

# ORIGINAL ARTICLE

## Assessment of pregnancy-related pelvic girdle pain and low back pain

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### ABSTRACT:

**Background:** About one-third of pregnant women experience severe pelvic girdle pain (PPGP) and low back pain, both of which are highly prevalent during pregnancy. The present study was conducted to assess pregnancy-related pelvic girdle pain and low back pain. **Materials & Methods:** 64 primigravida with gestation between 12 and 36 weeks, based on the presence and absence of pain, were divided into 3 groups. Group I was PPGP group, group II was combined pain group and group III was no pain group. **Results:** The mean age was 24.2 years, height was 1.8 meters, weight was 54.6 kgs and period of gestation was 24.1 weeks. The mean age was 23.8 years, 23.7 years and 24.2 years in group I, group II and group III respectively. The mean height (m) was 1.54, 1.51 and 1.59, weight was 54.3 Kgs, 54.3 Kgs and 55.9 Kgs, BMI was 20.1, 21.2 and 21.5 and pregnancy week was 25.8, 24.3 and 23.1 in group I, group II and group III respectively. The difference was significant ( $P < 0.05$ ). The mean VAS was 5.8 in group I and 4.7 in group II. The difference was significant ( $P < 0.05$ ). **Conclusion:** Lumbopelvic discomfort was present at the time of the evaluation in more than half of the pregnant study participants.

**Key words:** Lumbopelvic pain, pelvic girdle pain, Low back pain

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### INTRODUCTION

Numerous physiological and biomechanical changes are linked to pregnancy. These modifications cause a variety of musculoskeletal issues.<sup>1</sup> The most extensively researched of them is pelvic girdle pain associated with pregnancy. About one-third of pregnant women experience severe pelvic girdle pain (PPGP) and low back pain, both of which are highly prevalent during pregnancy.<sup>2</sup> Low back pain (PLBP), pelvic girdle pain (PPGP), and a combination of the two, are included in pregnancy-related back pain. When it is impossible to distinguish between PLBP and PPGP, the condition is referred to as lumbopelvic pain. PLBP originates in the area of the lumbar spine, while pelvic pain typically begins in the pelvic region close to the sacroiliac joints.<sup>3</sup>

PGP starts during pregnancy or within the first 3 weeks after delivery. Pain is often experienced between the posterior iliac crest and gluteal fold, predominantly near the sacroiliac joints. Many authors have suggested PGP to be a different syndrome than LBP in pregnant women, PGP being more common and more intense during pregnancy.<sup>4</sup> Contrary to LBP, the prevalence of PGP in pregnancy was found to be

higher in second and later pregnancies. Women with PGP had greater functional impairments than those with LBP, and women with a combination of both types of pain were more severely disabled than either of the 2 groups. These findings appear to suggest that PGP during pregnancy is distinct from LBP.<sup>5</sup> The present study was conducted to assess pregnancy-related pelvic girdle pain and low back pain.

### MATERIALS & METHODS

The present study consisted of 64 primigravida with gestation between 12 and 36 weeks. All gave their written consent to participate in the study.

Data such as name, age, etc. was recorded. Posterior pelvic pain provocation (P4) test was performed. A visual analog scale (VAS) was used to determine pain intensity. The diagnosis of PPGP was based on the five criteria as described by Ostgaard et al.<sup>6</sup> Based on the presence and absence of pain, 3 groups were made. Group I was PPGP group, group II was combined pain group and group III was no pain group. Data thus obtained were subjected to statistical analysis. P value  $< 0.05$  was considered significant.

### RESULTS

**Table I Demographic characteristic**

Parameters	Mean	SD
Age (years)	24.2	3.6
Height (m)	1.8	0.5
Weight (Kgs)	54.6	6.3
Period of gestation (week)	24.1	3.5

Table I shows that the mean age was 24.2 years, height was 1.8 meters, weight was 54.6 kgs and period of gestation was 24.1 weeks.

**Table II Comparison of parameters**

Parameters	Group I	Group II	Group III	P value
Age (years)	23.8	23.7	24.2	0.92
Height (m)	1.54	1.51	1.59	0.05
Weight (Kgs)	54.3	54.3	55.9	0.81
BMI	20.1	21.2	21.5	0.12
Pregnancy week	25.8	24.3	23.1	0.05

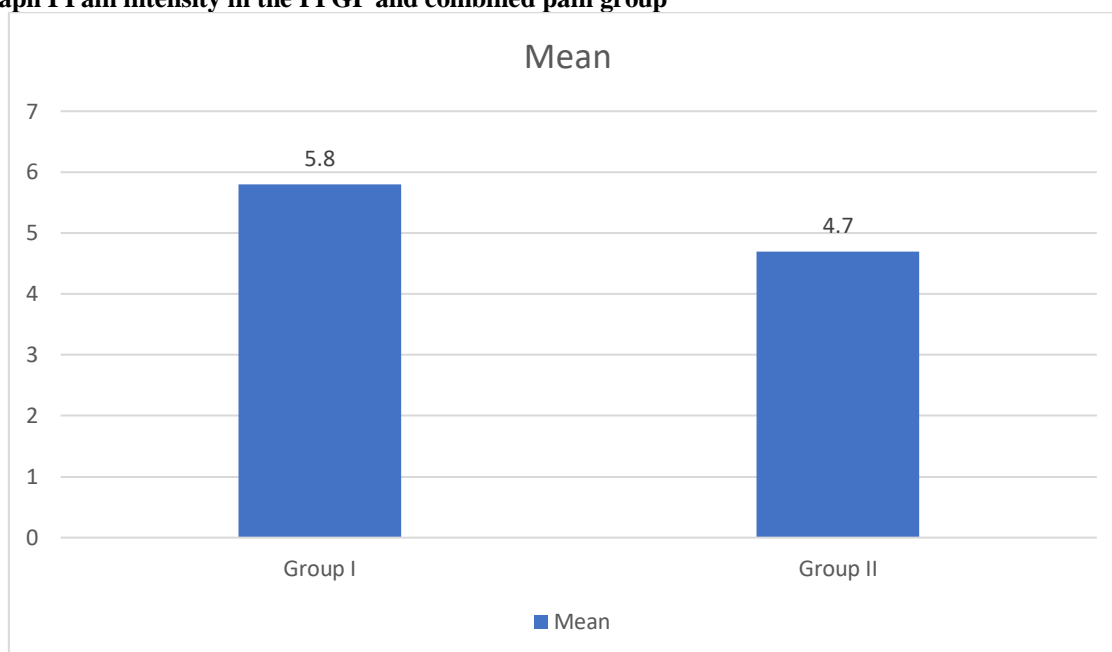
Table II shows that the mean age was 23.8years, 23.7years and 24.2years in group I, group II and group III respectively. The mean height (m) was 1.54, 1.51 and 1.59, weight was 54.3Kgs, 54.3Kgs and 55.9Kgs, BMI was 20.1, 21.2 and 21.5 and pregnancy week was 25.8, 24.3 and 23.1 in group I, group II and group III respectively. The difference was significant ( $P < 0.05$ ).

**Table III Pain intensity in the PPGP and combined pain group**

Groups	Mean	P value
Group I	5.8	0.01
Group II	4.7	

Table III, graph I shows that the mean VAS was 5.8 in group I and 4.7 in group II. The difference was significant ( $P < 0.05$ ).

**Graph I Pain intensity in the PPGP and combined pain group**



**DISCUSSION**

PGP is a common symptom among pregnant women in Western countries. There is no standard classification available for PLBP and PPGP. A large number of terms have been used to indicate pelvic girdle pain during pregnancy.<sup>7</sup> They include pelvic pain, pelvic girdle relaxation, pregnancy-related pelvic girdle pain, and posterior pelvic pain during pregnancy. However, in 2005, the term pregnancy-related pelvic girdle pain (PPGP), was introduced which appears to be the most accurate compared with previous definitions.<sup>8,9</sup> European guidelines on diagnosis and treatment of pelvic girdle pain have defined PPGP as pain which is often experienced between the posterior iliac crest and gluteal fold, predominantly near the sacroiliac joints. The pain may radiate in the posterior thigh and can also occur in conjunction with/or separately in the symphysis.<sup>10</sup> The

present study was conducted to assess pregnancy-related pelvic girdle pain and low back pain. We found that the mean age was 24.2 years, height was 1.8 meters, weight was 54.6 kgs and period of gestation was 24.1 weeks. Mousavi SJ et al<sup>11</sup> included 325 pregnant women, ranging in age from 16 to 42 years. All pregnant women were interviewed using a questionnaire. Two trained physical therapists performed the posterior pelvic pain provocation test on all women with lumbopelvic pain. A total of 161 pregnant women (49.5%) had reported lumbopelvic pain at the time of the examination. Based on the posterior pelvic pain provocation test, 91 women (28%) had PGP, 43 (13.2%) had LBP, and 27 (8.3%) had both PGP and LBP simultaneously. The intensity of pain in women with lumbopelvic pain using the visual analog scale was 5.6 (standard deviation 2.0; range 2–10)

We found that the mean age was 23.8years, 23.7years and 24.2years in group I, group II and group III respectively. The mean height (m) was 1.54, 1.51 and 1.59, weight was 54.3Kgs, 54.3Kgs and 55.9Kgs, BMI was 20.1, 21.2 and 21.5 and pregnancy week was 25.8, 24.3 and 23.1 in group I, group II and group III respectively. The mean VAS was 5.8 in group I and 4.7 in group II. In a prospective study, Ostgaard et al<sup>6</sup> studied the prevalence of back pain during pregnancy and 1 year after delivery in 855 pregnant women. A total of 49% of women experienced back pain at some time during pregnancy. Based on pain drawing, the point prevalence of LBP and sacroiliac pain was about 32%, and sacroiliac pain alone was about 19%. A study by Albert et al<sup>12</sup> revealed that majority (62.5%) of women having pelvic pain get relieved within 1 month after delivery but 8.6% continued to experience pelvic girdle pain 2 years after delivery.

Noren et al<sup>13</sup> in their study all women who were registered as having experienced back pain during an index pregnancy were interviewed by mail 3 years postpartum. Women who had residual back pain filled in an additional questionnaire and were physically examined. Out of 799 pregnant women, 231 had some type of back pain during the index pregnancy, and 41 women had pain 3 years later. Women with combined lumbar and posterior pelvic pain were significantly more disabled ( $P<0.05$ ) and had significantly lower endurance in the lumbar back and hip abduction muscles ( $P<0.01$ ). Some 5% of all pregnant women, or 20% of all women with back pain during pregnancy, had pain 3 years later.

The limitation of the study is small sample size.

## CONCLUSION

Authors found that lumbopelvic discomfort was present at the time of the evaluation in more than half of the pregnant study participants.

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