ORIGINAL ARTICLE

Knowledge, Attitude and Practice Towards Exclusive Breast Feeding in Jimma, Ethiopia.

Teklebrhan Tema, BSc, MSc[1]

ABSTRACT: A community-based cross-sectional survey to assess the knowledge, attitude and practice of mothers towards exclusive breast-feeding was undertaken in Jimma town, southwest Ethiopia. Data was collected using structured questionnaires from 1 July to 30 September 1998. One hundred fifty mothers who had infants between the age group of four months and one year were studied. The result showed that among mothers studied, 87% had adequate knowledge about exclusive breast-feeding while most (90%) had positive attitude toward exclusive breast-feeding. However, one third (33%) of the mothers still agreed on early introduction of cow's milk as a supplement since they believed it would increase their babies weight. Although knowledge and attitude toward exclusive breast-feeding among mothers was found to be high, the findings showed that only (25%) of mothers offered breast milk alone to their babies in the first 4-6 months of infant life. This study documented a discrepancy between mother's knowledge, attitude and practice of exclusive breast-feeding. It is therefore, recommended that efforts should be made by all concerned bodies to support and promote exclusive breast-feeding. In addition, further large-scale research needs to be conducted to identify determinant factors contributing to the decline of exclusive breast-feeding in the study area.

INTRODUCTION

Although human breast milk is the ideal nourishment for infants, it is now known in some parts of the world where the need for breast feeding is crucial, many mothers in poorer quarters of urban societies are either not breast feeding their infants at all or are weaning them after a few weeks (1, 2). Different studies documented that human breast-milk is rich in nutrients, electrolytes and antibodies that can protect a child against the complications of the commonest life threatening water borne infections in early life (3). The initiation of such early weaning in young infants is associated with an increased risk of disease and shortening of the duration of breast-feeding (4).

According to a World Health Organization (WHO) study on infant feeding practice during the first year of life, 98% of infants born in Africa, 96% of those born in Asia and 90% born in South America are breast-fed for some part of the period (4). The period of exclusive breast-feeding (EBF) however, is usually short. In Peru, it was shown that although 99% of infants were breast-fed in the first few month of life, 83% of them received water or tea in addition to breast milk (5,6). A study undertaken in western Ethiopia

[1]*School of Nursing, Jimma Institute of Health Sciences, P.O. Box 378, Jimma, Ethiopia*

indicated that EBF declined from 86% for infant at 2 months of age to 31% at 4 months (6). Another study conducted on socio-cultural factors related to breast-feeding at Jimma town, showed 79% of women have initiated breast-feeding within 12 hours after delivery. However, this study documented the rates of EBF 45.6%, in infants less than 3 months of age (7). A survey conducted on pattern of infant feeding at Addis Ababa indicated that 97.2% of mothers initiated breast-feeding, while 61% of the mothers gave fluids other than breast milk to their new born infants in the first three days of life (8).

A similar survey which looked at patterns of child feeding at Jimma town showed that 89% of mothers studied claimed that breast milk alone is sufficient as food up to 4-6 month of age. However, 2.3% of children were not initiated on breast-feeding or were completely weaned off the breast before one month of age (9,10). In addition, the above mentioned Ethiopian studies report EBF is high as 95% nation wide (11), and as low as 31% in the Southwest part of the country (12). These findings are inconclusive and inconsistent which calls for an in-depth assessment of mothers' knowledge, attitude and practice (KAP) towards EBF. To this end, this study was initiated to assess KAP of mothers towards EBF at Jimma town, Ethiopia and to provide information on current infant feeding practice to concerned local health authorities.

MATERIALS AND METHODS

As there is insufficient data to document mothers KAP towards EBF at Jimma town, data documented on patterns of child feeding in the area were used to estimate the prevalence rate of EBF (10). To obtain the required sample population a two stage sampling method was applied. First a convenience sampling method was used to get four Keble's out of the twenty Keble's of Jimma town. Before the second stage of sampling a house to house survey was conducted by trained data collectors to list mothers with infants between 4 months and 1 year of age (n=375).

Then 38 mother infant pairs from each of the two relatively large *kebeles* and 37 mother infant pairs from each of the other two relatively small *kebeles* were identified by a simple random sampling method (n=150). Data were collected using structured and semi-structured interviewer administered questionnaire. The questionnaire had four parts on mothers' socio-demographic characteristics, knowledge of EBF, attitude towards EBF and practice of EBF. As there is a scarcity of standardized questionnaire on EBF the author prepared ten questions to assess mothers' knowledge, five questions to assess mothers' attitude and ten questions to assess mothers' practice of EBF. In this survey EBF is defined as providing breast-milk alone for the first 4-6 months except for medication and categorized those mothers scoring 7-10 correct answers out of 10 knowledge measuring questions as knowledgeable, those scoring 5-6 out of the 10 knowledge measuring questions fairly knowledgeable and those scoring less than five not knowledgeable.

The data collection was piloted on (10%, n=15) of population with similar socio-demographic characteristics before being applied to the study subjects. All necessary modifications were made to fit local circumstances. To get full co-operation, the respondents were re-assured about the anonymity and confidentiality of their responses, insured their voluntarily participation and participants were advised of their right to take part in the study or to terminate at any time they wanted. During data collection the principal investigator supervised data collectors while interviewing mothers. In addition, the

investigator randomly cross-checked (10%, n=15) of the completed questionnaires. Finally, during data entry incomplete or inconsistent questionnaires were re-checked the next day in the field.

All data were cleaned, edited, coded and validated by double entry before analysis. Data analysis was made using the EPI Info statistical package. Frequency tables were made to see the distribution of variables. Cross-tabulations and statistical tests were done to look for associations between mothers' KAP of EBF. The chi-square or Yates corrected test was used to assess statistical significance of association in contingency tables. P values of < 0.05 were considered significant.

RSULTS

Among mothers interviewed (70%, n=105) were between 20-29 years of age, while the rest (30%, n=45) were between 15-19 and 30-44 years. The dominant religion of the study population was found to be Orthodox Christian (68%, n=102) followed by Muslim (19%, n=29), while the remaining (13%, n=19) were non- Orthodox Christians. The analysis of educational level of mothers showed that (52%, n=78) have up to elementary school, (30% n=45) completed secondary school, while the rest (18%, n=27) have higher education levels.

Out of the total mothers interviewed in relation to information about breast-feeding (75%, n=113) received information on EBF during pregnancy, while the rest (25%, n=37) had not. Concerning sources of breast-feeding information mothers indicated that health professionals were their main sources (40 %, n=60) followed by media (17 %, n=26), relatives (11%, n=17), and (7%, n=10) from more than one source while the rest (25% n= 37) had no information (Table1).

According to the set criteria for EBF knowledge (45%, n=68) were found to be knowledgeable, (42%, n=63) fairly knowledgeable and the remaining (13%, n=19) were classified as not knowledgeable (Table 2).

Table 1. Mothers distribution by source of breast-feeding Information at Jimma town, Ethiopia, 1998.

Source of information on EBF	No (%)
Health professionals	60 (40)
Media	26 (17)
Relatives	17 (11)
More than one source	10 (7)
No information	37 (25)
Total	150 (100)

Table 2. Mothers distribution by level of EBF knowledge at Jimma town, Ethiopia, 1998.

Level of knowledge	No (%)
Knowledgeable	68 (45)
Fairly knowledgeable	63 (42)
Not knowledgeable	19 (13)
Total	150 (100)

According to the response of mothers' on knowledge measuring questions the majority (90%, n=135) believed that breast milk alone is sufficient for the first 4-6 months. As the response given on advantages of EBF, (41%, n=62) of mothers claimed that feeding breast milk alone for 4-6 months prevents diarrhoea among infants while (46%, n=69) mothers knew that EBF serves as a contraceptive for the first few months after delivery. On the other hand (89%, n=134) believed that breast-fed babies need water supplements in the first 4-6 months. At the same time a considerable number of mothers (42%, n=63) responded that additional food should be introduced at the age range of 4-6 months while most recommended to start additional food after six months.

This study findings also indicated that the majority (90%, n=135) of mothers have a positive attitude towards EBF. However, (33%, n=50) of them believed that cow's milk needed to be added in the first 4-6 months to increase the weight of infants. Among the mothers studied, a higher proportion (63%, n=95) gave colostrum to their babies within half an hour after birth, while the remaining (37%, n=55) did not (Table 3).

Table 3. Practice of colostrum feeding at Jimma town, Ethiopia, 1998.

Colostrum feeding practice	No (%)
Yes	95 (63)
No	55 (37)
Total	150 (100)

The reason for not giving colostrum was mothers' belief that it causes constipation and cramp. Concerning pre-lacteal feeding most of the mothers (46%, n=70) have given plain water and (27%, n=40) of them gave sugar solution while only (27%, n=40) of the mothers have given breast-milk alone (Table 4).

Table 4. Practice of pre-lacteal feeding in Jimma town, Ethiopia, 1998.

Pre-lacteal feeding practice	No (%)
Plain water	70 (46)
Sugar solution	40 (27)
Nothing	40 (27)
Total	150 (100)

Results demonstrated that only (25%, n=37) of mothers gave breast-milk alone, while (46%, n=70) and (16%, n=24) of them gave additional water and cow's milk, respectively. The reasons given for supplementation were to quench thirst, to increase weight of an infant and to adapt infants to cows-milk. Few mothers (13%, n=19) gave other supplements such as formula milk. At the time of the survey, the majority of mothers (90%, n=135) were feeding breast milk while only (10%, n=15) of them were not. The major reason given for not currently feeding was inadequacy of breast milk and working condition of the mother.

Concerning the time at which additional food was started, the majority (73%, n=110) responded in the age range between 4-6 months; (11%, n=15) started after 6 months, and (13%, n=20) started below 4 months while the remaining (3%, n=5) of mothers had not started supplementary feeding at the time of the survey.

To determine the influence of mothers' attitude, knowledge, health information received about breast-feeding and educational level on their breast-feeding practice in the first 4-6 months cross-tabulation on selected variables was done. For statistical purposes mothers were categorised as having a positive attitude or negative attitude. Also, knowledge levels of EBF were categorised as knowledgeable or not knowledgeable, while for the level of education mothers were categorized as literate (Sec. school education and above), illiterate (primary school education and below). Those mothers who were fairly knowledgeable and not knowledgeable were combined and categorised as not knowledgeable (Table 5).

Table 5. Cross-tabulations of mothers knowledge level and attitude towards EBF by their breast-feeding practice at Jimma town, Ethiopia, 1998.

Variables	Feeding practice (BF) Alone No (%)	Partially No (%)	statistical test
Knowledgeable	25 (37%)	43 (63%)	Yates corrected χ^2 =8.64
Fairly & not knowledgeable	12 (15%)	70 (85%)	P < 0.001
Positive attitude	35 (29%)	85 (71%)	Yates corrected χ^2 =6.54
Negative attitude	2 (7%)	28 (93%)	P < 0.05

As shown in table 5, there is a statistically significant association between mothers' knowledge level and attitude towards EBF and their practice. Those mothers who were knowledgeable and have a positive attitude towards EBF are more likely to feed breast milk alone for the first 4-6 months than those mothers who were found to be not knowledgeable and have a negative attitude towards EBF.

DISCUSSION

This study examined mothers' KAP towards EBF at Jimma town, Ethiopia. Among mothers studied the majority claimed to have had information on EBF during pregnancy from different sources; of which half-received information on breast-feeding from health professionals which is similar to the previous finding (8). However, other information sources that should play a role in passing breast-feeding information to mothers, such as the media and relatives do not have the expected influence.

Concerning knowledge of EBF, even though there is a lack of literature that documented mothers' KAP of EBF in the study area, some studies conducted on patterns of child feeding documented different findings on mothers' knowledge of breast-feeding. A survey conducted on patterns of child feeding at Jimma town showed a high percentage of mothers had acceptable levels of EBF knowledge (9). This study also revealed that the majority of mothers had EBF knowledge ranging from fairly knowledgeable to knowledgeable which is comparable with the previous finding.

In a survey which looked at mothers' knowledge on the adequacy of breast milk a high proportion of mothers studied claimed that breast milk alone is sufficient for the first 4-6 months of infant life (9). This study also revealed that a similar proportion of mothers interviewed had knowledge of EBF duration. Moreover, few of the mothers knew that feeding breast milk alone for 4-6 months prevents diarrhoeal diseases, while almost the same number believed that EBF for the first few months after delivery serves as contraception. At the same time, this study showed that only a few mothers had given breast-milk alone to their infants immediately after delivery while more than

half of the mothers gave different forms of pre-lacteal feeding.

Despite the vast amount of information conveyed a high level of knowledge about EBF and a positive attitude towards EBF, this study findings showed that there is a discrepancy between mothers' knowledge and attitude towards EBF, and their practice.

Concerning mothers' knowledge about the advantages and their attitude towards colostrum feeding a previous study showed that mothers studied believe that colostrum is dirty and exposes the infants to evil spirits (10). However, this survey revealed different ideas, by which the majority of mothers indicated that they offered colostrum to their babies immediately after birth and verbalized that it is important for the optimum physical and mental development, and provides protection in early infant life. This is an indication for better understanding about the advantages of colostrum feeding among mothers. Moreover, a few of the mothers studied believe that it causes constipation and cramp to the infant, which is similar to previous studies' findings (10). The idea that colostrum causes constipation and cramp may be related to mothers' deeply rooted traditional beliefs and may be inherited from grand mothers and the society at large, who can influence a mothers' infant feeding practice. So, in order to bring about behavioural change in mothers and for better practice, it is mandatory to design an acceptable and sustainable strategy to support and promote EBF which should also involve other members of the family responsible for infant care.

Regarding the time of starting additional food the majority of mothers started between the age range of 4-6 months, some before 4 months and late. After 6 months' while very few had not started additional food at the time of the study. Also among the surveyed mothers, only a small proportion were found to give breast milk alone to their babies for the first 4-6 months, which is still lower than the previous findings (6,7). This pattern of feeding clearly show that some mothers introduce supplementary feeding before and after the recommended age. Those infants who were supplemented before or after the recommended age will be at an increased risk of morbidity and mortality as early introduction of supplementary feeding is associated with increased risk of diarrhoea diseases, while delayed weaning may contribute to malnutrition.

Eventhough, relatively few mothers practice EBF, the results showed a statistically significant difference between those mothers who were categorised as knowledgeable and have a positive attitude towards EBF and those who had information about breast-feeding in practice of EBF than the others. In general this survey showed that those mothers who were categorised as knowledgeable, educated and have positive attitudes towards EBF are more likely to give breast-milk only in the first 4-6 months than the others. Besides the study showed that there is misunderstanding among the mothers about what EBF really means since almost all mothers including those who are knowledgeable, and have a positive attitude are giving pre-lacteal feeding and still believe that they are on EBF.

Though knowledge and attitude towards EBF seems to be high among the mothers studied, very few practiced EBF. They also have misconceptions about the adequacy of breast-milk alone for the first 4-6 months as almost all mothers gave fluids as supplements to breast milk starting from the day of delivery. Both observations may be due to a lack of clear understanding about the completeness of breast-milk and an awareness of the consequences of early supplementation.

Therefore, there is a need to address what EBF means in clear and understandable ways for mothers to achieve the goal of EBF promotion.

It is, therefore, recommended that: 1. There should be clear policy guidelines developed for the promotion of EBF and information provided to mothers in relation to breast-feeding should be given in clear and understandable ways. Its practicability should be monitored regularly by all concerned bodies; 2. Health communication on breast-feeding should emphasize EBF for better practice by mothers and the mass media should be used effectively with particular emphasis on EBF; 3. In order to extend the validity of this study's findings the author recommends that further research should be conducted on a large scale to identify factors that contributed to the existence of the observed gap between mother's KAP of EBF.

ACKNOWLEDGEMENTS

I would like to acknowledge Dr Fekadu Ayele, Dr Frew Lema, Mr Tsegaye Asress and Mr Tamirat Asefa, for their advice and help they provided during my project work. I Also would like to extend my thanks to Mrs Karen Salmon editing this manuscript. My special thanks goes to W/t Tsegereda Fisseha who gave her valuable time for word processing. My sincere appreciation goes to those mothers and to their family for their co-operation and voluntary participation in this study.

REFERENCES

1. WHO. Contemporary Pattern of Breast-feeding. Report on the WHO Collaborative study on breast-feeding. WHO, Geneva, 1981.
2. Kestela T, *et al.* Breast-feeding in Addis Ababa Ethiopia: Results of focus group discussion. Ethiop. J. Health Dev. 1990; 10: 133-44.
3. Mata L. Breast-feeding, Infection and Infant out Come. An international Perspective, Biomedical publishers and distributors, Canada, 1990.
4. WHO. Facts About Infant Feeding. 1992; Issue number 1.
5. WHO. Division of child health and development, Breast-feeding and the use of water and teas. Update, reprint, No 9 November 1997, Geneva.
6. Ahmed Z, *et al.* Ecology of Health and Disease in Ethiopia. Addis Ababa, Ethiopia, 1984
7. Addus A. Socio-cultural Factors Related to Breast-feeding in Jimma. Masters Thesis, Addis Ababa University, Ethiopia. 1988.
8. Kestela T, *et al.* Pattern of Feeding Infants in Addis Ababa. Ethiopia. J. Health Dev. 1996 10:51-65.
9. Getaneh T *et al.*, Child Feeding in Jimma town: The knowledge and Practice. Bulletin of Jimma Institute of Health Sciences 1997; 7: 121-130.
10. Taddesse E. National Breast-feeding Survey in Ethiopia: Knowledge Attitude and Practice Among Mothers and Health Professionals, Addis Ababa, Ethiopia, 1993.
11. WHO, Regional Office for Africa and Regional Office for Eastern Mediterranean inter-country workshop Report on Rates of EBF Addis Ababa Ethiopia, 1995.
12. Kestela T, *et al.* Pattern of breast-feeding in western Ethiopia and heir relationship to acute diahrrea in infants. J.Trop.Ped. 1990; 36: 180-83.