



**EFFECTIVENESS OF KEGEL EXERCISE AND PRONE POSITION ON
AFTERPAINS AND INVOLUTION OF UTERUS AMONG POSTNATAL
MOTHERS AT SELECTED TERTIARY CARE HOSPITAL OF
VADODARA DISTRICT – A QUASI EXPERIMENTAL STUDY**

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ABSTRACT

Background: Labour is one of the most significant life experiences that a woman will have. Various therapies have been investigated to alleviate after aches and enhance uterine involution in response to these obstacles. Kegel exercises and the prone position have gotten a lot of attention because of their possible benefits in aiding postnatal recovery.

Objective: To evaluate the effectiveness of kegal exercise and prone position on afterpains and involution of uterus.

Material and methods: Quasi experimental research design was adopted with an experimental and control group. The conceptual framework used for this study is based on General System Approach. Samples of experimental group were performed Kegel exercise for 10 seconds for 3 times a day, 10 repetitions each time for three days among the postnatal mother and also same postnatal mothers made to lie in prone position for 3- 5 minutes for 3 times a day at 30 minutes interval, 3 repetitions each time for three days at Dhiraj General Hospital, Vadodara. VAS and fundal height measurement was used to

collect data. Ethical clearance was done before data collection. Descriptive statistics was used to analyse the data.

Results: There is statistically significant difference between Day1, Day 2 and Day 3 pretest and posttest level of fundal height and afterpains. Hence postnatal mothers after practicing kegel exercise and prone position helps to reduce pain level and fundal height.

Conclusion: This study concluded that kegel exercise and prone position is effective in reducing afterpains and involution of uterus in postnatal mothers.

Keywords: **Kegel exercise, Prone position, Afterpains, Involution of uterus, Postnatal mothers**

INTRODUCTION:

Labour is one of the most significant life experiences that a woman will have. It has a significant impact on women's minds, and negative idea perception or discomfort may cause psychological problems for her and her entire family. There are several non-pharmacological pain relief methods available during the postpartum period. Massage, counter pressure, hydrotherapy, breathing patterns, heat and cold packs, position changes, relaxation methods, music, aromatherapy, birthing doulas, and acupuncture points are all available. Position adjustment, stomach muscle exercise, and uterine massage are the most effective non-pharmacological approaches. Various therapies have been investigated to alleviate after aches and enhance uterine involution in response to these obstacles [1-4].

Kegel exercises and the prone position have gotten a lot of attention because of their possible benefits in aiding postnatal recovery. Kegel exercises, which involve the voluntary contraction and relaxation of pelvic floor muscles, have been shown to

improve muscle tone and strength. The prone position, on the other hand, where the individual lies flat on their stomach, is thought to accelerate uterine involution and provide relief from after pains [5-9].

The majority of patients in the hospital's obstetrics and gynaecology wards experienced postpartum discomfort, and many women experienced uterine prolapse, particularly those who had a history of more than one normal vaginal birth [10-12].

Kegel exercises can assist to situate the pelvic organs in the proper location, which can help to avoid subsequent gynaecological issues. Additionally, lying prone with a cushion can help to ease discomfort since it puts pressure on the abdomen, which causes the uterus to contract. According to estimates, 58% of women feel fatigue, 23% have perineal issues, 42% have backaches, 24% have hemorrhoids, 13% have bowel issues, 23% have sexual issues, 20% have vaginal bleeding, 46% have urine incontinence, and 43.5% have after-pains. So this study aimed to assess the

effectiveness of kegel exercise and prone position on afterpains and involution of uterus in postnatal mothers of Dhiraj general hospital, Vadoadara, Gujarat [13, 14].

MATERIAL AND METHODS:

Quasi experimental research design was adopted in this study with an experimental and control group. Experimental group performed Kegel exercise for 10 seconds for 3 times a day, 10 repetitions each time for three days among the postnatal mother and also same postnatal mothers made to lie in prone position for 3- 5 minutes for 3 times a day at 30 minutes interval, 3 repetitions each time for three days. Control group consists of 30 postnatal mothers from day one delivery, and routine care was provided. Setting for the present study was the postnatal ward of Dhiraj General Hospital, Vadodara. The sample size for the study was 60 postnatal mothers. Out of which, 30 was in experimental group and 30 in control group. Non-probability purposive sampling was used to select the samples. Inclusion criteria of the study was Postnatal Mothers who are admitted in Dhiraj hospital, with normal vaginal delivery and who are willing to take part. Postnatal mothers who are not present at the time of data collection, not willing to participate and not understanding Gujarati & Hindi was excluded from study. Data collection tool has Part A- Demographic proforma, Part B-Visual Analogue scale to assess level of afterpains

and Part C-Clinical proforma to assess involution of uterus by measuring fundal height daily. Validity and reliability of the tool was done prior data collection. The study objectives, intervention and data collection procedure were approved by the research and ethical committee of the institution.

RESULTS AND DISCUSSION:

The data analysed were edited, coded and entered in excel sheet. The data were analysed using SPSS version 10. A probability of less than 0.05 was considered to be significant (**Table 1**).

Table 2, shows that about 16 (53.33%) of mothers in experimental group having mild pain and 14(46.67%) of mothers having moderate pain. Mothers in control group it shows that about 28 (93.33%) of mothers in control group having moderate pain and 2(6.67%) of mothers having mild pain. There is statistically significant difference between experiment and control group of mothers.

Table 3, reveals about the comparison between pre-assessment and post-assessment of fundal height of the uterus among postnatal mothers (Experimental group) who are participating in this study, there is Statistically significant difference between **Day 1**($X=23.26, P=0.05^*$), **Day 2**($X=20.67, P=0.05^*$), **Day 3**($X= 8.45, P=0.05^*$) pretest and posttest level of fundal

height. Statistical significance was calculated using chi square.

Table 4, shows the effectiveness of Kegel exercise and prone position on after pains 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%.Hence Kegel exercise and prone position effective for postnatal mothers reducing fundal height and pain.

Table 1: Frequency and percentage distribution of the demographic variables and maternal variables of postnatal mothers in Experimental and control Group (N=30+30)

Demographic variables		Experimental Group(N=30)		Control Group(N=30)	
		F	%	f	%
Age in years	<18	3	10.0	2	7
	18-23	19	63	22	73
	24-29	6	20.0	4	13
	30-35	2	7	2	7
	>35	3	10.0	3	10
Religion	Hindu	30	100	30	100
	Muslim	0	0.0	0	0.0
	Christian	0	0.0	0	0.0
Educational status	No Formal Education	2	7	6	20.0
	Primary Education	8	27	22	73
	Secondary Education	18	60.0	2	7
	Higher Secondary	2	6	6	20.0
	Graduation and Above	0	0	0	0.0
Food Habit	Vegetarian	30	100	30	100
	Non Vegetarian	0	0.0	0	0.0
	Mixed	0	0.0	0	0.0
Type of Family	Nuclear Family	8	27	6	20.0
	Joint Family	22	73	24	80.0
Occupation of mother	House Wife	28	93	24	80.0
	Working	2	7	6	20.0
Family Income	Lessthan10,000	0	0.0	0	0.0
	10,000-20,000	8	27	6	20.0
	21,000-30,000	20	66	22	73
	Morethan30,000	2	7	2	7
Habitat	Rural	14	47	13	43
	Urban	16	53	17	57
Maternal variables		Experimental Group(N=30)		Control Group(N=30)	
Para	Primi Para	19	63.33	21	70
	Multi Para	11	36.67	9	30
	Grand Multi Para	0	0.0	0	0.0
Body Mass Index	Below18.5	2	6.67	4	13.33
	18.5-24.9	28	93.33	26	86.66
	25.0-29.9	0	0.0	0	0.0
	30.0andAbove	0	0.0	0	0.0
	Given	18	60	16	53.33

Episiotomy	Not given	12	40	14	46.66
Gestational Age	Less than 37 Weeks	0	0.0	0	0.0
	37-42 Weeks Completed	30	100	30	100
	>42weeks	0	0.0	0	0.0
Initiation of feeding	Within 8 hours after delivery	28	93.33	25	83.33
	9-12 hours	2	6.66	5	16.66
	Above12 hours	0	0.0	0	0.0
	First day after Delivery	0	0.0	0	0.0
Frequency of feeding	Every1 hour	29	97	28	93.33
	Every2 hour	1	3	2	6.67
	Every time baby Crying	0	0.0	0	0.0

Table 2: Comparison of post-test level of after pains among experimental and control group of postnatal mothers

Description	Experimental		Control		Chi square test
	n	%	n	%	
No pain	0	0.0	0	0.0	X ² =22.76 p=0.05
Mild pain	16	53.33	2	6.67	
Moderate pain	14	46.67	28	93.33	
Severe pain	0	0.0	0	0.0	
Very severe pain	0	0.0	0	0.0	

Table 3: Comparison of pretest and posttest involution of uterus among experimental group postnatal mothers

	Day 1		X2-test P=0.05	Day 2		X2-Test P=0.05	Day 3		X2-test P=0.05
	Pretest	Posttest		Pretest	Posttest		Pretest	Posttest	
Good	0	0		0	17		16	18	
Fair	4	28		26	13		14	12	
slow	26	2		4	0		0	0	
Total	30	30		30	30		30	30	

Table 4: Effectiveness of Kegel exercise and prone position

		Day 1- pretest	Day-2 Posttest	Mean difference (95% Confidence Interval)	Reduction from baseline data
FUNDAL HEIGHT	Experime- ntal	13.68	10.08	3.59(3.40-3.79)	26.2%(24.8% - 27.7%)
	Control	13.68	11.65	2.18(1.92- 2.44)	15.7%(13.8%- 17.6%)
PAIN	Experiment al	9.33	1.23	8.10(7.60-8.59)	86.8%(81.4%- 92.1%)
	Control	9.20	4.13	5.06(4.22- 5.90)	55.0%(45.7%- 64.1%)

DISCUSSION

Kegel exercise and prone position was effective for postnatal mothers of experimental group in reducing fundal height and afterpain. There was a significant association involution of uterus among postnatal mothers of experimental group. There was a significant association between

reduction level of pains among postnatal mothers of experimental group and their demographic variables such as age and education. On the basis of result of this study, it is stated that in postpartum period, if postnatal mother fasten the involution process and reduce the afterpains, kegel exercise and prone position will be effective

and every postnatal wards must practice this on postnatal mothers.

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CONFLICT OF INTEREST

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