

Factors Influencing Success Of Breast Crawl In Terms Of Positive Maternal And Fetal Outcome Among Primi Parturient Mothers Admitted In Labour Room At Tertiary Care Centre

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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. **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 study concludes that breast crawl is a simple and cost effective method for fetal positive adaptation to the environment.

Index Terms— Breast crawl, successful, Maternal.

INTRODUCTION

Birth is an important, often life-changing event which is accompanied by physiological and psychological changes in every woman's life. Its effect follows long-term positive or negative effects on both mother and neonates.¹ most of the woman experiences nervous about labour and child care specially if primi mother.² The strong relationship between a mother and a child, the development of parents' well-being, self-confidence, and the improved quality of life are positive effects of labour. Whereas, a negative health outcomes, post-traumatic stress disorder, decrease in rates of exclusive breastfeeding, interruption to social relationships, dysfunction in mother-infant relationships, fear of childbirth, increased tendency for an elective caesarean section in future pregnancies are considered negative experience of motherhood. Along with this, mother may have entirely different experiences with each new labor and delivery, which is a life-changing and leave an impression for rest of the life not only for the mother but also to their family.³

The childbirth is creating a positive experience for a woman and her family while preserving their physical and psychological health, preventing of morbidity and reaction to the emergency situations. Every mother has expectations during pregnancy which plays very important role in future prospective of child care. Midwives are responsible to identify the mothers need, wishes, fear and anxiety of labour for positive birth experience⁴. Mother experiences both joy and pain during the journey of

pregnancy and labor⁵. As the pregnancy weeks progresses' mother becomes enthusiasm to see the baby's face. Whether delivery takes place in a hut or hospital, in village or a major city, giving baby to breast feeding during the initial one hour is crucial⁶. As first one hour after delivery is sensitive it is called "Golden hour", "Magical Hour" or "Sacred Hour" which requires great deal of care, protection and support⁷. Health organizations such as UNICEF and World Health Organization strongly recommend the exclusive breast feeding for the first six months. Exclusive breast feeding during initial 6 months helps in sensory and cognitive development and protects the baby against infectious diseases⁶.

The need of the mother after delivery of the baby is unlimited skin to skin contact baby's need is breast feeding. Health care professional working at maternity department need to respect, honors, and must provide support for placing the baby and mother together along with privacy. Staff in maternity unit must consider physiological and psychological need of mother and baby. Separation must not be considered unless medically indicated in complicated cases. Keeping mother and baby is ethically not acceptable⁷. Breastfeeding, defined as the feeding baby from mother's milk⁸. The importance of exclusive breast feeding is due to Colostrum, initial milk secreted by the breast after delivery. Colostrum has high concentration of antibodies which helps in getting colonized by safe germs (bacterial flora) from the mother in terms offering protection against infections. Effect of breast crawl is skin to skin contact, early initiation of breastfeeding, maintaining body temperature, metabolic adaptation in terms of the sugar level, acid-base level, less crying, improves the bonding between mother and baby, the release of the hormone oxytocin.

The present study aimed at evaluating the factors influencing breast crawl among primi parturient mothers admitted in labor room at Krishna Hospital, Karad.

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. During the breast crawl, researcher assessed the stages of breast crawl such as birth cry, relaxation phase, awakening phase, active phase, crawling phase, resting phase, familiarization, suckling phase, sleeping phase. After the initiation breast feeding or breast crawl within 60 minutes, the vital signs of the mother and baby have been checked except the weight of the baby. Weight was checked for 3 days after the breast crawl. The mother and baby were kept on the same bed and maternal satisfaction was assessed. 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:

1. Demographic profile of the mothers of Successful breast crawl babies

| Sl no | Demographic variables | Category | Number of mothers | |
|-------|-----------------------|----------------|-------------------|----|
| | | | Frequency | % |
| | Age of the Mother | Below 19 Years | 23 | 7 |
| | | 20-22 Years | 51 | 15 |
| | | 23-25 Years | 88 | 26 |
| | | 26-28 Years | 108 | 31 |
| | | 29-31 Years | 68 | 20 |

| Sl no | Demographic variables | Category | Number of mothers | |
|----------|---|----------------------------|-------------------|------|
| | | | Frequency | % |
| | | Above 31 Years | 6 | 2 |
| | Educational Status | Primary education | 43 | 13 |
| | | Secondary education | 157 | 46 |
| | | Higher secondary education | 112 | 33 |
| | | Graduation | 27 | 8 |
| | | Post graduation | 5 | 1 |
| | Occupation | Officials | 37 | 10% |
| | | Business | 31 | 8% |
| | | Workers | 82 | 22% |
| | | House wife | 194 | 60% |
| 4 | Monthly income of family | Less than 10,000 | 130 | 38 |
| | | Between 11,000 to 15,000 | 182 | 53 |
| | | Between 16,000 to 20,000 | 27 | 8 |
| | | Above 20,000 | 5 | 1 |
| | Completed weeks of gestation | 38 weeks | 17 | 5 |
| | | 39 weeks | 129 | 38 |
| 40 weeks | | 198 | 58 | |
| 6 | Number of antenatal visits | <3 visits | 0 | 0 % |
| | | 3- 5 visits | 44 | 13 % |
| | | 6 – 8 visits | 220 | 65 % |
| | | 9 – 10 visits | 74 | 22 % |
| | | >10 visits | 6 | 1 % |
| 7 | Knowledge regarding breast crawl | Yes | 00 | 00% |
| | | No | 344 | 100% |

| Sl no | Demographic variables | Category | Number of mothers | |
|-------|-----------------------|------------------|-------------------|----|
| | | | Frequency | % |
| 8 | Habits of the Mother | Watching TV | 9 | 3 |
| | | Listening Music | 22 | 6 |
| | | Reading Books | 71 | 21 |
| | | House hold works | 242 | 70 |
| 9 | Sex of the baby | Female | 213 | 62 |
| | | Male | 131 | 38 |

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.

2: Parameters of Success of Breast Crawl Babies

| Sl no | Parameters | Number of babies | % |
|-------------------------|--|------------------|--------------|
| | Baby crawled and took feed without assistance | 248 | 72 % |
| | Baby crawled and took feed with partial assistance | 80 | 23% |
| | 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 fetal 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 1: Association between Successful breast crawl Demographic variables

| Demographic variables | Category | Successful breast crawl | 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 & | 32 | 6 | | | |
| | Post-graduation | | | | | |

| Demographic variables | Category | Successful breast crawl | Unsuccessful breast crawl | Chi Square value | p-value | Association at p< 0.05 level |
|-------------------------------------|---------------------------------|-------------------------|---------------------------|------------------|-----------|------------------------------|
| 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 | 102 | 6 | 0.36 | 0.55 | NS |
| | Listening Music | | | | | |
| | Reading Books | | | | | |
| | House hold works | | | | | |
| 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 $p < 0.05$. The odds of successful breast crawl were significantly higher in respondents completed weeks of gestation as above 38 weeks as compared to 38 weeks as (Crude OR = 3.35, 95% CI = 1.04– 10.76, $p = 0.03$; adjusted OR = 4.98, 95% CI = 1.28-19.35, $p = 0.02$). The completed weeks of gestation were significantly associated with status of successful breast crawl. The odds of successful breast crawl were significantly higher in respondents having antenatal visits more than 5 as compared to as upto 5 antenatal visits (Crude OR = 8.52, 95% CI = 3.74– 19.40, $p < 0.001$; adjusted OR = 8.14, 95% CI = 3.38-19.57, $p < 0.001$). The numbers of antenatal visits were significantly associated with status of successful breast crawl. Chi square test of independence was done to check association between statuses of breast crawl with socio demographic variables. It was found that there was no significant association was found between age, occupation of mother, habits of mother and gender of baby ($p > 0.05$). So these variables were not included in binary logistic regression analysis.

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}.

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.

From the present study it was concluded that breast crawl was an effective method in reducing the episiotomy suturing Pain, early placental expulsion, decreasing length of the third stage, reducing the blood loss during third stage of labor, normalizing the vital signs of the mother, and improving the maternal Satisfaction. As per as fetal outcomes were considered, vital signs of the babies were normal, mothers were initiated early breast feeding after the breast crawl. So the researcher concludes that breast crawl technique is an effective intervention for both mother and babies in term of their physiological as well as psychological well being after the delivery.

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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