Original Article

Journal of Nurse Midwifery and Maternal Health
Volume 6 Number 2, May – August 2020
DOI: http://dx.doi.org/10.21088/jnmmh.2454.7506.6220.6

A Pilot Study Entitled "Effectiveness of Mother and Newborn Early Skin-to-Skin Contact (SSC) on Duration of Delivery of Placenta and First Breastfeeding"

Minakshi Patidar[1], Sapna Patel[2], Anjali Tiwari[3]

Author Affiliation: [1]MSc Nursing Student, [2]Assistant Professor, [3]Assistant Professor and HOD, Department of Obstetrics and Gynecological Nursing, Manikaka Topawala institute of Nursing, Anand, Gujarat 388421, India.

How to cite this article:

Minakshi Patidar, Sapna Patel, Anjali Tiwari. A Pilot Study Entitled "Effectiveness of Mother and Newborn Early Skin-to-Skin Contact (Ssc) on Duration of Delivery of Placenta and First Breastfeeding". J Nurse Midwifery Matern Health. 2020;6(2):49–56.

Abstract

The close dermal contact between labouring woman and her newborn baby is a part of baby rising that may simpler and free from complication to a few, however its viewed as unique practice to mothers. This close contact expands the level of oxytocin in the mother's blood. There are some investigation indicated that this contact diminishes length of 3rd phase of labour and start of bosom breastfeeding. Therefore to evaluate the effect of mother and newborn early SSC on duration of delivery of placenta and first breast feeding and to discover the association between duration of delivery of placenta and first breastfeeding with socio-demographic and obstetrical variables of parturient mothers, a quasi experimental research: non-equivalent post-test only control group deign was used along with total 10 samples were recruited by non probability convenient sampling technique than randomly divided in to two groups (cont. group and Ex. group). Assessment was performed with the help of data collection tool consists of socio-demographic variable, maternal variable and stop watch for measure the duration of placental delivery and infant breastfeeding assessment tool scale was used for assessment of first breastfeeding. Result of the study reveals that 80% mothers in experimental group were delivered placenta within time period 10-15min while in control group 80% were delivered placenta >15minutes with p value of 0.1364. And about first breastfeeding 80% mothers in the study group has more than 10 score it mean successful breastfeeding compared to control group 100% mothers has less than 10 score with p value of 0.0317. This study concluded that early SSC may helps to lessen the duration of delivery of placenta and successful first breastfeeding and there is no statistically significant association found with duration of delivery of placenta and first breastfeeding with their socio -demographic and maternal variable.

Keyword: Effectiveness; Mother; Newborn; Early skin-to-skin contact; Time period of delivery of placenta; First breast feeding.

Corresponding Author: **Minakshi Patidar**, M Sc Nursing Student, Department of Obstetrics and Gynecological Nursing, Nursing, Manikaka Topawala institute of Nursing, Anand, Gujarat 388421, India.

E-mail: jayemina@gmail.com

Introduction

Background of the Study

Carrying a kid into the world is a blissful minute. There are good and bad times when a lady at last turns into a child' mother. Close skin contact (SSC) is a part of newborn rising, looks straightforward and simple to a few, yet it's viewed as a workmanship to skilled moms. SSC is characterized as placing the newborn baby close to the chest of the mother's or fathers. SSC builds up level of oxytocin in mother blood stream. It is a concoction dispatcher which is blended in the nerve centre as well as is secreted from the back part of pituitary gland in to fringe flow as a reaction to SSC.[1,2]

SSC through tangible boosts, for example, contact, warmth, and smell is an amazing vagus nerve aggravator, which among different impacts discharge of oxytocin in mother's blood. Increase the level of oxytocin responsible for a woman to become well-known with distinctive smell of her infant and once pulled in to it, to incline toward her very own infant's scent over entire others. Whenever neonate is delivered he is previously engraved on the scent of his/her amniotic liquid. This scent encourages neonates to search his/her mother's areola, has a comparable however marginally unique scent.[3'4]

Uterus and lactating breasts are two primary aim organ for physiologic effect of oxytocin. Nipple suckling of the lactating boom by neonates invigorates discharge of oxytocin which is accountable for breast milk "let down reflux" (enabling breast milk to stream) and ejection of breast milk throughout breastfeeding by causing withdrawals of cells of mammary gland of lactating breast, the measures of such contact responsible for the dimensions of the hormone.[5]

In the modern setting of obstetric, it is currently benchmark tradition to utilize medicine that reason unequivocally contracts the uterine muscle to hurry the 3rd phase of labour process, in an exertion to avoid bleeding. This is known as dynamic administration which incorporates early cord bracing and cord destroying to convey the infant's placental sheath rapidly. In an unmediated, natural, unsophisticated birth, it is sensible to design a natural 3rd phase of labour without enhancing the possibility of bleeding. In regular 3rd phase of labour, the infant's rope I generally not cut or clipped and mother with her neonate stay in SSC, in a non-stimulating, affectionate birthing condition awaiting once 3rd phase of labour has been completed. The shirking of this idea which may prompt baby blues discharge in ladies goes to complexity in third stage work or passing. In spite of proposal for prompt, consistent and continuous SSC, division of moms and newborn children is regular in numerous medical clinics and babies are frequently set in bunks or under warmers.[6]

Need of the Study

India, however being a quick creating country, despite everything has incredibly high neonatal and maternal passing rates. It is require distinguishing business, basic and predictable approaches to decrease this proportion. In this undertaking, we consequently attempt to show the measurable significance of giving early SSC in the middle of mother and her solid infant in labor room during third period of work procedure and achievement rate from the start breastfeeding.

As denoted through the majority current united nation universal assessment, per year 3 lacs 3 thousands women die during delivery process, or because of inconveniences emerging from pregnancy. This likens to around 830 ladies dies every day – approximately one in every 2 minutes.

Most of passings are from conditions that could have been reduced had ladies taken the correct clinical consideration all through their pregnancies and during birth. Extreme blood loss and Infections after labor are the greatest executioners; however hypertension, impeded work and dangerous premature births all contribute.[7]

Between 2016 and 2030, as part of the Sustainable Development Goals, the target is to reduce the global maternal mortality ratio to less than 70 per 100 000 live births. So there is a need to be have natural process in management of labour which Prevent complication specially during third stage of labour also SSC has several benefits to mother's and newborn.[8]

Partition of moms and children after birth is basic practice in numerous offices, especially in connection to cesarean, episiotomy or gash fix, or infant examination and routine consideration. This reality sheet abridges the valuable hormone

activities of mother-infant SSC, the advantages of SSC through the perspective of hormonal physiology, and practices that help useful hormonal physiology when division of mother and newborn child is essential.[9]

Specialists ask the initial 120 minutes immediate following birth, the "delicate period", since it is the main important ideal period for mother just as newborn child. The upsides of this technique quickly following first it makes the baby's progress to additional intra-uterine life a lot simpler; it enhances woman's capacity to think about her kid; it abbreviates the time period takes to convey placental sheath; it lessens worry of woman and infant; it has an extensive haul optimistic effect on connection practices.[9]

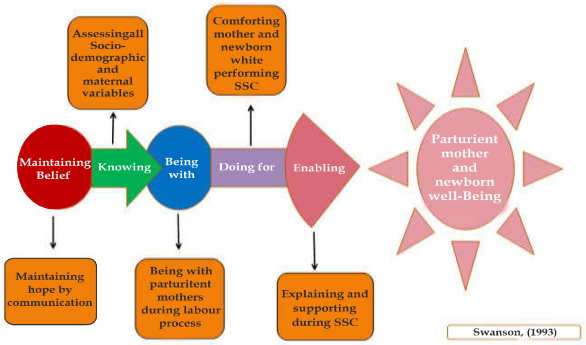
The American Academy of Pediatrics (AAP) has prescribes that "solid newborn children ought to be set and stay in direct SSC with their moms following conveyance until the principal sustaining is practiced". To make better care during post conveyance skin contact is a modest and an extremely basic strategy also helpful in expanding the length of breastfeeding, and empowering selective breastfeeding. Along these lines this examination planned to decide the impact of immediate mother/infant SSC following childbirth on the length of partition and removal of placenta.[10]

Early SSC intervention is a non-pharmacological, simple and easy to implement. But there is need of the study due to scarcity of this intervention in the local region. For this purpose study was carry out to inspect the outcome of early SSC on duration of placental delivery and breastfeeding. so after this intervention study can be used for recommendation.

Objective of the Study

1. To evaluate the effect of mother and newborn early SSC on duration of delivery of placenta among mothers admitted in the labour room
2. To evaluate the effect of mother and newborn early SSC on first breast feeding among mothers admitted in the labour room
3. To discover the association between duration of delivery of placenta with socio-demographic and obstetrical variables of mothers admitted in the labour room
4. To discover the association between first breastfeeding with socio-demographic and obstetrical variables of mothers admitted in the labour room.

Conceptual Frame Work for the Study



The present project depend upon the concept of immediate SSC in between mothers and their full term healthy neonates immediate after delivery, to observe the change in the duration of delivery of placenta and first breastfeeding.

This study has adopted the Kristen M. Swanson Theory of Caring (1993). Swanson states that during 3rd phase of labour, the parturient women feel sense of personal happiness, dedication and liability by the care.

In this model, Swanson stated the five basic principles of knowing, being with, doing for, enabling and maintaining belief. When practically applied in the nursing field thee all principle enhances the midwives attitude and overall improvement. This was framed to make sure constant caring attitude, which would in turn, enhance mother' level of satisfaction.[11]

Methodology

A quantitative approach was used for the study. A quasi experimental research: non-equivalent post-test only control group deign was adopted to conduct the research study. The target population were mother's who admitted in the labour room of Jethabhai Zaverbhai Manoharbhai and Natwarlal General Hospital, Nadiad. Using non-probability convenient sampling technique 10 parturient women who fulfilled the inclusion criteria and gave informed consent were selected and randomly

Table 1: Findings Related to Demographic and Maternal Variables of Parturient Mothers of both Experimental and Control Group.

S. No	Demographic and maternal variable	Experimental group N=5		Control group N=5	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1.	Age				
	18 to 23 years	2	40.0	4	80.0
	24 to 29 years	3	60.0	1	20.0
	30 to 35years	0	–	0	–
2.	Educational status				
	no formal education	2	40.0	2	40.0
	Primary education	1	20.0	1	20.0
	Secondary and/or Higher secondary education	2	40.0	2	40.0
	Graduation and/or above	0	–	0	–
3.	Types of family				
	Nuclear Family	0	–	0	–
	Joint Family	5	100.0	5	100.0
	Single parent	0	–	0	–
4.	Occupation				
	Housewife	5	100.0	4	80.0
	Related to Medical Profession	0	–	0	–
	Related to Non Medical Profession	0	–	1	20.0
5.	Monthly income in Rs				
	≤5000	2	40.0	0	–
	5001-10000	2	40.0	4	80.0
	10001-20000	0	–	1	20.0
	≥20001	1	20.0	0	–
6.	Place of residency				
	Rural area	2	40.0	3	60.0
	Urban area	3	60.0	2	40.0
7.	Height				
	< 140 cm	0	–	0	–
	141 cm - 150 cm	2	40.0	2	40.0
	151 cm - 160 cm	3	60.0	3	60.0
	> 161 cm	0	–	0	–
8.	Weight				
	≤50 kg	1	20.0	1	20.0
	51 kg-60 kg	3	60.0	3	60.0
	61 kg- 70 kg	0	–	1	20.0
	71 kg-80 kg	1	20.0	0	–
	≥81 kg	0	–	0	–
9.	Type of diet				
	Vegetarian	3	60.0	3	60.0
	Non vegetarian/Mixed	2	40.0	2	40.0
10.	Miscarriage				
	0	4	80.0	3	60.0
	1	1	20.0	2	40.0
	2	0	–	0	–
	More than 2	0	–	0	–
11.	Current pregnancy-gestational age				
	32 weeks -34 weeks	2	40.0	1	20.0
	35 weeks-37 weeks	2	40.0	1	20.0
	≥37 weeks	1	20.0	3	60.0
12.	No. of antenatal visits				
	<4	1	20.0	0	–
	≥4	4	80.0	5	100.0
13.	Information received about breastfeeding during antenatal care				
	Yes	5	100.0	4	80.0
	No	0	–	1	20.0
	If yes, specify:				
	By family members	1	20.0	3	60.0
	By mass media	0	–	0	–
	By health care professionals	4	80.0	1	20.0
	By friends and neighbours	0	–	1	20.0

Table 2: Effect of Early SSC on Duration of Delivery of Placenta in Ex. Group and Cont. Group N=5

Group	Duration of delivery of placenta	Frequency (f)	Percentage (%)	Mann Whitney Test	P value	Significance
Experimental group	5 min	0	–	5	0.1364	Not significant
	5-10 min	0	–			
	10-15 min	4	80.0			
	≥15 min	1	20.0			
Control group	<5 min	0	–			
	5-10 min	0	–			
	10-15 min	1	20.0			
	≥15 min	4	80.0			

allocated in experimental and control group (5 in each). Three tools were used for the data collection first was structured questionnaire tool for the assessment of socio-demographic and obstetrical variables, second was digital stop watch to measure time period of placental sheath delivery and third was standardized IBFAT scale to assess successful first breastfeeding score in which if score was >10 than it considered as a successful breastfeeding and if < 10 than not successful breastfeeding and interpretation of score was like: Poor 0-4 score, Moderate-5-8 score, High-9-12 score.

Procedure for Data Collection

After getting ethical clearance from institutional ethical committee, pilot study study was conducted. Firstly the medical officer of selected health care institutions (CHC's) or chief medical officer of civil hospital was contacted and the objectives and benefits of the research project were explained to him/her. Each participant was explained about the benefits of interventions and on agreement informed consent was obtained from them. After that by using structured questionnaire sheet, socio-demographical and obstetrical variable were collected from both groups during 1st stage of labour. Next, immediate after delivery of newborn, in experimental group the naked newborn was puts on mothers unclothed chest in prone position and back enclosed with warm coverlet and baby's head also covered with warm cap and all the routine procedure eg. Suctioning, Apgar score, eye care etc was done at mother's bare chest only. In study group, soon after implementation of SSC of parturient mother and her infant, the research tool digital stopwatch was started to countdown the time period of placental sheath delivery as well as sees the beginning of first breast feeding by using IBFAT scale. In control group the time period of delivery of placental sheath in the third phase was measured by using research tool and soon after birth, newborn babies and their mothers in the cont. group were received hospital routine care.

Result and Discussion

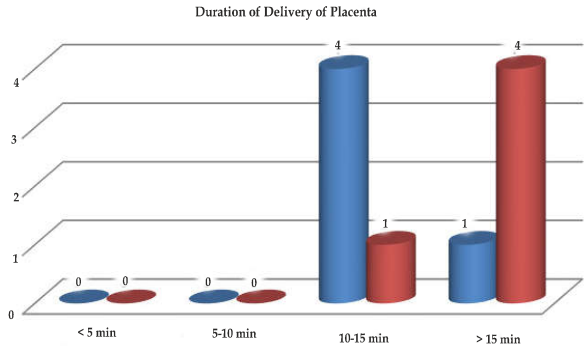
The data were analyzed by using descriptive and inferential statistics. Mann whitney test was used to identify the efficiency of SSC on placental sheath delivery and successful first breastfeeding. Chi square test was used to analyze the association of time period of placental delivery and first breastfeeding with their selected socio-demographic and maternal characteristics.

The data presented in the table 2 stated that 80% mothers in experimental group were delivered placenta within time period 10-15min while in control group 80% were delivered placenta >15minutes with p value of 0.1364. So it depicts that early SSC was not much effective in reducing duration of placental delivery as the p value was more than 0.05 in both experimental and control group. It may be due to small sample size.

Hence null hypothesis 1H0, there is no statistically significant effect of early SSC of mother and newborn on duration of delivery of placenta at 0.05 level of significant was accepted.

A similar an interventional study was done by Tarun Zekiye et.al. to check the outcome of SSC between parturient women and her neonate at the time of 3rd phase of delivery on pain, time of placental sheath partition and level of oxytocin in postnatal period (November 2018). This study

composed of 64 parturient women (32 in each group). Mothers and newborn of study group were received SSC intervention for half hour following childbirth whereas the neonates of cont. group were received only hospital routine care. With the help if visual analogue scale, introductory information form, placental partition degree form and time record sheet of oxytocin analyses, data were gathered. Result stated that there was no significant difference related to partition time of placental sheath and I and 30th minute level of oxytocin of parturient women but SSC is valuable, which reduces a mother's pain.[12]



Graph 1: A Graph showing frequency of duration of placental delivery acc. to time during SSC of Ex. and cont. group.

80% mothers in experimental group were delivered placenta within time period 10-15 min while in control group 80% were delivered placenta >15minutes.(Graph 1)

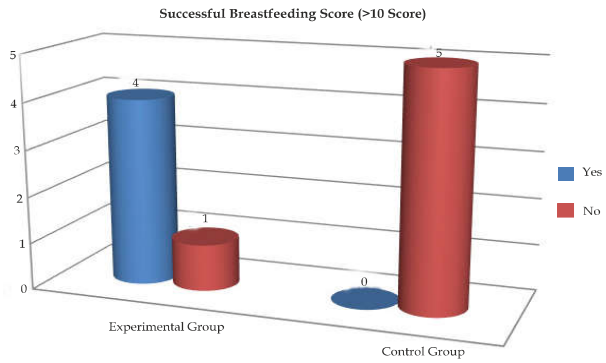
The data presented in table 3 depicted that according to the Infant breast feeding assessment tool score, there is 80% mothers in the study group has more than 10 score compared to control group 100% mothers has less than 10 score with p value of 0.0317. So it reveals that early SSC was effective in successful first breastfeeding as the p value was less than 0.05 in both groups.

Hence null hypothesis 2H0 there is no statistically significant effect of early SSC of mother and her newborn on first breast feeding at 0.05 level of significant was rejected.

A study finding also supported by an interventional project was conducted to evaluate the efficacy of early SSC of parturient mothers and her neonates following birth on the period of 3rd phase of labour process and beginning of breastfeeding at labour unit of National Medical Institution in Damanhour, Albehera Governorate, Egypt (2015). To select study's subjects purposive sampling techniques was used in which total 100 parturient women selected (50 in each group). Study group who received SSC and cont. group who given hospital routine care. The result of this study revealed that study group has higher success in first breastfeeding. The mean time period of 3rd phase of labour in the experimental group was lessening than the cont. group (p<01).[13]

Table 3: Effect of Early SSC on Successful Breastfeeding Score in Experimental and Control Group by IBFAT N=5

Group	successful breastfeeding score >10 (f)	%	Mann Whitney test	P value	Significance
Experimental group	Yes	4			
	No	1			
	Total	5	2	0.0317	Significant
Control group	Yes	0			
	No	5			
	Total	5			



Graph 2: A Graph showing frequency of successful breastfeeding (>10 score) acc. to IBFAT scale both experimental and control group.

In this graph, 80% mothers in the study group have more than 10 score compared to control group 100% mothers has less than 10 score.(Graph 2)

In the association of time period of placental sheath delivery and first breastfeeding all the p value was more than 0.05 significant levels which suggested that there was no statistically significant association of duration of placental delivery and first breastfeeding found with their socio-demographic data and obstetrical variables like: age, education, occupation, residence, type of family, family monthly income and maternal variables like: height, weight, period of gestation, type of diet, no. of miscarriage, no. of antenatal visits, information received about breastfeeding during antenatal care. Hence null hypothesis 3H0 and 4H0, there is no statistically significant association between time period of placental heath delivery and initiation of first breastfeeding with socio-demographic and obstetrical variables of women admitted in the labour room at 0.05 level of significant was accepted.

Recommendation

In different setting same study can be conducted.

On large wider subjects similar study may be conducted for making generalization.

The researcher can perform the comparative study between Primigravida and multigravida mothers.

To check the knowledge and practice regarding early SSC, several descriptive studies can be performed by nursing personnel.

Conclusion

The present study was conducted among 10 parturient women (5 experimental and 5 cont.) and concluded that early SSC intervention is a non-pharmacological, simple and easy to implement in every hospital. It helps to diminish the duration of placental sheath delivery and also in successful first breastfeeding. It should be use as a routine practice at all labour room.

References

1. Anderson GC, Chiu SH, Dombrowski MA, Swinth JY, Albert JM, Wada N. Mother-newborn contact in a randomized trial of kangaroo (skin-to-skin) care. Journal of Obstetric, Gynecologic and Neonatal Nursing. 2003;32(5):604–11. Available from: https://www.ncbi.nlm.nih.gov/pubmed/14565739
2. Chiu SH, Anderson GC. Effect of early skin-to-skin contact on mother-preterm infant interaction through 18 months: randomized controlled trial. International Journal of Nursing Studies. 2009;46(9):1168–80.Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2818078/
3. Bystrova K, Ivanova V, Edhborg M, Matthiesen AS, Ransjo-Arvidson AB, Mukhamedrakhimov R, et al. Early contact versus separation: effects on mother-infant interaction one year later. Birth. 2009;36(2):97–109. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1523-536X.2009.00307.x
4. Bystrova K, Matthiesen AS, Vorontsov I, Widstrom AM, Ransjo-Arvidson AB, Uvnas-Moberg K. Maternal axillar and breast temperature after giving birth: effects of delivery ward practices and relation to infant temperature. Birth. 2007;34(4):291–300. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1523-536X.2007.00187.x
5. D.C. Datta. Textbook of Obstetrics, 8th edition. New Delhi central book company publication.172-174
6. Mountaha Kahidm Mejbel, Rabea M. Ali. Effectiveness of Skin- to Skin Contact on duration of third stage of labor in Baghdad Teaching Hospital: Comparative Study. Kjfns.2018; 8(2).Available from: https://www.iasj.net/iasj?func=fulltext&aId=65569

7. Bill and Melinda Gates Foundation. Global development.[INTERNET] .10 Nov 2018. [cited on: april,2020].Available from: https://www.theguardian.com/global-development/2018/sep/24/why-do-women-still-die-giving-birth
8. Begley C, Gyte G, Murphy D. Active versus expectant management for women in the third stage of labor. Cochrane Database of Systematic Reviews. 2011; 11. Chichester: John Wiley and Sons.Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4026059/
9. Early Skin-to-Skin Contact Between Mothers and Newborns A new report, Hormonal Physiology of Childbearing: Evidence and Implications for Women, Babies, and Maternity Care (2015), synthesizes an extensive literature about hormonally-driven processes of parturition and the early postpartum period. Available from-http://www.nationalpartnership.org/our-work/resources/health care/maternity/early-skin-to-skin-contact.pdf
10. Mary w. Walters, boggs, kim m. Kangaroo care at birth for full term infants: a pilot study. The American Journal of Maternal/Child Nursing. Nov-/Dec. 2007;32(6):375 - 381.
11. Kristen M swanson. Nursing as Informed Caring for the well-being of others. IMAGE Journal of Nursing scholarship; volume 199;25(4):352-357
12. Rasha Mohamed Essa*, Nemat Ismail Abdel Aziz Ismail. Effect of early maternal/newborn skin-to-skin contact after birth on the duration of third stage of labor and initiation of breastfeeding, Journal of Nursing Education and Practice, 2015, Vol. 5(4).Available from https://pdfs.semanticscholar.org/c656/932d2880844da417348338a809682ec5f16d.pdf
13. Rasha Mohamed Essa*, Nemat Ismail Abdel Aziz Ismail. Effect of early maternal/newborn skin-to-skin contact after birth on the duration of third stage of labor and initiation of breastfeeding, Journal of Nursing Education and Practice, 2015, Vol. 5(4).Available from https://pdfs.semanticscholar.org/c656/932d2880844da417348338a809682ec5f16d.pdf