did not. Further, of all the doctors who worked for 10 hours per day 8 suffered from LBP during the last six months, while 7 did not. Moreover, a high prevalence rate of LBP was seen in those doctors

who worked for 12 hours a day, with 18 doctors suffering and 12 not suffering from LBP during the last 6 months.

Table 1. Prevelance of Lower Back Pain in Response to Working hrs and BMI

Parameter	**Lower Back Pain (LBP) during the Last 6 Months**	
	Yes	**No**
Working Hours		
• 6	8	10
• 8	16	18
• 10	8	7
• 12	18	12
Body Mass Index (BMI)		
• Underweight	7	04
• Normal	27	23
• Overweight	11	17
• Obese	04	03

Table 2. Prevalence of Lower Back Pain in Response to Working hrs, Severity of Pain and Gender

	No Pain	**Mild Pain**	**Moderate Pain**	**Severe Pain**	**Total (N)**
Working Hours					
• 6	07	07	04	00	18
• 8	11	11	07	05	34
• 10	04	08	03	00	15
• 12	06	15	06	03	30
Pattern of Pain					
• Sudden	01	12	08	04	
• Gradual	27	29	12	04	
Gender					
• Male	26	20	9	5	60
• Female	2	21	11	3	37

Discussion

A study was conducted on the frequency of LBP among nurses in Jinnah Hospital, Lahore with a sample size of 92. The results concluded that the prevalence of LBP among nurses was 65.1%. It was high in nurses who were 30 years old, married, overweight / obese and had more than 15 years of experience. In the current study, sample size was 92 and the prevalence of LBP recorded in doctors was 51.55% [8].

Another study was conducted to determine the perception and prevalence of MSK disorders among the nurses of Lahore. The researchers concluded that the prevalence of pain during the past 12-month period was 31.6% and the most common site of pain was lower back (32%), followed by shoulder pain (20%). Further, married nurses were more prone to work related musculoskeletal disorders. In the current study, which was conducted on doctors, the prevalence of pain over the past 6 months was 51.55%. Mostly, female doctors were prone to pain as shown in the above table [9].

A study was conducted on the prevalence of MSK hip pain among health professionals with a sample size of 971. Hip pain was positive in 15% population and the percentage of male professionals suffering with hip pain (53%) was higher. The current study contradicts these results because female population was found to have a higher percentage of LBP. Further, 51.55% population was prone to LBP which can some time mimic the hip pain [10].

In Pakistan, most people belong to the middle and poor class, so a high treatment cost of LBP is not affordable. A general awareness program on posture correction can reduce LBP. This survey emphasizes the need of posture correction. Further studies are required in this context. Among risk factors, gender and working hours are incredibly significant. Female workers experience more intense pain possibly due to psychological factors [11]. With increasing working hours, complains increase possibly due to stress on the lumber supine or the fatigue of muscles [12]. The awareness of body alignment and correct sitting posture is very important. Furthermore, to develop the habit of exercise not only in doctors but also in the community is the need of the hour. It not only decreases the cost of

treatment but also enhances job quality, job satisfaction and functional level [13].

Back support chairs stabilize the pelvis and supine in the correct position. The adjustment of the height of chair and working an optimum hour job can reduce LBP. By decreasing LBP, work efficiency can be increased [14]. Its symptoms are both idiopathic and mechanical. Morning pain on waking up is an indicator of idiopathic LBP. Constant pain, pain that wakes, and stiffness after resting are generally considered as moderate indicators of idiopathic LBP. There is a high level of agreement that pain felt when lifting an object is an indicator of mechanical LBP. Intermittent pain during the day, pain that develops later in the day, pain felt on standing for a while, when lifting objects, bending forward a little, on trunk flexion or extension, doing a sit up, when driving for long distances, getting out of a chair, and on repetitive bending, running, coughing and sneezing are all generally considered as moderate indicators of mechanical LBP [15, 16].

Conclusion

It was concluded that the occurrence of LBP among doctors was 51.55% over the past 6-month period, while 48.5% doctors did not suffer from LBP. The frequency of LBP was found to be high among those doctors who were 30 years of age. It was found to be more common in female doctors than male doctors. To prevent the incidence of LBP, it is essential to maintain a proper body posture during work. Also, the reduction of body weight and avoiding lifting heavy weight objects are equally important.

Limitations

- The findings are only applicable on the doctors of Jinnah Hospital, Lahore.
- Data was collected during the morning shift. The frequency of night duty doctors is hard to calculate accurately.
- Sample size was small.
- Time duration was limited.

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