



## RESEARCH ARTICLE

### A STUDY TO ASSESS THE EFFECTIVENESS OF KEGEL EXERCISE AND PRONE POSITION ON AFTERPAINS AND INVOLUTION OF UTERUS AMONG POSTNATAL MOTHERS AT A SELECTED HOSPITAL, REWA

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#### ABSTRACT

The wonder of motherhood is the enjoyable journey that is felt only by the mother after giving birth of rebirth by giving birth to a child. A mother, even though she is born earlier in this world, perceives an experience. It brings about remarkable changes in her normal life and introduces an exposure to a new role within her. During postnatal period, mothers experience numerous physiological and psychological changes. Most of the postnatal women had afterpains. So, it was found important to reduce the afterpains and hastened the process of involution of uterus. Research design chosen for this study was Quasi experimental design, two group pre-test and post-test design. The tool used for the study includes questionnaire to assess the level of afterpains pain by numerical pain scale and involution of uterus assessed by measuring the fundal height. The obtained data was analyzed by descriptive and inferential statistics using chi-square and students independent t test. The study revealed that Kegel exercise and prone position after child birth have significant reduction of afterpains. As the result shows that t test value = 15.12 significant at  $p=0.00$  level and improvement of involution of uterus as t value= 9.54 significant at  $p=0.001$  level.

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## INTRODUCTION

Childbirth is one of the most important events in a woman's life. The wonder of motherhood is the enjoyable journey that is felt only by the mother after giving birth to a child. It brings about remarkable changes in her normal life and introduces an exposure to a new role within her. Childbirth includes different stages, and in every stage, the mother plays a unique role in experiencing the important events that occur throughout her journey. The different stages are broadly classified into three main aspects, namely, antenatal period, intra-natal period, and postnatal period.<sup>1</sup> Postnatal period is the most vulnerable period for the mother and the newborn baby. Many mothers experience physiological, psychological and social changes during this period. There are many types of postnatal ailments experienced by the mother such as afterpains, irregular vaginal bleeding, leucorrhea, cervical ectopy (erosion), backache, retroversion of the uterus, anemia, breast problems and episiotomy discomforts.<sup>2</sup> The first 6 weeks after the birth of the baby is known as postpartum period or puerperium. During this time, mothers experience numerous physiological and psychological changes. Main changes occur for uterus is involution of the uterus and descent of the fundus. Involution begins immediately after the delivery of the placenta. During involution uterine muscles contracts firmly around the maternal blood vessels at the area where the placenta is attached. This contraction controls bleeding from the area when the placenta is separated.<sup>3</sup>

**NEED FOR THE STUDY:** The postnatal period is a time of maternal changes that are both retrogressive (involution of uterus and vagina) and progressive (production of milk for lactation, restoration of the normal menstrual cycle, and beginning of a parenting role). Protecting a women's health as these changes occur is important for preserving her future childbearing function and for ensuring that she is physically fit to incorporate her new child into her family. The physical care a woman receives during the postnatal period can influence her health for rest of her life. Most women experience some degree of discomfort during the postnatal period. Common causes of discomfort include pain from uterine contractions(afterpains), perineal lacerations, episiotomy, hemorrhoids, sore nipples, and breast engorgement.<sup>4</sup> Association of afterpains with multiparity and breastfeeding is well known. However, women may experience afterpains regardless of their parity and breast feeding. Women themselves have described the pain equal to the severity of moderate labor pains. A survey on childbearing experiences showed that 71% of women finding difficulty while feeding the baby. The most common reason they gave was cramping pain during breast feeding. Cramping intensity may vary with parity, in which multipara mothers are more prone to get severe afterpains than Primi mothers.<sup>5</sup> Afterpains are the abdominal cramps that are caused by postpartum contractions of the uterus as it shrinks back to its pre-pregnancy size and location. In short, afterpains signals the process of involution. Immediately after delivery, the uterus begins the

process of involution or reduction in size. A woman can best help her abdominal wall to return to good tone by using proper body mechanics and posture, getting adequate rest and by performing exercises. Deep breathing exercises help to feel better physically and emotionally; alternate leg raising exercises, Kegel exercise and early ambulation will encourage uterine contractions, helps in restoring the muscle strength and conditions the abdominal muscles. Exercises to strengthen abdominal and pelvic muscles and finally hastens the process of involution.<sup>6</sup>

## STATEMENT OF THE PROBLEM

A study to the assess the effectiveness of Kegel exercise and prone position on after pains and involution of uterus among postnatal mothers at the selected Hospital Rewa.

## OBJECTIVES

- To assess the pre-test and post-test scores of afterpains and involution of uterus among postnatal mothers in experimental and control group.
- To determine the effectiveness of Kegel exercise and prone position on afterpains and involution of uterus among postnatal mothers in experimental group
- To compare the effectiveness of Kegel exercise and prone position on afterpains and involution of uterus among postnatal mothers in experimental and control group.
- To find an association between pre-test level of afterpains and involution of uterus among postnatal mothers with their selected demographic variables

## ASSUMPTION

- Postnatal Mothers will experience reduce in after-pains after practicing this Kegel exercise and after adopting prone position
- The degree of after pains will vary from mother to mother

## HYPOTHESES

(All hypotheses will be tested at 0.05 level of significance)

- H<sub>1</sub>: There will be significant difference between the mean pre-test and post-test scores of afterpains and involution of uterus among postnatal mothers in experimental group.
- H<sub>2</sub>: There will be significant association between the pre-test level of afterpains and involution of uterus with selected demographic variables of postnatal mothers.

## METHODOLOGY

**Research Approach:** An evaluative research approach was used for the present study.

**Research Design:** Quasi experimental research design was adopted in this study with an experimental and control group.

**Control group:** This group consists of 30 postnatal mothers from day one delivery, and routine care was provided

**Experimental group:** This group consist of 30 postnatal mothers from day one delivery. There were selected for

experimental group and there were made to do Kegel exercise and prone position.

## Variables

**Independent variables:** Kegel exercise and prone position.

**Dependent Variables:** After pains and involution of uterus.

**Setting Of the Study:** Setting for the present study was the postnatal ward at Chaurasia Hospital Rewa.

**Study Population:** Postnatal mothers from day one delivery admitted in the postnatal wards at Chaurasia hospital. Hospital Rewa.

**Sample:** The postnatal mothers admitting in the postnatal ward.

**Sample Size:** The sample size for the study will comprise of 60 postnatal mothers. Out of which, 30 will be in experimental group and 30 in control group.

**Sampling Technique:** Non probability purposive sampling will be used to select the samples.

## Criteria For Sample Selection

### Inclusion Criteria for sampling

- Postnatal mothers with singleton gestation that had normal vaginal delivery.
- Postnatal mothers with singleton gestation that had normal vaginal delivery with or without episiotomy.
- Post natal mothers who are willing to participate.
- Post natal mothers who are able to speak and understand the Hindi

### Exclusion criteria for sampling

- Postnatal mothers with operative deliveries.
- High risk factors like postpartum hemorrhage, placenta accreta, shock, pulmonary embolism, uterine rupture, puerperal sepsis and multiple pregnancy.
- Who are not willing to participate
- Less than 18 years & more than 35 years.

## Scoring Technique

**Pain:** To find out the level of pain, numerical rating scale was used and was given score from 0-10 the following score indicates the level of pain

Pain rating	Scale	Mark
No pain	0	0
Mild pain	1-3	1
Moderate pain	4-6	2
Severe pain	7-9	3
Worst possible pain	10	4

**Involution of uterus:** To find out the performance of involution uterus by assessed daily measuring the fundal height, palpate the consisting of the uterus and observing the lochia (color, odor and amount)

Table 1. Effectiveness of Kegel Exercise and Prone Position

Variables	Groups	Day 1 pretest	Day3 Posttest	Mean difference with 95% confidence Interval	Reduction from base line data
Fundal height	Experiment	13.68	10.08	3.59(3.403.79)	↓26.2% (24.8%- 27.7%)
	Control	13.83	11.65	2.18(1.922.44)	↓15.7% (13.8%- 17.6%)
Pain	Experiment	9.33	1.23	8.10(7.608.59)	↓86.8% (81.4%- 92.1%)
	Control	9.20	4.13	5.06(4.225.90)	↓55.0% (45.7%- 64.1%)

**Section-B:** Observation schedule on Measurement of Fundal height postnatal mothers on Involution of uterus.

**Instruction:** The observer measures the Fundal height of postnatal mothers and fills the appropriate space.

S.no	Patient	Time	pretest	Post-test		
				Day 1	Day 2	Day3
				Fundal	Fundal	Fundal
				Height in cm	Height in cm	Height in cm

**Scoring:** <11cm= Good involution 12-13 cm = Fair involution 3<sup>rd</sup> day, 3<sup>rd</sup> provision 13-14 cm = Slow involution

**Pilot study:** The pilot study was conducted in postnatal ward. 6 postnatal mothers were selected for pilot study. Each three (3) for experimental group and control group. Non probability purposive sampling technique was used. The tool was feasible to administer and hence no further modification was done. The result showed that post assessment of the involution of uterus improved and afterpains level decreased.

## RESULTS

Table 1 Shows effectiveness of Kegel exercise and prone position on afterpains and involution of uterus between the Experimental and control group, among them in experimental group the fundal height reduced 26.2% whereas in control it is 15.7%. In pain score experiment reduced 86.8% whereas in control it is 55.0%. This shows the effectiveness of the study. The result showed that 53.3% of mothers in experimental group and 60.0% of mothers in control group are having slow Excruciating pain in pretest, and about 86.7% of mothers in experimental group and 93.3% of mothers in control group are having slow involution of uterus in pretest. The comparison between pre-assessment and post -assessment of fundal height of the uterus among post-natal mothers (Experimental group) showed that there is statistically significant difference between Day 1 ( $\chi^2=38.57$ ,  $P=0.001^{***}$ ), Day 2 ( $\chi^2=20.93$ ,  $P=0.001^{***}$ ), Day 3 ( $\chi^2=9.32$ ,  $P=0.001^{***}$ ) pretest and posttest level of fundal height. Statistical significance was calculated using chi square, the comparison between pre-assessment and post -assessment of fundal height of the uterus among post-natal mothers (Control group).

The result showed that is Statistically significant difference between Day 1, Day 2, Day 3 pretest and posttest level of fundal height. Statistical significance was calculated using chi square. Statistical significance difference between Day 1 ( $\chi^2=27.07$ ,  $P=0.001^{***}$ ) Day 2 ( $\chi^2=34.81$ ,  $P=0.001^{***}$ ), Day3 ( $\chi^2=33.04$ ,  $P=0.001^{***}$ ) pretest and posttest level of pain (Experimental group). Statistical significance was calculated using chi square. Statistically significant difference between Day 1, Day 2, Day 3 pretest and posttest level of pain (Control group).

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