

Prevalence of Lumbo-Pelvic Pain in Pregnant Women of Third Trimester in Lahore Pakistan

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ABSTRACT

BACKGROUND: Lower back and pelvic girdle symptoms are a common problem during pregnancy. Lumbo-pelvic pain is known to have detrimental effects on quality of life in pregnant women in many domains including physical activity, travel, social relationships, and emotional health.

OBJECTIVE: The purpose of this study is to determine the prevalence of lumbo-pelvic pain among pregnant women in their third trimester from Lahore.

METHODS: This cross-sectional short survey was conducted at Lady Aitcheson and Lady Willington Hospitals Lahore. A total no of 560 pregnant women in third trimester took part in the study.

RESULTS: Pregnant women included in this study showed 40.6% of lumbo-pelvic pain and 59.4% with no lumbo-pelvic pain. The prevalence of lumbar pain was more prevalent among all three components of lumbo-pelvic pain.

CONCLUSION: The findings of this study clearly indicated that prevalence of lumbo-pelvic pain is more significant in pregnancy. The point prevalence of lumbo-pelvic pain is 62.1%. Increased abdominal weight and hormonal changes put more burdens on the pelvic and lower back.

KEYWORDS: Lumbo-pelvic pain, prevalence, third trimester, pregnancy.

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INTRODUCTION

Pregnancy has many profound effects on the body systems including not only the hormonal, cardiovascular and renal systems but also the musculoskeletal system specially the axial skeleton¹.

Pregnancy induces many changes in the human body, including hormonal, physical or psychosocial at the level of an individual, whole family and societal level². 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 group³, it is quite necessary to understand the importance of incidence of lumbo-pelvic pain in pregnancy⁴. The number of biomechanical changes in pregnancy and the increased abdomen changes the back curves that result in pregnancy related back pain⁵ and increased level of relaxin hormone loosens the joints of pelvis with the resultant unstable sacroiliac joint, causing pelvic pain¹. 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 problem⁶. 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 always⁷. It has a great influence on sick leave, psychological health, and becomes a chronic condition^{1,4}. Lumbo-pelvic pain is the growing reason for people requesting induction of early labor and elective caesarian⁸ and this may affect the health of the baby and mother⁹.

Half of all pregnant women and about one quarter of postpartum women experience lumbo-pelvic pain⁹ and many physicians think it to be normal or expected in pregnancy¹⁰.

The point prevalence of pelvic girdle pain during pregnancy in two groups of a study was 65% and 15%¹¹. According to one study, point prevalence of lumbo-pelvic pain is about 34% while period prevalence was reported to be of 71%². No research has been reported in Pakistan regarding lumbo-pelvic pain in a pregnant woman of a third trimester. This study aims at finding the prevalence of lumbo-pelvic pain experienced by pregnant women in their third trimester.

METHODOLOGY

It was a cross-sectional short survey conducted at Lady Aitcheson Hospital and Lady Willington Hospital,

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Lahore Pakistan in 2016. The study duration was of 6 months starting from October 10, 2016 to April 10, 2017. This survey was carried out on the pregnant females to know the prevalence of lumbo-pelvic pain in them in third trimester. Sample size of 560 pregnant females was calculated and then included, according to a predefined criterion (Table I), in the study by convenient sampling. The participants were included after demonstration of study procedure. A written consent was taken. Participants were required to fill a survey form that included a pain diagram, Visual Analogue Scale and Oswestry Disability Index to further explore the experiences of patients complaining of lumbo-pelvic pain. Study variables included were age, lumbo-pelvic pain and pain intensity.

TABLE I: CRITERION FOR SAMPLE SELECTION

INCLUSION CRITERIA	EXCLUSION CRITERIA
Pregnant females of third trimester with ages between 20 and 40.	Women of first and second trimester. Women with inflammatory arthritis.
With or without pelvic girdle pain.	Women with a recent fracture of the hip or vertebral joint.
With or without low back pain.	Women with a history of surgery or disc pathology

STATISTICAL ANALYSIS

Data was entered and analyzed through SPSS (statistical package for social sciences) version 24. All qualitative variables were presented in the form of frequency tables and percentages, bar charts, pie charts.

RESULTS

A total of 560 pregnant women in their third trimester from Lady Aitcheson and Lady Willington Hospital Lahore, participated in the survey among which 4 were excluded from the study on the basis of exclusion criteria that they had a history of recent pelvic/lower back surgery and 2 were excluded because they were not comfortable with the survey. Most of the participants were young (Figure I). Pain was assessed by visual analogue scale. Out of 550 pregnant women 41% females complained of lumbo-pelvic pain and 59% females with no lumbo-pelvic pain during their third trimester of pregnancy. Out of the women who reported the symptoms of lumbo-pelvic pain, 51% complained of lumbar pain, 27% complained of pelvic pain and 22% complained of both lumbar and pelvic pain.

Third trimester pregnant women were chosen conveniently and response rate was 95%.

The point prevalence of Lumbo-pelvic pain was reported to be 62% and 38% pregnant females reported that they had no pain at the moment of survey.

Most of the females experienced mild to moderate pain with the severity being calculated on a Visual Analogue Scale, a pain rating scale (Figure II). Similarly, pelvic girdle pain also effects personal care, walking, sitting and social life of the participants, calculated by Pelvic Girdle Questionnaire with a Cronbach alpha value ranging from 0.88 to 0.94 (Table II).

FIGURE I: HISTOGRAM OF AGE OF THE PARTICIPANTS

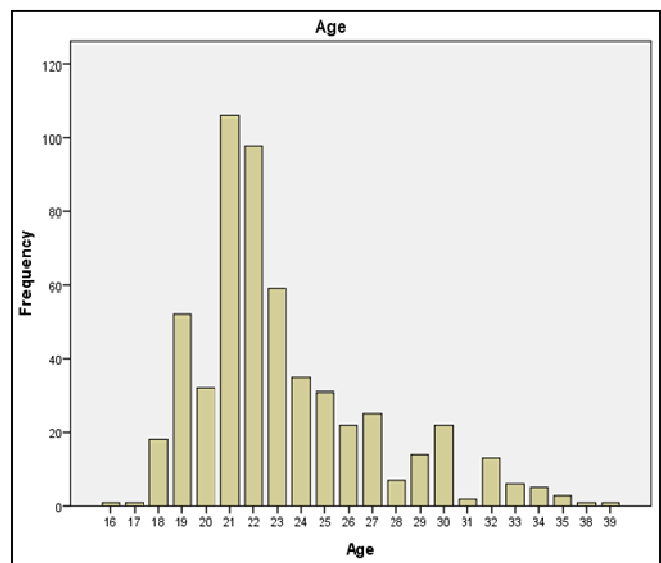


FIGURE II: PAIN INTENSITY OF PREGNANT WOMEN

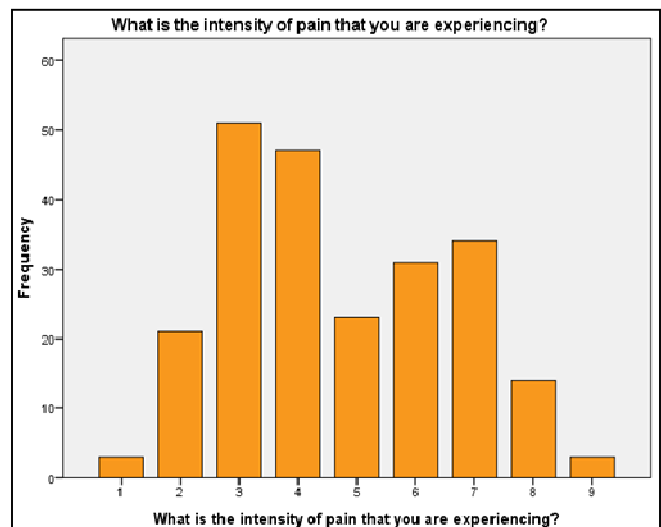


TABLE II: EFFECT OF PELVIC GIRDLE PAIN ON DIFFERENT PARAMETERS BY USING OSWESTRY DISABILITY INDEX

Effect on ADL	Functional Activities	%
Personal Care	She can look after herself without causing extra pain	13.4
	She can look after herself normally but it is very painful.	11.7
	It is painful to look after herself and she is slow and careful.	3.8
	She needs some help but manage most of her personal care.	.9
Difficulty in walking	Pain does not prevent walking any distance.	12.1
	Pain prevents walking more than a quarter of life.	7.9
	Pain prevents walking more than 100 yards.	6.1
	In bed most of the time.	3.6
Difficulty in Sitting	Can sit in chair as long as she likes.	11.6
	Pain prevents from sitting for more than 1 hour.	5.6
	Pain prevents from sitting for more than half an hour.	6.5
	Pain prevents from sitting for more than 10 min.	4.2
	Pain prevents from sitting at all.	2.0
Effect on social life	Social life is normal and causes no extra pain.	15.2
	Social life is normal but increases the degree of pain.	7.8
	No effect on pain but limits energetic interests.	4.2
	Restricted social life.	1.8
	No social life	0.9

DISCUSSION

Total of 560 pregnant females in their third trimester were included in the study and 4 were excluded because of the recent history of surgery and 2 were excluded because of the lack of cooperation. Of the 554 women, 225 complained of the lumbo-pelvic pain and 329 reported that they did not have any type of lumbo-pelvic pain. By rounding that to percentages, about 41% women suffered from lumbo-pelvic pain in their trimester of pregnancy, this was in close relation to a study that reported 50% prevalence of lumbo-pelvic pain¹².

This study shows that lumbo-pelvic pain is quite significant in third trimester and of the lumbo-pelvic pain, incidence of lumbar pain alone is higher than pelvic pain only or both lumbar and pelvic pain occurring together. A similar study was conducted in India, that reported posterior pelvic girdle pain to be more than lumbar pain¹¹.

The lumbo-pelvic pain, which has been experienced in the sample population, varies in intensity across the women. However mean pain intensity is 4 and about 22% of the women had pain score of 3. And comparing to similar study in Australia, mean pain intensity score of which was 6.5². In another study by

Yoo and colleagues, pain intensity for pelvic girdle was 5.8 and 4.18 for lower back¹³, pain that were experienced by individual patient. Of the 225 women, 115 women had lumbar pain, 62 women suffered from pelvic pain and about 50 women suffered from both lumbar and pelvic pain occurring together. In comparison with another similar study in Australia, in which more women had experienced both lumbar and pelvic pain than lumbar or pelvic pain alone².

The point prevalence of lumbo-pelvic pain calculated by this study was 62%. This was comparable to a study in Australia that reported point prevalence of lumbo-pelvic pain to be 34%². Period prevalence of this study was 41% which can be compared to two other studies of similar definitions. One in Sweden and the other in Japan, both of them reported period prevalence of about 72%^{14,15}.

Further exploring the experiences of women with different types of pain, different results were produced regarding the ability to do daily activities of life.

Exploring the effect of lumbar pain on the quality of life, it was seen that 13% of women found it painful to look after them and they were slow and careful. Some of them need help but they managed most of their care. Lumbar pain prevented 20% of the women from

walking for more than a 100 yard.

Considering the sitting and standing ability of the pregnant woman, 21% women could not sit for more than half an hour and 13% women could not stand for more than half an hour. This explains that sitting had more influence of lumbar pain than standing.

Lumbar pain also affects the social life and travelling of a pregnant woman in her third trimester. 26% of women reported that pain had no impact on their social life but it somehow limited their more energetic activities. 51% women reported that they can travel anywhere without pain and only 8 patients reported that they cannot travel anywhere except to receive treatment.

Coming to the pelvic girdle pain, 28% women were affected by pelvic girdle pain to a small extent in their daily dressing. Pelvic girdle pain also affected their bending ability and 15% of the women reported that they could not bend and it was problematic to a large extent.

Comparing the standing and sitting ability of the women, only 8% women reported that it was problematic to stand for up to 10 min to some extent and 44% of the women reported that it was problematic to stand for more than 60 minutes to some extent, while 21% of women found it problematic to sit for less than 10 minutes and 56% of the women, for more than 60 minutes, just because of pelvic girdle pain.

Gorginzadeh and his colleagues in 2016 observed the influence of pelvic girdle pain on walking of a pregnant woman in her third trimester. 3 women reported that they could not stand for up to 10 minutes and 17 women reported that they could not stand for more than 60 minutes because of pelvic girdle pain. This was similar in a sense to another study that showed patients had difficulty in everyday activities of sitting, walking and standing¹⁶.

Because of the pelvic girdle pain, women also found it difficult to climb stairs, roll over in bed, do house work and sleep comfortably¹⁷.

CONCLUSION

The findings of this study indicate that Lumbo-pelvic pain is significant in third trimester of pregnancy. This pain significantly affect the activities of daily living of a pregnant women.

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