

## Feasibility of breast crawl in a tertiary care teaching institute

Ashna Gupta<sup>1</sup>, Brijendra Prasad<sup>2</sup>, Sandhya Khadse<sup>3</sup>, Chhaya Valvi<sup>4</sup>, Rajesh Kulkarni<sup>4</sup>, Uday Rajput<sup>4</sup>, Rahul Dawre<sup>4</sup>, Priyanka Badjate<sup>2</sup>, Arti Kinikar<sup>5</sup>

From <sup>1</sup>Resident, <sup>2</sup>Assistant Professor, <sup>3</sup>Ex-Professor, <sup>4</sup>Associate Professor, <sup>5</sup>Professor and HOD, Department of Pediatrics, B. J. Government Medical College, Pune, Maharashtra, India

**Correspondence to:** Dr. Brijendra Prasad, Department of Pediatrics, B. J. Government Medical College, Railway Station, Jai Prakash Narayan Road, Pune - 411 001, Maharashtra, India. E-mail: [drbrijendraprasad@gmail.com](mailto:drbrijendraprasad@gmail.com)

Received - 09 July 2019

Initial Review - 31 July 2019

Accepted - 12 September 2019

### ABSTRACT

**Background:** Early initiation of breastfeeding has many beneficial effects for both the mother and the baby. The breast crawl has been established as the ideal method for promoting early skin-to-skin contact and early initiation of breastfeeding. **Objective:** The objective of the study was to assess the feasibility of breast crawl in a busy tertiary care institute. **Materials and Methods:** An observational study was performed including 50 mother-baby pairs, admitted to the labor room of Sassoon General Hospital, Pune, from January 2018 for 6 months. Observations were made on patient and nurse attitude and behavior and were further analyzed. **Results:** Of the total subjects, 23 (46%) mothers had not received any counseling about breastfeeding during the antenatal period and none of them were familiar with the idea of breast crawl from the antenatal period. Of the 50 mothers, 27 mothers (54%) were concerned about privacy, 8 (16%) were concerned about environmental cold, 6 (12%) were worried about exposure, and 9 mothers (18%) were concerned about the baby, whereas 6 mothers (12%) had no concerns and 6 mothers had more than one concern. The attitude of the nursing staff was favorable (enthusiastic) 19 times, indifferent 23 times, reluctant 6 times, and unfavorable (uncooperative) 2 times. **Conclusion:** While it is highly desirable to implement breast crawl as a routine practice, there are several roadblocks such as lack of antenatal counseling, lack of awareness and motivation, lack of specific guidelines and instructions, skewed staff-to-patient and bed-to-patient ratio, and lack of privacy.

**Key words:** Breast crawl, Early initiation of breastfeeding, Early skin-to-skin contact, Feasibility

It is a well-established fact that human breast milk is the optimal source of nutrition for infants up to the age of 6 months [1]. Adequately breastfed babies, up to the age of 6 months, do not require any other food or drink as human milk contains all the required ingredients for the nutritional and immunological needs of the infant [1,2]. It is also well established that early initiation of breastfeeding (within 1 h of birth) has many beneficial effects for both the mother and baby. It helps in capitalizing on the initial period of heightened alertness in the baby immediately after birth; provides natural warmth to the baby; leads to colonization of the newborn skin with commensal bacteria from the mother; promotes bonding between the mother and the baby; helps in early expulsion of placenta and involution of the uterus; and reduces postpartum blood loss in the mother [3-7].

Contrary to the earlier practice of giving the baby to the mother, after all post-delivery routine cares such as drying, suctioning, and administering Vitamin K to the baby are over, and assisting the mother in breastfeeding, nowadays, concept of breast crawling is used. It is a natural instinctive behavior of the human newborn, wherein the babies start suckling on their own when allowed to do so by keeping them prone to the mother's abdomen [8-12]. Indeed, every newborn when placed on its mother's abdomen, soon after birth has the ability to find its mother's breast all on its own and

to decide when to take the first breastfeed [8,10,13,14]. It is now widely accepted that an organized feeding behavior develops in a predictable way during the 1<sup>st</sup> h of life. It is initially expressed as spontaneous sucking and rooting movements followed by hand-to-mouth activity together with more intense sucking and rooting activity which culminates in sucking of the breast. The whole activity takes about 35–50 min [10].

The breast crawl is possibly a more superior and natural method of early initiation of breastfeeding and this has been demonstrated in many studies. However, very few studies have been done to assess the feasibility of breast crawl in a busy tertiary care institute's labor room [15,16]. Therefore, this study was planned to assess the feasibility and acceptability of breast crawl in a tertiary health-care teaching institute.

### MATERIALS AND METHODS

An observational study was performed on 50 mother-baby pairs admitted to the labor room of B. J. Government Medical College and Sassoon General Hospital, Pune. Purposive sampling was used to select the pairs. Inclusion criteria included women with term gestation, i.e., completed 37 weeks by date or by earliest available ultrasound report (if the last menstrual period was not

recalled) undergoing normal vaginal delivery (Figure 1). Women with antenatal obstetric or medical conditions who were unstable in the perinatal period, intrapartum and postpartum complications such as postpartum hemorrhage and 3<sup>rd</sup> and 4<sup>th</sup> degree perineal tears, multiple gestation, and meconium stained liquor (MSL) were excluded from the study. Apgar score was calculated immediately after the birth and babies with Apgar score  $\leq 7$ , respiratory distress at birth or serious congenital anomalies (cleft lip/cleft palate, imperforate anus, neural tube defects, congenital heart diseases [CHDs] presenting at the time of birth, limb defects, etc.) were also excluded from the study [17].

In the study center, on an average, there are about 850 deliveries a month, of which about 500 are vaginal deliveries. Of these deliveries, about 380 mothers give birth to normal term neonates with a weight of  $>2000$  g every month. Women ( $n=68$ ) with term gestation in labor, fulfilling the inclusion criteria were selected. Initially, the women were counseled in the language they understood best about breastfeeding and its benefits and the advantages of early initiation of breastfeeding. The main points covered during counseling were based on the objectives to clear

misconceptions and superstitions that the mother might have about breastfeeding, to allay the mother's anxiety regarding childbirth and care of the newborn, to explain the benefits of breastfeeding, early initiation, and exclusive breastfeeding till 6 months of age, and to introduce the concept of breast crawl to the mother.

Post-counseling, written consent was taken from the mother to experience breast crawl and if the mother gave consent, the mother and baby were assisted in the process. The following steps were followed while initiating breast crawl:

The baby was thoroughly wiped (except for the hands) with a soft cotton cloth. The baby was then kept close to the mother and held briefly in cheek-to-cheek contact. The baby would then be placed prone in between the mother's breasts, with the eyes at the level of the nipples. Full skin-to-skin contact (SSC) between the mother and baby was ensured. The baby and the mother were covered together with a cloth so that they keep warm while continuing with SSC.

Care was taken to prevent the baby from falling. The baby was allowed to be in SSC for at least 1 h even if the baby failed to complete the crawl and latch onto the breast. The time taken

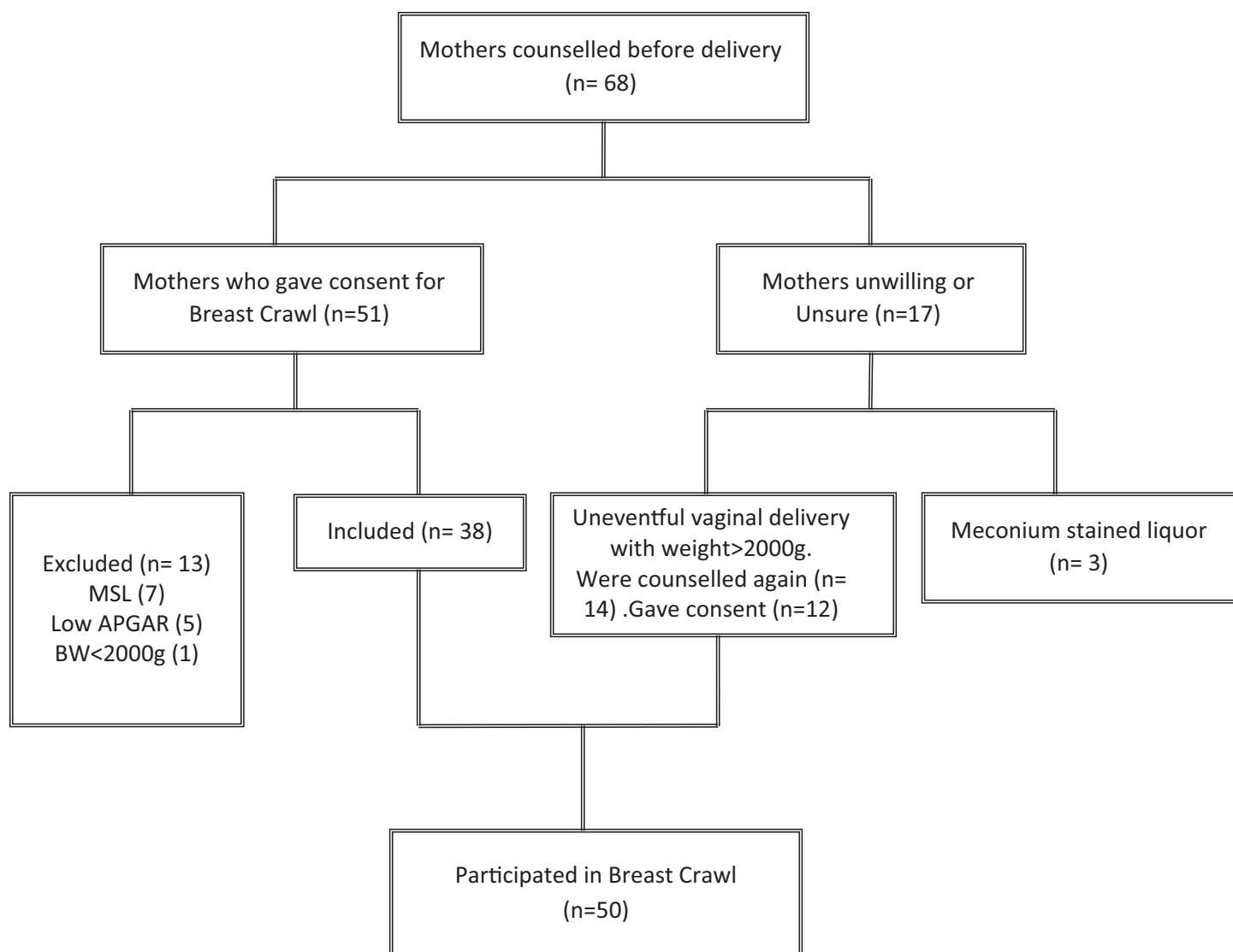


Figure 1: Study enrollment flowchart showing participation before and after delivery (MSL: Meconium stained liquor, BW: Birth weight)

for the baby to complete the crawl (from positioning to suckling) was recorded in minutes using a standard watch. The counseling and breast crawl were performed by the pediatric resident on duty. During each breast crawl, the concerns of the mother, the level of cooperation of the mother, and the attitude of the nursing staff toward the ongoing breast crawl were recorded.

The concerns of the mother were listed as concerns for privacy, about exposure, about environmental cold, and about the well-being of the baby. The level of cooperation of the mother was assessed subjectively by the pediatric resident as completely cooperative, reluctantly cooperative, and completely uncooperative. The attitude of the nursing staff was also assessed subjectively by the pediatric resident and recorded as enthusiastic, indifferent, reluctant, and uncooperative. The availability of other labor room staffs (obstetrician/nurses/Class IV workers) during the breast crawl was also recorded. Among the available staff, the number of people that voluntarily came forward for assistance was recorded.

## RESULTS

A total of 51 mothers gave consent for performing breast crawl. The demographic characters of the mothers are given in Table 1. The mean age of the mothers was 23.7, the youngest being 19 years, and the oldest being 33 years old. The major concern in participating mothers was privacy which is detailed in Table 2.

**Table 1: The demographic characters of the mothers**

Parameters	Frequency	Percentage
Age (years)		
<20	4	8
20–24	27	54
25–29	14	28
≥30	5	10
Education		
Illiterate	1	2
Primary	8	16
Secondary	25	50
Higher secondary	12	24
Graduation	4	8
Total	50	100

**Table 2: Categorization of the concern of the study subjects for the study**

Concern	Number (%)
Privacy	22 (44)*
Privacy+cold	3 (6)
Privacy+exposure	2 (4)
Cold	4 (8)
Cold+about baby	1 (2)
Exposure	4 (8)
About baby	8 (16)
None	6 (12)
Total	50

\*indicates p<0.01

A total of 13 mother-baby pairs got excluded (7 – MSL with normal Apgar score, 5 – low Apgar scores <7, and 1 – birth weight <2000 g). Of the 50 mothers who participated, 38 mothers were willing to participate after initial counseling in the delivery room before the actual delivery. The remaining 12 mothers were from the group of 17 mothers that were initially unsure or unwilling. Of these 17 mothers, 14 had uneventful normal deliveries with birth weight >2000 g and 3 had MSL. Among the 12 who agreed after the second round of counseling, 9 mothers had been initially unsure and 3 mothers had been initially unwilling.

Analysis of the data regarding antenatal counseling showed that only 23 (46%) mothers had received any counseling about breastfeeding during the antenatal period and none of them was familiar with the idea of breast crawl. The families of only 14 (28%) of the mothers had been counseled regarding breastfeeding in the antenatal period. However, there was no correlation found with the education status of the mother.

During the breast crawl, the level of cooperation of the mothers was recorded. Of the three mothers who were initially unwilling, all cooperated only reluctantly. Of the nine mothers who were unsure initially, 3 (33%) cooperated completely and 5 (55%) cooperated reluctantly while 1 (11%) was uncooperative. However, of the total 15 mothers who cooperated reluctantly, 7 mothers (46%) were initially willing and 5 (33%) were initially unsure while 3 (20%) were initially unwilling.

All the babies were able to successfully complete the breast crawl. The mean time taken was 23.66 ± 10.19 min. A majority

**Table 3: Time taken by babies for crawling**

Time taken for crawl (min)	Frequency	Percentage
<10	2	4
10–19	16	32
20–29	19	38
30–39	10	20
≥40	3	6
Total	50	100

**Table 4: Behavior of nursing staff**

Willingness for participation	Nurse's attitude	Number (%)
Willing to participate	Enthusiastic	19 (38)**
	Indifferent	23 (46)
Unwilling to participate	Reluctant	6 (12)
	Uncooperative	2 (4)
	Total	50

\*indicates p<0.01

**Table 5: Distribution of actively participating staff**

Actively participating staff	Frequency	Percentage
Pediatrician	19	38.0
Pediatrician+nurse	21	42.0
Pediatrician+nurse+obstetrician	9	18.0
Pediatrician+Class IV worker	1	2.0
Total	50	100.0

(70%) of the babies took between 10 and 29 min to complete the crawl. The results are tabulated in Table 3.

Active participation by pediatrician was seen in 100% of cases. In 62% of cases, the pediatrician was accompanied by at least one paramedic. The attitude of the nursing staff was favorable (enthusiastic) on 19 occasions, indifferent on 23 occasions, reluctant on 6 occasions, and unfavorable (uncooperative) on 2 occasions. Interestingly, there is a significant correlation with the number of patients in the labor room at that time ( $p < 0.001$ ) as the attitude is seen to worsen with an increase in the number of patients (Table 4). The difference in attitudes of nursing staff, i.e., willing (84%) and non-willing (16%) was statistically significant ( $p < 0.01$ ).

Participation means standing next to the mother and helping in positioning the baby or saying words of encouragement and/or comfort. It reflects how motivated the nursing staff feels about this method of initiation of breastfeeding which is an indirect marker for awareness of its benefits. However, on some occasions, they came forward because it was something novel that piqued their curiosity, especially some of the younger staff. The obstetricians rarely ever voluntarily offered assistance as they would be concentrating on episiotomy suturing or on other patients. However, none of the obstetricians interfered with the process or expressed any displeasure about it (Table 5).

## DISCUSSION

Some of the impediments that are evident from the above study are that the lack of antenatal counseling and complete lack of awareness of breast crawl among the mothers are few of the limiting factors for bringing breast crawling into clinical practice. Only 46% of the mothers had received antenatal counseling about breastfeeding and none about breast crawl. Initial counseling might mainly serve to sensitize mothers and make them more receptive. The second round of counseling could be a useful tool in mopping up a majority of those mothers who were unconvinced after the first round. Another important interpretation is that mothers are a lot more receptive to counseling after the birth of the baby and after seeing the baby than they are during labor.

Furthermore, it was seen that even among the 38 mothers who were initially willing and had normal deliveries, 7 (18%) were reluctantly cooperative. This means that there were factors other than counseling that influenced the mothers' final reaction. This brings us to the concerns of the mothers. The major concern of the mothers participating in the breast crawl was lack of privacy. While concern about the baby and environmental cold is easily tackled, exposure is unavoidable. Privacy requires separate rooms or at least separate compartments, which is impossible in the present setting.

A similar study had been conducted in Vadodara for the assessment of acceptability and feasibility of breast crawl as a method of early initiation of breastfeeding in a tertiary care institute [15]. In this study, a focus group discussion was carried out as a qualitative tool for the assessment of knowledge and attitudes of the labor room staff. Some of the operational difficulties that the participants complained about were

unwillingness on the part of the mother due to concern about the baby slipping and falling, maternal exhaustion due to anemia and difficult labor, lack of confidence in the intervention from the relatives, reluctance or hurriedness from the obstetric residents, and shortage of staff, especially when 2–3 deliveries were occurring simultaneously [18].

Moreover, skewed staff-patient and doctor-patient ratio also had an important impact. It is evident from the above data that the nursing staff is much more cooperative when there are fewer patients to deal with. Furthermore, when the patient turnover is too high, there is not enough time to stand next to one patient until the baby has crawled as the mother has to be moved quickly to make room for the next patient. There is a general lack of awareness and motivation. No specific guidelines and instructions have been approved for this practice.

However, these roadblocks are easy to overcome. It is evident that in spite of the lack of initiative, the labor room nursing staffs are highly receptive and often enthusiastic and just need a bit of encouragement or incentive to give them that push. Keeping in mind, the above inferences, following recommendations, can be implemented for removing the drawbacks associated with breast crawling.

1. Incorporating counseling about breastfeeding and breast crawl during antenatal visits as a routine practice. It is evident that counseling for the 2<sup>nd</sup> time convinced a lot more patients than the 1<sup>st</sup> time.
2. Being a baby-friendly hospital, the breast crawl should be incorporated into the written policy and it should be strictly adhered to as far as possible.
3. Arranging a brief training program for all pediatric residents, interns, obstetric residents, and labor room staff to spread awareness among them all, to motivate the existing staff, and to sensitize the new recruits. It should be repeated biannually to keep sensitizing the new recruits until it becomes a routine practice.
4. Increasing the number of working hands by increasing the number of staff nurses and interns.
5. An inexpensive infrastructural change would be to install curtains around each labor room bed for privacy.

The breast crawl is not just a method of initiating breastfeeding; it is the natural instinctive behavior of the newborn infant, embedded in its neuronal networks, that has developed eons before the advent of modern obstetrics and pediatrics, designed by nature, and shaped by evolution to help the infant to survive in their absence. It keeps the baby warm, promotes bonding and milk let down, decreases postpartum bleeding in the mother, and promotes expulsion of the placenta and speedy involution of the uterus. However, the common practices of separating the baby soon after birth, drying, and cleaning and showing the family, rob the mother and the baby of these crucial initial moments. While it is highly desirable to implement breast crawl as a routine practice, it is not always possible to do so.

## CONCLUSION

The breast crawl is a proven method to initiate early breastfeeding in a mother-infant pair. It can be developed with persistent and firm initiatives to improve the infrastructure and functioning of the labor ward, sincere and repeated counseling of expectant mothers at every available opportunity, and the inclusive enrolment of the support of paramedical staff in the labor ward.

## ACKNOWLEDGMENT

We wish to thank the labor room nursing staff and the Department of Obstetrics and Gynaecology of B. J. Government Medical College, Pune.

## REFERENCES

1. Elizabeth K. Nutrition and Child Development. 5th ed. Hyderabad: Paras Medical Publisher; 2015. p. 1-3.
2. Elizabeth K. Nutrition and Child Development. 5th ed. Hyderabad: Paras Medical Publisher; 2015. p. 17-23.
3. Salariya EM, Easton PM, Cater JI. Duration of breast-feeding after early initiation and frequent feeding. *Lancet* 1978;2:1141-3.
4. Tiwari S, Bharadva K, Yadav B, Malik S, Gangal P, Banapurmath CR, *et al.* Infant and young child feeding guidelines, 2016. *Indian Pediatr* 2016;53:703-13.
5. UNICEF, World Health Organization. Baby-Friendly Hospital Initiative : Revised, Updated and Expanded for Integrated Care. Section 1, Background and Implementation. Geneva: World Health Organization; 2009. p. 23. Available from: [http://www.who.int/nutrition/publications/infantfeeding/bfhi\\_trainingcourse/en](http://www.who.int/nutrition/publications/infantfeeding/bfhi_trainingcourse/en). [Last accessed on 2019 Aug 10].
6. World Health Organization. Infant and Young Child Feeding. Geneva: World Health Organization; 2014.
7. Shwetal B, Pooja P, Neha K, Amit D, Rahul P. Knowledge, attitude and practice of postnatal mothers for early initiation of breast feeding in the obstetric wards of a tertiary care hospital of Vadodara city. *Natl Community Med* 2012;3:305-9.
8. Sosa R, Kennell JH, Klaus M, Urrutia JJ. The effect of early mother-infant contact on breast feeding, infection and growth. *Ciba Found Symp* 1976;45:179-93.
9. Jeannette C, Klaus PH, Klaus MH. #6: No separation of mother and baby with unlimited opportunity for breastfeeding. *J Perinat Educ* 2004;13:35-41.
10. Widström AM, Lilja G, Aaltomaa-Michalakis P, Dahllöf A, Lintula M, Nissen E, *et al.* Newborn behaviour to locate the breast when skin-to-skin: A possible method for enabling early self-regulation. *Acta Paediatr* 2011;100:79-85.
11. Mahmood I, Jamal M, Khan N. Effect of mother-infant early skin-to-skin contact on breastfeeding status: A randomized controlled trial. *J Coll Physicians Surg Pak* 2011;21:601-5.
12. Marín Gabriel MA, Llana Martín I, López Escobar A, Fernández Villalba E, Romero Blanco I, Touza Pol P. Randomized controlled trial of early skin-to-skin contact: Effects on the mother and the newborn. *Acta Paediatr* 2010;99:1630-4.
13. Klaus M. Mother and infant: Early emotional ties. *Pediatrics* 1998;102:1244-6.
14. Dumas L, Lepage M, Bystrova K, Matthiesen AS, Welles-Nyström B, Widström AM, *et al.* Influence of skin-to-skin contact and rooming-in on early mother-infant interaction: A randomized controlled trial. *Clin Nurs Res* 2013;22:310-36.
15. Patel S, Nayak U. Operationalisation of breast crawl as a method of early initiation of breast feeding and its impact in a tertiary care hospital. *Glob J Res Anal* 2014;3:108-10.
16. Girish M, Mujawar N, Gotmare P, Paul N, Punia S, Pandey P. Impact and feasibility of breast crawl in a tertiary care hospital. *J Perinatol* 2013;33:288-91.
17. Torday JS, Nielsen HC. The molecular apper score: A key to unlocking evolutionary principles. *Front Pediatr* 2017;5:45.
18. Patel S, Nayak U. To analyze the acceptability and feasibility of breast crawl as a method of early initiation of breast feeding in a tertiary care hospital by qualitative research method. *Int Res Med* 2016;5:44-8.

*Funding: None; Conflict of Interest: None Stated.*

**How to cite this article:** Gupta A, Prasad B, Khadse S, Valvi C, Kulkarni R, Rajput U, *et al.* Feasibility of breast crawl in a tertiary care teaching institute. *Indian J Child Health*. 2019; 6(9):507-511.

Doi: 10.32677/IJCH.2019.v06.i09.010