Original Article

Association between fear avoidance belief and pain in pregnant women with pelvic girdle pain

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Objective: To determine the association of fear avoidance belief as a mental element with pelvic girdle pain during pregnancy.

Methodology: This descriptive cross-sectional study was conducted on 171 pregnant women with pelvic girdle pain for 4 months. The samples were collected from the University of Lahore Teaching Hospital, Jinnah Hospital, Al-Khidmat Teaching *Mansoorah Hospital*, Bahria International Hospital and private clinics. Informed consent was signed by each patient. Data collection tools included a demographic questionnaire, Pelvic Girdle Questionnaire and Fear-Avoidance Beliefs Questionnaire. Data were analyzed using SPSS version 25. $p<0.05$ was considered significant.

Results: Out of 171 women, 27(15.8%) had mild, 138(80.7%) had moderate and 6(3.5%) had severe pelvic girdle pain. In physical activity, 40(23.4%) had very low fear, 30(17.5%) had low fear, 94(55%) had moderate fear, 6(3.5%) had high fear and 1(0.6%) had very high fear. In work, 22(12.9%) had very low fear, 87(50.9%) had low fear, 55(32.2%) had moderate fear, 6(3.5%) had high fear and 1(0.6%) had very high fear ($p= 0.000$ for both).

Conclusion Fear avoidance beliefs, with pelvic girdle pain in pregnancy could be anticipated. Fear avoidance belief varied with pain severity. (Rawal Med J 202;45:338-341).

Keywords: Pregnancy related pelvic girdle pain, fear avoidance belief.

INTRODUCTION

Fear is a response which is activated during pain or danger and includes survival tactics that is avoidance. Beliefs are mental interpretations acquired from perceptions and personal experiences. Because these beliefs have significant role in human behavior, so these beliefs affect their decision making related to back pain and this make them avoid activities and movement and cause progression of pain leading towards disability.[1] Psychological, social and culture factors play major role in progression of pain and its persistence and treatment response.[2,3] Among psychological factors, fear avoidance belief is the most important.[4] Recognizing these beliefs as an important barrier to recovery, along with determining the superiority of one intervention approach over another while considering high fear avoidance beliefs, makes progress in treatment and outcomes.[5]

Lethem et al was the first to coin the term fear avoidance.[6] Model of fear avoidance has been utilized to clarify how mental elements influence pain experience.[7] These factors have negative impact on rehabilitation.[8] Many women are affected physically and emotionally because of pelvic pain during pregnancy. Pelvic girdle pain, universally affects three out of ten,[9] or one out of five pregnant females.[10,11] Prevalence of pelvic girdle pain is reported to be 20% during pregnancy and incidence to be reported 4-76% and for about 25-30% severity of condition increases in pregnant women.[12]

Women who have gone through pelvic girdle pain in their previous pregnancies, experience relapse during their future pregnancies for about 85-95%,[13] and 8% causes serious disability.[14] The primary response to the pain seen extensively in females during pregnancy is that they avoid instinctively anything that they fear will increase their pain.[2] Fear avoidance beliefs are fundamentally connected with increments in pain and decreased dimensions of physical movement.[15]

Measuring fear avoidance belief level in patients in primary care level by physiotherapist is important,[16,17] and to decrease the pain due to fear, treatments are designed that are effective.[18] The aim of the study was to determine the association of fear

avoidance belief as a mental element with pelvic girdle pain during pregnancy.

METHODOLOGY

This descriptive cross-sectional study was carried out on 171 pregnant women having pelvic girdle pain for 4 months. The samples were collected from the University of Lahore Teaching Hospital, Jinnah Hospital, Al-Khidmat Teaching *Mansoorah Hospital*, Bahria International Hospital and private clinics. Painful pathologies of the pelvis related to viscera, pain syndromes of lower back, infections of bone or soft tissue, symphysis pubis rupture, tumors, previous surgery on the spine, pelvis or lower limbs were part of exclusion criteria. An Informed consent was taken from all women.

They were interviewed through a structured questionnaire. Demographic attributes recorded were gestational age, occupation, and parity. A diagram was shown of a skeleton with anterior and posterior view to the pregnant females to point out the location of pain as pelvic girdle pain location is specific. Pelvic Girdle Questionnaire used had two scales that were activity subscale and symptoms subscale. There are 20 items in activity scale and 5 items in symptoms scale. The minimum score of both the scales was zero and the maximum activity score was 60 and maximum symptom score was 15 and total score was 75. The scales were summed up to determine severity of pelvic girdle pain. This questionnaire gave us the data of intensity of pelvic girdle pain.

The Fear-Avoidance Beliefs Questionnaire consisted of 16 items with two scales of physical activity and work. Fear avoidance belief scale one and two were summed up. The more higher the score the more fear avoidance related to pain.

Statistical Analysis: The data were analyzed using SPSS version 25. Chi-square test was applied and $p<0.05$ was considered significant.

RESULTS

Out of 171 pregnant females, 27(15.8%) had mild pelvic girdle pain, 138(80.7%) had moderate pelvic girdle pain and 6(3.5%) had severe pelvic girdle pain (Table 1). In physical activity, 40(23.4%) women had very low fear, 30(17.5%) had low fear and 94(55%) had moderate fear (Table 2). In work, 22(12.9%) women had very low fear, 87(50.9%) had low fear and 55(32.2%) had moderate fear (Table 3).

Table 1. Severity of pelvic girdle pain.

Severity	Frequency	Percent
Mild <28	27	15.8
Moderate 28-62	138	80.7
Severe >62	6	3.5
Total	171	100.0

Table 2. Fear avoidance belief (physical activity).

Level of fear	Frequency	Percent
very low fear 0-4	40	23.4
low fear 5-9	30	17.5
moderate fear 10-14	94	55.0
high fear 15-19	6	3.5
very high fear 20-24	1	.6
Total	171	100.0

Table 3. Fear avoidance belief (work).

Level of fear	Frequency	Percent
very low fear 1-6	22	12.9
low fear 7-18	87	50.9
moderate fear 19-24	55	32.2
high fear 25-36	6	3.5
very high fear 37-42	1	.6
Total	171	100.0

Table 4. Association between FABPA and FABW with PPGP.

		P-value	Value
FABPA	Pelvic girdle pain	0.000	200.854
FABW	Pelvic girdle pain	0.000	165.696

Association between Fear avoidance belief (physical activity) and pregnancy related pelvic girdle pain was significant (p=0.000). Association between Fear avoidance belief (work) and pregnancy related Pelvic girdle pain was also significant (p=0.000) (Table 4).

DISCUSSION

The attention given towards the significance of the pain in pelvic girdle has been increasing and now it's considered as one of the most common problems related to pregnancy in our part of the world. Fear

avoidance belief is one of the contributors of this pain, which needs to be addressed early in a patient. To best of our knowledge no work has been done in Pakistan on fear avoidance belief and its association with pain in pelvic girdle during pregnancy.

The result of our study suggests strong association between Fear avoidance belief and pain in pelvic girdle during pregnancy. A large percentage of pregnant females showed with pelvic girdle pain and their scores of fear avoidance elevated as pain increased. Leeuw et al expressed that pain is related to fear as a precursor and during this, pain is experienced as a threat and patient adapts a specific behavior as a precaution however it leads to exacerbation of problem.[19]

Fakhri et al studied three variables in relation to pain which included anxiety, disaster related to pain and fear avoidance. Out of these three, fear avoidance showed significance relation.[2] A study conducted on Saudi women by Buragadda et al with back pain which was chronic, a positive association was found between disability and movement and work which further confirmed the relation between fear avoidance and disability caused by pain.[20]

On the contrary, Hilde et al in a study between psychological risk factors in early pregnancy and pain and disability in late pregnancy, showed that fear avoidance belief was not significantly related to disability and agony.[21] The results of the present study were not consistent. The reason behind this could be the dissimilarity in the type of study, different gestational age during the pain measurement and measurement of disability, and the measurement difference.

One of the limitations of the present study was lack of considering the role of other effective factors such as depression and anxiety in this area. Furthermore, this study was done in short span of time of 4 months with no clinical test applied for diagnosing pelvic girdle pain. Subjective pelvic girdle pain questionnaire was used.

CONCLUSION

This study found that fear avoidance beliefs, with pelvic girdle pain in pregnancy could be anticipated. According to the results, fear avoidance belief varied with pain severity

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