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Effect Of Breast Crawl On Maternal Outcome In Third Stage Of Labour

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Abstract

A study was conducted to assess the effect of breast crawl on maternal outcome in third stage of labour in selected hospitals with the objectives to assess the LATCH score among new born after breast crawl in experimental group. To assess the amount of blood loss in ml and time duration for expulsion of placenta in mins in third stage of labour after breast crawl in experimental and control group. A Quasi-experimental post-test design with control group was selected. Total 40 samples were selected by non- probability purposive sampling method. Assigned 20 samples each in experimental and control group. Researcher considered inclusion and exclusion criteria to select the samples for the study. In experimental group breast crawl was given in third stage of labour and Observation checklist was prepared to record amount of blood loss in ml and time duration for expulsion of placenta in mins. In control group initiation of breast feeding is done and amount of blood loss in ml and time duration for expulsion of placenta in mins is observed and recorded.

The findings revealed that, in the experimental group the mean volume of blood loss was 132.25 ml (SD= 17.95) whereas in control group the mean volume of blood loss was 154.25ml (SD =16.20). The calculated t value was 4.06 with p value 0.000 which is less than 0.05. The average time duration for expulsion of placenta in experimental group was 6.70 mins (SD= 0.73) whereas in control group the average time duration for expulsion of placenta was 9.00 min (SD= 1.33). The calculated t value was 6.74 with p value 0.000 which is less than 0.05. Findings shows that, breast crawl in experimental group was effective to reduce amount of blood loss and time duration for expulsion of placenta among mothers in third stage of labour compared to control group.

Keywords: Breast crawl, breastfeeding, maternal outcome (amount of blood loss, time duration for expulsion of placenta).

Introduction:

Every newborn when placed in between the mother's breast soon after birth, has ability to find mothers breast all their own and to decide when to take the first breast feed. This is called breast crawl. It was first described in 1987 at the Karolinska institute in Sweden. (windstorm et al, 1987). Mother and newborn skin to skin contact after birth bring numerous protective effects for mother as well as newborn, however it is an intervention that is underutilized. During breast crawl, kicks from

the baby will give tender firm jerks to the womb that stimulate uterine contractions which helps to expel the placenta and thereby reduces bleeding[1].

Initiation of breast feeding within first hour of birth and feeding the colostrum protects the child from illness and diseases. Breast feeding improves child IQ. Mother's milk is divine gift for a baby. Breast feeding could save the lives of 1.3 million children a year[2].

UNICEF and its partners are highlighting a natural occurrence called breast crawl, which can benefit mother and newborn around the world. Breast crawl technique in third stage of labour also benefits the mother, massage of the breast by the baby and subsequent suckling induces a large oxytocin surge from mother's pituitary gland into her blood stream. This oxytocin helps to contract the uterus, expelling the placenta and closing of many blood vessels in the uterus, thus reducing blood loss and preventing anaemia. (Klaus and Kennel, 2001) [3].

Child birth is a process beautifully designed by nature and the care following the birth of the baby is essential for maintenance for both mother and child. Maternal mortality is considered a key health indicator and the direct cause of maternal death are well known and largely preventable and treatable. The major complications that account for nearly 2/3rds of all maternal deaths are severe bleeding (bleeding after delivery), infection (usually after child birth), high blood pressure during pregnancy, complications from delivery and unsafe abortions[4]. Globally the number of women and girls who die each year due to issue related to pregnancy and child birth has dropped considerably, from 4,51,000 in the year 2000 to 2,95,000 in the year 2017, a 38% decrease. Breast crawl has tremendous potential to change initiation practice. It deserves worldwide dissemination for improving initiating rates, breast feeding success and ultimately reducing neonatal, infant and under five mortality and morbidity rate by early initiation of breast feeding[5].

World health organization and united nations and international children emergency fund recommended early initiation of breast-feeding which results in lower neonatal mortality. Each year approximately four million newborns die mostly from preventable causes. Evidence shows that early initiation of breast feeding can prevent 22% of all deaths among babies below one month in developing countries. About 16% of neonatal deaths could be prevented if all infants were breast fed from day one and 22% if breast fed within first hour after birth[5].

Material and method:

A quantitative approach with quasi experimental post-test with control group design was used for conducting the study. The independent variable was breast crawl and dependent variable was maternal outcome (amount of blood loss, time duration for expulsion of placenta). The study population in this study was mothers who were in first stage of labour. Samples are selected according to inclusion exclusion criteria. 40 mothers were selected by using non-probability purposive sampling method. Samples were divided as 20 each in experimental control group. After doing validity of the tool by experts the final tool was prepared with three sections. Section I with demographic variables like age in years, obstetrical score, gender of newborn, weight of the newborn in grams. Section II LATCH scale for assessment of LATCH scale among newborn in experimental group. Section III observation checklist to record amount of blood loss in ml and time duration for expulsion of placenta in minutes.

The research was approved by institutional ethical committee after presenting research proposal with data collection tool. Permission was taken from hospital administrator HOD of obstetrics and gynaecology. Written informed consent was taken from each mother after explaining the procedure.

Privacy was provided to mother, nipples were checked for any abnormalities, mother will be observed and supported during labour. Once the baby is born the cord to be cut after the cessation of pulsation. The liquor and other discharges which were present in second stage of labour were cleaned and Kelly's pad was placed under the mother for further observation of amount of blood loss in third stage of labour. If the baby has cried well immediately after birth and is stable no need of oro-nasal suction. Baby will be wiped with clean towel except hands and also checked APGAR score within one minute, score should more than 7. Now keep the baby naked in between the breast of mother and cover the baby and mother together with a cloth to keep warm while skin to skin contact continues. The mother's hand can support the baby's back. This will help in avoiding slipping of baby and give added advantage of maternal touch. Continue in this position till the baby takes the first feed 30- 60 min. In case the baby's several attempts to latch on breast fails, then the baby can be gently moved near to the breast and assisted by a helper to attach the breast while researcher observes the amount of blood loss and time duration for expulsion of placenta, she takes help of another midwife who is present at that time to hold baby to prevent slipping of baby during breast crawl. Time duration for expulsion of placenta in minutes is observed and amount of blood present in Kelly's pad will be measured with measuring jar at the end of third stage of labour.

Result and discussion:

The data was analyzed using descriptive and inferential statics. Frequency and percentage was calculated for demographic variables. Assessment of latch score in experimental group, assessment of amount of blood loss in ml and time duration for expulsion of placenta in mins done by calculating mean in both the groups. Unpaired t test was used to assess the effectiveness of breast crawl.

Table 1: Frequency & percentage distribution of mothers and new born in selected hospitals in terms of frequency and percentage n=20+20

Sr. No.	Variable	Groups	Experimental		Control	
			Frequency	Percentage	Frequency	Percentage
1	Age of Mother (in years)	18-24	8	40.00	5	25.00
		24-30	8	40.00	15	75.00
		above 30	4	20.00	0	0.00
2	Obstetrical Score	Primi Gravida	10	50.00	12	60.00
		Multi Gravida	10	50.00	8	40.00
3	Gender of New Born	Male	11	55.00	10	50.00
		Female	9	45.00	10	50.00
4	Weight of New Born (in grams)	less than 2500	1	5.00	0	0.00
		2500 – 3500	19	95.00	20	100.00
		more than 3500	0	0.00	0	0.00

Table no. 1 shows that according to age of mothers in third stage of labour 40% of the mothers were between the ages of 18 and 24, 40% were between the ages of 24 and 30, and 20% were over the age of 30. In the control sample, 25% of the mothers were between the ages of 18 and 24, 75% were between the ages of 24 and 30, and no one was over the age of 30. According to Obstetrical Score of mothers in third stage of labor in selected hospitals, in the experimental group 50% from primi-gravida and 50% from the multi gravida. In the control group 60% from primi-gravida and 40% from the multi gravida. According to the gender of new born babies at selected hospitals, 55 percent of them were male children and 45 percent were female children in the experimental group. In the control group 50% of them were male child and 50% of them were female child. according to weight of new born at selected hospitals, in the experimental group 5% of them had weight less than 2500 gm., 95% had weight in the 2500-3500 gm and no one with age more than 3500 gm. In the control group no one of them had weight less than 2500 gm, all 100% had weight in the 2500-3500 gm and no one with age more than 3500 gm.

Table 2: Assessment of Latch score among new born in experimental group. n=20

	Groups		Frequency	Percentage
Experimental Group	Poor	0-4	0	0.00
	Average	5-7.	0	0.00
	Good	8-10.	20	100.00
LATCH	**Minimum**		8	
	Maximum		8	
	Average (SD)		8 (0.00)	

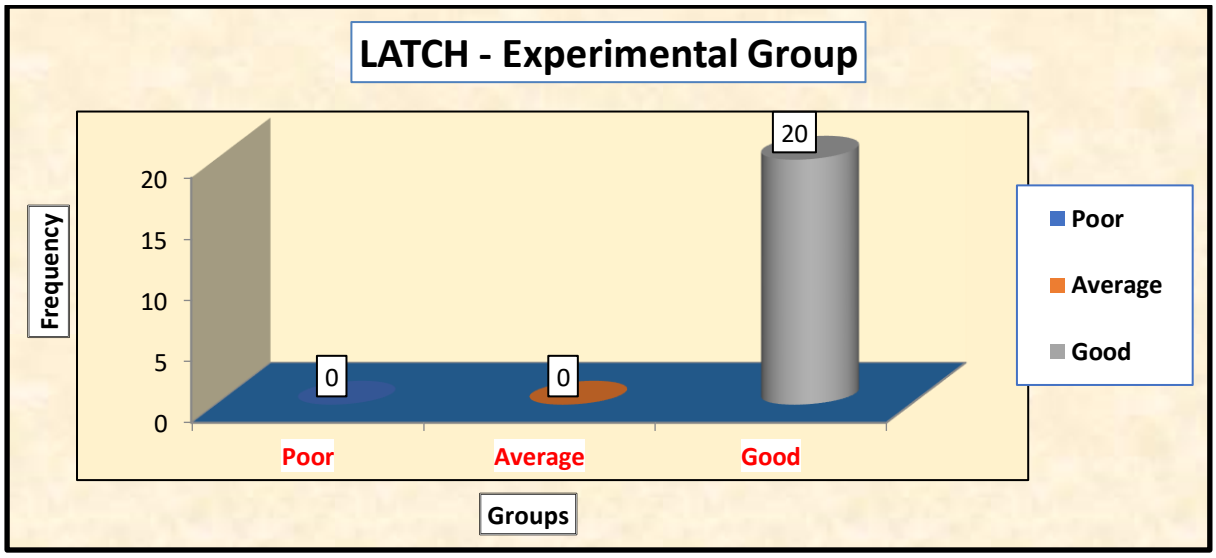

Figure No- 1: Assessment of Latch scale among new born in experimental group.

Table no.2 and figure no. 1 shows that there is for the assessment purpose the total LATCH score was divided in to three groups like poor (0-4 score), average (5-7 score) and good (8-10 score). All babies in the experimental group actively crawled towards nipple, no one of them had LATCH score in poor

and good group, all 100% of mother had score in average group. Average LATCH score was 8.00 with standard deviation

Table 3: Frequency and percentage distribution of the Amount of Blood Loss In Third Stage Of Labour After Breast Crawl In Experimental And Control Group. n=20+20

Amount of Blood Loss (ml)	Groups	Experimental		Control	
		Frequency	Percentage	Frequency	Percentage
	100-125 ml	7	35.00	1	5.00
	126-150 ml	13	65.00	10	50.00
	151-180 ml	0	0.00	9	45.00

Group	Minimum	Maximum	Mean	S.D.
Experimental	100	150	132.25	17.95
Control	120	180	154.25	16.24

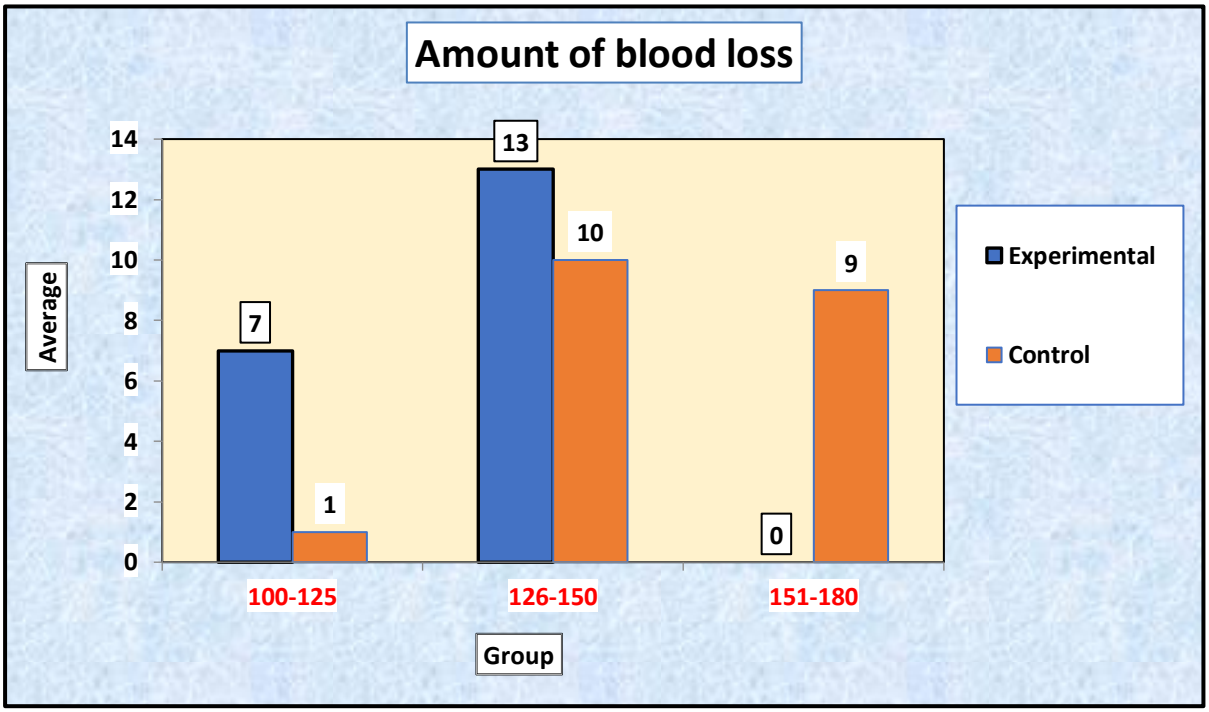

Figure No 2- Frequency and percentage distribution of the Amount of Blood Los In Third Stage of Labour After Breast Crawl In Experimental And Control Group.

n=20+20

In the experimental group, 35% of them had blood loss in 100-125 ml, 65% of them had blood loss in 126-150 ml and no one in the 151-180 ml. The average blood loss was 132.25ml. with the standard deviation of 17.95 ml. In the control group, 5% of them had blood loss in 100-125 ml, 50% of them had blood loss in 126-150 ml and 45% in the 151-180 ml. Average blood loss was 154.25 ml with the standard deviation of 16.24 ml.

Table No. 4: Frequency and percentage distribution of time duration for placental expulsion in third stage of labour after breast crawl in experimental and control group

n=20+20

Time duration of placental expulsion	Groups	Experimental		Control	
		Frequency	Percentage	Frequency	Percentage
	up to 6 min	9	45.00	1	5.00
	7-8 min	11	55.00	7	35.00
	9-11 min	0	0.00	12	60.00

Group	Minimum	Maximum	Mean	S.D.
Experimental	6	8	6.70	0.73
Control	6	11	9.00	1.33

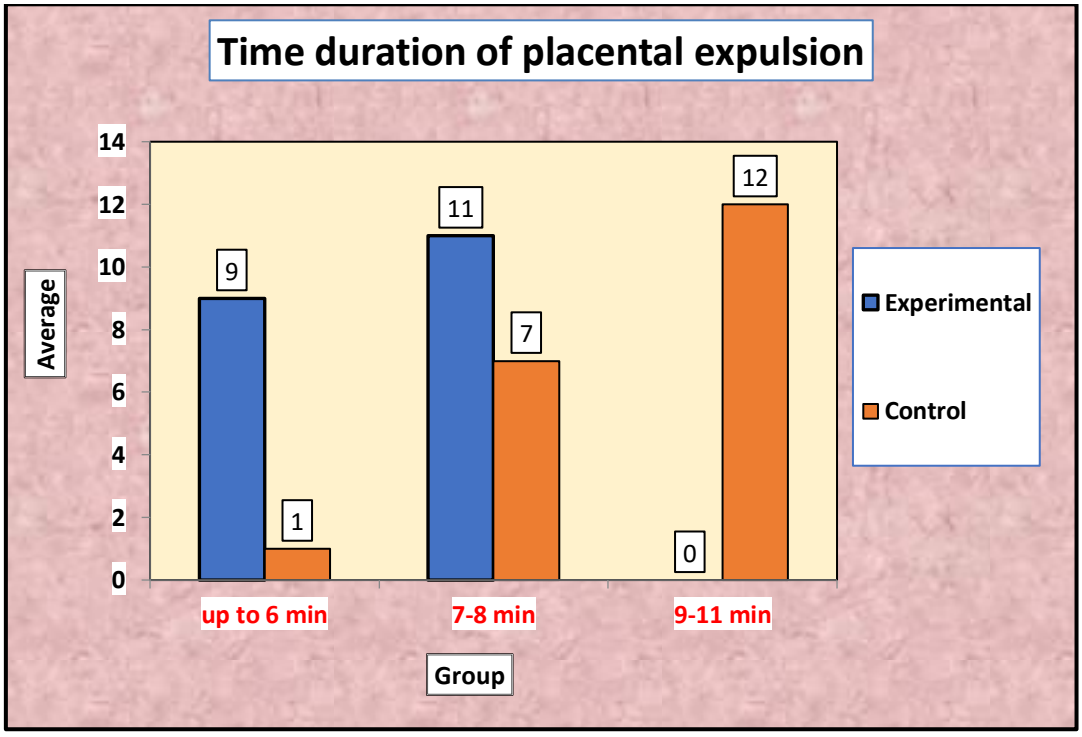

Figure No- 3: Assessment of time duration for expulsion of placenta **n=20+20**

In the experimental group, 45% of them take time for expulsion of placenta up to 6 min, 55% in the 7-8 min and no one in 9-11 min. The average time for expulsion of placenta was 6.70 min with the standard deviation of 0.73 min.

In the control group, 5% of them take time for expulsion of placenta up to 6 min, 35% in the 7-8 min and 60% in 9-11 min. The average time for expulsion of placenta was 9.00 min with the standard deviation of 1.33 min.

Table 5: Comparison of the amount of blood loss in third stage of labour after breast crawl in experimental and control group n=20+20

Group	Size	Mean	S.D.	T	P
Experimental	20	132.3	18.00	4.06	0.00
Control	20	154.3	16.20		

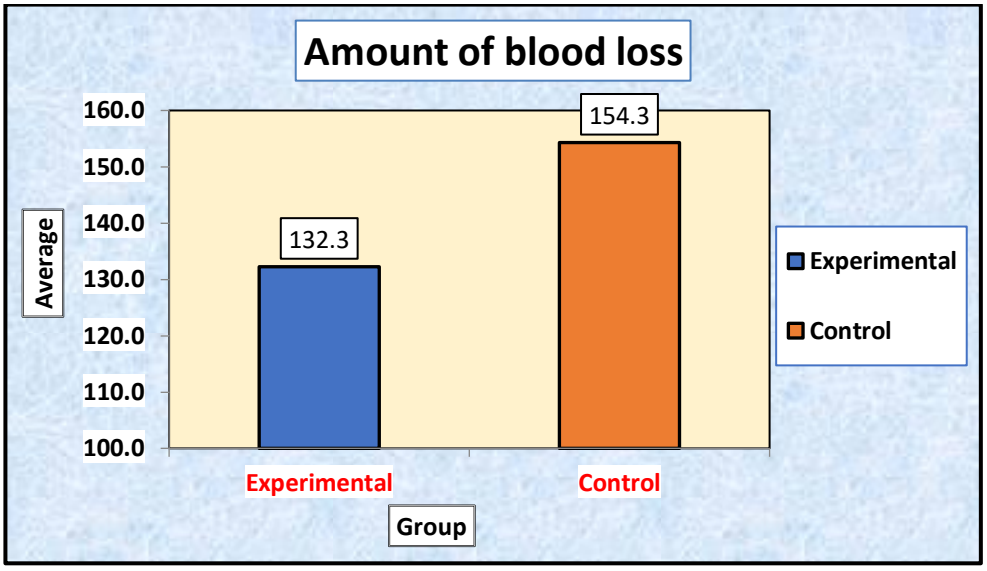

Figure 4: Comparison of the amount of blood loss. in third stage of labour after breast crawl in experimental and control group

Comparisons of the amount of blood loss in third stage of labour after breast crawl in experimental and control group were done by the unpaired t test. The average blood loss in experimental group was 132.3 ml with standard deviation of 18 ml. The average blood loss in control group was 154.3 ml with standard deviation of 16.20 ml. The test statistics value of the unpaired t test was 4.06 with p value 0.00. The p value less than 0.05, hence reject the null hypothesis and accept the alternative hypothesis. Shows that, breast crawl in experimental was effective to reduce amount of blood loss among mothers in third stage of labour.

Table 6: Comparison of time duration for expulsion of placenta in third stage of labour after breast crawl in experimental and control group n=20+20

Group	Size	Mean	S.D.	T	P
Experimental	20	6.70	0.73	6.74	0.00
Control	20	9.00	1.31		

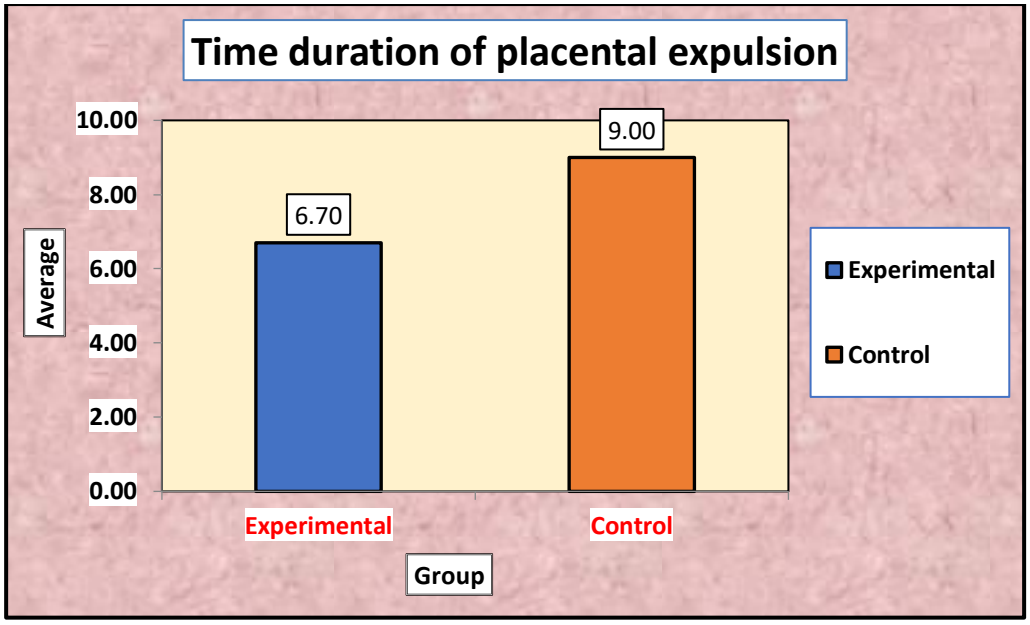

Figure 5: Comparison of time duration for expulsion of placenta in third stage of labour after breast crawl in experimental and control group. n=20+20

The comparisons of time duration for expulsion of placenta in third stage of labour after breast crawl in experimental and control group were done by the unpaired t test. The average time duration for expulsion of placenta in experimental group was 6.70 min with standard deviation of 0.73 min. The average time duration for expulsion of placenta in control group was 9.00 ml with standard deviation of 1.31 ml. The test statistics value of the unpaired t test was 6.74 with p value 0.00. The p value less than 0.05, hence reject the null hypothesis and accept the alternative hypothesis. Shows that, breast crawl in experimental was effective to reduce time duration for expulsion of placenta among mothers in third stage of labour.

A study conducted to measure the effectiveness of initial suckling in third stage of labour among parturient women. The data was collected using structured observation record. The total duration of third stage of labour among the mothers was about 8-10 minutes with the mean score of 9.63 and SD of 0.62 duration of third stage of labour among the mothers was 11-13 minutes. It was determined that there was an important correlation between initial suckling and third stage of labour at p=0.007 level.[6]

Discussion:

Breast crawl technique has been shown in studies to minimize the amount of blood loss and time duration for expulsion of placenta in third stage of labour. Breast crawl helps in improvement of immediate and long-term breast-feeding success. It helps in maintaining body temperature, blood sugar level. When baby kept naked between mothers breast this skin-to-skin contact enhance the ability of newborn to adapt, coordinate and attachment. Breast crawl is associated with variety of sensory, central, motor, and neuroendocrine components all directly or indirectly helping the baby to move and help her survival[7]. Early suckling gives tremendous release of hormone called oxytocin which facilitate in contraction of uterus, production of milk ejection and separation of placenta and minimize the blood loss during postpartum period.[8]

Breast crawl is associated with variety of sensory, central, motor, and neuroendocrine components all directly or indirectly helping the baby to move and help her survival[9]. study conducted to identify effectiveness of early suckling in third stage of of labour. The researcher observed and recorded the attachment of LATCH score, comparison of blood loss during third stage of labour and duration of placental separation. Finding revealed that early suckling in third stage of labour had significant reduction in the amount of blood loss in third stage of labour in experimental group.[10] In this study some mothers were little worried related to breast crawl. Due to chances of falling or slipping of baby but to prevent the fall researcher has taken the help of other midwife to hold baby who was present at the time of delivery with the permission of the authority. Researcher recommend that new born should be left undisturbed and encouraged during breast crawl.

Biomedical waste management

The safe and sustainable management of biomedical waste is a social and legal responsibility of all people supporting health care activities, while conducting research the investigator has followed the guidelines of biomedical waste management. The blood and rubber Kelly's pad which was used in third stage of labour after the experiment are properly disposed after segregation as per colour code. It was done with proper use of personal safety equipment like gloves, etc. Researcher also felt and understood more about the importance of breast crawl method for minimizing the blood loss and time duration for expulsion of placenta in third stage of labour. The selected samples became familiar and found themselves comfortable and also expressed satisfaction. The researcher also felt the need that midwives can establish the practice of breast crawl as a routine management in third stage of labour. Study

Conclusion:

Breast crawl was very successful in reducing the amount of blood loss and time it took for the placenta to be expelled in third stage of labour. The breast crawl is a simple test that is a very cost-effective way to continue breast-feeding going. It was a lot of fun doing the breast crawl.
All midwives may use this simple method to start breast feeding with new born babies.

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CONFLICT OF INTERESTS

No conflict of interest.

FUNDING SOURCE

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