

# Prevalence of Low Back Pain Among Women Living in Slum Areas of Dhaka City

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## Abstract

**Objective:** The aim of the study was to explore socio-demographic factors, risk factors for low back pain, relationship between developing low back pain with posture during work, any sort of treatment was taken or not etc. **Methods:** A cross sectional study was conducted to see the prevalence of low back pain among the women living in slum areas of Dhaka city. The study was done with a structured questionnaire to collect information from randomly selected 60 slum women from three selected slums in Dhaka city. **Results:** This study revealed that about 82% slum women had low back pain. Among them 76.7% were married and majority of them were house wives (46.2%). The vulnerable age group for developing low back pain was 26 to 29 years. Most of the patients were illiterate (41%), 36% women had history of trauma, 58% women had history of lifting heavy weight. This study also showed that 46.9% of them pain was increased during work, persisted >3 hours in 59.2% women, 46.9% women had moderate pain. Pain was radiated mostly as tingling sensation in 39% women. Pain was relieved spontaneously among 41% women. Analgesics were taken by 73% women. **Conclusion:** Low back pain among slum women hampered the quality of their social and working lives.

**Key words:** Low back pain; Slum area; Dhaka City; Posture during work.

## INTRODUCTION

Low back pain has become a costly burden to society and a leading cause of disability and loss of productivity. Low back pain is a symptom, not a specific disease. It is generally described as pain between costal margin and the gluteal folds<sup>1</sup>. Low back pain is usually described as discomfort in the lumbosacral region of the back that may or may not radiate to the legs, hips, and buttocks. The pain may be due to a variety of causes, and many individuals may never receive a clear diagnosis for the cause of the pain. Back pain affects 60-80% of people at some time in their lives. Although the prevalence has not increased, reported disability from back pain has increased significantly in the last 30 years. In western countries, back pain is the most common cause of sickness-related work absence, and in the UK 7% of adults consult their GP each year with back pain<sup>2</sup>.

Among two thirds of the adults, low back pain is a major health problem<sup>3</sup>. A European study also shows that, 66% patient suffered by moderate pain, 34% suffered by severe pain<sup>4</sup>. Low back pain is one of the most common symptoms experienced by most of the people throughout the world<sup>5</sup>. It is estimated that 70 to 80% of the world's population has been suffered at least one group of events of back pain in their lifetime<sup>6</sup>. This condition may decrease the quality of life of individual and also become worse in daily activities. Usually low back pain is occurred between ages 25 and 50<sup>7</sup>.

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In a Chinese study claimed that the 1-year prevalence of LBP was 64%.<sup>8</sup> Another research in UK shows that 75% people suffered with low back pain in every year.<sup>9</sup> Ratio found that low back pain is more common in female compared to male<sup>10</sup>. Almost every women will have at least one episode of low back pain at some time in her life. The pain can vary from severe and long term to short period. Usually it resolves within a few weeks. The most common risk factor for low back pain of women are heavy physical workload, lifting, awkward posture, static work posture, pregnancy, pushing & pulling, body vibration, increased body mass index and life style<sup>11</sup>. Bangladesh is a land of grueling poverty in terms of economic sense. Annually, the city draws an estimated 300,000 to 400,000 mostly poor migrants who provide critical employment for the city's industries and services. In 2010, the population of the city of Dhaka has projected at 17.6 million people, with up to 60% in the slums. The poor mainly live in slums scattered throughout the city. The society of Bangladesh is characterized by gender discrimination. Women are always victims of gender-biased policies, and treatments are also made in all spheres of live accordingly. Because of particular gender, women are the most suppressed, oppressed and exploited section of the society. Urban slum women are neglected and deprived in all spheres of their lives like family, society and state. They are deprived of adequate nutritious food, clothing, shelter, security of social services. Physical deprivation is a feature main in these women's live and it is at the core of poverty in the case of urban slum women<sup>12</sup>. Slum women are vulnerable to develop low back pain indeed.

#### MATERIALS AND METHODS

This study was conducted by using cross sectional study design. Random sampling was done among women aged 25 to 50 years living in the three selected slum areas (Nandipara, Trimohoni, Dakhkhingao) in Dhaka city in 2013. Researcher alone collected data by face to face interview in the slums and filled up the pre formed questionnaire by himself. Analysis was done by using SPSS 17 software. Descriptive statistics was used for data analysis. The results were presented with the use of simple percentage (%). The collected data were illustrated with tables, bar charts and pie charts. Chi square test was done to find the associations between variables.

#### RESULTS

In this study, the participant's ages were 25–50 years. Among them 27 to 28 year women had low back pain more followed by 31 to 32 years and 35 to 36 years.

Among the respondents 41% were illiterate, 22% completed primary level, 17% passed SSC and 20% had higher education. Among the respondents 88% were Muslims and only 12% were Hindu's.

Among the respondents, 76.7% married, 8.3% unmarried, 10% widow, 1.7% divorcee and 3.3% separated.

Most of the respondents had four family members (35%) followed by five members (24%).

Among the respondents, 39 were house wife (65%), 8 were garment worker (13.3%), 4 were house maid (6.7%), 3 were sells girl (5%). Most of them had family income 5000-8000 Tk (35%) per month followed by 8000-12000 Tk (38.3%), 12000-15000 Tk (18.3%), 15000-20000 Tk (8.3%).

In this study, it was revealed that 57% of the respondents worked for 1-3 hours daily and only 22% of them worked > 8 hours. Within total working period the slum women worked in sitting position for 1-3 hours in 55.7%, 3-5 hours in 15%, 5-8 hours in 5% and >8 hours in 22% daily.

Study showed that 58% slum women had history of lifting heavy weight.

Study showed that 48% slum women had habit of taking tobacco or alcohol.

Most of the respondents (63.3%) had no history of trauma.

#### Presence of low back pain

Study revealed most slum women (82%) had low back pain.

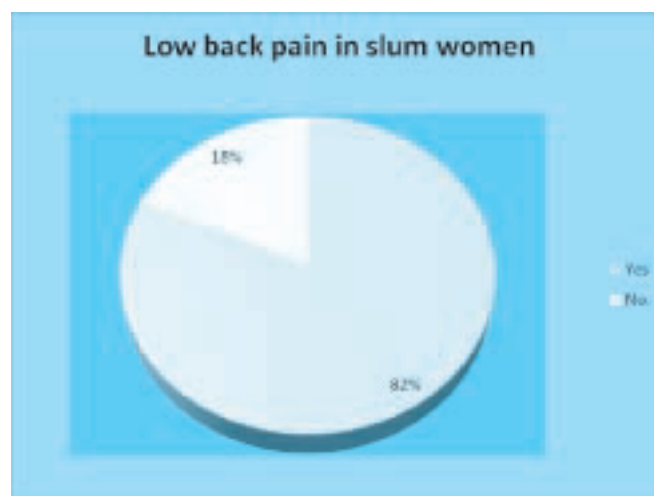


Figure 1 : Presence of low back pain

#### Duration of pain

Most of the respondents 22.4% had 5-10 years history of low back pain followed by 20.4% had 10-15 years history.

Table 1 : Duration of pain

Months/ Years	Duration of pain	
	Number of women	Percent
>6 months	4	8.2
1 year	6	10.2
2 years	6	12.2
3-5 years	9	20.4
5-10 years	11	22.4
10-15	10	20.4
15-20	3	6.1
Total	49	100

**The time when pain start**

This study showed that pain was aggravated during work among the most respondents (46.9%), and 14.3% respondents had continuous pain.



Figure 2 : Time when pain starts

**Pain persisting time (in hour)**

Maximum respondents (59.2%) had pain persisting > 3 hours.

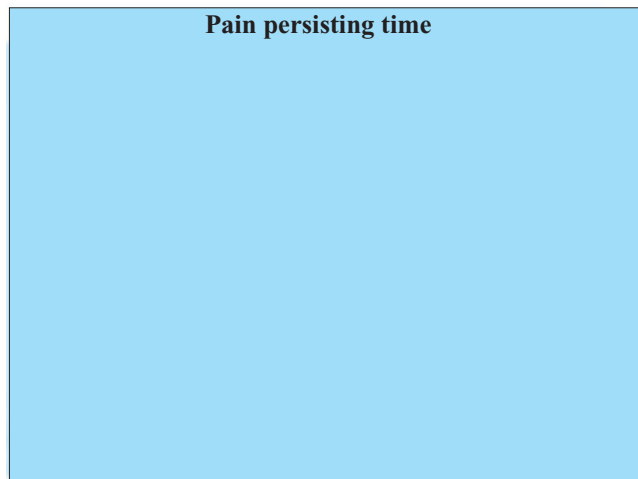


Figure 3 : Pain Persisting time

**Intensity of pain**

Most of the respondents (46.9%) had moderate pain.

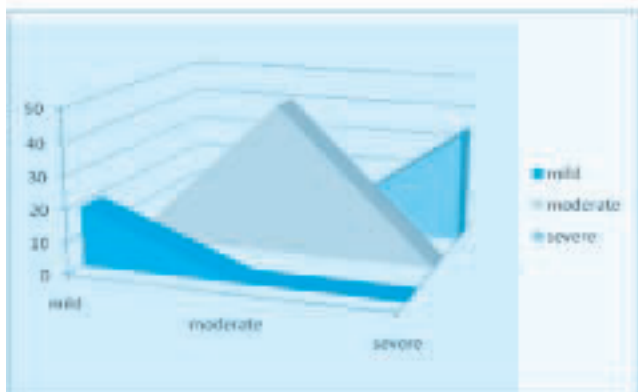


Figure 4 : Intensity of pain

**Radiation of pain in leg/ buttock**

39% of the respondents had tingling type of radiating pain followed by numbness in legs (37%).

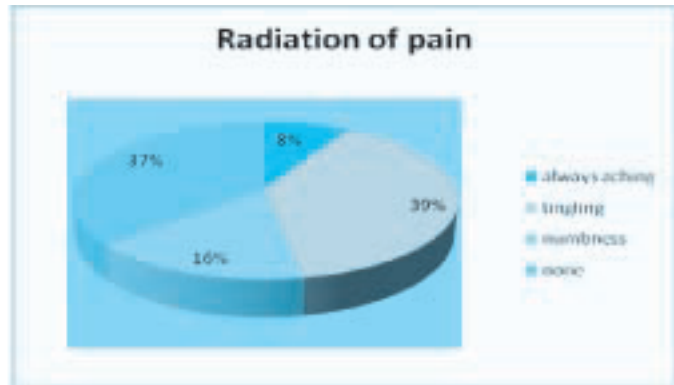


Figure 5 : Radiation of pain

**Precipitates work position for pain**

Study showed that sitting posture during work precipitated pain in 70% cases followed by standing work (16%).



Figure 6 : Precipitating work position of pain

**Position reduces pain**

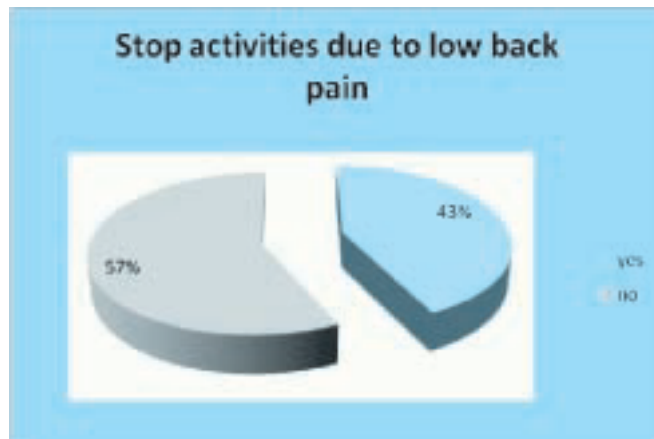
75.5% of them, pain relieved by lying and 14.3% had no specific decubitus.



Figure 7 : Position reducing pain

### Abstinence of work due to low back pain

43% of women having low back pain required to stop activities, while 57% can continue their activities with pain.



**Figure 8 :** Abstinence of work due to low back pain

### BMI

This study results showed that, in the slum 8.1% women were under weight, 59% women were normal weight, 18.3% women were overweight, and 14.2% women were in obesity according to BMI score.

**Table 2 :** BMI of the participants

BMI score	BMI				Total
	Under weight BMI < 18.5	Normal weight BMI 18.5 – 24.9	Over weight BMI 25 – 29.9	Obesity BMI > 30	
Number of women	4	29	9	7	49
Percent	8 %	59 %	18 %	14 %	100 %

### DISCUSSION

This study results showed that out of 60 participants 49 (82%) have low back pain and 11(18%) have no low back pain. MC Anil in his study in Southern India found 52.9% women had low back pain out of 403 women<sup>13</sup>. Bener A in his study found LBP was more prevalent among women 53.9%<sup>14</sup>. In Sikiru found LBP was more prevalent among female nurses (57.6%) in Africa<sup>15</sup>.

In this study the most vulnerable age group was found 26-29 years for developing low back pain. An epidemiology community health study stated that the most affecting age group was 30 to 39 aged people where men were 39.9% and women were 38.9%<sup>10</sup>. Another study showed that low back pain usually occurs between 20-40 years of age<sup>16</sup>. On the contrary they found LBP was common in the age group between 40-59 years and it was 172(48.17%) followed by 60-79, 20-39 and 80 years group with 21.29%, 17.65% and 12.89% respectively in his study<sup>17</sup>. Low back pain was more prevalent in the 31-40 years age group in a Nigerian study<sup>18</sup>.

This study revealed that 65% of the respondents were housewives, 13.3% garments worker, 6.7% housemaid. Most of the women were married (76.7%).

Researcher also found that most of the slum women with LBP were less educated, 41% illiterate, 22% completed primary level, 17% SSC level, 10% HSC level. A Thai study stated that 46.1% were educated upto primary level who had back pain<sup>11</sup>.

The researcher found that 55.7% slum women work for 1-3 hours per day in sitting position, 15% work for 3-5 hour, 5% work for 5-8 hours and 22% work for > 8hours. Among them 58% women had history of lifting heavy weight. Most of them (63.3%) had no history of trauma. Maximum of them (46.9%) experienced, pain was aggravated by working which is similar to other study findings<sup>6,7</sup>.

The study showed that pain was moderate among 46.9% and severe among 34.7% women. Another study showed 66% of their respondents experienced moderate pain, 34% of them had severe pain<sup>4</sup>.

This study revealed pain was relieved spontaneously among 41% women. Another study showed 90% of low back pain resolved spontaneously within one month<sup>19</sup>.

In this study, about 73% were responded to medication (NSAIDs) and 27% were not responded to medication. A European study also showed almost half took nonprescription analgesics, NSAIDs (55%), paracetamol (43%), weak opioids (13%). Two-thirds took prescription medicines, NSAIDs (44%), weak opioids (23%), paracetamol (18%)<sup>4</sup>.

In this study, 8.1% were underweight, 59% normal weight, 18.3% over weight, 14.2% obesity according to their BMI score. Overweight and obesity was found association with development low back pain ( $p < 0.05$ ) that is similar to some other studies<sup>17, 20, 21</sup>.

In this study there was no association with tobacco intake with development of low back pain ( $p > 0.05$ ) which is similar with Leboeuf – Yde C's review study but differs in another study<sup>22,23</sup>.

### CONCLUSION

Posture during work and regular household work is responsible for developing low back pain among women living in slum area. Bending activities aggravate this kind of pain. In slum their social and financial condition is related to the low back pain. The women with low back pain have no option and they have to have continued their work for survival, they do not take proper rest and often delay treatment due to their financial problem.

To prevent low back pain in the slum areas of Dhaka city, awareness should be developed regarding posture, early diagnosis & treatment, adequate diet and ergonomics.

### LIMITATION OF THE STUDY

Study samples were very few thus didn't reveal the scenario of the women living in Dhaka city indeed.

### DISCLOSURE

All the authors declared no competing interest.

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