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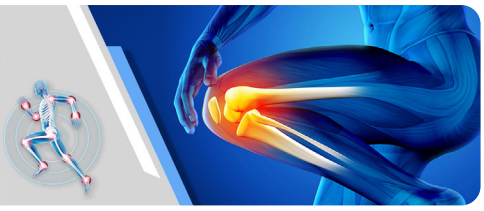

Prevalence and Associated Factors of Low Back Pain among the Staffs of a Pharmaceutical Company of Dhaka City

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Abstract

Background: Low Back Pain has been shown to be an important health and socio-economic problem of occupational diseases, which plague a large segment of the population in industrialized countries. Reviews of the literature describing LBP point prevalence in the developed world have produced variable of prevalence rates. Low back pain is common in Bangladesh also, responsible for an enormous burden of chronic disease, so this study aimed to disseminate the findings to take necessary steps to minimize low back pain and reduce the costs and injuries associated with ergonomic hazards of workers.

Objective: To identify the prevalence and factors associated with low back pain among the staff of a pharmaceutical company of Dhaka city.

Methods: A descriptive cross-sectional study was conducted in General Pharmaceutical Company in Mohammadpur, Dhaka. The study was carried out of Pharmaceutical Company in Mohammadpur, Dhaka, Bangladesh. The duration of the period from 10th October 2019 to 10th January 2020. Randomly interview was done by standard questionnaire containing extremely simple and well-structured question.

Results: Total 349 sample was collected from General pharmaceutical company in Dhaka, Bangladesh. The result of this study showed that the prevalence of low back pain is 45.3% among the staff of this pharmaceutical company. Regarding sex, females have recorded 51.2% of those suffering from back pain. Factors such as socio-economic factors, family factors, body mass index, physical factors, psychological factors, medical history and sleeping disturbance were associated with the prevalence of LBP among staff of pharmaceutical company.

Conclusion: Preventive strategies such as maintaining weight, fairness of stress and a comfortable work environment can help reduce the incidence of LBP among staff working in pharmaceutical company.

Keywords: Low Back Pain; Risk factor; Prevalence; Pharmaceutical staff

Introduction

As Complaints related to work is a major problem for workers and employers around the world. It depends on the type of work. Lower Back Pain (LBP) is a common problem suffered by many workers [1]. Back pain is a physical disability that has a serious impact on Western society. It is a burden to individual patients and an additional cost to society through lost jobs and health care costs [2]. This study was conducted to identify the prevalence and risk factors for back pain among pharmaceutical company employees.

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As well as examining the scope of these issues. Back pain is a familiar problem affecting both genders and most age groups, with approximately 1 in 4 adults seeking help within 6 months. This leads to direct and indirect costs, such as economic, occupational, and social. Caregiving behaviors vary according to cultural factors, pain intensity, degree of activity limitation, and the presence of comorbidities. Seeking medical care for back pain accounts for a significant portion of the number of cases in some primary contact areas. Recent episodes of back pain resolve in only about 1 in 3 women [3].

Occupational factors associated with an increased risk of LBP include:

Heavy physical labor, static working postures, frequent bending and twisting, mental and psychosocial. More than two-thirds of back strain is caused by lifting, pushing or pulling. The most common causes of LBP are muscle strain, vertebral compression fractures, spinal stenosis, disc injuries, spondylosis or spondylolisthesis and exercise programs. Back pain is a common musculoskeletal condition, acute or chronic. It can be caused by a variety of diseases and disorders that affect the lumbar spine [4]. Obesity and back pain are generally thought to be related. However, scientific evidence for this relationship is sparse and sometimes conflicting [5].

Signs and symptoms of LBP include pain, numbness, tingling, burning, firmness, stiffness, reduced range of motion, deformity, reduced functional strength and loss of muscle activity. Overweight people are more likely to seek medical attention for back muscle and joint problems [7]. Not only does it mean a lower aspect of life for individuals, but it also means lower labor production due to disability, absenteeism and early retirement. In addition, rising healthcare costs are corresponding with back pain [8].

Methodology

A descriptive cross-sectional study was conducted in Pharmaceutical Company in Dhaka. The duration of the period from 10th October 2019 to 10th January 2020. Interview was done by standard questionnaire containing extremely simple and well-structured question. Most of the questions were close-ended and semi structured and few were mixed and open-ended questions. It preserves confidentiality and limits risk of providing expected answers. Structured questionnaire containing items to elicit socio-demographic information (age, residence, marital status, monthly income, education etc.), modalities of treatment currently receiving, relevant information about co-occurring physical illness. After collection of data, all interviewed questionnaire were checked for its completeness, and internal consistency to exclude missing or inconsistent data and those were discarded. Then the data were analyzed by using the software named SPSS 20. A total of 349 questionnaires were analyzed.

Results

Table 1 shows the distribution of socio-demographic profile (n=349). The respondents were grouped into four categories (≤30), (31-40), (41-50), (>50). Here according to age distribution, 79(22.6%) were (≤30) years, 134(38.4%) were (31-40) years, 89(25.5%) were (41-50) years, 47(13.5%) were >50 years age group. According to sex 231(66.2) were male and 118(33.8) were female. Among the participants 92.3% were Muslim, 6.9% were Hindu and only 0.9% were Christian. Most of them- 169(48.4%) have 3-4 family members, 107(30.7%) have 1-3 family members and 73(20.9%) have >4 members in their house. According to family history, 158(45.3%) gave positive family history of low back pain and rest of them responded negatively.

Table 2 demonstrated the occupational distribution of the General Pharmaceutical. According to occupation 45.27% were MPO, 13.47% were Area manager, 9.74% Regional manager, 29% were Deputy Manager, 6.02% were Assistant General Manager, 3.15% were General Manager, 1.7% were Managing director, 8.30% were Executive and 3.43% were in other occupation.

Table 3 demonstrated the association of physical and psychological factor and low back pain (n=349). Out of 349 respondents, 149 (94.3%) staff are suffering from low back pain who does not perform physical exercise regularly

Table 1: Distribution of the according to socio-demographic profile (n=349).

Socio-Demography	Frequency	Percentage
Age in years		
≤30	79	22.6
31-40	134	38.4
41-50	89	25.5
>50	47	13.5
Gender		
Male	231	66.2
Female	118	33.8
Religion		
Muslim	322	92.3
Hindu	24	6.9
Christian	3	0.9
How many people living in the house		
01-Feb	107	30.7
03-Apr	169	48.4
>4	73	20.9
Family history of low back pain		
Yes	158	45.3
No	191	54.7

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and 9(5.7%) have LBP although they do physical exercise. According to daily sleeping hour 62(39.2%) staff suffering from LBP who sleeps ≤8 hours at night and 96(60.8%) had LBP who sleeps >8 hours. More than two third of the participants were satisfied with their job and there was no significant relation of LBP with Job satisfaction and job stress level at work.

Table 4 demonstrated the association of body mass index and low back pain (n=349). According to BMI 46 staffs had underweight, 93 had normal weight, 122 had over weight and 88 staff were fall in obese group. Over weight (25-29.9) and obese (≥30) group people are at higher risk of Low Back Pain (LBP).

Table 2: Occupational distribution of the study subjects (n=349).

Occupation	Frequency	Percentage (%)
Medical representative (MPO)	158	45.27
Area manager	47	13.47
Regional manager	34	9.74
Deputy Manager	29	8.31
Assistant General Manager	21	6.02
General Manager	11	3.15
Managing director	6	1.7
Executive	29	8.3
Others	12	3.43

Discussion

Low Back Pain (LBP) is a typical musculoskeletal disorder in both advanced and developing countries, with more than half of the world's population experiencing low back pain in their lifetime. This study aims to determine the prevalence and factors related to low back pain in the materials of pharmaceutical companies in Dhaka city. Available study results were discussed and correlated with formerly published correspondent studies.

At the same time, the prevalence of LBP (45.3%) was found to reach among pharmaceutical company employees in the population of Dhaka city. These results are persistent with Bawabi et al. [12] they found back pain in 45.2% of him. In the literature, LBP prevalence ranges from (37.3%) to (70-85%) and (60%) in scaffolds. [9-11]. In terms of gender, women report 51.2% of back pain. This is probably due to the fact that in addition to spending more time on housework and childcare, the responsibilities of employees are increasing. This finding is consistent with other studies that reached similar conclusions [12]. Other studies conducted in the United States and China have shown that back and spine disorders are more usual in female workers [10,13].

The current study exhibits a significant relationship between LBP and increasing age. Other studies have reported a significant association between LBP and older age [9].

This study shows a significant association between physical factors and back pain (P<005). In the literature to date, the association between physical activity and her LBP

Table 3: Association of physical and psychological factor and low back pain (n=349).

Associated factor	Frequency	Low Back Pain			
		Present (n=158)		Absent (n=191)	
		No	%	No	%
Physical factor					
Do you perform physical exercise regularly					
Yes	56	9	5.7	47	25
No	293	149	94.3	144	75
What is your daily sleeping hours					
≤8	151	62	39.2	89	47
>8	198	96	60.8	102	53
Psychological factor					
Are you satisfied with your work					
Yes	218	66	41.8	152	80
No	131	92	58.2	39	20
What is the job stress level at your work					
Mild	169	36	22.8	133	70
Moderate	131	82	51.9	49	26
Severe	4	40	25.3	9	4.7

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Table 4: Association of body mass index and low back pain (n=349).

Body Mass Index	Frequency	Low back pain			
		Present (n=158)		Absent (n=191)	
		No	%	No	%
Underweight (<18.5)	46	7	4.4	39	20
Normal weight (18.5-24.9)	93	13	8.2	80	42
Over weight (25-29.9)	122	71	45	51	27
Obese (≥30)	88	67	42	21	11

remains controversial. According to a study conducted in Iran [14]. Another study, Hodges reported a reduced incidence of LBP, even though there was no significant association of physical activity variables with back pain (LBP).

The study found significant associations between familial factors, physical factors, psychological factors, medical history, sleep disturbances, and low back pain ($P<0.05$). Several studies have been reported that are consistent with previous studies on the effects of familial factors on her LBP [10]. Detailed descriptions of study populations, especially occupational factors, can enhance the validity of population assessments. Activities such as correcting bad posture, splitting work hours, taking time off when in pain or discomfort, and changing jobs within traffic areas lead to healthy living and upgrade performance levels of pharmaceutical staff.

This study shows that there is a significant difference in mean BMI among people with back pain. This indicates that overweight and obese people are at higher risk of low back pain (LBP). The relationship between BMI and LBP is controversial, with several studies showing similar findings. [14,9] However, others found that neither height nor weight were significantly associated with the risk of developing LBP [13].

In the current study, the prevalence of LBP among office workers was high, with one article reporting prevalence as high as 62%, while the other three reported less than 20%. LBP prevalence among manual workers was independent of job classification. These studies reporting point prevalence of LBP. Most of the These studies report on the prevalence of LBP in a wide range of occupations. In addition to occupational characteristics, they sought to assess other factors such as age, gender, history of accidents and trauma, job satisfaction, marital status, education level, stress, anxiety, depressive symptoms, and body mass index [15].

In the current study, more than two-thirds of participants were satisfied with their jobs, and no significant association was found between LBP and job satisfaction. Therefore, the results of this study are in good agreement with those of other studies [12], although another study found that people with LBP had mild to moderate job satisfaction was found [16]. The study began with no association between work experience and LBP. A previous study found that more years in practice increased her risk of LBP, and duration of employment appeared to be significantly associated with the prevalence of LBP [16].

Another study reported that psychological parameters such as stressful life, respect at work, satisfactory career advancement, and fear of changing jobs due to back pain were significantly associated with his LBP [12]. This shows the impact of mental state on physical health. These results are consistent with previous research on the importance of psychological factors on LBP [10].

Conclusion

Preventive strategies such as maintaining weight, fairness of stress and a comfortable work environment can help reduce the incidence of LBP among staffs working in pharmaceutical company.

Limitations of the study

The present study was conducted in a very short period due to time constraints and funding limitations. The small sample size was also a limitation of the present study.

Recommendation

This study can serve as a pilot to a much larger research involving multiple centers that can provide a nationwide picture, validate regression models proposed in this study for future use and emphasize points to ensure better management and adherence.

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Declarations

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