

Effectiveness of Early Suckling on Third Stage Labour among Parturient Women at Government Ranees Hospital, Pudukkottai

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Abstract

The present study was conducted to evaluate the effectiveness of early suckling on third stage of labour among parturient women at Government Ranees Hospital, Pudukkottai, for that the post-test only control design was used. 120 parturient women in third stage of labour was selected by using probability simple random sampling. Data was collected with the tools including structured observation record for observing duration and amount of blood loss; standardised Latch score and maternal satisfaction rating scale. Tools like descriptive statistics and inferential statistics such as unpaired "t" test and chi-square test, hypothesis were also used. Latch score was assessed using standardised rating scale and maternal satisfaction score was also assessed using rating scale. The study revealed that early suckling was effective in reducing the duration of third stage of labour and blood loss and there was a significant association between duration of third stage of labour and blood loss among parturient women in experimental group with their selected demographic variables the Latch score and maternal satisfaction score was also found to be 100 percent among experimental group. It is concluded that early suckling was the most safe and most effective intervention during third stage of labour and it can naturally release the oxytocin to stimulate the uterine contraction and it helps to reduce duration of third stage of labour and amount of blood loss and increase the maternal infant bonding.

Pregnancy and delivery are natural and joyous human events. Its a wonderful experience. The child birth is a universally celebrated event and the happiest occasion in a woman's life, though it carries some amount of risk to the foeto maternal unit.

Breastfeeding is a right of every mother and essential to fulfil every child's right to adequate food and the highest attainable standard of health. Nipple stimulation by immediate suckling may increase the release of oxytocin which may further stimulate the uterine contractions, encourage placental separation, reduce postpartum haemorrhage and shorten the third stage of labour.

The midwife must perform frequent and careful assessment and should provide necessary care during the labour process to achieve a safe outcome of labour. The aim of maternal and child health is to ensure that the mother will have a good health and that every pregnancy may culminate in a healthy mother and healthy baby. From a recent study on maternal mortality jointly carried out by WHO and UNICEF, it is estimated that globally 585,000 maternal deaths that occur every year are related to pregnancy, and about 99 percent of these deaths occur in

developing countries. The third stage labour is a crucial period when an unexpected and uncontrolled bleeding can lead to a rapid deterioration of the mother, at times leading to mortality. Suckling and nursing are synonyms for breastfeeding. Suckling is the feeding of an infant or young child with breast milk directly from the female human breast. If early suckling combined with active management of third stage of labour is provided to a parturient woman by a competent midwife, it helps to reduce the duration of third stage of labour and reduces the blood loss by enhancing the uterine contraction which establishes a bonding between the mother and infant.

In regards to maternal mortality and morbidity statistical data and the information received from the media the aim to reduce MMR by strengthening the midwifery care, a felt need was identified by the investigator to emphasise the importance of early breast suckling to facilitate maternal as well as foetal well-being. With this background the present study was undertaken.

Objectives

The study sought to: (a) evaluate the effectiveness of early suckling on third stage of labour among parturient women in experimental and control group;

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(b) associate the duration of third stage of labour among parturient women in experimental and control group with the selected demographic variables, and (c) associate the amount of blood during third stage of labour among parturient women in experimental and control group with the selected demographic variables.

Review of Literature

Jenifer (2015) conducted an experimental study to assess the effectiveness of early suckling on third stage of labour among parturient women. Quantitative research approach was used and data was collected using structured observation record. The total duration of third stage of labour among parturient mother was about 8 – 10 minutes (n=27) with the mean score of 9.63 and standard deviation of 0.62; duration of third stage of labour among parturient mother was about 11-13 minutes (n=18). It was concluded that there was a significant association between early suckling and the third stage of labour at $p=0.007$ level.

Amy Brown et al (2014) stated that management of third stage of labour may influence breastfeeding. To deliver the placenta, women choose either active management or physiological management whereas active management which includes breastfeeding causes reduction in mean postpartum blood loss and allows the placenta to deliver spontaneously.

Pediatr et al (2013) stated that breastfeeding can promote hormonal processes and protect mothers against depression by acting as a control response to stress.

Himani (2011) conducted a study to assess the effect of initiation of breastfeeding immediately after the delivery on maternal infant bonding. The total samples were 218 mothers and their newborn babies in obstetric unit, Nehru Hospital PGIMER, Chandigarh. Samples were divided into control group and experimental group of 119 mothers and newborns in each group. Experimental group was initiated breastfeeding immediately after birth and the control group babies do not receive breastfeeding. Results revealed that initiation of breastfeeding within one hour of delivery improves maternal infant bonding when compared to control group babies.

Ram C (2011) conducted a study to assess the effectiveness of correct position, attachment and effective suckling among mothers and infants. The study design was observational, descriptive and cross sectional study and the total number sample size was 192 mothers and infants in neonate units. The researcher observed the mothers and baby's position, attachment and effective suckling by using WHO B-

R-E-A-S-T feed observation form and the grading of positioning attachment and suckling was done according to the score of various characteristics. The data revealed that poorer positioning was found among 24 percent of primipara mothers than multipara mothers (86%). The young primipara mothers need more support and guidance for correct breastfeeding techniques and position. Hence it was concluded that correct breast feeding techniques improve the suckling among neonates.

Egebo (2010) conducted a study to validate the laboratory method of measuring postpartum blood loss collected in measurable bottles among post-natal mothers in Singapore. The measured amount of blood (50-1000 ml) was poured into the absorbent paper and sanitary pads, to mimic conditions, when measuring blood loss in clinical trials in the post-partum period, the amount of blood loss was measured by rapid method of automatic alkaline hematin. The study showed that this method reduced a reliable means of measuring blood loss.

Buckley (2010) in her study on third stage of labour the practice of skin-to-skin contact, early suckling or both concluded that the practice of skin-to-skin contact, early suckling or both released peak levels of oxytocin, the hormone of love, which helped the baby's first attempts to breastfeed further augments oxytocin levels, strengthening the uterine contractions that will help the placenta to separate and uterus to contract down. In this way oxytocin acts to prevent haemorrhage as well as to establish a close bond that will ensure a mothers care and protection and thus baby's survival.

Vanaja Kumari (2001) reported that the incidence of third stage complications like haemorrhage, obstetric shock, uterine inversion and obstetric hysterectomy was constant if third stage is more than 30 minutes. Out of 6 cases referred from outside with retained placenta, 3 had delivered before 2 hours, 2 had delivered after 3 hours and 1 had delivered after 6 hours.

Methods and Materials

This study has adopted the Christen M Swans Theory of Caring (1993). Swanson states that caring is a nurturing way of relating to a value of others, towards themselves. The parturient mother feels a sense of personal satisfaction, commitment and responsibility by the care provided by the midwife during the third stage of labour. An evaluative research approach was selected for this study and True Experimental - post-test only control group design was used; 120 parturient women parturient women who were admitted in the labour were selected by using probability simple random sampling technique; among them 60

were assigned to experimental group and 60 in control group .

Criteria for sample selection: Parturient women who are between 38 to 42 weeks of gestation, having singleton pregnancy with a live foetus and undergoing normal vaginal delivery with or without episiotomy.

Study tool: The selection and development of tool consisted of three sections.

Section A: Demographic Data - Consisted of demographic data such as age of the mother, gravida, type of delivery, duration of third stage of labour, duration of second stage of labour, and APGAR score of the new born at 1 minute.

Section B: Structured observation record on third stage of labour - It includes the time of delivery, duration of placental separation and lengthening of cord, expulsion of placenta, duration of third stage of labour and total blood loss during third stage of labour. The duration of third stage of labour was categorised in the following division such as 8-10 minutes, 11-13 minutes, 14-16 minutes and more than 16 minutes. The blood loss during third stage of labour was categorised in to following divisions 100-150 ml, 151-200 ml, 201-250 ml.

Section C: Assessment of latch score and maternal satisfaction: (a) Assessment of latch score – observation record: Breastfeeding latch score was assessed using standardised scale. The components of latch was assessed on the areas of Latch, audible swallowing, type of nipple, comfort and hold (positioning). The total score of latch was 10. The baby was put into the breast and the suckling on the areas of the latch score was assessed. (b) Assessment of maternal satisfaction: The maternal satisfaction was assessed using a modified rating scale. The rating scale consisted of scores from 1-5.

Results

Table 1 reveals the percentage distribution of amount of blood loss during third stage of labour among parturient women in experimental and control group. In experimental group, majority 47 (78.33%) had lost 100-150 ml, 12 (20%) had lost 151 – 200 ml and 1 (1.67) had lost 201-250 ml of blood during third stage of labour. In the control group, majority 29 (48.33%) had lost 100-150 ml, 25 (41.67%) lost 151-200 ml and 6 (10%) lost 201 – 250 ml of blood during third stage of labour.

Comparison of amount of blood loss during third stage of labour among parturient women between the experimental and control group is shown in Table 2. The mean score of blood loss in the experimental group was 1.23 with SD 0.46 and the mean score in the con-

trol group was 1.61 with SD 0.66. The calculated unpaired “t” value of $t = 3.658$ was found to be statistically significant at $p < 0.001$ level. This clearly shows that the administration of early suckling on third stage of labour had significant reduction in the amount of blood loss during third stage of labour among parturient women in experimental group than in the control group. This clearly indicates that early suckling was effective in reducing the amount of blood loss during third stage of labour among parturient women.

The Chi square analysis among parturient mothers was at $p < 0.05$ level in the experimental group whereas none of the demographic variables had shown statistically significant association with the duration of third stage of labour among parturient mothers in the control group.

The latch score was assessed using standardised rating scale and maternal satisfaction rating scale score was also assessed using modified rating scale. All (100%) of the babies of the parturient women in the experimental group belonged to the category of ‘good’ on the breastfeeding latch score and all (100%) of the parturient mothers in the experimental group had found to be very satisfied with the early suckling during the third stage of labour.

Discussion

In experimental group majority 25 (41.67%) of the parturient women were aged 21-25 years, 33 (55.00%) were primigravida, 37 (61.67%) had spontaneous delivery, 33 (55.00%) had duration of first stage of labour as 13-24 hours. About 33(55.00%) had duration of second stage of labour was 30 minutes – 1 hour and 37 (61.67%) of their newborn got Apgar score of 10 at one mt. About 39 (65%) had received Pitocin drip, 30 (50.0%) of babies had weight of above 3 kg. About 35 (58.33%) of the newborns were male, and 60 (100%) received the planned parenthood information through health personnel.

In control group majority i.e. 33 (55%) of the parturient women were in 21-25 years, 35 (58.33%) were primigravida, 41 (68.33%) had spontaneous delivery, 35 (58.33%) had duration of first stage of labour as 13-24 hours. About 34 (56.67%) had duration of second stage of labour was 30 minutes – 1 hour and 41 (68.33%) of their newborn got Apgar score of 10 at one minutes. About 41 (68.33%) had not received Pitocin drip, 28 (46.67%) of babies had weight of above 2.9 - 3 kg and 60 (100%) received the Planned Parenthood information through health personnel. The findings of the present study were supported by Jinu K John (2008) who conducted a study on effectiveness of suckling technique on selected physiological outcomes

Table 1: Frequency and percentage distribution of amount of blood loss during third stage of labour among parturient women in experimental and control group

Amount of Blood Loss	100 – 150 ml		151 – 200 ml		201 – 250 ml	
	No	%	No	%	No	%
Experimental Group	47	78	12	20	1	2
Control Group	29	48	25	42	6	10

Table 2: Comparison of amount of blood loss during third stage of labour among parturient women between the experimental and control group

Amount of Blood Loss	Mean	S.D	Unpaired “t” Value
Experimental Group	1.23	0.46	t=3.658***
Control Group	1.61	0.66	p = 0.000, S

***p<0.001, S – Significant

during the third stage of labour among mothers in selected hospital at Kerala. In experimental group 10 (67%) were in 21-25 years, 12 (80%) of them belongs to primigravida, 3 (20%) of them belongs to multigravida, whereas in control group 11 (73%) of them were in 21-25 years, 11 (73%) belonged to primi gravida and 4 (27%) of them belonged to multigravida.

And also the findings of the present study was supported by Dilek Bilgeç (2004) conducted a study regarding the effect of early breastfeeding on duration of the third stage of labour and enhances the infant mother interaction. In experimental group 19 (52%) of them were in 20-24 years, 19 (52.8%) of them belonged to primigravida, 17 (47.2%) of them belong to multigravida, whereas in control group (23, 63.9%) of them were in 20-24 years, (14, 38.9%) belonged to primi gravida, and (22, 61.1%) of them to multigravida.

Comparison of third stage of labour (Duration of third stage of labour & blood loss) among parturient women in experimental and control group: In experimental group majority 52 (86.67%) of the parturient women had 8 - 10 minutes on duration of third stage of labour, 8 (13.33%) of them had 11 -13 minutes and none of them were in 14-16 and more than 16 minutes. Whereas in control group 21 (35.0%) had 8-10 minutes, 28 (46.67%) had 11-13 minutes, 11 (18.33%) had 14 -16 minutes none of them were in more than 16 minutes. In experimental group majority 47

(78.33%) of the parturient women had 100-150 ml of total blood loss, 12 (20%) had 151 – 200 ml and 1 (1.67%) of them had 201 -250 ml. whereas in control group 29 (48.33%) of them had 100 - 150ml of total blood loss, 25 (41.67%) of them had 151-200 ml and 6 (10%) of them had 201-250 ml (Fig 1).

In experimental group the mean value of duration of third stage of labour was 1.13 whereas in control group the mean value was 1.83. The difference in the standard deviation was found to be 0.34 in experimental group and 0.71 in control group. In experimental group the mean value of blood loss was 1.23, whereas in control group the mean value was 1.61. The difference in the standard deviation was found to be 0.46 in experimental group and 0.66 in control group. The calculated t-value of 6.822 showed that there was a significance difference between the experimental and control group on duration of third stage of labour at p<0.001 level. The calculated “t” value (3.658) showed that significance difference was found between the experimental and control group on amount of blood loss during third stage of labour at p<0.001 level.

This clearly shows that the administration of early suckling on third stage of labour had significant reduction in the duration of third stage of labour among parturient women in experimental group than the control group. Thus early suckling was effective in reducing the duration of third stage of labour among parturient women.

The findings of the present study were supported by Jenifer (2015) who showed that the total duration of third stage of labour among parturient mother was 8 – 10 minutes (n=27) with the mean score of 9.63 and standard deviation of 0.62, with the mean score of 11-13 minutes (n=18) was 12.28 with the standard deviation of 0.82, the total duration of 14 – 16 minutes (n=11) with the mean 14.64 and standard deviation of 0.67 and the mean score of 7-16 minutes (n=4) was 18.25 with the standard deviation of 1.25. It was concluded that there was a significant association between early suckling and the third stage of labour at p=0.007 level. This revealed that early suckling was effective in duration of third stage of labour and blood loss.

A significant association was found on duration of third stage of labour among parturient women in experimental group with their selected demographic variables and no association was found on duration of third stage of labour and blood loss parturient women in among control group with their selected demographic variables.

A significant association was found on amount of blood loss among parturient women in experimental group with the selected demographic variables.

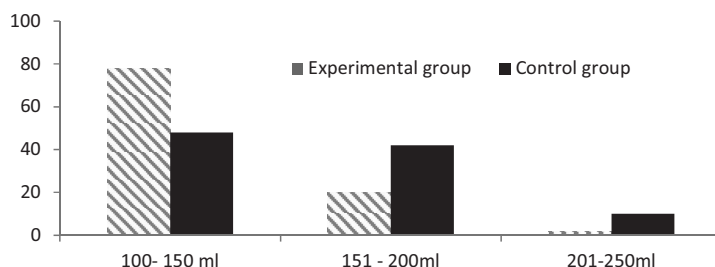


Fig 1: Percentage distribution of amount of blood loss.

Frequency and percentage distribution of Latch Score of parturient women in experimental group: The results revealed that all (100%) of the babies of the parturient mothers in the experimental group belonged to the category of good on the breastfeeding latch score. This was supported by Himani (2011).

Frequency and percentage distribution of Maternal Satisfaction Score related to breast feeding of parturient mothers in experimental group: The results showed that all (100%) of the parturient mothers in the experimental group had found to be very satisfied with the early suckling during the third stage of labour. As a result of increased mother infant interaction and early suckling the parturient women found to be satisfied by the care by the investigator.

In experimental group 86.67 percent of the parturient mothers had 8-10 minutes duration of third stage of labour and the mean value was 1.13, standard deviation was 0.34 when compared with the control group values of 35 percent, 1.83 & 0.81 respectively. In experimental group 78.33 percent of the parturient mothers had 100 – 150 ml of blood loss when compared with the control group value of 48.33 percent this reveals that early suckling was effective in reducing the duration of third stage of labour and blood loss among the parturient mother.

Implications

Nursing Service: Early suckling demonstration classes can be conducted in hospital and maternity child health centre. Midwives can establish the practice of early suckling as a routine management of third stage of labour. Awareness can be created among the antenatal mothers about effectiveness of early suckling in hospital and maternity centres. Midwives can plan the nursing management and enhance the nurse patient relationship and sense of cooperation, sense of well-being of the mother, and baby through the development of mutually agreed goals. A written early suckling policy and training that is routinely communicated to all health care staff is desired. Educate all pregnant women about advantages of breastfeeding, breastfeeding position and techniques and about correct latching.

Nursing Education: The curriculum can involve the nurse educators to have the additional responsibility to update their knowledge on early suckling on third stage of labour; this can be done in collaboration with the nurse administrator by planning and conducting, continuing educational programmes. The teachers can work together in clinical area to disseminate knowledge on early suckling, through clinical teaching /ward demonstration.

Nursing Administration: The nurse administrator coordinates her work along with the staffs, to encour-

age the parturient women for the cooperation of early suckling on third stage of labour. Midwifery department should have policy and decision to use early suckling practice during third stage of labour. Nursing administrator can organise in-service educational programme to staff nurses regarding early suckling on third stage of labour for parturient women.

Nursing Research: There is a need to find out various innovative methods on early suckling to reduce the duration of third stage of labour and reduce the blood loss.

Recommendations

A comparative study can be conducted between primigravida and multigravida women on effectiveness of early suckling on third stage of labour. A similar study can be done (1) using the large sample primigravida women, (2) to find out the other aspects of effectiveness of early suckling such as mother baby bonding, temperature maintenance, mother's psychology, baby's behaviour and suckling response of the baby. A STP can be done related to the technique of Latching among primi and multigravida women. A prospective observational study can be done related to the Latch score Assessed in the first 24 hours after delivery.

Conclusion

The study findings revealed that early suckling is an effective intervention on duration of third stage of labour and blood loss. There was a significant association found between the third stage of labour with their selected demographic variables like weight of the baby, duration of first and second stage of labour.

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