

BREAST CRAWL - REASON BEHIND SUCCESSFUL Vs UNSUCCESSFUL BREAST CRAWL

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Abstract:

Background: Being natural method, breast crawl is initiated by instinctive nature of human behavior, where babies use sucking behavior when allowed to do so. As soon as the baby is place on abdomen of the mother soon after the birth, new born starts searching for mother's breast on its own. This study is carried out to assess the proportion of breast crawl. **Material and Method:** 371 mothers who delivered at full term without any complications were involved in the study. Check list was used for assessing the successful and unsuccessful breast crawl. **Results:** Out of 371 babies, 344 (93%) babies have succeeded in the breast crawl. 248 (67%) babies crawled without any assistant, 80 (22%) babies crawled with partial assistant and only 16 (4%) babies Baby crawled and took feed with full assistance. 27 (7%) babies were observed for

unsuccessful crawl. **Conclusion:** The success rate of the breast crawl in this study was 93% which indicates these techniques of breast crawl can be practiced in every maternity setting.

Key words: Breast crawl, successful, Maternal.

Introduction:

Breast crawl is one of the baby mother bonding techniques where baby is placed on abdomen of mother immediately after birth and observing for the movement towards breast of the mother ultimately results in breast feeding. Usually, within 12 to 44 minutes after placing the baby on abdomen, baby's initiates movements, and within 27 to 71 minutes spontaneous suckling response will starts¹. Breast crawl has both maternal and neonatal benefits. As per as mother is concerned all physiological or psychological benefits starts due to skin to skin contacts which results in release of various hormones, oxytocin being the most common. The hormone oxytocin helps in lots of physiological changes such as improving the process of involution of uterus, reducing the hemorrhage, reducing the duration of third stage of labor and ultimately improving the sense of wellbeing in mother and baby². Apart from these the most important objectives of breast crawl is early initiation of breast feeding.

Breast crawl was introduced by Widstorm *et al* (1987) at Karolinska Institute in Sweden, The research findings in their study indicated that an systematic feeding behavior develops during the first hours after the baby born then these behavior leads to hand-to-mouth activity and finally culminating in sucking of breast.³ Although the concept of skin to skin contact is ancient one but breast crawl seems to be recent but not much popular and not adopted by many maternity units. Many authors suggested that breast crawl is simple method which provides skin-to-skin contact and will initiate early breast feeding⁴, does not require much preparations⁵, can be done

in any maternity settings without much complications⁶. Breast crawl is also considered Evidenced Based Practice and critical component in early one hour of mother and baby⁷. Being natural method, breast crawl is initiated by instinctive nature of human behavior, where babies use sucking behavior when allowed to do so. As soon as the baby is placed on abdomen of the mother soon after the birth, new born starts searching for mother's breast on its own. Earlier this behavior is considered as spontaneous sucking and rooting movements but now it is accepted as organized feeding behavior⁸.

Although recent literature suggested that breast crawl is the best method for early initiation of breast feeding with lots of maternal and neonatal benefits, this study is carried out to assess the proportion of breast crawl and also to identify the reason for failed breast crawl in tertiary care unit.

Material and Method:

The present study was conducted in the Krishna Hospital Karad. Expected Outcome of this study was, the baby should crawl towards the breast and find the nipple to take the first feed by the baby its own. The research design used in this study was Experimental – Post test only design. With convenient sampling technique 371 mothers who delivered at full term in labour ward were selected. Mothers with any maternal or fetal complications were excluded from the study.

The mother was continuously observed and supported during labour process. After delivery of the baby the cord was clamped immediately and cut, suctioning was done and baby

was wiped with clean towel also checked for active and breathing normally. Immediately the baby was put on mother's abdomen and observed for crawling movements. Breast crawl technique was performed and observed with the routine hospital procedure. Check list was used for assessing the successful and unsuccessful breast crawl. Data were analysed using descriptive and inferential statistics. In this study, frequency and percentage distribution mean, standard deviation, chi square test and unpaired "t" test were used.

Ethical consideration: The study was initiated after approval of the Institutional Ethics Committee of Krishna Institute of Medical Sciences Deemed University's. Permission was obtained from Head of the Department in Obstetrics and Gynecology and Medical director. All the mothers were explained about the purpose of the study and were assured of confidentiality of the data collected and were assured that the newborn's health will not be affected. An oral and written consent of each study samples was obtained before starting the data collection.

Results:

Table 1: Distribution of demographic variables of Mothers of successful breast crawl.

N= 371

Sl n o	Demographic variables	Category	Successful breast crawl		Unsuccessful breast crawl	
			Frequency	%	Frequency	%
1.	Age of the Mother	Below 19 Years	23	7	1	4
		20-22 Years	51	15	3	11
		23-25 Years	88	26	5	19
		26-28 Years	108	31	11	41
		29-31 Years	68	20	4	15
		Above 31 Years	6	2	3	11
2.	Educational Status	a) Primary education	43	13	1	4
		b) Secondary education	157	46	12	44
		c) Higher secondary education	112	33	8	30

Sl n o	Demographic variables	Category	Successful breast crawl		Unsuccessful breast crawl		
			Frequency	%	Frequency	%	
3.	Occupation	d) Graduation	27	8	6	22	
		e) Post graduation	5	1	0	0	
		a) Officials	37	10%	5	19	
		b) Business	31	8%	0	0	
		c) Workers	82	22%	6	22	
4	Monthly income of family	d) House wife	194	60%	16	59	
		a) Less than 10,000	130	38	3	11	
		b) Between 11,000 to 15,000	182	53	13	48	
		c) Between 16,000 to 20,000	27	8	7	26	
	Completed weeks of gestation	d) Above 20,000	5	1	4	15	
		a) 38 weeks	17	5	4	15	
		b) 39 weeks	129	38	9	33	
	6	Number of antenatal visits	c) 40 weeks	198	58	14	52
			a) <3 visits	0	0 %	4	15
b) 3- 5 visits			44	13 %	11	41	
c) 6 – 8 visits			220	65 %	9	33	
d) 9 – 10 visits			74	22 %	2	7	
7	Knowledge regarding breast crawl	e) >10 visits	6	1 %	1	4	
		a) Yes	00	00%	0	0	
8	Habits of the Mother	b) No	344	100%	27	100	
		a) Watching TV	9	3	2	7	
		b) Listening Music	22	6	3	11	
		c) Reading Books	71	21	1	4	
9	Sex of the baby	d) House hold works	242	70	21	78	
		a) Female	213	62	11	41	
		b) Male	131	38	16	59	

Among Successful breast crawl, Classification of mothers according to age shows that maximum 108 (31%) mothers were belong to 25 to 27 years of age, 157 (46%) mother completed Secondary education, 194 (60%) were House wife's by occupation, 98 (59%) mothers completed 40 weeks of gestation, 220 (64 %) mothers had 6 – 8 time hospital antenatal visit, no mother had any knowledge on breast crawl process and Maximum 213 (62 %) mother delivered Female baby where as only 131 (38 %) mothers gave birth to male babies.

Among Unsuccessful breast crawl, maximum 11 (41%) were belong to 25 to 27 years of age, (44%) mother completed Secondary education, 16 (59%) were House wife's, 13 (48%) mother's family had Between 11,000 to 15,000 rupees monthly income, Maximum 14 (52%) mothers completed 40 weeks of gestation, maximum 11 (41 %) mothers visited 3 – 5 time hospital and 16 (59 %) mother delivered Female baby where as only 11 (41 %) mothers gave birth to male babies.

Table 2 : Proportion of Successful Breast Crawl

SL NO	Proportion Of Successful Breast Crawl	Number Of Babies	Percentage
1.	Successful Breast Crawl	344	93 %
2.	Unsuccessful Breast Crawl	27	7 %

Out of 371 babies, 344 (93%) babies have succeeded in the breast crawl techniques with positive outcome and 27 (7%) babies were observed for unsuccessful crawl. This proves that 93% of success is observed in breast crawl intervention.

Table 3: Number of babies with successful Breast Crawl

Sl no	Parameters	Number of babies	%
a)	Baby crawled and took feed without assistance	248	72 %
b)	Baby crawled and took feed with partial assistance	80	23%
c)	Baby crawled and took feed with full assistance	16	5%
Total Successful		344	100 %

From the above table it is clear that 344 (94%) babies have succeeded in the breast crawl techniques with positive outcome. Among these 248 (67%) babies crawled without any assistant, 80 (22%) babies crawled with partial assistant and only 16 (4%) babies Baby crawled and took feed with full assistance.

Table 4: Number of babies with unsuccessful breast crawl

Sl no	Parameters	Number of babies	%
a)	Baby crawled and do not take feed	12	44 %
b)	Baby crawled and do not take feed due to sleep	11	41 %
c)	Baby did not crawled	4	15 %
Total Failed		27	100 %

The table indicates that Level of Unsuccessful Breast crawl among babies taken for study. Total 27 (7%) babies were observed for unsuccessful crawl. 12 (3%) babies crawled & do not take feed and 11(3%) crawled and do not take feed due to sleep where only 4 (1%) has noted that not at all crawled.

Table 5: Association between Successful breast crawl & Unsuccessful breast crawl with Demographic variables

Demographic variables	Category	No Of Successful breast crawl	No Of Unsuccessful breast crawl	Chi Square value	p-value	Association at p< 0.05 level
Age of the Mother	Up to 25 years	162	9	1.39	0.24	NS
	25 years and above	182	18			
Educational Status	Up to Higher secondary education	312	21	3.24	0.071	NS
	Graduation & Post-graduation	32	6			
Occupation	Officials, Business and farmers	150	11	3.52	0.06	NS
	House wife	194	16			
Monthly income of family	Less than 15,000	312	16	21.18	< 0.0001*	S
	Above 16,000	32	11			
Completed weeks of gestation	38 weeks	17	4	2.90	0.088	NS
	Above 39 weeks	327	23			
Number of antenatal visits	Up to 5 visits	44	15	31.90	< 0.0001*	S
	>5 visits	306	12			
Habits of the Mother	Watching TV Listening Music Reading Books	102	6	0.36	0.55	NS
	House hold works	242	21			
Sex of the baby	Female	213	11	3.85	0.050	NS
	Male	131	16			

Association between socio demographic data and number of successful and unsuccessful babies shows that all demographic variables were not significantly associated except monthly income and antenatal visits where we found statistically significant with p<0.05.

Table 6: RISK FACTORS FOR FAILED BREAST CRAWL

RISK FACTORS	Number of
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	mothers (%)
Mothers unable to tolerate weight of babies	14 (52%)
Interrupted Skin To skin Contact	13 (48%)
Delayed Skin To skin Contact	00 (00%)
Feeding difficulties	00 (00%)
Separation of the mother and baby in first hour of the birth due to busy labour room routines	00 (00%)
Mother was not in comfortable position during the duration of breast crawl	00 (00%)
Baby's hands have dried by mistakenly while drying the baby	00 (00%)

In the present study, among 27 (100%) unsuccessful breast crawled babies, 14 (52%) babies did not crawl due to mothers were unable to tolerate weight of babies because of abdominal pain and 13 (48%) babies fail to crawl because of interrupted skin to skin contact.

Discussion:

Although there are many reviews on effect of breast crawl on maternal and neonatal outcome, only few studies have published on feasibility and practicability of breast crawl in clinical setting. In our study out of 371 babies, 344 (93%) babies have succeeded in the breast crawl techniques with positive outcome. This proves that 93% of success is observed in breast crawl intervention. As baby born with natural instinct to find the nipple of breast of mother it was completely natural process to initiate movement of baby on mother's abdomen towards nipple. The routine obstetrical care was not modified but only after birth, baby undertaken for breast crawl process. Author observed that routine practice of baby care such as clamping the cord, cleaning and measurement of baby, sucking, administration vitamin K injection and timing of repair of episiotomy has not didn't come in between the process of breast crawl. Whereas Awi DD (2004) ⁹ mentioned that routine practices after the delivery of the baby are hindering factors

for breast crawl. There are many studies proved skin to skin contact as a reason for early initiation of breast crawl but very limited studies mentioned the concept of breast crawl in them^{10, 11, 12}.

Out of 371 babies, 27 (7%) babies were failed to breast crawl. Among these 12 (44 %) Baby crawled and do not take feed, 11 (41 %) Baby crawled and do not take feed due to sleep and 4 (15 %) baby did not crawl at all. There was no exact cause identified for failure but most probably it could be due to multiple causes. As per as the feasibility of practicing the breast crawl techniques, author has experienced that there was no issues with motivating the mothers for breast crawl.

Some studies mentioned that counseling mothers for breast counseling is one of the factor for failure in utilizing the breast crawl effectively¹³ but in our study in spite of all mothers has mentioned that they don t have any initial knowledge of breast crawl still all participants were agreed for the technique and 100% active participation was seen. Patel S,(2014)¹⁴ and Girish M, (2013)¹⁵ stated lack of knowledge, inappropriate staff and patient ratio and lack of interest & involvement of staff nurse in practicing this technique would be the another factors for failure to implement breast crawl and ultimately unsuccessful rate of breast crawl increases. In this study author has personally conducted the breast crawl techniques and some staff were given prior knowledge on this technique, so there was full co operation from the staffs in maternity ward. One of the reason author identified in the present study is that low APGAR score among these babies. As breast crawl involves sensory stimulations, endocrine and motor aspect of child, failure may be because of low APGAR score would be reason behind failure. However there are no studies which support this reason for failure to crawl but some studies mentioned that Lack of

maternal confidence^{16, 17, 18}, and Problems with attachment (latch-on or effective milk transfer)¹⁹ would be the cause.

Overall in the present study among 371 babies, 344 (93%) babies have succeeded in the breast crawl, which was slightly lower than Girish M, (2013) 15 where he mentioned 94%, but higher than Bhagat K²⁰ (73%), in Wistorm's²¹ (54%) and Richard's²² (63%).

Association between socio demographic data and number of successful and unsuccessful babies shows that all demographic variables were not significantly associated except monthly income and antenatal visits where we found statistically significant with $p < 0.05$. In the study by Heidarzadeh M, et al. maternal educational level, employment, and economical status did not show significant association with breast crawl. In his study author also mentioned that knowledge and support are among the most important factors for a successful breastfeeding.

Conclusion: The success rate of the breast crawl in this study was 93% which indicates these techniques of breast crawl can be practiced in every maternity setting. The benefits for mother and baby are more in terms of physiological and psychological, hence the process of breast crawl must be made mandatory in labour room.

Strength of the study: This study conducted with 371 mothers which is huge sample to generalize the results.

Conflict of interest: None

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