

A Study to Evaluate the Effectiveness of Prone Position on Afterpains and Involution of Uterus Among Primi Mothers Delivered in Shri Vinoba Bhave Civil Hospital, Silvassa

Jyoti Shravanbhai Thakariya¹, Bincy Mathew²

¹M.Sc. Nursing, Shri Vinoba Bhave College Of Nursing Silvassa

²Associate Professor, Shri Vinoba Bhave College Of Nursing Silvassa

ABSTRACT

All postnatal mothers experience pain in some form or the another. Crampy pain in the abdomen known as afterpains is a determinant of the uterine involution which is a more evident clinically in the first four days of the postpartum period. And uterine involution is a natural process that involves your pregnant uterus returning to its pre- pregnancy state. The process begins after you deliver your baby and placenta and takes about six weeks to complete.

AIMS: The main aim of the study was to assess the effectiveness of prone position on afterpains and involution of uterus among primi postnatal mothers.

MATERIALS AND METHODS: A Quasi-experimental time series non- equivalent control group design was adopted for the study. 100 primi postnatal mothers were selected by using non-probability convenient sampling technique.

RESULTS: The result shows that obtained data of effectiveness of prone position on afterpains and involution of uterus are significant at the level of $P < 0.05$ as there is significant difference between the control group and Experimental group scores. So both the research hypothesis H1 and H2 are accepted for association of after pain with educational status and place of living and is rejected in all other variables.

CONCLUSION: It was concluded that the prone position was effective on afterpains and involution of uterus among primi postnatal mothers in experimental group.

KEYWORDS: Effectiveness, Prone position, Afterpains, Involution of Uterus, Primi Postnatal Mothers.

INTRODUCTION

Childbirth is one of the most important events in a women's life. The wonder of motherhood is the enjoyable journey that is felt only by the mother after 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.

Childbirth includes different Stages, and in ever stage, the mother plays a unique role in experiencing the important events that occur through her journey. The different stages are broadly classified into three main aspects, namely, antenatal period, intranatal period, and postnatal period. 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, and leucorrhea, cervical ectopy (erosion), and backache, retroversion of the uterus, anemia, breast problems and episiotomy discomforts. The first 6 weeks after the birth of the baby is known as postpartum period or puerperium. During this time, mothers experience numerous physiological 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 where the placenta is separated. There are many reasons for the sub involution of the uterus. Sometimes it can be associated with certain factors such as inadequate breast feeding, lack of maternal care during pregnancy, and puerperium and puerperal infections. Certain complications may be fatal and would be recognized early and dealt with prompt care. Maternal mortality and morbidity rates measure the risk of women dying from puerperal causes.

After the birth of the baby placenta separates from the wall of the uterus and expelled. Immediately the uterus contracts tightly to seal off open blood vessels on uterine wall at placental site. These uterine contractions called afterpains. Afterpains refers to the infrequent, spasmodic pain felt in the lower abdomen after delivery for a variable period of 1-3 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.

Uterine muscle tone decreases with increase in number of pregnancies and this may lead to more severe cramping. Breast feeding the baby stimulates the production of the hormone oxytocin by the pituitary gland. Oxytocin triggers the let-down reflex that releases milk from the breasts and causes the uterus to contracts even more. This effect creates additional abdominal discomfort. Cramping will be most intense during 1st day after the delivery and should taper off on 3rd day. Afterpains will be relieved if the womb remains firmly contracted. When the bladder is full it is unable for the uterus to contract and it tends to relax, thus prohibiting relief from afterpains.

STATEMENT OF THE PROBLEM

“A study to evaluate the effectiveness of prone position on afterpains and involution of uterus among primi mothers delivered in shri vinoba bhava civil hospital, Silvassa.”

OBJECTIVES OF THE STUDY

- Evaluate the effectiveness of prone position on level of afterpains among Primi postnatal mothers between experimental and control group.
- Evaluate the effectiveness of prone position on involution of the uterus among Primi postnatal mothers between experimental and control group.
- Find an Association between the pre intervention level of afterpains and involution of uterus with their socio demographic variables

HYPOTHESIS

- **H₁:** There is a significant difference in the level of afterpains outcome after the implementation of prone position among Primi Postnatal mothers between the experimental and control group at 0.05 level of significance.
- **H₂:** There is a significant difference in the level of involution of uterus after the implementation of prone Position among Primi Postnatal mothers between experimental and Control Group at 0.05 levels of Significance.
- **H₃:** There is a significant association between the Pre intervention level of afterpains and involution of uterus with their selected socio-demographic Variables.

ASSUMPTIONS

- The degree of afterpains will vary from mother to mother.
- Pain is Subjective in nature; No one can rate the intensity of Pain except the person who experiences it.
- Uterine involution is an inevitable natural Phenomenon.

METHODOLOGY

Study Design: Time series research design

Research Setting: Postnatal wards at shri vinoba bhav civil Hospital Silvassa.

Population: All primi postnatal mothers

Sample size: 100 samples of Primi Postnatal mothers

Sampling Technique: Non Probability Convenient sampling Technique.

Inclusion criteria:

- Primi postnatal mothers who have undergone normal vaginal delivery with episiotomy.
- Primi postnatal mothers who are willing to participate.
- Primi postnatal mothers within 6 hours of normal vaginal delivery.

Exclusion criteria:

- Primi postnatal mothers with postnatal complications like postpartum hemorrhage, puerperal infection, puerperal pyrexia.
- Primi postnatal mothers who delivered twins.
- Primi postnatal mothers who are not able to understand Gujarati and Hindi language.
- Primi postnatal mothers with cervical or perineal tear.
- Primi mothers who used abdominal binders.

DESCRIPTION OF TOOL FOR DATA COLLECTION

SECTION-1: Socio-demographic variables

SECTION-2: Clinical variables

SECTION-3: Numerical pain rating scale

SECTION-4: Measurement of fundal height

DATA ANALYSIS AND INTERRETATION

Section-1: frequency and percentage distribution of sample depending on the socio-demographic variables among control group and experimental group.

SR NO	SOCIO DEMOGRAPHIC VARIABLES		CONTROL GROUP (n=50)		EXPERIMENTAL GROUP (n=50)	
			Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1.	Age (in years)	≤ 20 years	9	18%	18	36%
		21-25 years	28	56%	25	50%
		26-30 years	13	26%	6	12%
		31-35 years	0	0%	1	2%
2.	Educational status	No Formal Education	1	2%	2	4%
		Primary school Education	10	20%	11	22%
		Secondary School Education	22	44%	13	26%
		Higher Secondary School education	8	16%	16	32%
		Diploma Programme	0	0%	0	0%
		Graduate Degree Programme	8	16%	8	16%
		Post Graduate Degree Programme	1	2%	0	0%
	Occup	Home maker	49	98%	47	94%
		Daily Wage	0	0%	1	2%

3.		Private Employee	1	2%	1	2%
		Government Employee	0	0%	0	0%
		Self-Business	0	0%	1	2%
4.	Food Habits	Vegetarian	3	6%	7	14%
		Non- Vegetarian	47	94%	43	86%
5.	Place Of	Rural	38	76%	36	72%
		Urban	12	24%	14	28%
6.	Religion	Hindu	48	96%	50	100%
		Muslim	2	4%	0	0%
		Christian	0	0%	0	0%
		Mention if any others	0	0%	0	0%
7.	Marital Status	Married	42	84%	40	80%
		Unmarried	8	16%	10	20%
		Divorce	0	0%	0	0%
		Widow	0	0%	0	0%
		Living together	0	0%	0	0%

Section- 2: frequency and percentage distribution of sample depending on the clinical variables among control group and experimental group.

SR. NO	CLINICAL DATA		CONTROL GROUP (n=50)		EXPERIMENTAL GROUP (n=50)	
			Frequency	Percentage	Frequency	Percentage
1.	Gestational age of the	Preterm	1	2%	1	2%
		Term	49	98%	49	98%
		Post term	0	0%	0	0%
2.	Number of the	2	9	18%	16	32%

		3	25	50%	24	48%
		4	12	24%	10	20%
		≥ 5	4	8%	0	0%
3.	Breast feeding per day	Adequate (8-12 times/day)	28	56%	26	52%
		Inadequate (<7 time/day)	22	44%	24	48%
		More than Adequate (> 12 times/day)	0	0%	0	0%

Section-3.1: Assess the effectiveness of prone position on afterpains among primi postnatal mothers in control group through ANOVA

Control Group		SS	df	MS	f	Significant
Afterpains	Between Groups	407.064	4	101.766	137.749	.00001*** HS
	Within Groups	181	245	0.7388		
	Total	588.064	249			

Section-3.2: Assess the effectiveness of prone position on afterpains among primi postnatal mothers in Experimental Group through ANOVA.

Experimental Group		SS	df	MS	F	Significant
Afterpains	Between Groups	821.584	4	205.396	227.577	.00001*** HS
	Within Groups	221.12	245	0.9025		
	Total	1042.704	249			

Section 4.1: Assess the effectiveness of prone position on Involution of uterus among primi postnatal mothers in control group through ANOVA.

Control Group		SS	df	MS	F	Significant
Involution of uterus	Between Groups	168.0033	2	84.0017	48.75526	.00001*** HS
	Within Groups	253.27	147	1.7229		
	Total	421.2733	149			

Section 4.2: Assess the effectiveness of prone position on involution of uterus among primi postnatal mothers in Experimental Group through ANOVA.

Experimental Group		SS	df	MS	F	Significant
Involution of uterus	Between Groups	353.9321	2	176.9661	84.02735	.00001*** HS
	Within Groups	309.5898	147	2.1061		
	Total	663.5219	149			

postnatal mothers in Experimental Group through ANOVA.

Section 4.3: Association between demographic variables and afterpains.

The chi-square analysis shows that the calculated value for the level of afterpains has association with a few socio demographic variables. They are educational status ($P= 0.033$) and place of living ($P=0.005$). The research hypothesis H3 is accepted for association of after pain with educational status and place of living and is rejected for association of afterpains with all other socio-demographic variables such as Age ($P= 0.44, 0.427$), occupation ($P=0.691, 0.293$), food habits ($P=0.932, 0.318$), religion ($P= 0.93$), and marital status ($P=0.086, 0.470$).

Hence, the research hypothesis, “There is a significant association between pre intervention level of afterpains score of primi postnatal mothers at the level of $P<0.05$ ” is rejected.

Section 4.4: Association between demographic variables and involution of the uterus.

The chi-square analysis shows that the calculated value for the involution of uterus did not show a significant association with the age ($P=0, 0.718$), educational status ($P=0, 0.564$), occupation ($P=0, 0.933$), food habits ($P=0, 0.292$), place of living ($P=0, 0.510$), religion ($0,0$), and marital status ($P=0, 0.758$). Thus it can be interpreted that there was no significant association between involution of uterus and selected socio demographic variables. The research hypothesis H3 is rejected for the association of involution of uterus with all the socio demographic variables.

Hence, the research hypothesis, “There is a significant association between pre intervention level with involution of uterus and socio demographic variables of primi postnatal mothers at the level of $P<0.05$ ” is rejected.

CONCLUSION

The chapter explains the statistical analysis and interpretation of data. The characteristics of samples were analyzed by using frequency and percentage. Mean, Standard deviation, independent t test and ANOVA was used to assess the effectiveness of prone position among primi postnatal mothers with normal vaginal delivery. And chi-square test was used to find association between the pre intervention level of afterpains and involution of uterus with their selected socio demographic variables.

REFERENCES

1. Sankhla S. Issue 7 www.jetir.org (ISSN-2349-5162). JETIR2207096 Journal of Emerging Technologies and Innovative Research [Internet]. 2022; 9. Available from: <https://www.jetir.org/papers/JETIR2207096.pdf>
2. Dash M. Effectiveness of Selected Nursing Interventions on After-Pain among the Postnatal Mothers in the Selected Hospital in Puducherry. International Journal of Vaccines & Vaccination. 2016 Dec 28; 3 (2).
3. Chauhan G, Tadi P. Physiology, Postpartum Changes [Internet]. PubMed. Treasure Island (FL): StatPearls Publishing; 2020. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK555904/>
4. After the birth of the baby placenta separates from the wall of the uterus and expelled. Immediately the uterus contracts tightly to seal off open blood vessels on uterine - Google Search [Internet]. www.google.com. [cited 2024 Jan 2]. Available from: <https://www.google.com/search?q=After+the+birth+of+the+baby+placenta+separates+from+the+wall+of+the+uterus+and+expelled.+Immediately+the+uterus+co>

5. Murray D. Oxytocin and Breastfeeding [Internet]. Verywell Family; 2016. Available from: <https://www.verywellfamily.com/oxytocin-and-breastfeeding-3574977>
6. Aziato L, Acheampong AK, Umoar KL. Labour pain experiences and perceptions: a qualitative study among post-partum women in Ghana. *BMC Pregnancy and Childbirth*. 2017 Feb 22; 17(1).
7. Chauhan G, Tadi P. Physiology, Postpartum Changes [Internet]. PubMed. Treasure Island (FL): StatPearls Publishing; 2020. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK555904/>
8. Holdcroft A, Snidvongs S, Cason A, Doré CJ, Berkley KJ. Pain and uterine contractions during breast feeding in the immediate post-partum period increase with parity. *Pain*. 2003 Aug; 104(3):589–96.
9. Uterus Involution: Causes, Process & How It Feels [Internet]. Cleveland Clinic. Available from: <https://my.clevelandclinic.org/health/diseases/22655-uterus-involution>
10. Deussen AR, Ashwood P, Martis R, Stewart F, Grzeskowiak LE. Relief of pain due to uterine cramping/involution after birth. *Cochrane Database of Systematic Reviews*. 2020 Oct 20;2020(10).
11. Sumy PJ, S. Malarvizhi, M Navaneetha. A Conceptual Framework for Behavioral Therapy Nursing Research Utilizing J.W. Kenny’s Open System Model Framework. *International Journal of Health Sciences and Research*. 2023 Sep 12;13(9):87–92.
12. [appammal_kurusamy.pdf](http://repository-tnmgrmu.ac.in/9548/1/300316314appammal_kurusamy.pdf) 2014 [cited 2024 Jan 2]. Available from: http://repository-tnmgrmu.ac.in/9548/1/300316314appammal_kurusamy.pdf
13. Basvanthappa, B.T., *Nursing Research*, 2018, 5th edition, Published by Jaypee Brothers Medical Publishers Pvt Ltd, New Delhi, page no.473
14. Shi S. Literature Review: An Overview [Internet]. 2006. Available from: <https://web.cortland.edu/shis/651/LitRevOverview.pdf>
15. Saxena A, G VM, Gupta S. A Study to Assess the Effectiveness of Kegel Exercise and Prone Position on Afterpains and Involution of Uterus Among Postnatal Mothers at Selected Hospitals of Moradabad U.P. *Journal of Coastal Life Medicine* [Internet]. 2023 May 29 [cited 2023 Dec 20];11:1506–10. Available from: <https://www.jclmm.com/index.php/journal/article/view/1191>
16. Sahu A, Biswal A, Santosh S. A Quasi-Experimental Study to Assess the Effectiveness of Kegel Exercise and Prone Position on Involution of Uterus Among Post Natal Mothers Admitted in Selected Hospital, Bhilai (C.G.). *International Journal of Recent Advances in Multidisciplinary Topics* [Internet]. 2023 Mar 8 [cited 2024 Jan 2];4(2):81–3. Available from: <https://journals.ijramt.com/index.php/ijramt/article/view/2569>
17. N. Siva Subramanian(1) Munjapaya Krishna Dhiralal(2) B. Mahalakshmi(2) Prakash(3) (2023) An experimental study was conducted to assess the effect of prone position on spasmodi - Google Search [Internet]. www.google.com. [cited 2024 Jan 2]. Available from: <https://www.google.com/search?>