



Original article

Impact of Antenatal Counseling on First Hour Skin-To-Skin Contact and Exclusive Breast Feeding

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ABSTRACT

Background: Structured antenatal education programs are commonly recommended for pregnant women and their partners by healthcare professionals in many parts of the world. **Aim of the study:** To evaluate the effectiveness of antenatal education on early first hour skin-to-skin contact (FSSC) at birth and on the practice of exclusive breastfeeding over the first 6 months of life. **Methods:** This prospective study was conducted on 200 women during the last trimester in pregnancy; these were randomly assigned into two groups. Group A included 100 pregnant women whom received antenatal counseling with intense preparation to demand FSSC from their birth attendant, while group B did not. The proportion of women practiced FSSC and initiating breast feeding within one hour of birth was then assessed and both groups were compared. All mothers were followed up over the first 6 months after labour for the practice of exclusive breast feeding. **Results:** In group A 39% practiced FSSC and 27% initiated breast feeding within one hour of birth but in the group B no one practiced FSSC, the difference was statistically significant. ($p < 0.001$). Regarding to exclusive breastfeeding over the first 6 months of life it was 55% in group A and in group B it was (10%) with odd ratio (OR-0.09, 95% CI -0.04-0.2) the difference was statistically significant. ($p < 0.001$). **Conclusion:** Antenatal counseling motivates pregnant women for early initiation of breast feeding, FSSC and also reinforces exclusive breastfeeding.

KEYWORDS: Antenatal counseling, exclusive breastfeeding, first hour skin to skin contact.

INTRODUCTION

Breast-feeding (BF) has various beneficial effects including enhancement of the infant's immunity, protection against gastrointestinal and respiratory infections, reduction in maternal hemorrhage, and reduction in the risk of breast and ovarian cancer [1]. Despite the wide recognition of the importance of breast milk, rates of exclusive breast-feeding are still low in most countries, and the duration of any breast-feeding is also unsatisfactory in most of the world [2]. Early initiation of breast feeding has been recommended by the WHO since 1992. It is recommended that women who have had normal vaginal deliveries should be given their babies to hold with skin contact, for at least 30 minutes, within a half hour of birth and offered help by a staff member to initiate breastfeeding. At least 50% of mothers who have had caesarean deliveries should be given their babies within half-hour of being able to respond, to hold with skin contact [3].

Successful establishment of breastfeeding increases self-confidence and facilitates bonding with baby. Also, it

promotes warmth and protection which may reduce the risk of death from hypothermia. Early first hour skin to skin contact (FSSC) between mother and baby has been shown to reduce neonatal mortality by up to 22% [4]. It has been observed that the suckling reflex of the newborn is at its height twenty to thirty minutes after birth. If the infant is not fed then the reflex diminishes rapidly only to reappear adequately forty hours later. Also, the antibody content of colostrum is at its maximum during the first twelve postpartum hours making it relevant [5].

Antenatal BF education is defined as BF information being imparted during the pregnancy in a variety of forms. This could be on an individual or group basis, could include home visiting programmes, peer education programmes or clinic appointments specifically aimed at imparting BF knowledge and could involve prospective fathers or not. BF education is usually a formalised, defined, descriptive and goal-orientated programme with a specific purpose and target audience [6].

A different meta-analysis of various programmes of breastfeeding education and support by lactation consultants, nurse or peer counselors showed increased initiation and duration of breastfeeding [7]. Hence the aim of this study is to evaluate the effectiveness of antenatal education on early first hour skin-to-skin contact (FSSC) at birth and on the practice of exclusive breastfeeding over the first 6 months of life.

MATERIALS AND METHODS

This prospective study was conducted on 200 pregnant women in the third trimester attending at obstetric outpatient clinic of Benha University hospitals and Benha Teaching hospital in Qalubiya Governorate during the period from June 2014 to December 2015. The 200 cases were randomly assigned to two groups; Group A and group B

Each of them consisted of 100 pregnant women. **Inclusion criteria:** women in the third trimester of pregnancy who were healthy and had no pregnancy related complications, or major medical condition, and not receiving any medication. **Exclusion criteria:** women with diabetes mellitus, endocrine, renal or hepatic or cardiac disease, major fetal anomalies or intrauterine growth retardation (IUGR), preterm birth, eclampsia, pre-eclampsia or antepartum hemorrhage. The study gained approval of local ethical committee of Pediatrics department, Benha University. Informed written consents were obtained from Mothers to participate in the study, before the interview.

Group A was prepared in the third trimester by using specific BF materials printed matter and audiovisual aids were adapted from the WHO/UNICEF BF counseling training manual [8], LINKAGES (Academy for Educational Development) "Facts for Feeding" brochure [9], and a book entitled *Helping Mothers to Breastfeed* [10], giving them information about definition of exclusive breastfeeding (EBF), importance of colostrum, on-demand and frequent feeds, benefits and importance of EBF for infant and mother, BF techniques (correct positioning and attachment, including latch-on) to establish successful breast feeding and early initiation of breastfeeding through the first hour of skin to skin contact (FSSC), dangers of prelacteal

feeds, adequacy of breast milk for 6 months, dangers of breast milk substitutes, and prevention (by learning them how to express their breast milk) and management of lactation problems (engorgement, sore nipples). Women were encouraged to ask questions during the educational sessions. Group B received no antenatal preparation.

All mothers were followed up in the postnatal period for six months. All infants were assessed for their feeding practices and health status over the first 6 months of life by questionnaire covered the sociodemographic data of the mother and her family, antenatal care, and mode of delivery. Infant's birth order, sex, birth weight, and gestational age, infants' and mothers' health, BF support obtained previously and for the current pregnancy, planned infant feeding practices for the current pregnancy, and previous infant feeding behaviors among multiparas were recorded.

Statistical analysis: Data was analyzed using SPSS version 16. Variables were described as number and percent. In categorical variables χ^2 test and unadjusted odds ratio (OR) were used for comparison between groups and corresponding 95% confidence interval (CI). Quantitative data were described as mean \pm standard deviation. The median will be provided for non-normally distributed data. Student t-test was used to compare between two groups. Pearson's correlation coefficient was used to test correlation between variables and chi-square test was used to compare frequency of qualitative variables among the different groups. Levels of significance included a cutoff of P value \geq 0.05 which was considered non significant.

RESULTS

The study comprised 200 pregnant women who were further grouped according to antenatal education into: Group A included 100 mothers who received antenatal counseling, group B: included 100 mothers who did not receive antenatal counseling. The mean ages of the studied groups were very close the difference was not significant, group A: (m=27.7 \pm 3.9 years), group B: (m=27.4 \pm 4.4 years). There was statistical significant difference between studied groups as regards education and job (table 1).

Table 1: demographic data of study groups

| | | Group A (100 cases) | | Group B (100 cases) | | P-Value |
|-----------------------|------------------|---------------------|---|---------------------|---|------------------------------------|
| | | NO | % | NO | % | |
| Maternal age in years | Mean | 27.7 | | 27.4 | | 0.69 (t-test) |
| | SD | 3.9 | | 4.4 | | |
| | Median | 28 | | 28 | | NS |
| Education | Illiterate | 5 (5%) | | 24 (24%) | | 0.001 (Chi ²) HS |
| | Primary school | 5 (5%) | | 11 (11%) | | |
| | secondary school | 40 (40%) | | 57 (57%) | | |

| | | | | |
|--------------------|---------------------|----------|--------|------------------------------------|
| | High education | 50 (50%) | 8 (8%) | |
| Job | House wife | 40 (40%) | (92%) | 0.001 (Chi ²) HS |
| | Manual work | 1 (1%) | 0 (0%) | |
| | Business woman | 3(3%) | 3 (3%) | |
| | Professional worker | 56 (56%) | 5 (5%) | |
| Number of children | Mean | 0.91 | 1.72 | 0.001 (t-test) HS |
| | SD | 1.1 | 1.33 | |
| | Median | 1 | 2 | |

There was no statistical significant difference between studied groups as regard knowledge and scales of breast feeding in the previous child as all mothers in the two groups except two only in group A were able to list the benefits of early breastfeeding for mother and baby (OR: 0.196, 95% CI: 0.009-4.14). Mothers in groups A and group B were able to describe the correct method of breastfeeding with proper positioning and attachment to the breast except

three mothers in group A who could not describe how to breastfeed(OR: 0.14, 95% CI: 0.007-2.72).

There was statistical significant difference in group A between previous baby and present one in the first two weeks of life as regard initiation of 1st breast fed, when the mother breastfed her baby and introduction of any supplements after labor (OR: 2.45, 95% C I :1.3-4.63) (table 2).

Table 2: Comparison of group A subjects regarding practice of breast feeding between the previous child and present one in the first two weeks.

| | | Group A (100cases) | | OR(95% CI) | P-value (Chi ²) |
|---------------------------------|----------------------|--------------------|----------------|------------------|-----------------------------|
| | | Previous baby % | Present baby % | | |
| Initiation of 1st breast fed | till 2hrs | 41% | 62% | 0.43(0.24-0.75) | 0.02 S |
| | 2-6hrs | 11% | 11% | 1(0.41-2.43) | |
| | 6-24hrs | 6% | 25% | 0.19(0.07-0.49) | |
| | 24-48hrs | 3% | 0% | 7.22(0.37-141.5) | |
| | >48hrs | 3% | 2% | 0.52(0.25-9.27) | |
| any problem in breast or nipple | yes | 10% | 15% | 0.63(0.27-1.48) | 0.29 NS |
| | no | 90% | 85% | | |
| When breastfed? | No previous baby | 36% | ----- | 113.7(6.7-1886) | <0.001 HS |
| | Crying | 61% | 92% | 0.14(0.06-0.31) | |
| | Schedule | 2% | 3% | 0.66(0.12-4.04) | |
| | Crying then schedule | 1% | 5% | 0.19(0.02-1.67) | |
| Any supplements after labor | yes | 38% | 20% | 2.45(1.3-4.63) | 0.006 HS |
| | no | 62% | 80% | | |
| reason to introduce | Baby crying | 10% | 8% | 1.28(0.48-3.38) | |

| | | | | | |
|----------------------------|--------------------------------------|----|-------|------------------|------------|
| supplements | Mother tired | 6% | 6% | 1(0.31-3.21) | 0.3 NS |
| | Little breast milk | 5% | 2% | 2.58(0.49-13.6) | |
| | Mother general anesthesia | 3% | 1% | 3.06(0.31-29.95) | |
| | Mother work | 4% | ---- | 9.37(0.5-176.4) | |
| | Colic | 5% | 2% | 2.58(0.49-13.62) | |
| | Increase weight | 2% | ---- | 5.1(0.24-107.6) | |
| | Baby in neonatal intensive care unit | 3% | 1% | 3.06(0.31-29.95) | |
| Who prescribed supplements | Mother | 8 | ----- | 18.4(1.1-324.5) | 0.28 NS |
| | Grandmother/father | 4 | 2 | 2.04(0.37-11.4) | |
| | doctor | 4 | 3 | 1.35(0.29-6.2) | |
| | More than one | 22 | 15 | 1.6(0.77-3.3) | |

There was statistical significant difference between studied groups regards knowledge about benefits of SSC 22% in group A 1% in group B (OR: 27.92, 95% CI : 3.68-211.7), knowledge about that the hospital must encourage their breastfeeding and SSC (OR: 28.83, 95% CI : 1.5-444.6) and knowledge about their right to ask hospital for SSC in the previous child it was 11% in group A, zero% in group B.

According to group A already 5% practiced SSC in previous child 2% in 1-5 hours after labor and 3% done on 2nd day.

There was statistical significant difference in group A between the previous child and present baby in the first two weeks as regards the practice of skin to skin contact (OR: 0.48, 95% C I: 0.03-0.22), when did skin to skin contact and why skin to skin contact not done, but there was no statistical significant difference in group A regarding did father practice SSC or no(OR:1, 95% C I: 0.02-50.1)(table 3).

Table 3: Comparison of group A subjects regarding practice skin to skin contact between the previous child and present baby in the first two weeks.

| | | Group A (100 cases) | | OR(95% CI) | P-value (Chi ²) |
|----------------------------------|-----------------------------|------------------------|-------------------|------------------|--------------------------------|
| | | Previous baby% | Present baby % | | |
| Is there skin to skin contact | yes | 5% | 39% | 0.48(0.03-0.22) | <0.001 HS |
| | No | 95% | 61% | | |
| When did skin to skin contact | Done in 1 st hr. | 0% | 27% | 0.01(0.001-0.22) | <0.001 HS |
| | Done 1-5 hrs. | 2% | 8% | 0.23(0.05-1.13) | |
| | Done 5-24hrs | 0% | 3% | 0.14(0.01-2.72) | |
| | Done 2nd day | 3% | 1% | 3.06(0.31-29.9) | |
| | Done >2nd day | 0% | 0% | 1(0.02-50.1) | |
| why no skin to skin contact | Not know | (35%) | 0 | 108.9(6.6-1807) | |
| | No one told me | (21%) | 0 | 54.4(3.2-911.3) | |
| | Cold climate | 0% | 20% | 0.02(0.001-0.33) | |

| | | | | | |
|--|---------------------------|-------|------|-------------------|--------------|
| | Mother tired | (2%) | 29% | 0.05(0.01-0.22) | <0.001 HS |
| | Doctor refused | 0 | 7% | 0.06(0.003-1.1) | |
| | Mother general anesthesia | (1%) | 0% | 3.03(0.12-75.3) | |
| | Baby distressed | 0% | 5% | 0.09(0.004-1.58) | |
| | No baby | (36%) | 0% | 98.5(5.95-1630.5) | |
| Did father practice skin to skin contact or no | Yes | 0 | 0 | 1(0.02-50.1) | 1 |
| | No | 100% | 100% | | |

At 6th week there was statistical significant difference between studied groups as regards introduction of additives ,it was higher in group B than group A (50% to 25% respectively) (OR: 0.33, 95% CI: 0.11-1.24), but there was no statistical significant difference between studied groups as regards when to breastfed, any problems in breast or nipple and who prescribed additives.

At 6th week there was statistical significant difference between studied groups as regards the practice of skin to skin contact as it was 32% in group A and only 1% in group B (OR: 45.6, 95% CI : 6.2-349.2), and why skin to skin contact not done as in group A 53% not done due to cold climate,6% no time and 4% mothers was tired, while barriers to not practicing SSC in group B was 89% not know benefits of SSC, 10% no one told them and 1% baby was distressed. No father made SSC in both groups.

At the 4th month there was statistical significant difference between studied groups as regards introduction of additives or pacifier as it was higher in group B than group A(75% to 40% respectively) (OR: 0.22, 95% CI: 0.2-1), but there was no statistical significant difference between studied groups as regards any problem in breast or nipple, when breast fed and who prescribed additives.

At the 4th month regarding practice skin to skin contact there was statistical significant difference between studied groups as it was 34% in group A (OR:104.3, 95% CI : 6.3-1730.3),and why skin to skin contact not done as in group A 41% was due to cold climate, 7% mother was tired and

18% no time in group A, while barriers to not practicing SSC in group B was 89% not know benefits of SSC, 10% no one told them and 1% baby was distressed. No father made SSC in both groups.

At the 6th month there was statistical significant difference between studied groups as regards introduction of additives or pacifier as it was higher in group B than group A (90% to 45% respectively) (OR: 0.09, 95% CI: 0.04-0.2), but there was no statistical significant difference between studied groups as regards when to breastfed, any problems in breast or nipple and who prescribed additives (table4).

At the 6th month regarding practice skin to skin contact there was statistical significant difference between studied groups as it was 34% in group A (OR:104.3, 95% CI : 6.3-1730.3),and why skin to skin contact not done as in group A 41% was due to cold climate,7% mother was tired and 18% no time in group A, while barriers to not practicing SSC in group B was 89% not know benefits of SSC, 10% no one told them and 1% baby was distressed. No one father made SSC in both groups.

Regarding to morbidities necessitating hospitalization (like neonatal jaundice, gastroenteritis and respiratory distress) there was statistical significant difference between studied groups as it was higher in group B than group A (25% to 10% respectively) (OR: 0.33, 95% CI: 0.15-0.74).

Table 4: Comparison between study groups regarding practices of breast feeding and use of additives at the 6th month.

| | | Group A (100 cases) | | Group B (100 cases) | | OR (95% CI) | P-value (Chi2) |
|---------------------------------|----------------------|---------------------|---|---------------------|---|-----------------|----------------|
| | | NO | % | NO | % | | |
| any problem in breast or nipple | yes | 10 (10%) | | 15 (15%) | | 0.63(0.27-1.48) | 0.29 NS |
| | no | 90 (90%) | | 85 (85%) | | | |
| When Breastfed? | Crying | 98 (98%) | | 93 (93%) | | 3.6(0.75-18.2) | 0.09 NS |
| | Schedule | 2 (2%) | | 7 (7%) | | 0.27(0.05-1.34) | |
| | Crying then schedule | 0 | | 0 | | 1(0.02-50.9) | |

| | | | | | |
|--|--------------------|---------|---------|-----------------|--------------|
| Addition of liquids or semisolid foods or pacifier | yes | 45(45%) | 90(90%) | 0.09(0.04-0.2) | <0.001 HS |
| | no | 55(55%) | 10(10%) | | |
| Who prescribed additions? | Mother | 10(10%) | 25(25%) | 0.33(0.15-0.74) | 0.28 NS |
| | Grandmother/father | 11(11%) | 24(24%) | 0.39(0.18-0.85) | |
| | doctor | 4(4%) | 15(15%) | 0.24(0.08-0.74) | |
| | More than one | 20(20%) | 26(26%) | 0.71(0.37-1.38) | |

DISCUSSION

Early FSSC should be seen as a beneficial, low cost, and feasible intervention to promote lactation after delivery especially in settings that lack sanitation and safe water where breastfeeding can be lifesaving [4].

In the present study the mean ages of the studied groups were very close the difference was not significant. There was no statistical significant difference between studied groups as regards knowledge and scales of breast feeding in the previous child however, when comparing feeding practices in previous child and present baby, we noticed that initiation of breast feeding was better in the present baby in group A who were exposed to intense antenatal counseling about BF as it increased their timely initiation rates from 41% to 62% in the first 2 hour which was estimated as a statistically significant increase, this indicates that antenatal counseling increased early initiation rates.

This is in agreement with study done by Gami et al., who studied 100 pregnant females attending a tertiary care hospital in Delhi and exposed one half to verbal antenatal counseling regarding benefits of early initiation. They found that the counseled group more readily initiated breastfeeding within one hour of birth (58%) compared to only 32% among those who did not receive counseling, the difference was statistically significant [11].

In the present study the mothers who were exposed to the educational interventions were less likely to develop any problem in breast or nipple (breast engorgement, mastitis and nipple fissure) which facilitates to end up giving artificial feeding especially in group A and this is explained by the fact that expressing breast milk for the infant helps to prevent maternal engorgement and discomfort so mothers should learn to express their breast milk before return to the work [12].

In the study done by Kent et al., they reported that milk expression is not only important for production of milk for the child but has significant implications for the breastfeeding mothers. If breastfeeding mothers do not have the opportunity to express their breast milk regularly they may experience painful engorgement [13].

Most mothers in the two groups breastfed on-demand rather than by the schedule, the main cause reported for the introduction of pacifiers was colic and crying under the influence of the grandmother. The study showed that mothers of group A did not offer any pacifier or

supplements in 80%, compared to about 62% in their previous child. This changed significantly in present child after exposure to antenatal counseling. This indicates that mother exposed to ANC abided by the instructions and did not add any supplement. This continued up to the six week where 75% of group A babies were exclusively breastfeeding as well as group B (50%). However at 4th month the rate of exclusive breastfeeding dropped significantly in group A to 60% and even more so in group B (25%) and at 6th month the rate of exclusive breastfeeding dropped significantly in group A to 55% and even more so in group B (10%). This is most important in the first 4 to 6 weeks, when breastfeeding is getting started using a pacifier during this time can interfere with breastfeeding due to latch-on problems, reduce sucking at the breast, and thereby decrease milk supply.

Tarrant et al., conducted a study on 1242 mothers who were exposed to Baby Friendly practices at birth and who were followed up to 8 weeks and found that 46.6% of mothers were still exclusively breastfeeding. They concluded that greater exposure to Baby friendly practices in hospitals increased new mother's chances of exclusive breastfeeding beyond 8 weeks [14].

A randomized controlled trial conducted in a tertiary hospital in Singapore has revealed that antenatal breastfeeding education and postnatal lactation support, as single interventions based in hospital, both significantly improved rates of exclusive breastfeeding up to six months after delivery [15].

In the present study regarding their knowledge in previous baby about benefits of SSC for her and baby and if they know that the hospital must encourage them and this is their right it was significantly higher in group A, While in present baby concerning SSC in first two weeks 39% of mothers in group A practiced SSC, 27% practiced in 1st hour, 8% in 1-5 hours, 3% in 5-24h and 1% in 2nd day. At six weeks, 32% of mothers practiced SSC in group A and only 1% in group B. At the 4th and 6th month 34% of mothers in group A practiced SSC, compared to no one in group B. This was of high significance and indicates the importance of antenatal counseling in supporting continued practice of SSC after discharge.

This supports the importance of antenatal preparation in the success of early and continued SSC. The barriers to the first hour SSC in previous child included ignorance about the

practice and its benefits in 35% and not well informed in 21%, while in the present baby barriers to the first hour SSC was 20% due to cold climate and 29% mother tired but at 6th week barriers was due to 53% cold climate and at 4th and 6th month 41% due to cold climate in group A.

While barriers to not practicing SSC in group B in the present baby at 6th weeks, 4th month and 6th month was 89% not know benefits of SSC, 10% no one told them and 1% baby was distressed. This is in agreement with Farrarello who reported that the most common barriers to SSC was mother's lack of information about the procedure, mother's unfamiliarity to the benefits of SSC and mother being tired or in pain from C-Section, also the visitors who want to hold and touch the baby [16]. Also similar barriers were found by Charpak and Ruiz-Pelaiz [17].

In addition FSSC plays a role in protecting the baby against disease as in our study only 10% in group A compared to 25% in group B ($P < 0.007$) were admitted to hospital. This is substantiated by the reports from WHO (2010) that provide evidence of how early initiation of breastfeeding, FSSC and exclusive breastfeeding for the first six months of life decrease neonatal and infant deaths by reducing the risk of infectious diseases [18].

Bhandari *et al.*, reported that complementary feeding practices vary substantially across regions, and include the addition of liquids, porridges, and semisolid foods to the infant's diet very early in life. This has been associated with a high rate of diarrhea, a common cause of infant mortality [1].

Fathers also play an important role by performing SSC themselves with their baby when mother is not available and also by supporting the mother during the FSSC to initiate breastfeeding. However in our study none of the fathers performed SSC with their previous or current baby. This is probably related to cultural factors that discriminate gender roles and separate fathers from the family such local traditions that do not accept such a practice for males disempowering their fatherhood roles and deprive them from performing their roles as effective parents in communicating and cherishing their children as they should and thus interfere with family unanimity.

Studies have shown that when fathers perform SSC they experience changes in their hormonal make up in the form of increased oxytocin, that makes them more sensitive and responsive to the needs of their children and vice versa, as babies too learn more quickly to respond to the needs of their father to follow them and to learn their mannerisms and follow their behavior instinctively [19-20].

Riccitiello, reported that without the father's help many women don't practice breastfeeding through the sometimes rocky first days and weeks of nursing. When the father encourages and reassures the mother she tends to feel more confident in her choice of breastfeeding. The father's support is critical especially in a mother that is breastfeeding for the first time [21].

CONCLUSION

Antenatal counseling is a simple inexpensive intervention that can be easily done during antenatal visits to motivate pregnant women for early initiation of breast feeding and reinforce exclusive breastfeeding also Antenatal preparation to FSSC plays an essential role for mother's commitment to request for FSSC and make the birth attendant respond to her needs. When combined with exclusive breastfeeding FSSC has an additive effect on reducing morbidities necessitating hospitalization.

Conflicts of Interest: NIL

REFERENCES

1. Bhandari, N., Bahl, R., Mazumdar, S., Martines, J., Black, R. E. & Bhan, M. K. Effect of community-based promotion of exclusive breastfeeding on diarrheal illness and growth: a cluster randomized controlled trial. *Lancet* 2003; 361: 1418–1423.
2. Elaine Albernaz, Cesar G. Victora, Hinke Haisma, Antony Wright and William A. Coward. Lactation Counseling Increases Breast-Feeding Duration but Not Breast Milk Intake as Measured by Isotopic Methods. *J. Nutr* 2003; 133: 205–210.
3. The Global Criteria for the WHO/UNICEF Baby Friendly Hospital Initiative, 1992. Available at <http://www.unicef.org/programme/breastfeeding/baby.htm>
4. Edmond KM, Zandoh C, Quigley MA, Amenga-Etego S, Owusu-Agyei S, Kirkwood BR. Delayed breastfeeding initiation increases risk of neonatal mortality. *Pediatrics* 2006; 117: 380-6.
5. Eriksson UM. Breastfeeding: physiological, endocrine and behavioral adaptations caused by oxytocin and local neurogenic activity in the nipple and mammary gland. *Acta Paediatrica* 1996; 85(5): 525-30.
6. Pisake Lumbiganon, Ruth Martis, Malinee Laopaiboon, Mario R Festin, Jacqueline J Ho, and Mohammad Hakimi. Antenatal breastfeeding education for increasing breastfeeding duration. *Cochrane Database of Systematic Reviews*. 2014; (11): 4-6.
7. Guise J-M, Palda V, Westhoff C, Benjamin K. S. Chan, Mark Helfand, Tracy A. Lieu. The effectiveness of primary care-based interventions to promote breastfeeding: systematic evidence review and meta-analysis for the US Preventive Services Task Force. *Ann Fam Med* 2003; 1: 70–78.
8. WHO/UNICEF. Breastfeeding Counseling: A Training Course. World Health Organization, Geneva, Switzerland 1993. available at http://www.who.int/maternal_child_adolescent/documents/who_cdr_93_3/en/index.html
9. LINKAGES. Facts for Feeding: Recommended Practices to Improve Infant Nutrition during the First Six Months. Academy for Educational Development, Washington, DC 1999. available at <http://www.popline.org/node/283684>

10. Savage King, F. Helping Mothers to Breastfeed. African Medical and Research Foundation 1992, Nairobi, Kenya. available at <http://trove.nla.gov.au/work/10066107?selectedversion=NB D10154788>
11. Gami N, Mishra A, Srishti & Kocher SP. the Effect of Counseling on Early Initiation of Breast Feeding in the First Hour of Life .global Journal of Medical research Gynecology and Obstetrics 2013; 13(2): 17-24.
12. Greenberg CS and Smith K. Anticipatory guidance for the employed breastfeeding mothers. Journal of Pediatric Health Care 1999; 5:204-209.
13. Kent JC, Mitoulas LR, and Cregan DG. Importance of vacuum for breast milk expression. Breastfeed Med 2008; 3:11-19.
14. Tarrant, M., Wu, K.M., Fong, D. y., Lee, I.L., Wong, E.M., Sham, A and Dodgson, J.E. Impact of baby friendly hospital practices on breast feeding in Hong kong birth 2011; 38(3), 238-245.
15. Lin SS, Chien LY, Tai CJ, Lee CF . Effectiveness of a prenatal education programme on breastfeeding outcomes in Taiwan. J Clin Nurs 2008; 17(3):296-303.
16. Ferrarello, D. Barriers to skin-to-skin care during the post-partum stay. MCN Am J matern child Nurs 2014; 39(1):56-61.
17. Charpak N, & Ruiz-Pelaez JG. Resistance to kangaroo mother care implementation in developing countries: proposed solutions. Acta Paediatrica 2006; 95(5): 529-534.
18. World Health Organization .Early initiation of breastfeeding the Key to Survival and beyond. WHO secretariat 2010. Available at www.paho.org.
19. Kuo PX, Saini EK, Thomason E, Schultheiss OC, Gonzalez R, Volling B. Individual variation in fathers' testosterone reactivity to infant distress predicts parenting behaviors with their 1-year-old infants. Dev Psychobiol 2015; 57(1):1-36.
20. Weisman O, Delaherche E, Rondeau M, Chetouani M, Cohen D, Feldman R. Oxytocin shapes parental motion during father–infant interaction. Biol Lett 2013; 9(6):20130828.
21. Riccitiello R. Breastfeeding: how can dad help? Available at www.breastfeeding.com 2011.

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