



## EFFECTIVENESS OF PELVIC FLOOR EXERCISE ON PELVIC PAIN AMONG ANTENATAL MOTHERS

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### ABSTRACT

A quasi experimental study was conducted to determine the effectiveness of pelvic floor exercises on pelvic pain among antenatal mothers. The subjects were antenatal mothers of 25-36 weeks of gestation having pelvic pain. Total 80 subjects, 40 in each experimental and control group were selected by using purposive sampling technique. The study design was quasi experimental pre test-post-test control group design. Data were collected by using socio personal profoma and numerical pain rating scale. Result showed the mean pain score (4.95) of control group is greater than that of the mean pain score (0.61) of experimental group in the post test. It was also found that there was a significant association between the pain with age and gestational age. The findings showed that pelvic floor exercise has significant effect on pelvic pain among antenatal mothers.

**KEYWORDS :** Effect, Pelvic floor exercise, Pelvic pain, Antenatal mother

### INTRODUCTION

Pregnancy is a unique, exciting and often joyful period in a woman's life, as it emphasizes the woman's amazing creative and nurturing powers while providing a bridge to the future. The growing fetus depends completely on its mother's body for all needs. Pregnancy is not sickness; it is a normal human condition. Although, it also presents the body with a number of challenges, many of which can produce symptoms and cause problems.

Pregnancy is a natural and normal physiological state and therefore, pregnant woman should be healthier to remains active. Exercises can be one way to be active and are defined as any bodily activity that enhances or maintains physical fitness and overall health. Even minor physical and psychological symptoms not appropriately treated could enfeeble pregnant women. PGP is pain in the front and/or the back of pelvis that can also affect other areas such as the hips or thighs. It can affect the sacroiliac joints at the back and/or the symphysis pubis joint at the front. PGP used to be known as symphysis pubis dysfunction (SPD). Pregnancy related pelvic pain typically starts around the 18th week of pregnancy and peaks between week 24 and 36. Pelvic pain is common during pregnancy with a prevalence described in different ways as ranging from 50% to 70%. Between 14 to 22% of all pregnant women have serious pregnancy- related pelvic pain (PGP) and 5 to 8% of these women have severe pain and disability. Serious PGP is also present in 7% of women in postpartum.

Exercise can lower the intensity of pain, improve function and reduce disability. A supervised exercise programme is recommended as a first-line treatment for patients with non-specific pain in the non-pregnant population. The European guidelines for pelvic girdle pain (PGP) recommend individualized exercises in pregnancy. Advice on avoiding movements that may be aggravating the pain. Exercises that should help relieve pain and allow to move around more easily. They should also strengthen abdominal and pelvic floor muscles to improve your balance and posture and make spine more stable.

A quasi-experimental study related to the effect of pelvic floor muscle exercise training protocol for pregnant woman during 3rd trimester at El-Manial University Hospital, Cairo University, Egypt. A total of 100 pregnant women in 3rd trimester were included for this study. A convenience sample was used and divided into two groups (study & control groups)

50 each, the study group who received pelvic floor muscle training exercise and control group who received standard routine care. Each group was assigned randomly to the line of management. Tools include Structured interviewing tool, pelvic floor muscles strength assessment, antenatal follow up checklist, partograph. Result was statistically significant difference between the study and control groups in relation to duration of 1st, 2nd and 3rd stage of labor.

### MATERIALS AND METHOD

A quasi experimental design was used to find out the effectiveness of pelvic floor exercise on pelvic pain. Formal permission was obtained from institutional research and ethical committee. Data were collected over a period of two and half months, started from 21/12/17 to 15/3/18. 80 subjects, 40 in each control group and experimental group satisfying the inclusion criteria were selected by purposive sampling from OBG outpatient department of the hospital. Informed consent was obtained after explaining the nature and purpose of the study. Confidentiality was maintained for each subjects. The first 40 subjects included in the control group to avoid bias. Four to five subjects were obtained daily. Socio personal data of the subjects were collected by using socio personal profoma and the level of pelvic pain assessed by using standardized numerical pain rating scale from both group. Subjects in experimental group were demonstrated pelvic floor exercises (abdominal, gluteal medius and kegel exercises) and made them to do return demonstration to make sure the accuracy. Spend 30-35 minutes with each subject. They were advised to perform these exercises twice daily, fifteen minutes for three weeks and a practical guide book marked with date and time of exercise given to the mother to make it easy for them to perform the exercise regularly, daily telephonic reminder were given to them. The subjects from the control group received the routine antenatal care. After three weeks, the level of pelvic pain was assessed in both the groups to determine the effect of pelvic floor exercise on pelvic pain. Two of the subjects from both the groups eliminated since they delivered during the study. The data collected were compiled for data analysis.

### RESULTS

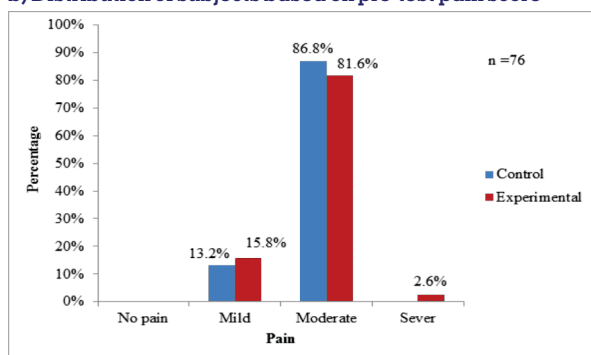
#### a) Distribution of the subjects based on socio personal variables and clinical variables

In experimental group 42.2% belongs to the age group of 22-25yrs and 2.6% of the subjects belongs to the age group of 30-33yrs. In control group half of the subjects, 50% belongs to the

age group of 22-25yrs and 13.2% of the subjects belong to the age group of 30-33yrs. Both the group more than half 53% of the subjects were Hindu and in control group 39% and experimental group 34% of the subjects were Muslim. In experimental group majority 63.1% of the subjects were graduate and 2.6% of the subjects had upper primary education. In control group majority 52.7% of the subjects were graduate and above and 10.5% of the subjects had secondary education. In experimental group majority 94.8% of the subjects were house wives 2.6% of the subjects were professional and office workers. In control group 92.1% of the subjects were house wives 7.9 % of the subjects were professionals. In both the groups all the subjects 100% were moderate workers. More than half of the subjects that is in experimental group 58% and control group 55% were had the monthly income of <5000. In experimental group 13% and in control group 8 % of subjects had the income of >15000. In experimental group 71.1% and control group 76.3% of the subjects belongs to nuclear family.

Majority of the subjects in experimental group 63.2% and control group 60.5% of the subjects were primiparous. In experimental group 39.5% and control group 36.8 % of the subjects were multipara. In experimental group 39% and control group 29% of the subjects were 25-27 weeks of gestation. In experimental group and control group 32% of the subjects were comes under 28-30 weeks of gestation. Majority of the subjects in experimental and control group were primiparous (63.2% and 60.5% respectively). Both the experimental group and control group 7.9% of the subjects had lower segment caesarean section. In experimental group 45% and control group 58% of the subjects had 150-159cm height. Both the groups 5% of the subjects had the height of 170.-179 cm. In experimental group 37% of the subjects had 55-64kg weight and 5% had 75-84kg weight .In control group 34% of the subjects had 55-64kg weight and 8% of the subjects had 75-84kg weight. In experimental group more than half 61% and control group less than half 42% of the subjects had the BMI of 18.5-24.9. In experimental group 29% and control group 45% of the subjects had 25-30 BMI.

**b) Distribution of subjects based on pre-test pain score**



Both of the subjects were homogenous since the chi square value 1.5, p value >0.05.

**c) Effect of pelvic floor exercise on pelvic pain**

Test	Group	Mean	Standard Deviation (SD)	t value	P value
Difference between experimental and control group post test pain score	Experimental	0.61	0.755	21.6***	0.000
	Control	4.95	0.985		

Significant at 0.001 level

**d) Association between pelvic pain and selected socio personal variables.**

Association between pelvic pain and selected socio personal variables analysed by using chi square test. It shows that there was significant association between pelvic pain with age (chi square value of age is 5.3, degree of freedom is 1 and p value is 0.021) and gestational age (chi square value of gestational age is 9.6, degree of freedom is 3 and p value is 0.022). It shows the research hypothesis was also supported.

**DISCUSSION**

For testing the effect of independent variable on dependent variable independent t test was used. While testing the effect of pelvic exercise on pelvic pain among antenatal mother, value obtained was (t – 21, p- 0.000) which is significant at p<0.001. Hence it was interpreted that pelvic exercise has significant effect on level of pelvic pain among antenatal mother. The present study findings are consistent with the finding of another study conducted to assess the effect of therapeutic exercises on pregnancy-related low back pain and pelvic girdle pain. The control group received only standard antenatal care. There were significant differences between the 2 groups on the numeric rating scale, PGQ and RMDQ scores in the 36th week of pregnancy (p=0.017; p=0.005) and the result shows exercise has significant effect on pain.

For determining the association, chi square test was used. It shows that there was significant association between pelvic pain with age ( $\chi^2$  - 5.3, P-.021) and gestational age ( $\chi^2$  -9.6, P-.022) at p< 0.05. The findings were contradictory with another study. Prevalence of pregnancy related low back and Pelvic Girdle Pain among Australian women who concluded that age, parity, ethnicity, period of gestation, work status, regular exercise and life style variables was not associated with Pelvic Girdle Pain.

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