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A Study To Assess The Effectiveness Of Breast Crawl Technique On Initiation Of Breastfeeding Among Primi Mothers At Selected Hospitals Of Jaipur, Rajasthan

[1]Ms. Mamta Yadav, [2]Dr. Ramachandra S. Hooli

[1.] Ph. D Nursing Scholar, Faculty of Nursing, Parul University Vadodara, Gujarat
[2.] Research Supervisor, Faculty of Nursing, Parul University Vadodara, Gujarat
*Corresponding Author: Ms. Mamta Yadav
Email: mamtayadav0666@gmail.com

ABSTRACT

Background: The Initiation of breastfeeding within first hour of birth and feeding the first yellowish thick milk protects the child from illness and diseases. To assess the effectiveness of breast crawl technique on initiation of breast feeding and intensity of episiotomy suturing pain among primi mothers at selected Hospitals of Jaipur Rajasthan.
Objective: To assess the effectiveness of breast crawl technique and Compare scores between experimental group and control group and it's association between the selected demographic variables on initiation of breastfeeding among primi mothers.
Methodology- Quantitative research approach with post test only design was used to achieve the objectives of the study. This study was conducted in the labor ward at SDMH Jaipur Rajasthan. A total of 300 samples were recruited with Simple random sampling technique for this study which composed of 150 each in experimental and control group. Breast crawl technique was implemented for experimental group participants along with routine care whereas control group participants were only on routine care. Post test was done for both experimental and control group participants. The plan of data analysis was drawn on the basis of objectives and testing of hypothesis by using descriptive and inferential statistics.
Results -The results revealed that The calculated p-value was 0.93, indicating no significant effect of the breast crawl technique on the initiation of breastfeeding. These study findings implied that the simple measure like breast crawl technique is easy to do and practice to maintain initiation of breastfeeding among primi mothers.
Conclusion- In the experimental group, 42% of mothers initiated breastfeeding within 46 to 60 minutes, 36% within 31 to 45 minutes, and 22% after 66 minutes. In the control group, 43.33% initiated breastfeeding within 46 to 60 minutes, 34% within 31 to 45 minutes, and 22.67% after 66 minutes.

KEYWORDS: Breast crawl technique, Initiation of breastfeeding, Intensity of episiotomy suturing pain and primi mothers.

INTRODUCTION

Early initiation of breastfeeding within one hour of birth and feeding colostrum protects newborns from infections and reduces neonatal mortality. WHO, UNICEF, WABA, and BPNI strongly recommend early breastfeeding. Breast crawl is a natural instinctive behavior in which a newborn placed skin-to-skin on the mother's chest immediately after birth moves towards the breast and initiates breastfeeding independently. Usually completed within 35–50 minutes, breast crawl promotes successful breastfeeding, warmth, mother–infant bonding, safe bacterial colonization, and neurological development. Early feeding also prevents hypoglycemia and infections in newborns. For mothers, breast crawl stimulates oxytocin release, leading to better uterine contractions, faster placental expulsion, reduced blood loss, prevention of anemia, and reduced episiotomy pain. WHO and UNICEF recognized breast crawl as a simple, evidence-based, and cost-effective method suitable for all birth settings. Thus, breast crawl is an effective technique for early initiation of breastfeeding and improving maternal and neonatal outcomes.

OBJECTIVES OF THE STUDY

1. To assess the effectiveness of breast crawl technique on initiation of breastfeeding among primi mothers.

2. To compare the effectiveness of breast crawl technique scores between experimental group and control group on initiation of breastfeeding among primi mothers.
3. To find out the association between the selected demographic variables with initiation of breastfeeding among primi mothers.

HYPOTHESES

- **H1**:-There will be a significant difference in scores of initiation of breastfeeding among primi mothers who were subjected to breast crawl technique between experimental group and control group.
- **H2:**-There will be association between the selected demographic variables and initiation of breastfeeding among primi mothers.

REVIEW OF LITERATURE-It involves systematic identification, location, scrutinization and summary of written material that contains information relevant to the research problem. The related literature was organized and presented under the following headings.

1. **Literature related to the breast crawl technique.**
2. **Literature related to the initiation of breastfeeding.**

METHODOLOGY

Quantitative research approach with post test only design was used to achieve the objectives of the study. This study was conducted in the labor ward at SDMH Jaipur Rajasthan. The target population was third stage of labor A total of 300 samples were recruited with Simple random sampling technique for this study which composed of 150 each in experimental and control group. The standardized structured instrument was selected that included modified LATCH scale The structured instrument composed of 4 parts, which included

Part – I- Demographic variables
Part – II- Obstetrical variables
Part – III- Modified LACTH scale
Part – IV- Numerical Pain Rating Scale

The reliability of the modified LATCH scale were established by the test retest method the "r" value was calculated by using Karl Pearson's coefficient correlation which were 0.98.

INCLUSION CRITERIA

Normal birth including instrumental assisted birth.Healthy pregnancy, full-term newborn infant. Newborn who are thermodynamically stable not requiring any resuscitation. Primi mothers aged 18- 30 years who were undergoing full term normal spontaneous vaginal delivery. Primi mothers with newborn and Apgar score more than 7.Primi mothers who were willing to participate in the study.Primi mothers who were able to talk and understand the language Hindi or English.

EXCLUSION CRITERIA

High risk pregnancy, Cesarean Section, baby needs any resuscitation or transfer to Neonatal Intensive Care Unit (NICU) Low APGAR score (<7) and new born with high risk condition. Primi mothers who had high risk conditions. Primi mothers who had nipple abnormalities like cracked nipple. Newborn who had high risk conditions

DATA COLLECTION PROCEDURE

Data collection was carried out for the main study from 26/05/2022 to 31/12/2022. The main study participants were selected by simple random sampling technique. The study was carried out in obstetrics and gynecology department of Santokba Durlabhji Memorial Hospital Jaipur Rajasthan.

DATA ANALYSIS

The plan of data analysis was drawn on the basis of objectives and testing of hypothesis by using descriptive and inferential statistics.

RESULT-

Descriptive and inferential statistics were used for the analysis of the data, as per the objective and hypothesis of the study.
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SECTION – A-Distribution of demographic, obstetrical variables, initiation ofbreastfeeding and intensity of episiotomy suturing pain among experimental and control group.

Table – 1- frequency and percentage distribution of sample according to demographic variable in experimental and control group.

Sl.No.	Demographic Variable		Group			
			Experiment		Control	
			No.	%	No.	%
1	Age of the primi mothers	18-20 years	43	28.67	38	25.33
		21-25 years	88	58.67	89	59.33
		26-30 years	19	12.67	23	15.33
2	Religion	Hindu	124	82.67	126	84
		Christian	3	2	3	2
		Muslim	23	15.33	21	14
3	Marital Status	Married	149	99.33	149	99.33
		Unmarried	0	0	1	0.67
		Separated/ Divorced	1	0.67	0	0
4	Educational status of primi mothers	Literate	60	40	58	38.67
		Primary	46	30.67	47	31.33
		Secondary	34	22.67	35	23.33
		Graduate and above	10	6.67	10	6.67
5	Occupation of primi mothers	Home Maker	63	42	65	43.33
		Daily Labour	30	20	37	24.67
		Professional	24	16	19	12.67
		Business	33	22	29	19.33
6	Family Income Monthly (Rupees)	Below 10000	57	38	59	39.33
		10000-20000	36	24	30	20
		30001-40000	41	27.33	46	30.67
		Above 60000	16	10.67	15	10
7	Type of family	Nuclear	66	44	69	46
		Joint	39	26	39	26
		Extended	45	30	42	28
8	Diet pattern of primi	vegetarian	47	31.33	53	35.33
		Mixed diet	103	68.67	97	64.67
9	Habitat	Rural	53	35.33	52	34.67
		Urban	97	64.67	98	65.33

Table – 2- frequency and percentage distribution of sample according to obstetrical variables in experimental and control group.

SL.No.	**Obsetetrical variable**		**Group**			
			Experiment		**Control**	
			No.	**%**	**No.**	**%**
1	Age at Menarche	12-13 years	101	67.33	107	71.33
		14-15 years	40	26.67	37	24.67
		16-17 years	9	6	6	4
2	Age at Marriage	18 Years	31	20.67	20	13.33
		19-22 years	39	26	41	27.33
		23-26 years	62	41.33	67	44.67
		27-30 years	18	12	22	14.67
3	Type of Marriage	Maternal	13	8.67	38	25.33
		Paternal	44	29.33	30	20
		Non-consanguineous	93	62	82	54.67
4	Gestational Age	37 Weeks	2	1.33	8	5.33
		37-38 Weeks	72	48	66	44
		39-40 Weeks	71	47.33	71	47.33
		Above 40 Weeks	5	3.33	5	3.33

5	I stage duration	6-8 Hours	33	22	24	16
		8-12 Hours	114	76	124	82.67
		>12 Hours	3	2	2	1.33
6	II stage duration	0.5-1 Hours	138	92	142	94.67
		1-1.5 Hours	12	8	8	5.33
		1.5-2 Hours	0	0	0	0
		>2 Hours	0	0	0	0
7	Gender of the new born	Male	81	54	86	57.33
		Female	69	46	64	42.67
8	Birth weight of the new born	<2.5 Kg	15	10	10	6.67
		2.5-3.00 Kg	114	76	126	84
		>3.00 Kg	21	14	14	9.33
9	Apgar Score	7	3	2	2	1.33
		8	6	4	4	2.67
		9	141	94	144	96

Table –3-asssociation between demographic data and initiation of breast feeding in control group.

S.No.	Demographic Variable		Initiation of breast feed for control Group						P value
			31-45 minutes		46-60 minutes		>60 minutes		
			No.	%	No.	%	No.	%	
1	Age of the primi mothers	18-20 years	12	8	18	12	8	5.33	0.262
		21-25 years	31	20.67	41	27.33	17	11.33	
		26-30 years	8	5.33	6	4	9	6	
2	Religion	Hindu	45	30	54	36	27	18	0.388
		Christian	0	0	1	0.67	2	1.33	
		Muslim	6	4	10	6.67	5	3.33	
3	Marital Status	Married	50	33.33	65	43.33	34	22.67	0.3764
		Unmarried	1	0.67	0	0	0	0	
		Separated/ Divorced	0	0	0	0	0	0	
4	Educational status of primi mothers	Literate	12	8	28	18.67	18	12	0.0883
		Primary	19	12.67	18	12	10	6.67	
		Secondary	17	11.33	13	8.67	5	3.33	
		Graduate and above	3	2	6	4	1	0.67	
5	Occupation of primi mothers	Home Maker	25	16.67	28	18.67	12	8	0.602
		Daily Labour	8	5.33	19	12.67	10	6.67	
		Professional	8	5.33	6	4	5	3.33	
		Business	10	6.67	12	8	7	4.67	
6	Family Income Monthly (Rupees)	Below 10000	16	10.67	29	19.33	14	9.33	0.2117
		10000-20000	8	5.33	15	10	7	4.67	
		30001-40000	23	15.33	15	10	8	5.33	
		Above 60000	4	2.67	6	4	5	3.33	
7	Type of family	Nuclear	22	14.67	27	18	20	13.33	0.4885
		Joint	13	8.67	18	12	8	5.33	
		Extended	16	10.67	20	13.33	6	4	
8	Diet pattern of primi	vegetarian	24	16	18	12	11	7.33	0.0003059
		Mixed diet	27	18	47	31.33	23	15.33	
9	Habitat	Rural	20	13.33	21	14	11	7.33	0.7026
		Urban	31	20.67	44	29.33	23	15.33	

The table no. 3 describes the relationship between various demographic variables and the initiation of breastfeeding among the control group, categorized by the time intervals 31-45 minutes, 46-60 minutes, and >60 minutes after delivery. Each category includes the number (No.) and percentage (%) of participants. The statistical significance of the relationships is indicated by the P-value.

The association with the age group and initiation of breast feeding in control group shows that The P-value of 0.262 suggests no significant association between age and breastfeeding initiation.
The association with the religion and initiation of breast feeding in control group shows The P-value of 0.388 indicates no significant relationship between religion and breastfeeding initiation.
The association with the marital status and initiation of breast feeding in control group shows The P-value of 0.3764 suggests no significant link between marital status and breastfeeding initiation.
The association with the Education status of mothers and initiation of breast feeding in control group shows The P-value of 0.0883 indicates no significant association between educational status and breastfeeding initiation.
The association with the family monthly income and initiation of breast feeding The P-value of 0.602 shows no significant association between occupation and breastfeeding initiation.
The association with the occupation of mothers and initiation of breast feeding in control group shows that The P-value of 0.2117 indicates no significant association.
The association with the type of family and initiation of breast feeding in control group shows the p-value (0.4885) indicates no significant association between family type and initiation time.
The association with the diet pattern of mothers and initiation of breast feeding in control group shows The p-value (0.0003) shows a significant association between diet pattern and breastfeeding initiation time.
The association with the habitat of mothers and initiation of breast feeding in control group shows the p-value (0.7026) indicates no significant association between habitat and initiation time.

Table –4-Asssociation between Obstetrical data and initiation of breast feeding in control group.

S. No.	Obstetrical variable		Initiation of breast feed for control Group						P value
			31-45 minutes		46-60 minutes		>60 minutes		
			No.	%	No.	%	No.	%	
1	Age at Menarche	12-13 years	30	20	47	31.33	30	20	0.03248
		14-15 years	17	11.33	17	11.33	3	2	
		16-17 years	4	2.67	1	0.67	1	0.67	
2	Age at Marriage	18 Years	10	6.67	6	4	4	2.67	0.06388
		19-22 years	13	8.67	23	15.33	5	3.33	
		23-26 years	20	13.33	31	20.67	16	10.67	
		27-30 years	8	5.33	5	3.33	9	6	
3	Type of Marriage	Maternal	14	9.33	20	13.33	4	2.67	0.0002563
		Paternal	19	12.67	7	4.67	4	2.67	
		Non-consanguineous	18	12	38	25.33	26	17.33	
4	Gestational Age	37 Weeks	0	0	3	2	5	3.33	<0.000001
		37-38 Weeks	14	9.33	40	26.67	12	8	
		39-40 Weeks	35	23.33	21	14	15	10	
		Above 40 Weeks	2	1.33	1	0.67	2	1.33	
5	I stage duration of labour	6-8 Hours	12	8	6	4	6	4	0.223
		8-12 Hours	39	26	58	38.67	27	18	
		>12 Hours	0	0	1	0.67	1	0.67	
6	II stage duration of labour	0.5-1 Hours	49	32.67	60	40	33	22	0.5212
		1-1.5 Hours	2	1.33	5	3.33	1	0.67	
		1.5-2 Hours	0	0	0	0	0	0	
		>2 Hours	0	0	0	0	0	0	
7	Gender of the new born	Male	35	23.33	25	16.67	26	17.33	**0.0001829**
		Female	16	10.67	40	26.67	8	5.33	
8		<2.5 Kg	1	0.67	5	3.33	4	2.67	0.271

	Birth weight of the new born	2.5-3.00 Kg	46	30.67	55	36.67	25	16.67	
		>3.00 Kg	4	2.67	5	3.33	5	3.33	
9	Apgar Score	7	1	0.67	0	0	1	0.67	0.5656
		8	2	1.33	2	1.33	0	0	
		9	48	32	63	42	33	22	

Table no. 4 provides an analysis of obstetrical variables in relation to the initiation of breastfeeding among a control group, with initiation categorized into three time frames: 31-45 minutes, 46-60 minutes, and >60 minutes after birth.

The association with the age of menarche and initiation of breast feeding in control group shows The association was statistically significant (P = 0.03248).
The association with the age of marriage and initiation of breast feeding in control group shows However, this variable did not reach statistical significance (P = 0.06388).
The association with the type of marriage and initiation of breast feeding in control group shows This association was highly significant (P = 0.0002563).
The association with the Gestational Age and initiation of breast feeding in control group shows This variable was extremely significant (P < 0.000001).
The association with the I stage duration of labour and initiation of breast feeding in control group shows The association was not statistically significant (P = 0.223).
The association with the II stage duration of labour and initiation of breast feeding in control group shows This variable was not statistically significant (P = 0.5212).
The association with the Gender of the new born and initiation of breast feeding in control group shows This association was significant (P = 0.0001829).
The association with the Birth weight of the new born and initiation of breast feeding in control group shows The association was not statistically significant (P = 0.271).
The association with the Apgar Score and initiation of breast feeding in control group shows. This variable was not statistically significant (P = 0.5656).

Table –5 -Association between maternal variable and initiation of breast feeding in control group.

S.No.	Variable		Initiation of breast feed for control Group						P value
			31-45 minutes		46-60 minutes		>60 minutes		
			No.	%	No.	%	No.	%	
1	Time of separation of placenta	0-10 Minutes	51	34	64	42.67	34	22.67	0.5178
		10-20 Minutes	0	0	1	0.67	0	0	
		20-30 Minutes	0	0	0	0	0	0	
		>30 Minutes	0	0	0	0	0	0	
3	Blood loss during labour	100-200	40	26.67	36	24	12	8	<0.00001
		200-300	1	0.67	28	18.67	9	6	
		300-400	10	6.67	1	0.67	13	8.67	
		400-500	0	0	0	0	0	0	
4	Blood loss post natal mother	<200	15	10	29	19.33	12	8	<0.00001
		200-250	0	0	14	9.33	0	0	
		250-300	27	18	9	6	10	6.67	
		300-350	9	6	13	8.67	12	8	
5	Pain Perception	No pain	36	24	42	28	22	14.67	0.7654
		Mild	0	0	0	0	0	0	
		Moderate	15	10	23	15.33	12	8	
		Severe	0	0	0	0	0	0	

The table no. 5 analyzes the relationship between various maternal variables and the initiation of breastfeeding in the control group.
The association with the Time of separation of placenta and initiation of breast feeding in control group shows No statistically significant association with breastfeeding initiation time (P = 0.5178).

The association with the Blood loss during labour and initiation of breast feeding in control group shows Blood loss during labor significantly influenced breastfeeding initiation times ($P < 0.00001$).
The association with the post natal Blood loss and initiation of breast feeding in control group shows Postnatal blood loss was significantly associated with breastfeeding initiation times ($P < 0.00001$).
The association with the Pain Perception and initiation of breast feeding in control group shows Pain perception during labor was not significantly associated with breastfeeding initiation ($P = 0.7654$).

Table –6 –comparison of initiation of breast feeding among control group and experimental group

Group	Initiation of breast feed			p value
	31-45 minutes	46-60 minutes	>60 minutes	
Control	51	65	34	0.9362
Experiment	54	63	33	

Table no 6 shows The initiation of breastfeeding comparison between the control and experimental groups within three time intervals: 31–45 minutes, 46–60 minutes, and >60 minutes post-delivery. In the control group, 51 participants initiated breastfeeding within 31–45 minutes, 65 participants within 46–60 minutes, and 34 participants after more than 60 minutes. In the experimental group, 54 participants initiated breastfeeding within 31–45 minutes, 63 participants within 46–60 minutes, and 33 participants after more than 60 minutes. The p-value for this comparison was 0.9362, indicating no statistically significant difference in the initiation of breastfeeding between the control and experimental groups across the three time intervals.

DISCUSSION

In the control group, 51 participants initiated breastfeeding within 31–45 minutes, 65 participants within 46–60 minutes, and 34 participants after more than 60 minutes. In the experimental group, 54 participants initiated breastfeeding within 31–45 minutes, 63 participants within 46–60 minutes, and 33 participants after more than 60 minutes. The p-value for this comparison was 0.9362, indicating no statistically significant difference in the initiation of breastfeeding between the control and experimental groups across the three time intervals.

Sara Subodh Dhanawade, Ruchika Chouksey, and Gracy Bhore(2024) conducted a study on "The Impact of Breast Crawl on the Effectiveness of Breastfeeding in the First 48 Hours: A Quasi-experimental Study" with 60 mother-infant dyads were included. Thirty infants were assigned to either Group 1 (breast crawl) or Group 2 (standard care) using a quasi-experimental design. The study revealed that Out of 30 babies in the breast crawl group, 25 (83.3%) successfully completed breast crawl. 20 (80%) of 25 babies completed breast crawl within 45 minutes, and 5 (20%) completed within 60 minutes. LATCH and IBFAT scores were significantly higher in the breast crawl group than in the standard care group at 24 and 48 hours ($p > .01$). Scores were significantly higher after 48 hours compared to 24 hours in both groups ($p > .01$).[6]

CONCLUSION - In the experimental group, 42% of mothers initiated breastfeeding within 46 to 60 minutes, 36% within 31 to 45 minutes, and 22% after 66 minutes. In the control group, 43.33% initiated breastfeeding within 46 to 60 minutes, 34% within 31 to 45 minutes, and 22.67% after 66 minutes. The calculated p-value was 0.93, indicating no significant effect of the breast crawl technique on the initiation of breastfeeding.

Conflict of interest-Researcher don't have any conflict of interest

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