Effectiveness of Video Assisted Teaching Regarding Breast Crawl on Knowledge among Staff Nurses

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Abstract

Background: Every newborn when placed on her mother's chest, soon after birth has the ability to find her mother's breast all on her own and to decide when to take the first breast feed. This is called "Breast crawl". *Aim*: This study aimed to assess the effectiveness of video assisted teaching regarding breast crawl on knowledge among staff nurses. *Methods:* The present study was conducted in selected hospitals at Kerala namely Josgiri, Christuraja, Cherukunne & Amala. Out of which, Josgiri hospital and Christuraja hospital were selected for the study group and Cherukunne hospital and Amala hospital were chosen for control group. Quasi experimental, pre test and post test design was adopted for the study. 60 staff nurses were selected by convenient sampling technique. Out of which, 30 of them were allotted to study group and 30 to control group. Inclusion criteria for sample selection includes a) Staff nurses who were working in the maternity wards of selected hospitals, b) Staff nurses who were willing to participate in the study and c) Staff nurses who had diploma or graduate degree in nursing. Staff nurses who underwent Inservice education or any awareness programme on breast crawl were excluded from the study. Structured questionnaire was used to assess the knowledge regarding breast crawl among staff nurses which was devised by the investigator. The scores were interpreted as adequate knowledge, moderately adequate knowledge and inadequate knowledge. *Result:* The present study findings revealed that, there was statistically significant difference found in the post test level of knowledge on breast crawl among staff nurses between study and control group at $p=0.001$ level. The overall gain score of knowledge of staff nurses in study group after video assisted teaching was 12.63 and the percentage difference with 95% confidence interval was 36.1%. *Conclusion:* The current study results conclude that , video assisted teaching on breast crawl was effective in improving the knowledge of staff nurses in the study group. An understanding of the techniques of breast crawl by the staff nurses holds the possibility that more women will experience this natural way of initiation of breast feeding immediately after birth, which in turn helps to reduce the morbidity and mortality rate of the Newborn.

Keywords: Video Assisted Teaching; Breast Crawl and Knowledge.

Introduction

Breast feeding begins at birth. The first act after birth is to suck mother's milk, this is an act of affection and compassion. Without that act no one can survive, that is clear, that is the way of life, that is the reality [1]. Nutrition is the one of the basic needs of living organism, either they are born or even while they are in their mother's womb. By nature,

the fetus gets its nutritional requirements from mothers breast Milk. Breast milk contains an ideal balance of nutrients for the complete growth of body and brain, more than a food it is a multipurpose medicine, rich in anti-infective factors which helps to protect the baby. Breast milk is widely acknowledged as the most complete form of nutrition for infants, with a range of benefits for infants' health, growth, immunity and development [2,3].

Every newborn when placed on her mother's chest, soon after birth has the ability to find her mother's breast all on her own and to decide when to take the first breast feed. This is called "Breast crawl". In the past, most caretakers believed that the newborn needed help to begin breastfeeding. So, immediately after birth, the baby was given to the mother with its lips placed near or on the mother's nipple. Now many research studies found that newborn have its own innate capacity to reach the mothers breast .The Breast Crawl, demonstrates the process of initiating breastfeeding exclusively on baby's own ability. The starting position for the 'Breast Crawl' is nose in the midline of the mother's chest, and eyes at the level of the nipples. Many research studies identified how the Breast Crawl is associated with a variety of sensory, central, motor and neuro-endocrine components, all directly or indirectly helping the baby to move and facilitate her survival in the new world [4].

The target given in United Nations Millennium Development Goals is to reduce two-thirds of the mortality among children <5 years of age by 2015. In India, as many as 1.72 million children die annually before reaching their first birthday and out of these, 72% die during their first month of life, that is the neonatal period. The neonatal mortality rate varies by nation by nation and state by state.The international statistics shows that the present neonatal mortality rate is almost 5 millions within the first year of life. In India, the infant mortality rate is 44.6 per 1000 live birth, in Tamilnadu its about 24 per 1000 live birth and in Kerala it is about 46 per 1000 live birth. The infant mortality rate differs in rural and urban area, it is more in rural area than the urban area. In order to reduce the neonatal mortality and morbidity, one of the preventable methods is early initiation of breast feeding that is with in half an hour of birth , and it can be achieved by breast crawl [5].

The maximum benefits of early initiation are best achieved with the Breast Crawl. Mother-baby interactions are not only for the nutrition needs it has many other advantages also . The transition from the intrauterine to the extra uterine environment is made most comfortable by the Breast Crawl. Initiating

early skin to skin contact offers many advantages, it helps in the development of various sensory organs and also the brain. This may offer an advantage for better sensory-neural development. The baby reaches out to the nipple in a massaging movement, this not only protracts the nipple and makes it more prominent, but also releases a hormone called oxytocin which helps in uterine contractions and helps to reduce the third stage of labour, it also facilitates the secretion of prolactin as a result, helps in successful feeding. Early initiation through breast crawl will help in successful establishment and maintenance of breastfeeding. It is the first giant step, no doubt, of a process which ultimately ends with establishment of lactation in a few days. So it is very important to practice this breast crawl by every health professionals to improve the quality of life of the child and mother. As a health professional, the nurse must be well equipped to possess good knowledge regarding the new concept like Breast Crawl and also to provide a practical way to integrate these techniques in to midwifery practice [6,7,8].

Black R E found that, 22% of deaths among newborns are prevented, if newborns started breastfeeding within one hour of birth. It is estimated that if 99% of infants started breastfeeding on first day of life, a total of 8,67, 000 lives could be saved worldwide and if they started breastfeeding within first hour of birth, then 31% of all neonatal deaths could be prevented [9].

As science and technology has remarkably developed in the 21st century, teaching with video is the one of the innovative method by which a large number of people can be taught at the same time. Many researchers have proved that, the video teaching is an effective method of innovative teaching and are used commonly in community, hospitals, health departments and office waiting rooms. It is necessary to impart knowledge on breast crawl among staff nurses through video assisted teaching.

The present study aims to assess the effectiveness of video assisted teaching regarding breast crawl on knowledge among staff nurses.

Methodology

The present study was conducted in selected hospitals at Kerala namely Josgiri, Christuraja, Cherukunne & Amala. Out of which, Josgiri hospital and Christuraja hospital were selected for the study group and Cherukunne hospital and Amala hospital were chosen for control group. Quasi experimental, pre test and post test design was adopted for the

study . 60 staff nurses were selected by convenient sampling technique. Out of which, 30 of them were allotted to study group and 30 to control group. Inclusion criteria for sample selection includes a) Staff nurses who were working in the maternity wards of selected hospitals, b) Staff nurses who were willing to participate in the study and c) Staff nurses who had diploma or graduate degree in nursing. Staff nurses who underwent In-service education or any awareness programme on breast crawl were excluded from the study.

Ethical Consideration

Formal approval was obtained from the Institutional review board and Institutional ethical committee of SRM University, Kattankulathur, Chennai, Tamil nadu, India. Permission was obtained from the management of the selected hospitals, after explaining the objectives of the study. The purpose and the benefit of the study were explained to the staff nurses and written consent was obtained from each participants before the data collection. Assurance was given to the staff nurses that the confidentiality will be maintained.

Data Collection Instruments

The questionnaire for present research study comprised of two sections. Section I pertained information regarding demographic variables such as age, religion, educational status, marital status, area of work and years of clinical experience. Section II comprised of structured questionnaire to assess the knowledge regarding breast crawl among staff nurses which was devised by the investigator. A total of 35 questions were prepared under various sections like breast feeding, general information on breast crawl, components of breast crawl, techniques of breast crawl and advantages of breast crawl .Each section had 7 questions. Each correct answer was given a score of 1 and 0 for wrong answer. The maximum score was 35. The scores were interpreted as adequate knowledge, moderately adequate knowledge and inadequate knowledge.

The reliability of the tool was obtained by test-retest method and a reliability coefficient of 0.83, hence the tool was considered reliable and feasible for proceeding with main study.

Development of Video Assisted Teaching on Breast Crawl

The investigator had prepared a lesson plan on breast crawl after extensive review of literatures from various sources like, books, journals and electronic data bases such as CINHAL, pubMed, etc. Based on the lesson plan, the video on breast crawl was developed by the investigator for the study, which consisted of information about breast crawl, its technique, components, do's and don'ts and advantages for 15 minutes and was given once for the staff nurses in study group.

Statistical Package

The data was analyzed using both descriptive and inferential statistical methods. Independent 't' test was used for comparison of values between study and control groups. P value less than 0.05 was considered statistically significant.

Results

Regarding the demographic variables of staff nurses in study group, majority 18(60.0%) staff nurses were in the age group between20 -25 yrs and 25(83.3%) were Christian. With respect to the educational status, 22(73.3%) had completed GNM. 9(30.0%) were working in the antenatal ward and 11(36.7) of them had 1- 2 yrs of experience. In the control group, 14(46.7%)staff nurses were in the age group between 20-25 yrs, 20(66.7%) were Christian, 17(56.7%)had completed GNM, 11(36.7%) were working in the labour room. Considering the years of clinical experience, 17(56.7) of them had 1-2 yrs of experience (Table 1).

The baseline values on knowledge regarding breast crawl among staff nurses were not significantly different between the study and control groups. (t=0.25)

Regarding the post test level of knowledge on breast crawl among staff nurses in study group, majority 24(80%) had adequate level of knowledge on breast crawl where as in the control group, most of them 23(76.7%) had moderately adequate knowledge and none of them had adequate knowledge on breast crawl (Table 2).

The comparison of post test level of knowledge on breast crawl among staff nurses between study and control group showed that, the mean value of 29.10 with standard deviation 3.38 in study group compared with the mean value 17.17 with standard deviation 3.69 of control group projects "t" value 13,05 which was statistically significant at p=0.001 level (Table 3).

The analysis regarding the comparison of overall gain score of knowledge regarding breast crawl

among staff nurses in study group after video assisted teaching programme revealed that, the mean difference between pre test and post test was 12.63 and the percentage difference with 95% confidence interval was 36.1%, where as in control group the mean difference between pre test and post test was only 0.43 and the percentage difference with 95% confidence interval was only 1.2% (Table 4).

Table 1: Demographic variables of staff nurses in study and control groups   N=60

Demographic variables		Study group (n=30)		Control (n=30)		Chi square test
Age	20 -25 yrs	18	60.0	14	46.7	
	25 -30 yrs	6	20.0	11	36.7	χ2=2.11 p=0.55
	31 -35 yrs	4	13.3	3	10.0	
	36 -40 yrs	2	6.7	2	6.7	
Religion	Hindu	5	16.7	10	33.3	χ2=2.22 p=0.13
	Christian	25	83.3	20	66.7	
	Muslim	-	-	-	-	
Educational status	GNM	22	73.3	17	56.7	χ2=1.97 p=0.37
	Post basic B.Sc(N)	5	16.7	7	23.3	
	B.sc(N)	3	10.0	6	20.0	
Marital status	Married	7	23.3	10	33.3	χ2=0.73 p=0.39
	Unmarried	23	76.7	20	66.7	
Area of work	Gynaec ward	6	20.0	6	20.0	
	Labour room	7	23.3	11	36.7	χ2=2.87 p=0.41
	Post natal ward	8	26.7	9	30.0	
	Ante natal ward	9	30.0	4	13.3	
Years of clinical experience	< 1 year	8	26.7	3	10.0	
	1- 2 yrs	11	36.7	17	56.7	χ2=4.82 p=0.18
	3- 4 yrs	9	30.0	6	20.0	
	> 4 yrs	2	6.7	4	13.3	

Table 2: Assessment of post test level of knowledge regarding breast crawl among staff nurses in study and control groups   N=60

Post test level of knowledge	Study group (n=30)		Control group (n=30)	
	n	%	n	%
Inadequate knowledge	-	-	7	23.3
Moderately adequate knowledge	6	20.0	23	76.7
Adequate knowledge	24	80.0	-	-

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Table 3: Comparison of post test level of knowledge regarding breast crawl among staff nurses
between study and control groups   N=60

Post test level of knowledge				
Study group (n=30)		Control group (n=30)		Student independent 't' test
Mean	Standard Deviation	Mean	Standard Deviation	
29.10	3.38	17.17	3.69	t=13.05
				P=0.001***

*** very high significant at   Pd"0.001

Table 4: Comparison of overall gain score of knowledge regarding breast crawl among staff nurses in study group after
video assisted teaching programme   N=60

Groups	Knowledge On Breast Crawl	Max score	Mean score	Mean Difference with 95% Confidence interval	Percentage Difference with 95% Confidence interval
Study Group	Pretest	35	16.47	12.63 (11.2%– 14.1%)	36.1% (32.0%–40.2%)
	Posttest	35	29.10		
Control Group	Pretest	35	16.73	0.43 (0.06– 0.93)	1.2% (0.2% –2.6%)
	Posttest	35	17.17		

Discussion

Every newborn, when placed on his mother's abdomen, has the ability to find his mother's breast, and initiate breastfeeding on his own . Newborn babies identify the direction of breast milk by the scent of the unwashed breast, which is similar to the smell and taste of amniotic fluid [10]. The Breast Crawl seemed to be the best and easiest method to complement the recommendations to initiate breast feeding within half an hour of birth. Breast crawl is the natural instinctive behavior of the human newborn. The mother and the newborn dyad are mutually responsive in the most sensitive period of half to one hour following delivery This period is crucial for laying the foundation for successful breast feeding [11,12].

The current study findings revealed that, there was statistically significant difference found in the post test level of knowledge on breast crawl among staff nurses between study and control group at p=0.001 level. The overall gain score of knowledge of staff nurses in study group after video assisted teaching was 12.63 and the percentage difference with 95% confidence interval was 36.1%. This shows that, the video assisted teaching on breast crawl was effective in improving the knowledge of staff nurses in study group.

Righard A conducted a study, regarding early initiation of feeding through breast crawl and success of breast feeding. 17 babies kept in the breast crawl position and kept in uninterrupted skin-to-skin contact for 1 hour, 16 attached to the breast correctly. Fifteen babies in the other group were separated after about 20 minutes for routine measuring and weighing procedures. After an interval of approximately 20 minutes, they were returned to the mother. Only seven babies in this group attached correctly. These findings are crucial because the early sucking pattern is of prognostic value for the duration and success of breastfeeding [13].

The present study results showed that, there was significant association found between level of knowledge regarding breast crawl among staff nurses in study group with demographic variables such as age ,area of work and years of clinical experience at ≤ 0.05 level of significance and there was no significant association found with other variables such as religion, educational status and marital status. But in the control group, none of the demographic variables were significantly associated with the level of knowledge regarding breast crawl among staff nurses .

Health professionals should follow "10 steps to successful breast feeding" developed by UNICEF (United Nations Integrated Children Education Fund) and WHO (World Health Organization) in hospitals and community setting. Health professionals should give current, accurate, consistent and non-judgmental breast feeding information to enhance successful breast feeding. Health team can have a significant impact on the initiation and maintenance of breast feeding, if they have sufficient knowledge of its benefits and the necessary clinical management skills or habits. Success of breast feeding depends on the support of staff directly involved with feeding mothers and neonates. So it is very important to provide information to the health care members especially to the staff nurses regarding this aspect of breast feeding immediately after delivery of the baby ,because they are the members who will be there with the mothers throughout their hospital stay and they are the one who can help and support the mothers to feed the baby immediately after delivery with this magical phenomena of breast crawl [14].

Conclusion

The current study results showed that , there was statistically significant difference found in the post test level of knowledge on breast crawl among staff nurses between study and control group at p=0.001 level. The video assisted teaching on breast crawl was effective in improving the knowledge of staff nurses in the study group.

An understanding of the techniques of breast crawl by the staff nurses holds the possibility that more women will experience this natural way of initiation of breast feeding immediately after birth, which in turn helps to reduce the morbidity and mortality rate of the Newborn. Therefore continuing nursing education programmes can be done about the resent trends in the field of obstetrics with the help of video, as it helps to update their knowledge ,thus helps them to practice efficiently in their area of work.

References

1. Assuma Beevi T. M. Text book of Pediatric Nursing. UP. 2009; 133-34.

2. Healthy People 2010, Centres for Disease Control and Prevention, Atlanta, Georgia. 3.

3. Alive and Thrive .Impact of early initiation of exclusive breast feeding on newborns death. Insight. 2010 Jan 1; (1)Available from http://www.Allive and Thrive.org.

4. Marshall Klaus. Mother and infant Early Emotional Ties. Official Journal of The American Academy of Paediatrics. 2007 March 8; 102(10): 1244-1246

5. Millennium development goals [Internet]. Available from: www.un.org/ Millennium goals.

6. Bhagat K.etal., Initiation of breast feeding by breast crawl. 1stedition,UNICEF. 2007. URL:www.breastcrawl.org/pdf/breastcrawl. pdf

7. Chaturvedi p. Breast crawl to initiate breast feeding within half an hour after birth.Journal Of Mahatma Gandhi Institute of Medical Sciences. 2008 September; 13(2): 9-14.

8. Edmond KM, Zandoh .C,etal., Delayed Breastfeeding Initiation Increases Risk of Neonatal Mortality. International journal of Pediatrics. 2006 March 3; 117(10): 380-386.

9. Black R E, Morris SS and Jennifer Bryce. Where and why 10 million dying every year.Lancet. 2003 June 28; 361: 2226-34.

10. Breast Crawl Article on Initiation of Breastfeeding, A Scientific Overview.23 June 2010; Website http://breastcrawl.org/science.html23 June 2010.

11. Prabhudeva S.S. Breast feeding week.Nightingale Nursing Times. 2007; 3(5): 3.

12. I.W.R.,Bushnell.Mothers face recognition in new born infants .Infant and child development journal. 2001 June; 10(2): 67-74.

13. RigardA.Early initiation of breast feeding through breast crawl.1990; Website: http://breastcrawl.org/science. Html.

14. Breast crawl Phenomenon benefits mothers and baby, UNICEF – India, news report, 2011 [updated 8 August 2007; cited 2011 June 17], Website http://www.unicef.org/infobycountry/india_40548.html.