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Low Back Pain Among Ethnic Pregnant Women

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Abstract

A cross sectional study was conducted to identify the state of low back pain and associated factors among ethnic pregnant women in Bangladesh. Considering time period and resource availability, cross-sectional analytical study design was most feasible for this study. The subjects were selected conveniently and conducted among 230 pregnant women residing in Rangamati hilly district. Face to face interview was carried out. Low back pain status was determined by taking history and conducting physical examination. Medical records were checked if available. Majority of the respondents (31.7%) completed HSC followed by graduation 22.6%, primary 21.3%, SSC 13.0% and post-graduate 1.7% and most of them were housewives. Prevalence of low back pain was 66.10%. Acute and sub-acute pain was nearly equal distribution i.e 49.70% and 48.40%. Localized low back pain was widely prevalent (79.90%) followed by referred pain (15.60%) and radiating pain (4.50%). Statistical strong significant association was found between trimester and low back pain. Wide prevalence of low back pain was seen among pregnant ethnic women which was acute and sub-acute in nature as well as localized.

Keywords: low back pain; low back pain; ethnic pregnant women; bangladesh

Introduction

Pregnancy related low back pain is a common complaint among pregnant women. It can potentially have a negative impact on their quality of life. The majority of women are affected in their first pregnancy.[1] Eighty percent of women suffering from LBP claim that it affects their daily routine and 10% of them report that they are unable to work.[2] Twenty percent of pregnant women will experience PGP. Pregnancy related LBP usually begins between the 20th and the 28th week of gestation, however it may have an earlier onset. The duration varies. A study about PGP in Netherlands shows that 38% of women still have symptoms at 3 months postpartum and 13.8% at 12 months.[3] LBP during pregnancy is considered to be the most important risk factor for postpartum LBP and the existing literature supports LBP as the leading reason for sick leave, as far as pregnant working women are concerned.[4] Bangladesh has a number of ethnic minor group population and they lead their life in great ethnic diverse fashion. They constitute about 1% of total population. They are distributed in scattered way all over the hilly, riverine and dense forest region of the country. Ethnic people are distinct from Bengali people by their ethnic origin, culture, feeding practice, literacy rate and profession. Locally, there is no literature on pregnancy and low back pain (LBP) among ethnic pregnant women.

Methods

Study design: Cross-sectional analytical study design.
Study Period: January to June, 2023.
Study place: This study was conducted in Rangamati hilly district.
Study population: Ethnic pregnant women live in Rangamati sadar upazila of Chittagong Hill Tracts.
Sampling technique: Non-probability convenient sampling was used to collect study subjects.
Data processing and analysis: After administering questionnaire, data were checked for consistency. Individual sheet was checked and cleaned to avoid any error. Data were categorized and coded during entry into the SPSS software. Collected data were analyzed by computer technology SPSS version 22.0. Collected information was presented in the form of tables and graphs. Descriptive statistics (mean, SD, frequency, percentage) and inferential statistics (Chi-square) were used.
Limitations of the Study: During the course of my study, I had to face some limitations. As I had to depend on the verbal response of the respondents, there might have been some discrepancy on their income level. There might have a bit of inaccuracy in collected information because I had to depend on

their history and physical examination. Radiological and pathological examination were absent in some cases.

Results

This analytical study was conducted in Rangamati sadar upazila in order to determine pattern of low back pain and associated factors among ethnic pregnant women in Bangladesh. A semi-structured questionnaire was used to collect the information. A total of 230 ethnic pregnant women were interviewed to collect the data. All the data were entered and analyzed by using statistical packages for social science (SPSS) software version 22.0.

Table 1: Age group of the study subjects

Age in year	Frequency	Percentage
19-29	188	81.7
30-39	42	18.3
Total	230	100.0
Mean±SD	26.21±4.73	

Table 1 reveals that average age of the respondents was 26.21±4.73 years. Majority of the subjects (81.7%) belonged to 19-29 years and 18.3% belonged to 30-39 years.

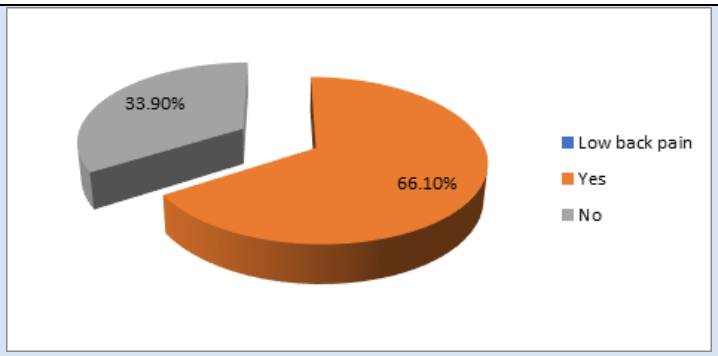

Figure 1: Prevalence of low back pain

It is revealed that prevalence of low back pain was quite double (66.10%) than who did not have the sufferings (33.90%).

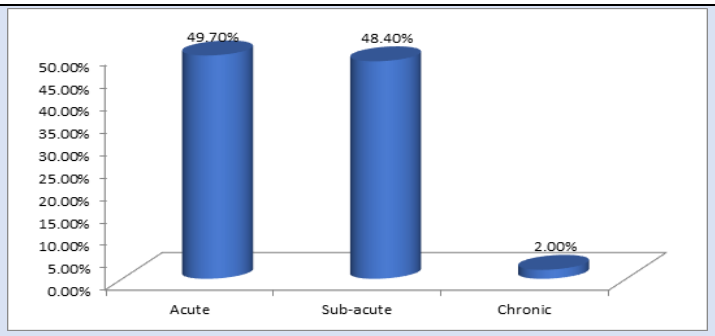

Figure 2: Nature of low back pain

Figure 2 reveals that acute and sub-acute pain was nearly equal distribution i.e 49.70% and 48.40%. Prevalence of chronic pain was 2%.

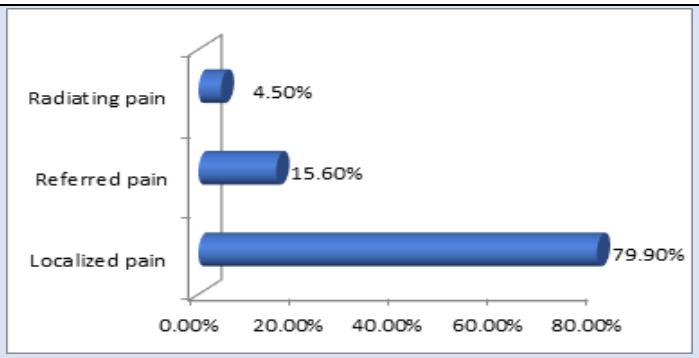

Figure 3: Magnitude of pain

Figure 3 shows that localized low back pain was widely prevalent (79.90%) followed by referred pain (15.60%) and radiating pain (4.50%).

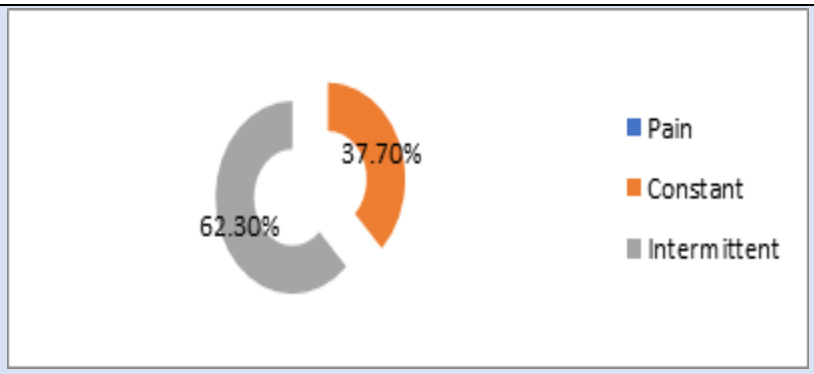

Figure 4: Type of low back pain

Of the respondents, intermittent pain was quite double (62.30%) than constant pain (37.70%).

Table 2: Association between age group and low back pain

Age group	Low back pain		Total	χ^2	p-value
	Yes	No			
19-29	120(52.2)	32(13.9)	152(66.1)	2.340	0.126
30-39	68(29.6)	10(4.3)	78(33.9)		
Total	188(81.7)	42(18.3)	230(100.0)		

No statistically significant association was found between age group and low back pain.

Table 3: Association between occupation and low back pain

Occupation	Low back pain		Total	χ^2	p-value
	Yes	No			
Housewife	88(38.3)	41(17.8)	129(56.1)	4.699	0.195
Service	30(13.0)	16(7.0)	46(20.0)		
Business	30(13.0)	14(6.1)	44(19.1)		
Others	4(1.7)	7(3.0)	11(4.8)		
Total	185(80.4)	45(19.6)	230(100.0)		

No statistically significant association was found between occupation and low back pain.

Table 4: Association between monthly family income and low back pain

Family income	Low back pain		Total	χ^2	p-value
	Yes	No			
Low income	9(3.9)	2(0.9)	11(4.8)	2.203	0.332
Middle income	103(44.8)	50(21.7)	153(66.5)		
High income	40(17.4)	26(11.3)	66(28.7)		
Total	152(66.1)	78(33.9)	230(100.0)		

No statistically significant association was found between monthly family income and low back pain.

Table 5: Association between trimester and low back pain

Trimester	Low back pain		Total	χ^2	p-value
	Yes	No			
First	28(12.2)	38(16.5)	66(28.7)	30.504	0.000
Second	50(21.7)	27(11.7)	77(33.5)		
Third	74(32.2)	13(5.7)	87(37.8)		
Total	152(66.1)	78(33.9)	230(100.0)		

Statistical strong significant association was found between trimester and low back pain.

Discussion

The present study reveals that average age of the respondents was 26.21±4.73 years. Majority of the subjects (81.7%) belonged to 19-29 years and 18.3% belonged to 30-39 years. It was revealed in the study that prevalence of low back pain was quite double (66.10%) than who did not have the sufferings (33.90%). The study shows that acute and sub-acute pain was nearly equal distribution i.e 49.70% and 48.40%. Prevalence of chronic pain was 2%. It is shown in the study that localized low back pain was widely prevalent (79.90%) followed by referred pain (15.60%) and radiating pain (4.50%). Of the respondents, intermittent pain was quite double (62.30%) than constant pain (37.70%). In the study no statistically, significant association was found between age group and low back pain. There was no statistically significant association found between occupation and low back pain. Similarly, no statistically significant association was found between monthly family income and low back pain. In the study statistical strong significant association was found between trimester and low back pain. Pregnancy induces many changes in the human body, including hormonal, physical or psychosocial at the level of an individual, whole family and societal level [5]. Since about half of the world's population is women and almost every second pregnant woman complaints of lumbo-pelvic pain which can be compared to about 6.3% in non-pregnant women of same age group [6], it is quite necessary to understand the importance of incidence of lumbo-pelvic pain in pregnancy [7]. The number of biomechanical changes in pregnancy and the increased abdomen changes the back curves that result in pregnancy related back pain [8] and increased level of relaxin hormone loosens the joints of pelvis with the resultant unstable sacroiliac joint, causing pelvic pain [9]. The increased laxity through this hormone and resultant widening of pubic symphysis, not compensated by altered neuromotor control at the same time, will lead to pelvic pain. Despite the fact that lumbo-pelvic pain can have many adverse effects on the quality of life of individuals suffering from it, still it is quite easy to underestimate this problem. With this fear that any treatment for the lumbo-pelvic pain may affect the developing fetus and due to the lack of proper knowledge for possible treatment interventions, the afflicted pregnant women are encouraged to believe that their complaint is temporary, however that might not be the case always [10]. It has a great influence on sick leave, psychological health, and becomes a chronic condition. Lumbo-pelvic pain is the growing reason for people requesting induction of early labor and elective caesarian [11] and this may affect the health of the baby and mother [12]. Half of all pregnant women and about one quarter of postpartum women experience lumbo-pelvic pain[13] and many physicians think it to be normal or expected in pregnancy [13]. The point prevalence of pelvic girdle pain during pregnancy in two groups of a study was 65% and 15% [14]. According to one study, point prevalence of lumbo-pelvic pain is about 34% while period prevalence was reported to be of 71%.[5] At a study on Iranian women found the prevalence of LBP during pregnancy was 57.3%, which is nearly similar to most other countries [15]. In Swedish women the prevalence of low back pain during pregnancy was 49% [16]. In another study on Swedish women found that 68.5% respondents reported experiencing LBP during their current pregnancy [17]. Approximately half of all pregnancies are complicated by back pain [18]. According to a study on Northern Sweden; the prevalence of LBP during pregnancy was 72% [19]. In a study found that pain onset most frequently in the third trimester of pregnancy (40.7%) [20]. Peter and Ulrich (2011) mentioned that as many as 80% of pregnant women will experience low back pain, especially in their third trimester of the pregnancy [19]. Another study found that, the 2nd and early-3rd trimesters are the period when backache is most prevalent [15]. According to a study of United States of America, the average low back pain during pregnancy was moderate in severity [21]. In a study on south Australian women, thirty-five and a half per cent of women recall having at least moderately severe back pain during pregnancy and 61.8% of women who reported low back pain during pregnancy claimed the pain was at least moderately severe, 9% claimed they were completely disabled by pain [22]. In a study on North American women, it was found that, severe low back pain during pregnancy is at extremely high risk for developing a new episode of severe low back pain during a subsequent pregnancy as well as later in life [23]. In a study among the pregnant women of Sweden, it was found that, multiparty is a risk factor for LBP of current pregnancy [24]. In a Swedish study it was reported that, in case of increased parity LBP during pregnancy is more.[25]

Evidence suggests that low back pain can occur if any job involves lifting and carrying heavy objects, or if anyone spends a lot of time sitting or standing in one position or bending over [8]. Among the person who had LBP in this study in the pregnancy period 62.75% felt pain during day time and 37.25% felt pain during night time [26]. According to a study in Swedish women, 57% participants claimed that LBP impaired their activities of daily living & nearly 30% of respondents stopped performing at least one daily activity because of pain and reported that pain also impaired the performance of other routine tasks [20].

Conclusion

The study concludes that most of the ethnic pregnant women suffer from low back pain. Acute and sub-acute pain among the pregnant women was nearly equal distribution. But prevalence of chronic pain very insignificant among them. The study revealed that localized low back pain was widely prevalent followed by referred pain and radiating pain. Of the respondents, intermittent pain was quite double than constant pain. No statistically significant association was found between monthly family income and low back pain. In the study statistical strong significant association was found between trimester and low back pain. It is shown in the study that localized low back pain was widely prevalent followed by referred pain and radiating pain.

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