Low back pain is known as the utmost common health problem among all the population around the globe [1]. LBP has affected 60-80% of the adult population once in their life time [2]. It is the fifth main cause of consulting a physician [3]. There are many causes of pain in lower back ranging from occupational to behavioral and socio-economic as well as metabolic factors. LBP refers to pain or feeling of discomfort in the region of lower posterior margin of rib cage to horizontal fold of glutei [4].

I N T R O D U C T I O N

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Frequency and Risk Factors of Low Back Pain among Health Care Professionals of Jinnah Hospital, Lahore

Asma Rania¹, Shazia Rafiq², Saddiqa Qamar³, Maida Mushtaq¹, Alma Rania¹, Rameen Rania¹, Aeliya Abbas⁶ and Maha Mohiuddin⁷

¹King Edward Medical University, Mayo Hospital, Lahore, Pakistan
²Department of Physiotherapy, Jinnah Hospital, Lahore, Pakistan
³University of Management and Technology, School of Health Sciences, Lahore, Pakistan
⁴Combined Military Hospital, Lahore, Pakistan
⁵Riphah International University, Lahore, Pakistan
⁶Department of Physiotherapy, Maqbool Memorial Hospital, Shakargarh, Pakistan
⁷Allama Iqbal Medical College, Lahore, Pakistan

A R T I C L E I N F O

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*Corresponding Author:
Saddiqa Qamar
university of management and technology Lahore.
(School of Health Sciences, SHS UMT)
siddiqaqamar16@gmail.com

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A B S T R A C T

Low back pain is known as the utmost common health problem among all the population around the globe. Objective: Low back pain is a common musculoskeletal disorder involving nerves, muscles and bones of back. It may be associated with a several risk factors like family history, BMI, ergonomics of occupation, exercise habits and stress. A study was conducted to determine the frequency of Low Back Pain and to determine its risk factors among health care professionals. Methods: A cross sectional study was conducted among health care professionals at Jinnah hospital Lahore, Pakistan, for a period of four months after the approval of synopsis. Convenient sampling technique was used and all patients during study interval were fulfilling the inclusion criteria. A total of 64 participants were included of age range from 18 to 60 years. Data were analysed by using SPSS Version 16.0. Results: The prevalence of LBP among health care professionals is 67%. Among subjects 58 were below 40 years and 6 were over 40 years, 26 reported to have a family history of LBP, 24 participants do exercise, 43 have normal BMI, 12 were overweight, 8 were obese and 1 was underweight. 58 respondents were mildly stressed and 6 were moderately stressed. Conclusions: Frequency of low back pain was high in health care professionals with a high frequency in females. Most of the subjects have normal BMI and low perceived stress score.
and functioning at work place. LBP is second most common complaint for doctor visit and the first cause of work restriction [7]. There are two types of low back pain including specific (due to an identifiable cause) and non-specific (due to non-identifiable cause), some of the patients of back pain are of specific causes but many of the cases are non-specific [8]. Acute low back pain is more common presenting complains and resolves without any treatment, it lasts only less than three months [9]. Back pain of chronic nature is a very serious issue and has a solid relation with psychological factors: work related disappointment, boredom and a compensation system contributes to it [10]. Several Risk Factors are found in association with LBP including trauma, old age, bony degenerative changes, poor lifting techniques, smoking, obesity, and pregnancy, lack of exercise, sedentary life style, and alcohol use. Psychological factors strongly influence the prevalence of LBP [11]. Universally, LBP related to occupation has a prominent impact on the number of disability-adjusted life years lost each year. Quite a few physical workload factors, like that of non-neutral trunk postures and various physical handling activities have been linked with LBP. Considering the psychological factors as a significant cause of LBP, stress and anxiety play a vital role. It is stated that depression and anxiety are significant psychological factors in the context of chronic low back pain [12]. The experience of stress, anxiety, and depression is sometimes, but not always, secondary to back pain. In this study, we have determined the prevalence of LBP in Jinnah Hospital health care professionals and have investigated its demographical, behavioral, and psychosocial risk factors. Low back pain is an issue that needs to be cater at all the levels of healthcare including behavioral and psychological level [13]. To cater pain in low back multidisciplinary approach is required and it includes pharmacological treatment, non-invasive approaches of physiotherapy and exercise as well as occupational plus life style changes [14]. Majority of health care professionals including physiotherapists, dentists, physicians, nurses, laboratory workers, caregivers are at a risk of MSK disorders. Though certain literature concerning about this topic is available but it is a necessity for further literature evidence in under developed countries as Pakistan, so that the incidence of various risk factors related to pain in low back can be resolute. This will ultimately aid the health care providers in the management of the patient as a whole rather than just prescribing painkillers and anti-inflammatory drugs or suggesting exercise. Workers in hospital experience more pain in low back than any further groups. Working activities involving lifting, bending, twisting, and psychological stress are regarded as unintentional factors for many back injuries [15].

M E T H O D S
It was a cross sectional study conducted. The researcher selected cross sectional study because it has no follow up and the frequency can be checked easily through this design of study. A cross sectional study was descriptive study which provides the clear picture of the frequency and characteristics of a disease in a population at a particular point in time. The study was conducted at JINNAH HOSPITAL LAHORE. Approval from the hospital MS was taken before collecting the sample. Researcher selected this area because desired sample was easily available to find out the frequency of low back pain and its relation with the occupation, age gender and stress among healthcare professionals of Jinnah hospital Lahore. Inclusion Criteria: Age 18 to 60, Male and Female health care professionals, Subjects willing to participate. Exclusion Criteria: Congenital back pathology, Pregnancy, Disc pathology, Malignancy. Non probability or convenient sampling was used. A convenience sample group of people who were easily approached by researcher and available for study. Healthcare professionals who were easily available in the Jinnah Hospital Lahore. 64 subjects were involved in the study As most of the subjects were literate, consent was taken verbally before starting the questions and then questions were asked by the researcher. Questionnaires were filled by the researcher and signature of patient was taken at each questionnaire. The data were collected by using 3 scales; Standardized Nordic scale using a portion to determine the prevalence of LBP, Numerical Pain Rating scale to find the severity of LBP and Perceived Stress scale to determine LBP relationship with stress. Approval from the MS of Jinnah Hospital Lahore was taken to conduct the research. Consent of the participants was taken before starting the questions and their privacy, confidentiality and safety were secured.

R E S U L T S
Table 1 shows the mean age of the respondents is 27±5 years. The results showed the frequency of BMI of Respondents in which the total number of respondents is 64 out of which the frequency of Underweight is 1, Normal is 43, Overweight is 12 and Obese is 8. Table 2 shows that out of 64 participants, 43 experienced low back pain in the last 12 months, 12 individuals were prevented from normal work during last 12 months, and 20 individuals experienced low back pain during last 7 days. The results showed frequency of stress perception related to the low back pain, 58 participants categorize their level of stress as low whereas 6 categorize as moderate level of stress. shows that out of 64 participants 1 was underweight, 43 were with normal BMI, and 12 were overweight 8 obese. High BMI is one of the
risk factors for low back pain, there is positive relation between high BMI and prevalence of LBP. BMI is one of the personal factors that can cause low back pain.

<table>
<thead>
<tr>
<th>BMI</th>
<th>Frequency (%)</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under weight (BMI &lt; 18.0)</td>
<td>1(1.6%)</td>
<td>1.66</td>
<td>1.66</td>
</tr>
<tr>
<td>Normal (BMI 18 - 25)</td>
<td>43(67.2%)</td>
<td>7.21</td>
<td>8.88</td>
</tr>
<tr>
<td>Over weight (BMI 25 - 30)</td>
<td>12(18.8%)</td>
<td>8.81</td>
<td>7.5</td>
</tr>
<tr>
<td>Obese (BMI &gt; 30)</td>
<td>8(12.5%)</td>
<td>2.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>64(100.0%)</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: BMI of Study Participants

Table 2 shows that out of 64 participants, 43 experienced low back pain in the last 12 months, 12 individuals were prevented from normal work during last 12 months, and 20 individuals experienced low back pain during last 7 days. This illustrates that most of the participants were having chronic low back pain whereas only 20 participants were of acute low back pain.

Table 3: Respondents with stress scale score

Table 4 shows that the severity of pain on Numerical Pain Rating scale was 2.67±2 which is less than NORDIC scale that was 22.1094±4.87337. A study was conducted in which data was collected from 64 individuals, using the NORDIC scale the frequency of LBP was determined and the severity of pain was calculated using Numerical Pain Rating scale, results were deduced on the basis on various risk factors i.e. exercise habits, family history BMI, and perceived stress. In 2020 Jonas Vinstrup and colleagues done a study on perceived stress and its relation with low back pain and concluded that Psychological stress surges with that of LBP among healthcare workers. Categorizing and lessening the occupational-related psychosocial stressors should be included in strategies that aim to prevent musculoskeletal disorders in this population [16]. Similarly, in our study stress is also linked with low back pain and work related factors. In 2017 Ö Çınar-Medeni reported that occurrence of pain at the level of low back in healthcare professionals was estimated to be 53% based on SNMA. That was perceived that pain in low back was commonest among medical secretaries (56.9%) [17]. Increased age, females, high BMI, married, lack of daily exercise routine, and decreased job satisfaction were found to be factors increasing low back pain risk. In 2018 Gutke A. conducted a research about the prevalence and risk factors of LBP in a tertiary care hospital. Among 375 participants 194 were men, the mean patient age was 42.05 ± 15.35 years (mean ± standard deviation); most of the patients belonged to the 21- to 40-year-old age group (48%, n = 180). The majority (78.4%) had chronic back pain; healthcare workers (12.3%, n = 46). The major risk factors identified were identified, and these factors included lack of exercise (76.3%, n = 286), sleep disorder (41.6%, n = 158), anxiety (39.5%, n = 148), and depression [18]. Foster NE reported that mental wellness, anxiety and depression (as life style factors) were not associated with socio-demographic or physical factors. According to Gunnar BJ Anderson 1999, 70–85% of people have low back pain at some time in their life. The prevalence of back pain per year ranges from 15% to 45%, with point prevalence averaging 30%. The involvement of stress, anxiety, and depression is occasionally, but not constantly, secondary to back pain. My study also depicts that LBP has a high prevalence in health care workers i.e. 67% with a high frequency among females 72% (23 out of 32) than males 63% (20 out of 32). The respondents 58 out of 64(91%) scored low on perceived stress scale [19]. A study done in 2017 on risk factors associated with pain in low back in hospital professionals revealed that occupational activities associated with such profession is linked with high rate of occurrence of back pain. The current study also came up with the same conclusion [20].

CONCLUSIONS

Frequency of LBP is high among health care professionals. Gender has an effect on the occurrence of LBP with
females having greater frequency of LBP. Majority of the individuals have a normal BMI and have low perceived stress score.

Conflicts of Interest
The authors declare no conflict of interest.

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REFERENCES


[20] Terzi R and Ailt F. Hastane çalışanlarında bel ağrısı sikliği, bel ağrısı kronik yorgunluk sendromu ve
Rania A et al.,

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