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Assessment of Pre-Test and Post-Test Scores of Afterpains and Involution of Uterus among Postnatal Mothers

Ms. Chitra Yadav[1], Mrs. Preetshikha Sharma[2], Mrs. Anupriya[3]

[1]Assistant Professor, Sardar Patel CON, Lucknow, Uttar Pradesh, India
[2]Associate Professor, CARE CON, Haridwar, Uttarakhand, India
[3]Assistant Professor, CARE CON, Haridwar, Uttarakhand, India

ABSTRACT

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 of rebirth by giving birth to a child. During post-natal period, mothers experience numerous physiological and psychological changes. Most of the post-natal women had afterpains. So it was found important to reduce the afterpains and hastened the process of involution of uterus. This study was conducted to assess Pre-Test and Post-Test Scores of Afterpains and Involution of Uterus Among Postnatal Mothers. Research design chosen for this study was Quasi experimental design, two group pretest and posttest design. The tool used for the study includes questionnaire to assess the level of afterpains pain by numerical pain scale. In control group-level of afterpains and involution of uterus will be assessed every day morning and evening for 3 days through numerical pain rating scale and clinical proforma and also routine care provided. The obtained data was analysed by descriptive and inferential statistics using chi-square and students independent t-test. The study results revealed that results include the total 53.3% of mothers in experimental group and 60.0% of mothers in control group are having slow excruciating pain in pre-test, and about 86.7% of mothers in experimental group and 93.3% of mothers in control group are having slow involution of uterus in pre-test. The association includes a statistical significance between pain reduction and mother's age between 26-30 years, (**$\chi 2=7.79 p=0.05$***), the mothers who attained menarche at the age between 12-15 years were also having a marked reduction in pain (**$\chi 2=6.43$ p=0.04***) statistical value is calculated by using Chi square test. The conclusion include that the intervention was found to be very effective in prevention of pains in mothers and fast involution of uterus.

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KEYWORDS: *Afterpains, Involution of uterus, Postnatal mothers*

BACKGROUND OF THE STUDY

Childbirth includes different stages, and in every stage, the mother plays a unique role in experiencing the important events that occur throughout her journey. Eventually, after the birth of the baby placenta separates from the wall of uterus and expelled. Immediately the uterus contracts tightly to seal off open blood vessels on uterine wall at placental site. These uterine contractions called after pains. The afterpains refer to the infrequent, spasmodic pain felt in the lower abdomen after delivery for a variable period of 2-4 days. These abdominal cramps are caused by postpartum contractions of the uterus as it shrinks back to its pre-pregnancy size and location. Presence of blood clots or bits of the afterbirth leads to hypertonic contractions of the uterus in an attempt to expel them. The uterus loses muscle tone during subsequent pregnancies due to its contraction-relaxation cycle and causes afterpains, and is vigorous pain in multiparous woman.

NEED OF THE STUDY

Most women expect and experience afterpains after the labour process. Intensity of pain experienced, varies from one woman to another. Afterpains are managed in various ways according to the following

indicators such as frequency, duration and intensity of uterine contractions, the women's emotional behavior, her response to afterpains. Postnatal health problem needs close attention. It is estimated that approximately about 58% women experience tiredness, 23% perineal problems, 42% backache, 24% hemorrhoids, 13% bowel problems, 23% sexual problems, 20% vaginal bleeding, 46% urinary incontinence, and 43.5% women experience after pains.

PROBLEM STATEMENT

"Assessment of Pre-Test and Post-Test Scores of Afterpains and Involution of Uterus Among Postnatal Mothers".

OBJECTIVES

1. To assess the pre-test and post-test scores of afterpains and involution of uterus among postnatal mothers in experimental and control group.
2. To find an association between pre-test level of afterpains and involution of uterus among postnatal mothers with their selected demographic variables.

RESEARCH APPROACH

An evaluative approach was used in this study as the investigation aimed to assess the Pre-Test and Post-Test Scores of Afterpains and Involution of Uterus Among Postnatal Mothers.

RESEARCH DESIGN

Quasi experimental research design was adopted in this study with an experimental and control group.

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 TECHNIQUES

Non probability purposive sampling will be used to select the samples.

TOOLS & TECHNIQUES

After an extensive review of literature and discussion with experts, the tool was developed that includes:

- Part A – Demographic proforma to collect baseline data.
- Part B – Numerical Pain Rating scale to assess level of afterpains.
- Part C – Clinical proforma to assess involution of uterus.

It consists of: - fundal height

- consistency of uterus
- lochia
- color and odour of lochia.

Scoring Technique includes:

Pain: To find out the level of pain, numerical rating scale was used and scoring was done from 0-10 as the following score indicates the level of pain.

Pain rating	Scale	Marks
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 of uterus by assessing daily measurement of the fundal height, palpate the consistency of the uterus and observing the lochia (colour, odour and amount).

RESULTS

Objective 1- To assess the pre-test and post-test scores of afterpains and involution of uterus among postnatal mothers in experimental and control group.

(Pretest level of pain score)

Description	Experiment		Control		Chi-square Test
	n	%	N	%	
No pain	0	0.0%	0	0.0%	$\chi 2=0.27$ p=0.60
Mild pain	0	0.0%	0	0.0%	
Moderate pain	0	0.0%	0	0.0%	
Severe pain	14	46.7%	12	40.0%	
Excruciating pain	16	53.3%	18	60.0%	

* significant at P 0.05 ** highly significant at P 0.01 *** very high significant at P 0.001

Table reveals the assessment the pre-test scores of pain level among postnatal mothers before practicing kegel exercise and prone position. It shows that about 53.3% of mothers in experimental group and 60.0% of mothers in control group are having slow Excruciating pain in pretest. There is no statistically significant difference between experiment and control group of mothers. Statistical significance was calculated using chi-square ($\chi 2=0.27$ p=0.60).

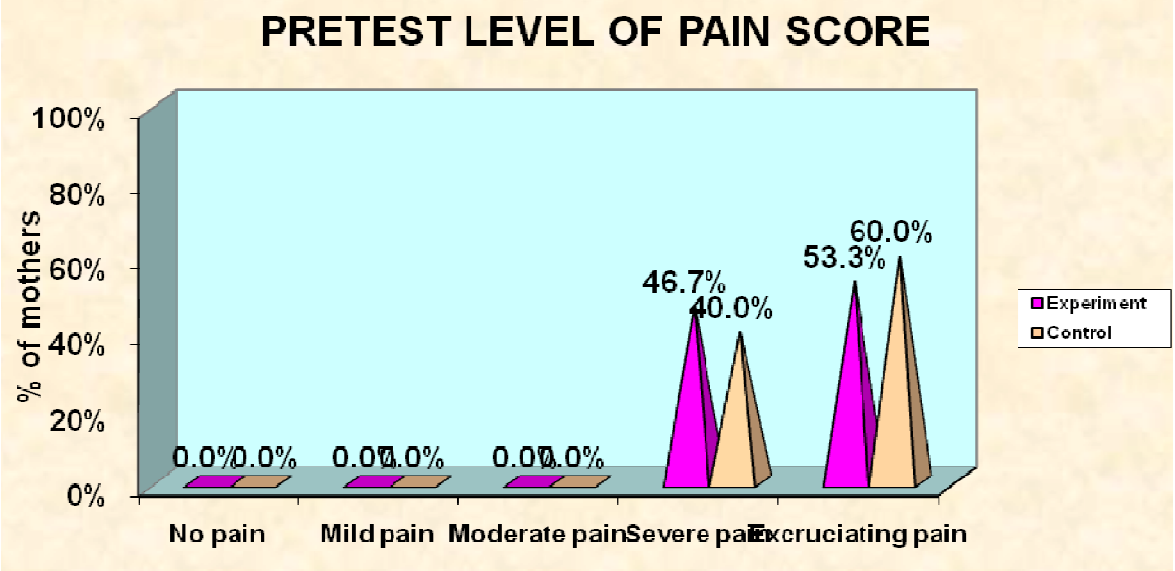

Figure shows that about 53.3% of mothers in experimental group and 60.0% of mothers in control group are having slow Excruciating pain in pertest.

Objective 2- To find an association between pre-test level of afterpains and involution of uterus among postnatal mothers with their selected demographic variables.

Table showing PRE and POSTTEST LEVEL OF PAIN (Experiment)

	DAY 1		χ^2 –test	DAY 2		χ^2-test	DAY 3		χ^2-test
	pre	post		Pre	post		pre	post	
No pain	0	0	χ^2=27.07 P=0.001***	0	0	χ^2=34.81 P=0.001***	0	16	χ^2=33.04 P=0.001***
Mild pain	0	0		0	13		13	14	
Moderate pain	0	10		10	17		17	0	
Severe pain	14	20		20	0		0	0	
Excruciating pain	16	0		0	0		0	0	
Total	30	30		30	30		30	30	

* significant at P 0.05 ** highly significant at P 0.01 *** very high significant at P 0.001.

Statistical significance difference between **Day 1** (χ^2=27.07 P=0.001***), **Day 2** (χ^2=34.81, P=0.001***)**, Day 3** (χ^2=33.04, P=0.001***) pretest and posttest level of pain. Statistical significance was calculated using chi-square.

Table showing PRE and POSTTEST LEVEL OF PAIN (Control)

	DAY 1		χ^2-test	DAY 2		χ^2-test	DAY 3		χ^2-test
	Pre	post		pre	post		pre	post	
No pain	0	0	χ^2=26.27 P=0.001***	0	0	χ^2=20.45 P=0.001***	0	1	χ^2=22.74 P=0.001***
Mild pain	0	0		0	1		1	14	
Moderate pain	0	3		3	19		19	15	
Severe pain	12	27		27	10		10	0	
Excruciating pain	18	0		0	0		0	0	
Total	30	30		30	30		30	30	

*significant at P 0.05 ** highly significant at P 0.01 *** very high significant at P 0.001 Statistically significant difference between **Day 1, Day 2, Day 3** pretest and post-test level of pain (Control group). Statistical significance was calculated using chi-square.

Table showing Association between level of pain reduction score and mother's demographic variables (Experiment)

		Level of pain reduction score				Total	Chi square test
		Below average (<8.10)		Above average (8.10)			
		n	%	n	%		
Age	< 20 years	9	81.8%	2	18.2%	11	**χ2=7.79 p=0.05***
	21 – 25 years	2	25.0%	6	75.0%	8	
	26 – 30 years	3	33.3%	6	66.7%	9	
	31 – 35 years	1	50.0%	1	50.0%	2	
Religion	Hindu	12	63.2%	7	36.8%	19	χ2=4.31 p=0.11
	Christian	3	33.3%	6	66.7%	9	
	Muslim			2	100.0%	2	
Educational Status	Non formal			3	100.0%	3	χ2=3.53 p=0.31
	Primary	7	58.3%	5	41.7%	12	
	Secondary	5	50.0%	5	50.0%	10	
	Graduate	3	60.0%	2	40.0%	5	
Occupation	Housewife	10	47.6%	11	52.4%	21	χ2=0.38 p=0.94
	Cooley	2	66.7%	1	33.3%	3	
	Pvt company	2	50.0%	2	50.0%	4	
	Others	1	50.0%	1	50.0%	2	
Income	< Rs.2000	5	50.0%	5	50.0%	10	χ2=0.00 p=1.00
	Rs.2000-3000	9	50.0%	9	50.0%	18	
	Rs.3000-4000	1	50.0%	1	50.0%	2	
Type of family	Joint family	6	46.2%	7	53.8%	13	χ2=3.21 p=0.20
	Nuclear family	8	66.7%	4	33.3%	12	
	Extended family	1	20.0%	4	80.0%	5	
Place of living	Rural	3	60.0%	2	40.0%	5	χ2=0.56 p=0.75
	Urban	8	44.4%	10	55.6%	18	
	Suburban	4	57.1%	3	42.9%	7	
Type of marriage	Relative	8	44.4%	10	55.6%	18	χ2=0.55 p=0.45
	Non relative	7	58.3%	5	41.7%	12	
Height	140 -145cm	1	25.0%	3	75.0%	4	χ2=3.33 p=0.35
	146 -150cm	7	53.8%	6	46.2%	13	
	151 -155cm	3	37.5%	5	62.5%	8	
	>155cm	4	80.0%	1	20.0%	5	
Weight	50 -55 kg	6	46.2%	7	53.8%	13	χ2=0.88 p=0.82
	56 -65 kg	4	66.7%	2	33.3%	6	
	65 -70 kg	3	42.9%	4	57.1%	7	
	>70 kg	2	50.0%	2	50.0%	4	
Food habits	Vegetarian	1	25.0%	3	75.0%	4	χ2=1.15 p=0.28
	Non vegetarian	14	53.8%	12	46.2%	26	
Age at menarche	< 12 yrs	4	80.0%	1	20.0%	5	**χ2=6.43 p=0.04***
	12 -15 yrs	8	36.4%	14	63.6%	22	
	16 -19 yrs	3	100.0%	0	0.0%	3	

* significant at P 0.05 ** highly significant at P 0.01 *** very high significant at P 0.001

Table shows the association between level of pain reduction score and mothers demographic variables in experimental group. There is a statistical significance between pain reduction and mother's age between 26-30 years, (**χ2=7.79p=0.05***), the mothers who attained menarche at the age between 12-15yrs were also having a marked reduction in pain (**χ2=6.43 p=0.04***) statistical value is calculated by using Chi-square test.

Table showing Association between level of pain reduction score and mother's obstetrical variables (experiment)

		Level of pain reduction score				Total	Chi square test
		Below average (<8.10)		Above average (>8.10)			
		n	%	n	%		
Time of 1st stage of delivery	6 -12 years	7	46.7%	8	53.3%	15	χ2=0.66 p=0.71
	13 -14 years	6	60.0%	4	40.0%	10	
	24 hours	2	40.0%	3	60.0%	5	
Episiotomy	Yes	10	66.7%	5	33.3%	15	χ2=0.68 p=0.71
	No	5	33.3%	10	66.7%	15	
Time of 3rd stage of labour	10 -15 minutes	6	42.9%	8	57.1%	14	χ2=2.80 p=0.24
	16 -30 minutes	6	60.0%	4	40.0%	10	
	30 -45 minutes	3	50.0%	3	50.0%	6	
When the postnatal exercise has to be started	Immediately after delivery	8	40.0%	12	60.0%	20	χ2=0.60 p=0.74
	First day of delivery	6	75.0%	2	25.0%	8	
	Third day of delivery	1	50.0%	1	50.0%	2	
How long the postnatal exercise can be done	1- 2 months	6	54.5%	5	45.5%	11	χ2=3.61 p=0.16
	2- 3 months	4	40.0%	6	60.0%	10	
	6 months	5	55.6%	4	44.4%	9	
Uses of postnatal exercise	To increase sleep	3	60.0%	2	40.0%	5	χ2=0.72 p=0.69
	To provide comfort	9	64.3%	5	35.7%	14	
	Strengthening of abdomen	3	27.3%	8	72.7%	11	
Colour of bleeding in first three days after delivery	Red	15	50.0%	15	50.0%	30	χ2=0.00 p=1.00
How often you will change pad in a day	Four	9	45.0%	11	55.0%	20	χ2=0.60 p=0.41
	Five	6	60.0%	4	40.0%	10	
Gravida	First baby	5	45.5%	6	54.5%	11	χ2=0.14 p=0.70
	Second baby	10	52.6%	9	47.4%	19	
Para	First baby	11	45.8%	13	54.2%	24	χ2=0.83 p=0.36
	Second baby	4	66.7%	2	33.3%	6	
Number of live children	One	11	45.8%	13	54.2%	24	χ2=0.83 p=0.36
	Two	4	66.7%	2	33.3%	6	

Table shows the association between level of pain reduction score and obstetrical variables. None of the variables are significant.

Table shows Association between level of pain reduction score and mother's demographic variables(Control)

		Level of pain reduction score				Total	Chi square test
		Below average (<5.06)		Above average (5.06)			
		n	%	n	%		
Age	> 20 years	6	60.0%	4	40.0%	10	χ2=2.50 p=0.47
	21 - 25 years	3	30.0%	7	70.0%	10	
	26 - 30 years	5	62.5%	3	37.5%	8	
	31 - 35 years	1	50.0%	1	50.0%	2	
Religion	Hindu	9	56.3%	7	43.8%	16	χ2=0.58 p=0.74
	Christian	5	41.7%	7	58.3%	12	
	Muslim	1	50.0%	1	50.0%	2	
Educational Status	Non formal	1	33.3%	2	66.7%	3	χ2=4.25 p=0.23
	Primary	9	69.2%	4	30.8%	13	
	Secondary	3	50.0%	3	50.0%	6	
	Graduate	2	25.0%	6	75.0%	8	

Occupation	Housewife	11	52.4%	10	47.6%	21	χ2=1.58 p=0.66
	Cooly	1	100.0%			1	
	Private company	2	40.0%	3	60.0%	5	
	Others	1	33.3%	2	66.7%	3	
Income	< Rs.2000	7	58.3%	5	41.7%	12	χ2=1.33 p=0.51
	Rs.2000 - 3000	7	50.0%	7	50.0%	14	
	Rs.3000-4000	1	25.0%	3	75.0%	4	
Type of family	Joint family	6	54.5%	5	45.5%	11	χ2=1.69 p=0.41
	Nuclear family	6	40.0%	9	60.0%	15	
	Extended family	3	75.0%	1	25.0%	4	
Place of living	Rural	5	55.6%	4	44.4%	9	χ2=0.56 p=0.75
	Urban	6	42.9%	8	57.1%	14	
	Suburban	4	57.1%	3	42.9%	7	
Type marriage of	Relative	8	61.5%	5	38.5%	13	χ2=1.22 p=0.26
	Non relative	7	41.2%	10	58.8%	17	
Height	140 -145cm	1	33.3%	2	66.7%	3	χ2=2.26 p=0.52
	146 -150cm	9	60.0%	6	40.0%	15	
	151 -155cm	3	33.3%	6	66.7%	9	
	>155cm	2	66.7%	1	33.3%	3	
Weight	50 -55 kg	8	50.0%	8	50.0%	16	χ2=2.34 p=0.50
	56 -65 kg	3	42.9%	4	57.1%	7	
	65 -70 kg	2	40.0%	3	60.0%	5	
	>70 kg	2	100.0%			2	
Food habits	Vegetarian	1	33.3%	2	66.7%	3	χ2=0.37 p=054
	Non vegetarian	14	51.9%	13	48.1%	27	
Age menarche at	< 12 yrs	2	66.7%	1	33.3%	3	χ2=2.86 p=0.23
	12 -15 yrs	9	40.9%	13	59.1%	22	
	16 -19 yrs	4	80.0%	1	20.0%	5	

* significant at P 0.05 ** highly significant at P 0.01 *** very high significant at P 0.001

Table shows the association between level of pain reduction score and children demographic variables. None of the variable are significant.

Table shows Association between level of pain reduction score and mothers obstetrical variables (experimental group)

		Level of pain reduction score				Total	Chi square test
		Below average (<5.06)		Above average (>5.06)			
		n	%	n	%		
Time of 1st stage of delivery	6 -12 years	5	50.0%	5	50.0%	10	χ2=0.20 p=0.90
	13 -14 years	5	45.5%	6	54.5%	11	
	24 years	5	55.6%	4	44.4%	9	
Episiotomy	Yes	12	57.1%	9	42.9%	21	χ2=1.42 p=0.22
	No	3	33.3%	6	66.7%	9	
Time of 3rd stage of labour	10 -15 minutes	6	46.2%	7	53.8%	13	χ2=0.83 p=0.65
	16 -30 minutes	5	45.5%	6	54.5%	11	
	30 -45 minutes	4	66.7%	2	33.3%	6	
When the postnatal exercise has to be started	Immediately after delivery	8	53.3%	7	46.7%	15	χ2=0.40 p=0.81
	First day of delivery	6	50.0%	6	50.0%	12	
	Third day of delivery	1	33.3%	2	66.7%	3	
How long the postnatal exercise can be done	1- 2 months	2	22.2%	7	77.8%	9	χ2=3.97 p=0.13
	2- 3 months	5	62.5%	3	37.5%	8	
	6 months	8	61.5%	5	38.5%	13	

Uses of postnatal exercise	To increase sleep	5	71.4%	2	28.6%	7	$\chi2=1.72$ p=0.42
	To provide comfort	5	45.5%	6	54.5%	11	
	Strengthening of the abdominal	5	41.7%	7	58.3%	12	
Colour of bleeding in first three days after delivery	Red	15	50.0%	15	50.0%	30	$\chi2=0.00$ p=1.00
How often you will change pad in a day	Four	8	50.0%	8	50.0%	16	$\chi2=0.00$ p=1.00
	Five	7	50.0%	7	50.0%	14	
Gravida	First baby	7	50.0%	7	50.0%	14	$\chi2=0.00$ p=1.00
	Second baby	8	50.0%	8	50.0%	16	
Para	First baby	13	54.2%	11	45.8%	24	$\chi2=0.83$ p=0.36
	Second baby	2	33.3%	4	66.7%	6	
Number of live children	One	13	54.2%	11	45.8%	24	$\chi2=0.83$ p=0.36
	Two	2	33.3%	4	66.7%	6	

* significant at P 0.05 ** highly significant at P 0.01 *** very high significant at P 0.001

Table shows the association between level of pain reduction score and obstetrical variables. None of the variables are significant.

The final results include the total 53.3% of mothers in experimental group and 60.0% of mothers in control group are having slow Excruciating pain in pre-test, and about 86.7% of mothers in experimental group and 93.3% of mothers in control group are having slow involution of uterus in pre-test.

The association between level of pain reduction score and mothers demographic variables in experimental group. There is a statistical significance between pain reduction and mother's age between 26-30 years, (**$\chi2=7.79p=0.05$***), the mothers who attained menarche at the age between 12-15 years were also having a marked reduction in pain (**$\chi2=6.43$ p=0.04***) statistical value is calculated by using Chi square test.

CONCLUSION: Afterpains is a major problem remains in mothers after delivery problem in India. Since nurses have a key role in preventive, curative, rehabilitative aspects of healthcare. Nursing personnel should educate the mothers so that the quality of life will be improved. The intervention was found to be very effective in prevention of pains in mothers and fast involution of uterus.

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