

Effect of Antenatal Breast Feeding Education and Counseling on Mothers' Attitude and Intention to Practice

¹Ghada. M. Khalil and ²Ghada Mahmoud

¹Department of Public Health Preventive and Social Medicine, Faculty of Medicine, Zagazig University, Egypt

²Department of Community Medicine, College of Medicine, Qassim University

ghadamahmoud1@hotmail.com

Abstract: Background: In Saudi Arabia, recent studies reported rapid and continuous decline in breast feeding practice and duration in urban area specially among young mothers; only 33.08% of infant breast feed exclusively for the first four months, which indicate that health care providers are failed to promote breast feeding culture in between Saudis women. **Objective:** Assessment of attitude and intention to practice considering breast feeding of two study groups, Study the effect of intervention in changing female's attitude and intention to practice, compare females' attitude and intention of practice between intervention and control group. **Methodology:** randomized controlled study: 114 women divided randomly into 57 study group and 57 in control group. Structured questionnaire was used through personal interview with mothers. **Result:** intervention and control group showed high attitude toward breast feeding, barriers include ;embarrassment from lactating in public places, breast milk not sufficient, exclusive breastfeeding was in pre-test intervention group 26.3%and increased after intervention to 45.61%. **Conclusion:** causes behind decreased breastfeeding were: painful practice, father did not support lactation and absence of health care team support, after intervention intention to practice of breast feeding were improved.

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1. Introduction

Breast feeding is meritorious practice, as breast milk is the ideal food for the healthy and optimum growth and development of infants; it also has unique biological and emotional influence on child and mother (1) UNICEF recognizes breast feeding as one of four priorities to reduce the children's morbidity and mortality(2).

For many years later, there has been increasing concern about decline in breast feeding both practice and duration in developing countries. In Saudi Arabia recent studies reported rapid and continuous decline in breast feeding practice and duration in urban area especially among young mothers (3) .unfortunately little is known about breastfeeding barriers that women experience in the Middle East. Some researches accused higher education and higher employment rates in recent years among women which had an impact on breastfeeding practice (4). Previous studies revealed that the main risk factors for breastfeeding practice decline are young maternal age and the level of education is found to be inversely related to the duration of breast feeding (5).Other risk factors include being a working mothers and early introduction of bottle feeding (6).

Even when mothers choose to practice breast feeding poor breastfeeding and complementary feeding practices are Widespread, Worldwide it is estimated that only 34.8% of infants are exclusively breastfed for the first 6 months of life the majority

receiving some other food or fluid in the early months (7).

The low rates of exclusive breast feedings in Middle East are astonishing In Aqaba, Jordan; the exclusive breastfeeding rate was 46% for infants in the first 6 months of life (12). In Al-Hassa, Saudi Arabia only24.4% of infants were exclusively breastfed at the age of 6 months (8), and in whole Saudi Arabia only 33.08% of infant breast feed exclusively for 1st four month ,which indicate that health care providers are failed to promote breast feeding culture in between Saudis women(2) despite of effort made by governmental and nongovernmental organization to promote breast feeding in Saudi Arabia(6).Those effort concentrated mainly on mothers 'health education session through antenatal care and post partum period (9).

Previous studies (6) screened five ways by which mothers could acquired breast feeding knowledge through it ; medical staff consultation ,relative advises, mass media , school education and manufactures of infant formula education material and another several studies tried to evaluate level of mothers knowledge and their attitude toward breast feeding practice, but fewer studies evaluate the effect of various sources of mothers breast feeding knowledge on breast feeding practice (2,6,8,9) .worldwide few intervention trails have been conducted to identify interventions that might improve the rate of breast feeding (10).

According to our knowledge no previous studies in Saudi Arabia tried to evaluate the effect of health education-consultation intervention -which is personalized to each mother needs- on mothers' knowledge, attitude and intention to practice of breast feeding (11).

Study objectives:

- 1- Assessment of attitude and intention to practice considering breast feeding of female during antenatal care visits.
- 2- Study the effect of breast feeding health education and personal counseling approach in changing female's attitude and intention to practice.
- 3- Compare females' attitude and intention of practice in between group of female receiving intervention and group with no intervention

2. Methodology:

Subject:

Pregnant mothers attending antenatal clinics at child bearing age (18-45years) were contracted to participate in this study.

Sample size:

114 women divided randomly into 57 study group and 57 in control group.

Sample selection:

Women were randomly selected by file number while attending antenatal clinics, those agreed to participate were contracted.

Study design:

Randomized controlled study, where we had 2 groups: one study group on which we apply intervention and another control group and the study have 4 phases:

- 1- 1st phase pre -intervention assessment of mothers; attitude and practice of breast feeding in both control and intervention groups.
- 2- 2nd phase intervention phase which applied only on study group by using personalized health education and consultation session.
- 3- 3rd phase post intervention assessment of attitude and intention to practice applied for both intervention and control group.
- 4- 4th phase comparison between control and intervention group considering attitude and intention to practice.

Sitting:

Maternal and child health hospital, antenatal clinics

Assessment methods:

Structured questionnaire was used through personal interview with mothers and it covered the following:

- 1-Personal information: age, residency.
- 2-Maternal history: number of pregnancy, number of children, type of deliveries

3- Attitude toward breast feeding: importance of breast feeding for mothers , comparing breast feeding with artificial feeding, effect of breast feeding on children, length of breast feeding.

4-Previous practice: causes of refusing breast feeding before.

5-Evaluation of supportive service provided in maternal and child hospital toward breast feeding: who provide help, level of assistance, and satisfaction with these help.

6-Practice of breast feeding: intention to breast fed new child, after delivery plan to infant feeding and weaning.

Intervention method:

Previously designed health education message-personally face to face delivered - concerning breast feeding, designed with guidance of WHO /UNICEF. Recommendation covered all assessed items in assessment questionnaire with special emphasis on pre intervention assessment result and suitable counseling advice was giving according to every case situation.

Ethical consideration: informed consent was signed by all female participated in this study.

3. Result:

More than 49.1% of participating women lay between 26-35years and 21.9% were between 18-25years ,while 25.4% were between 36-45 years .23.7% were in their first pregnancy and 70.2% of those delivered before had normal delivery and there were no significant different in-between intervention and control groups considering age categories or type of previous delivery

Table 1: explore females' attitude toward breast feeding before and after the intervention which included both health education and consultation through answering attitude concerning questions.

First question asked about if mothers believed that breast feeding decrease child respiratory infection: pre-test intervention group showed mean score of 4.29 ± 1.27 compared with 3.94 ± 1.63 in pretest control group without significant difference while after intervention both groups showed also no significant difference considering mean score.

When asking if they believed that breast feeding benefit mothers health both groups pre and after intervention showed high mean score without significant difference .

Breastfeeding is better than formula feeding for child growth showed no significant difference in-between pre-test intervention and pre-test control group considering attitude mean score while after intervention; the intervention group showed increase in mean score from 3.85 ± 1.27 to 4.15 ± 1.43 in post intervention phase with significant difference

between it and post intervention control group which mean score was 3.58 ± 1.38 .

Mothers' attitude mean score considering recommendation of breast feeding for only 1st 6 months of life did not show significant difference in-between intervention and control group in pre and post comparison also attitude toward breastfeeding as a cause of decrease child diarrheal episode showed nearly similar mean score in-between different groups which was the same condition when we asked mother about their opinion about breast feeding favor on bottle feeding all women had high attitude score.

Table 2 discussed the possible causes that may push women to refuse breast feeding, 15.55% of women in pre-test intervention group consider that breast feeding not enough alone to satisfy her child with comparison to 17.39% in pre-test control group while after intervention post-test intervention group showed decrease in this reason as only 10.52% women agree on this reason compared to 22.8% in post-test control group but without significant difference in-between groups.

16.66% of mother in pre-test intervention group consider breast feeding as painful practice compared to 15.94% in pre-test control group this percent decreased to 7.01% in post test intervention group compared to 1% decrease only in post test control group but without significant difference, considering being busy for breastfed their children 12.22% of pre-test intervention group agreed upon that reason compared to 14.49% of pre-test control group while after intervention post-test intervention group the percent decreased to 8.77% while it increased in post-test control group to reach 19.29%.

Fathers did not encourage breast feeding is another cause to 14.44% of women in pre-test intervention group to refuse breast feeding compared to 5.79% of pre-test control group, while this high percentage decreased in post-test intervention group to reach 1.75% and remain high in post-test control group as 7.01% without significant difference.

19.29% of pre-test women embarrassed from lactating in public places compared to 22.8% of pre-test control group the percentage increased in post-test intervention groups to reach 22.8% and in post-test control group to 26.31% and only 5.26% of women in pre-test intervention group refused breast feeding as they want to get pregnant soon compared to 7.01% in pre-test control group and nearly the same result in post-test both groups.

Table 3 discussed the intended feeding method with women in different groups, 26.35% of women in pre-test intervention group intended to exclusively breast fed their children compared to 22.85% in pre-test control group without significant difference while in post-test intervention group the percentage

increased to reach 45.61% with significant difference between it and post-intervention control group which was 26.3%.

10.5% of women in pre-test intervention group intended to fed their children with exclusive bottle feeding compared with 8.77% in pre-test control group while after intervention that percent decreased to 3.55% in post-test intervention group and increased in post-test control group up to 12.82% without significant difference.

High percentage of women in pre-test intervention group 63.15% intended to fed their children with mixed feeding compared to 68.42 in pre-test control group that percentage decreased to 50.86% in post-test intervention group and to 61.4% in post test control group without significant differences.

Table 4: asked about intention to start breast feeding as early as possible while women is still in the hospital after delivery 80.7% of pre-test intervention group intend to start breast feeding at hospital compared to 73.68% of pre-test control group. This percentage increased up to 87.77% in post-test intervention group compared to 70.17% in post test control group with significant difference, the women intended to delay breast feeding until they go home was 19.29% in pre-test intervention group compared to 26.31% in pre-test control group and percentage decreased up to 12.28% in post-test intervention group and increased up to 29.82 in post-test control group with significant difference.

Table 5: asked about women intention to ask help, considering breast feeding from health care providers in pre-test intervention group 52.63% women intended to ask for help compared to 59.64% in pre-test control group this percent increased up to 70.17% in post-test intervention group and to 61.40 in post test control group.

4. Discussion:

Attitudes are important determinant of behavior, and favorable attitudes towards breast feeding are necessary to initiate and maintain breast feeding practice (12). To the moment of end, we didn't found any intervention study done before in Saudi Arabia to improve breast feeding attitude and intention to practice which used both health education and consultation and our study revealed that both groups intervention and control group showed high attitude mean score-above 4 from total of 5 - toward breast feeding considering its benefits in decreasing childhood respiratory and gastrointestinal illness both pre and after intervention with no significant difference between intervention and control groups, also most of mothers in both groups showed belief in breastfeeding benefits over

formula regarding to both maternal and child health and the difference between intervention and control group was significant after intervention with significant level 0.034 which indicate the significance of health education and counseling session as intervention method ,this result matched with **Iolanda et al.**,(12) which found high positive attitude of mothers toward breast feeding advantage over formula feeding in the high educated experienced group in compared to less educated and experienced group .but mothers attitude in both intervention and control groups did not show any significant different considering duration of breast

feeding and if it is enough to breastfeed only for 6 month attitudes ;the explanation may be that the attitude scores in both groups were already high before the intervention as it reached mean score higher than 3.29 in pre-test intervention group and 3.14 in pre-test control group and it increased slightly to reach 3.71 in post- test intervention group compared to 3.91 in post-test control group but without significant difference ,this result matched with **Jonas** (13)study which didn't find any significant relation between mothers attitude and the duration of breast feeding in her study on Bolivian mothers.

Table (1): Females' attitude toward breast feeding before and after intervention

	Pre-test Intervention N=57	Pre-test Control N=57	**P	Post-test Intervention N=57	Post-test Control N=57	**P
Breast feeding decrease child respiratory infection	4.29±1.27	3.94±1.63	0.372	4.4±1.0	4.63±0.08	0.193
Breast feeding benefit mother health	4.82±0.65	4.84±0.52	0.875	4.66±0.95	4.80±0.69	0.370
Breast feeding is better than formula for growth of child	3.85±1.27	4.10±1.47	0.343	4.15±1.43	3.58±1.38	0.034
Breast feeding is recommended only for 1st 6 months	3.29±1.63	3.14±1.70	0.615	3.71±1.55	3.91±1.73	0.533
Breast feeding decrease child diarrheal episodes	4.49±0.98	4.43±1.0	0.785	4.39±0.67	4.31±1.22	0.402

*mean and standard deviation

**student's t test

Table (2): Possible reasons for not breastfeed your baby:

	Pre-test Intervention 57 yes	Pre-test Control 57 yes	*P value	Post-test Intervention 57 yes	Post-test Control 57 yes	*P value
Breast milk not sufficient alone	15.55%	17.39%	0.80	10.52%	22.80%	0.78
Breastfeed is painful	16.66%	15.94%	1	7.01%	14.3%	0.22
Mother is busy	12.22%	14.49%	0.78	8.77%	19.29%	0.10
Father not encourage breast feeding	14.44%	5.79%	0.11	1.75%	7.01%	0.36
Embarrassed form lactation in public place	19.29%	22.8%	0.64	22.80%	26.31%	0.66
Want to get pregnant soon	5.26%	7.01%	1	8.77%	5.2%	0.71

*chi-square test

Table (3): Percent of female intended to practice breast feeding for 1st 6 months

	Pre-test Intervention group 57	Pre-test Control group 57	*P value	Post-test Intervention group 57	Post-test Control group57	*P value
Exclusive breast feeding	26.3%	22.8%	0.66	45.61%	26.3%	0.031
Exclusive artificial feeding	10.5%	8.77%	5.71	3.5%	12.82%	0.16
Mixed feeding	63. 15%	68.42%	0.55	50.86.%	61.4%	0.25

*chi-square test

Table (4): Intention in early starting breast feeding:

Start feeding	Pre-test Intervention group 57	Pre-test Control group 57	*P value	Post-test Intervention group 57	Post-test Control group 57	*P value
At hospital	80.70%	73.68%	0.37	87.77%	70.17%	0.021
At home	19.29%	26.31%	0.371	12.28%	29.82%	0.021

*chi-square test

Table (5): Intention to future consultation of health care provider:

	Pre-test Intervention group 57 yes	Pre-test Control group 57 yes	*P value	Post-test Intervention group 57 yes	Post-test Control group 57 yes	*P value
Ask of help from care providers	52.63%	59.64%	0.45	70.17%	61.40%	0.323

*chi-square test

We perceived many barriers for breastfeeding that was behind Saudis women refusing of breast feeding or to stop lactation early and we found the most common causes were; embarrassment from lactating in public places as 29.29% of pre-test intervention group said compared to 22.8% in pre-test control group and that percentage showed slight increase after intervention in both group but without significant difference, the result which matched with previous similar studies (12). Other studies (14,15) founded that many mothers belief that breast milk not sufficient alone to supply baby need and then they decided not breastfed their babies or to mix bottle feeding with breast milk and according to our study this was the opinion of 15.55% mothers in pre-test intervention group compared to 17.39% in pre-test control group and that percent decreased after intervention to 20.52% in post-test intervention group but without significant difference compared to post-test control group, also we found that a common cause for Saudis' women to stop breastfeeding is that fathers did not encourage them to breastfeed or even fathers were annoyed from wife practice of breastfeeding day and nights (8). mothers' work even inside or outside home is another reason for Saudis' women to not breastfed their infant ,our intervention tried to change mothers' believes about the ability to work and still lactate their children and we succeed in decreasing percent of mother in post-test intervention group from 12.22% in pre-test to 7.01% in post-test intervention but still with no significant difference in between intervention and control group which showed slight increase from 14.49% to 19.29%.

The most important question in our study was how do you intended to feed your next baby and here exactly our intervention showed significant effect on mothers on intervention group compared to control group as the percentage of mothers who decided to breastfeed exclusively was in pre-test intervention

group 26.3% and increased after intervention to 45.61% compared to control group which was 22.8% and increased only to 26.3% after intervention with significance level 0.031, also our intervention succeed to decreased percent of mothers intended to artificially fed their children and whom intended to mix artificial feeding with natural breastfeeding but without significant difference with control group ,our intervention result was matched with **Oliveria et al .**, (16) who used education and counseling session to improve breast feeding practice .

Previous studies (17-18) showed that rooming – in and early maternal contact is effective way to promote and maintain breast feeding practice, in our study we discussed with mothers the intention to start breastfeeding early as soon as possible inside the hospital with in the first four hours after delivery and our intervention succeed in increasing number of mothers who intended to start breast feeding early at hospital from 80.70% in pre-test intervention group to 87.77% in post-test intervention group with significant different from post-test control group was 0.021 and also we succeed in decreasing number of mothers who intended to delay breast feeding until they reach home with significant difference from control group in post- test phase.

Asking help and counseling with health care provider team was founded to be effective in mothers 'decision to initiate and practice breast feeding (15,16) and in our study we tried to change mothers' attitude and intention to ask help and consult health care providers in maternal health center to get some answer for her question and the needed advice to overcome constrains disabling her in breast feeding and we succeed in increasing percentage of mothers who intended to ask help from care providers from 52.63% in pre-test intervention group to 70.17% in post test intervention group but unfortunately without significant difference from post- test control group which showed 61.60% response .

Conclusion:

Mothers in both intervention and control groups had satisfactory attitude score considering breast feeding benefits for mothers and infant , so low attitude was not the main cause for decrease breast feeding practice among them .also our study revealed that breastfeeding wasn't the first choice for the mothers during the first months due to many precipitating factors such as: painful practice, , father did not support lactation , or she is worker mother and there is no nursery in the work place, another cause was absence of health care team support , but after the health education and consultation, mothers' intention to practice of breast feeding were improved

Corresponding author**Ghada. M. Khalil**

Department of Public Health Preventive and Social Medicine, Faculty of Medicine, Zagazig University, Egypt

ghadamahmoud1@hotmail.com

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