Knowledge and Practices of Working Mother about Breastfeeding and Weaning in Assiut City, Egypt

Safaa A Mohamed Kotb[1], Asmaa G Mohamed[1], Entesar M Mohamed[2] and Ekram M Abdel Khalek[3]

[1] Community Health Nursing Department, [2] Obstetrics and Gynecology Department, Faculty of Nursing,
[3] Public Health and Community Medicine Department, Faculty of Medicine, Assiut University, Egypt

Abstract: The importance of breastfeeding, especially exclusive breastfeeding (EBF) is well established for the infant, the mother and the family. The aim of this study is to assess the knowledge and practices of working mothers regarding breastfeeding and weaning using quantitative and qualitative approaches. The study was conducted in four MCH centers in Assiut city during 2010. Direct interviews were done with 43 working mothers had children aged 4 to 24 months as well as seven FGDs. 69.8% of the mothers were at the age 30 years or less. All the studied mothers knew that the breastfeeding is the best nutritional source for the baby. The majority of the mothers had good knowledge about the advantages of breastfeeding for the child and the mother. 67.4% initiated breastfeeding within the first 30 minutes after delivery. The participants in general were less knowledgeable about exclusive breastfeeding practices. There were some fault practices reported by the participants. There is a need for health education programs, which support and encourage breastfeeding particularly at a primary care level, focusing more on working mothers.

[Safaa A Mohamed Kotb, Asmaa G Mohamed, Entesar M Mohamed and Ekram M Abdel Khalek. **Knowledge and practices of working mother about breastfeeding and weaning in Assiut city, Egypt.** Life Science Journal 2012; 9(1):803-808]. (ISSN: 1097-8135). http://www.lifesciencesite.com. 116

Key words: Knowledge- practices- breastfeeding- weaning

1. Introduction:

Breastfeeding confers crucial health benefits to both mothers and their babies (Kramer et al., 2001). Breast milk is the natural first food for babies, it provides all the energy and nutrients that the infant needs for the first months of life, and it continues to provide up to half or more of a child's nutritional needs during the second half of the first year, and up to one-third during the second year of life (WHO, 2011).

Breastfeeding is critical for sustaining newborn infant health and wellbeing. Infants who are properly breast-fed grow better and experience less sickness and fewer deaths than other infants who are not breast-fed (John, 2005).

Each year more than 10 million children under the age of five years die, mainly from one of a short list of causes, and the majority live in low-income countries (Black et al., 2003). Millennium development goal number 4 is to reduce child mortality by two thirds by 2015 (United Nations Statistics Division, 2005). Under-nutrition is estimated to be the under lying cause of 53% of under five mortality (Bryce et al., 2005). Appropriate feeding practices are of the fundamental importance for the survival, growth, development and health of infants and young children (Jones et al., 2003). Fault feeding practices including lack of breastfeeding and early introduction of solid foods have been reported as health risks (Uany and Solmons, 2005).

Breastfeeding is an essential measure for the prevention of malnutrition and protection against infection in infancy (Livingstone et al., 2000). Breastfeeding is one of the oldest practices recommended by all religions and it is the universally endorsed solution in the prevention of early malnutrition (Dana, 1979). It is estimated that the lives of one million infants can be saved in the developing world by promoting breastfeeding (Heining and Dewey, 1996; Moreland and Coombs, 2000).

World Health Organization and the American Academy of pediatrics recommends that an infant should be breast- fed without supplemental foods or liquids for the first 6 months of age, known as exclusive breastfeeding and thereafter continued breastfeeding until two years of age along with complementary foods (WHO, 2011).

The prevalence of breastfeeding differs from one country to another and from one society to another, this of course is due to cultural and religious believes (Li et al., 2003).

In many developing countries, labor force participation by women in the childbearing years has increased rapidly. Social and economic changes present new challenges for women attempting to combine their roles as workers and mothers. Employed mothers perceived some contradictions messages on breastfeeding and most of them preferred to leave work after birth to exclusively care of their babies and others wished to have more institutional support (Barona-Vilar et al., 2009). In Egypt, many of women who are employed when they become pregnant return to the work by the time their children are three month old. Little is known about how these challenges affect infant feeding choices.

Aim of the study:

The present study aims to give an overview on and assess current knowledge and practices of working breast-fed mothers related to the feeding of their young children up to two years.

Subjects and methods

This study was performed by using cross sectional design and Focus Group Discussions (FGDs) during 2010. Four Maternal and Child Health Care (MCH) centers (El-Willidia, El-Arbaeen, Weast-Elbalad and Kolta) in Assiut city were be chosen randomly from total eight MCH centers located in different socio-economic areas in Assiut city. The target population was working mothers of children aged from 4 to 24 months. Verbal consent was obtained after the participants had been informed about the study objectives.

Formal administrative approvals were taken before the start of the fieldwork. These included approval by the Ethical and Technical Review Committee of the Assiut Faculty of Nursing for the study proposal and permission of Assiut Health Directorate.

The researchers recruit 50 working mothers visiting the MCH centers to participate in the study. Although all women agreed to participate 7 women did not complete their participation after a period of time because they were busy so the response rate is 86 %.

Data were collected by using both quantitative and qualitative approaches from mothers. For quantitative data collection, a semi-structured questionnaire was used for direct interview. The questionnaire included sociodemographic data, questions to assess mother knowledge and practices regarding breastfeeding. A pilot study was performed prior to the study and all necessary modifications were done.

The focus group discussion guide explored participants' knowledge, experiences, preferences and assumptions about breastfeeding. The guide was tested with a group of women not included in the study. The focus group moderator and observer received previous training on this type of qualitative data collection.

Seven focus group discussions were carried out in the nurses' room or in the clients waiting place of the MCH centers. Groups ranged in size from 5 to 7 mothers and each session lasted 45-60 minutes. Moderator used the protocol to ask open-ended questions and probe response. Prior to each discussion the researcher ensured the issue of confidentiality and they also made sure that there was a relaxed atmosphere before the discussion started. Topics covered were initiation of breastfeeding, practices regarding colostrum, use of pre-lacteal feeds, complementary food, weaning time and weaning food and cessation of breastfeeding.

The observer documented the sessions whether verbal or non-verbal aspects. The first session was audio taped after taking permission of the participants, other sessions were not because a difficulty was found as a result of the noise and unsuitable environment. Transcription was done by note-taker. By the end of each session, each participant took a brief Arabic booklet about breastfeeding and weaning that prepared by the researchers.

Data Analysis:

For quantitative data: Data were analyzed using SPSS version 16. Frequencies, percentages, mean and standard deviation were computed. Chi-squared test was used as the test of significance; $P < 0.05$ was considered significant.

For qualitative data: The FGDs were translated into English by the researchers. Coded material was compared and organized into themes that were then grouped into central categories. The information in each FGD was summarized and grouped according to these predefined information categories.

3. Results:

Table (1) shows the sociodemographic characteristics of the studied 43 mothers, 69.8% of the mothers were at the age 30 years or less. About half of the included mothers had secondary education, 39.5% having higher education and 4.7% of mothers had preparatory or no education. As regards mothers work, 55.8% were employers, 25.6% were teachers, 11.6% were unskilled workers and 7% were nurses. Those who work for more than 6 hours outside home represented 30.2%. Less than half of the studied mothers (48.8%), their family income was in the range from 300 to 450 Egyptian pounds per month.

As shown in Table (2), all the studied mothers knew that the breastfeeding is the best nutritional source for the baby. The majority of the mothers had good knowledge about the advantages of breastfeeding for the child and the mother. About 80% of the mothers knew that breast milk protects the child from diseases as well as strengths the relation between the mother and her baby. Nearly 70% of the participant mothers stated that breastfeeding protect mothers against cancer. 46.5% of the mothers aware that breast milk is a complete nutrition for the infant during the first 4 months. The majority (83.7%) of the participants knew that colostrum increase the immunity of the baby and 30.2% of the mothers reported that it is a first protection against infection.

As regards weaning, less than half of the mothers defined weaning correctly. On the other hand, good percentage of the respondents knew that weaning should be started by addition of juices (88.4%) and soft food as egg yolk (62.8%). More than half (53.5%) of the participants knew that 6 months is the suitable age for starting weaning. Unfortunately, 30.2% did not know the suitable age to start weaning. Nearly 42% of the mothers reported that baby must be weaned completely from breast milk at the age of two years and 39.5% said after one and half years (Table 3).

Table (4) presents the percentages of mothers regarding practice of breastfeeding, 67.4% initiated breastfeeding within the first 30 minutes after delivery. Only 9.3% started on the third day. Water, honey water and safe remedies were offered to the baby before lactation by 9.3%, 20.9% and 69.8% of the mothers, respectively. About one fifth of the mothers artificially fed their babies beside the breast milk. The important causes of artificial feeding were reported by 20.9%, 14% and 11% of mothers as follows low baby weight, mother work and breastfeeding weaken the mother, respectively. The majority of the mothers (93%) continued breastfeeding while their babies suffered from diarrhea.

Table (1): Sociodemographic characteristics of the studied mothers, Assiut MCH, 2010

Variable	No. (n= 43)	%
Mothers age:		
30 years	30	69.8
More than 30 years	13	30.2
Mean ± SD	27.6 ± 4.8	
Mothers education:		
Illiterate/ read& Wright	2	4.7
Preparatory	2	4.7
Secondary	22	51.2
Higher education	17	39.5
Mothers job:		
Employer	24	55.8
teacher	11	25.6
nurse	3	7.0
Unskilled worker	5	11.6
Work hours:		
6	30	69.8
More than 6	13	30.2
Husbands job:		
Employer	32	74.4
Businessman	4	9.3
Skilled worker	3	7.0
Unskilled worker	4	9.3
Family income: LE/month		
250-	9	20.9
300-	21	48.8
450-	8	18.6
600 or more	5	11.6

Table (2): Mothers knowledge about advantages of the breastfeeding, Assiut MCH, 2010

Variable	No. (n= 43)	%
The best nutrition for the baby:		
Breastfeeding	43	100.0
Artificial feeding	0	0.0
Advantages of breastfeeding for the child:		
Protect the child against disease	34	79.0
Complete nutrition in the first 4 months	20	46.5
Increase the intelligence of the child	18	41.9
Improve the child immunity	11	25.6
Help in early teeth eruption	11	25.6
Advantages of breastfeeding for the mother:		
Strengthen the relationship between baby and mother	34	79.1
Protect the mother from cancer	30	69.8
Prevent postpartum hemorrhage	16	37.2
Cheap	14	32.6
Breastfeeding is a natural contraceptive method	11	25.6
Safe mother time	2	4.7
Colostrum feeding:		
Increase the immunity	36	83.7
Protect the baby against diseases	13	30.2
Good nutrient for the baby	7	16.3
Easily digested	5	11.6
Increase the intelligence of the baby	3	7.0

Table (3): Knowledge of the studied mothers about weaning, Assiut MCH, 2010

Variable	No. (n= 43)	%
Definition of weaning:		
Stop of breastfeeding	21	48.8
Add other types of food beside breast milk	20	46.5
Do not know	2	4.7
Types of food used for starting weaning:		
Juices	38	88.4
Egg yolk	27	62.8
Mashed cereals	5	11.6
Any food	3	7.0
Suitable age of baby to starting weaning:		
Less than 4 months	1	2.3
4-6 months	6	14.0
After 6 months	23	53.5
Do not know	13	30.2
Complete weaning from breast milk:		
At one year	8	18.6
1.5 years	17	39.5
2 years	18	41.9

Table (4): Mother practice of breastfeeding, Assiut MCH, 2010

Variable	No. (n= 43)	%
Time of initiation of breastfeeding:		
In the first 30 minutes	29	67.4
In the first day	10	23.3
In the third day	4	9.3
Pre-lacteal feeds:		
Safe remedies	30	69.8
Honey water	9	20.9
Water	4	9.3
Giving artificial feeding;		
Yes	9	20.9
No	34	97.1
Causes of artificial feeding:		
Increase child weight	9	20.9
Work of the mother	6	14.0
Breastfeeding weaken the mother	5	11.6
Insufficient breast milk of the mother	3	7.0
Continuation of breastfeeding during diarrhea:		
Continue breastfeeding	40	93.0
Stop breastfeeding	3	7.0

FGD results:

Advantages of breastfeeding:

There was a general opinion among all the participants that breastfeeding is the best choice for baby feed. All of them reported more than one advantage of breastfeeding for the mother and her baby. All participants knew that the colostrum is very good, because it protects the baby against diseases. None of the participants reported having expressed and discarded the colostrum. They told that colostrum is good nutritive food which strength the child immunity.

The participants in general were less knowledgeable about exclusive feeding practices. Many of them believed that they followed exclusive breastfeeding, but in reality they gave water and other safe remedies. One participant said *"It is normal to give water especially in the summer"*. Few practiced exclusive breastfeeding only for the first 3 months. The main causes were the perception of insufficient milk, less satisfaction of the baby and return to the work. Mothers' relatives recommend to start giving the baby other food before six months to get used to eating food when the mother fell sick or may be died.

Half of the participants did not know the methods of suctioning and preserving of breast milk. The mothers believed that this practice is painful and requires certain hygienic measures. One of those stated that *"Even I know I don't do it because I afraid of"*.

Bottle feeding practices:

The majority of the women in the focus groups did not give anything to the baby before initiation of

breastfeeding. Unfortunately, some physicians prescribed safe remedies for baby as pre-lacteal feeds.

While asking mothers if they bottle fed their babies or not a small number of them reported that they gave bottle feeding to their babies for many reasons. The most reported reason is that there is no breast milk or insufficient milk in their breasts others stated "*To help child to gain weigh* ". One of the participants stated "*When I come back to work what the baby will feed*?".

Weaning time and complementary food

The majority of the mothers defined the weaning as the breastfeeding cessation. Nine mothers defined it as introduce assistant food with breastfeeding. Also the majority of mothers reported that the best time to start weaning when the baby aged 6 months and more. The main complementary food mentioned by all the interviewees was the easy digested food like mashed vegetables and fruits and mahlabia. Other complementary food mentioned was yoghurt, bean water, eggs, potatoes, and cow milk. Cerelac was mentioned by a few numbers of women.

Nutrition of lactating women

All participants told that the breast fed mother can eat the ordinary food of the home with an increase in the foods containing high calcium, high sugar like halvah named "halawa tahinia", treacle and desserts. Also they mentioned that fluids as arena named "helba", fruit juices and water play an important role in increasing the breast milk. Participants also gave special attention to the green leaves like Radish named "fegel", arugula named "Jarjir" and meat. Other mothers mentioned that breast fed mother should avoid spicy dishes as they may cause colic to the baby.

4. Discussions:

Results of this study indicated that mothers' knowledge concerning breastfeeding was in general satisfactory. Yet, they had less knowledge about weaning. In a study conducted on Indian mothers, the majority of the participants knew that breast milk is clean and sterile and promoted bonding between mothers and child. In addition, they were aware that colostrum protected the child from falling sick (Pant and Chothia, 1990) in comparison to 30.2% of mothers in our study knew that. These results are better than that reported by El- Kariri and Kannoa (2007) as 68.6% of mothers in Gaza strip knew more than three advantages of breastfeeding. Ekambaram and other researchers (2010) reported that the knowledge of the mothers in India was inadequate in areas of time of initiation of breastfeeding (92%), colustrum feeding (56%), duration of exclusive breastfeeding (38%), knowledge on expressed breast milk (51%) and continuation of breastfeeding while the baby is sick.

It is highly recommended that breastfeeding is to be initiated within the first thirty minutes after birth. However, many mothers in the Arabian countries start feeding their babies with pre-lacteal feeds until the mother lactates (Al-Shoshan, 2007).

In the present study, 67.4% of the mothers initiated breastfeeding within the first half an hour after birth. The rate of breastfeeding initiation within the first hour after labor was 78.4% in Gaza (El- Kariri and Kannoa, 2007) and 55.9% in Lebanon (Bata et al., 2006).

Many mothers in the Egypt believe that breast milk is secreted in the third day after labor and colostrum is not sufficient to be given as a feeding to the infant. This may explain the delay of initiation of breastfeeding of babies. Our results are previously observed by Youssef and their colleagues (1991) in their study about maternal approach to breastfeeding in Assiut.

In a study conducted on Saudi mothers whom been admitted for delivery at maternity hospitals in Riyadh. Pre-lactic feeding was practiced by 10.5% of mothers and 42% of mothers initiated breastfeeding within the first hour of delivery (Al-Shoshan, 2007).

In the present study, 20.9% of the mothers artificially fed their babies because they believed that bottle feeding increases the baby weight. This finding is lower than that reported by Al-Jassir et al. (2006) as 48.3% of lactating mothers in Saudi Arabia cited insufficient milk as a reason for introducing bottle feeding. While Al-Shoshan (2007) found that baby milk formula introduced at the first month by 9.7% of studied mothers in Saudi Arabia and 18.6% of them used it at the sixth month. The introduction of infant formula before one month and returning to the work postpartum were predictive of weaning before 3 months (Tarrant et al., 2010).

The majority of mothers in the present study reported that the best time to start weaning is when the infant aged 6 months. The main complementary food was easy digested food. This is different than that done in Gaza community as 6.3% women started weaning their children after 18 months. The most common practice (45%) was to wean children at two years of age. Egg, vegetable soup and fruit juice were common food given by mothers to their babies at the age 3 to 5 months (Kanoa et al., 2011).

In FGDs, the majority of women in our study had a good idea about the advantages of the breastfeeding but they had less knowledge about exclusive feeding practices. This finding is consistent with that reported by Fjeld et al. (2008) in Southern Zambia.

The present study revealed that working mothers rarely practiced exclusive breastfeeding. Work of the mother was the main obstacle for continuation of exclusive breastfeeding for 6 months. This is corresponded with previous research results (Kruger and Gericke, 2001; Kruger and Gericke, 2004).

Leong (2009) found that working women were more likely not to practice exclusive breastfeeding compared to non working women in Malaysia. Arts and his colleagues (2011) found that only 37% of infants younger than 6 months in Mozambique were exclusively breastfed. The practice of exclusive breastfeeding depends on various factors related to both mothers and their environment. Exclusive breastfeeding is not promoted in healthcare facilities because the health professionals do not encourage it (Moussa Abba et al., 2010).

Conclusion and recommendations:

The study showed good knowledge of studied mothers about the advantages of breastfeeding for the child and the mother but lack of adequate knowledge towards the practice and time of weaning. So the study recommended

implementation of health education program in primary health care settings to improve and support the breastfeeding practices among working mothers. Working outside the home was of most concern to lactating women in our study. Longer paid maternity leave at least for 6 months and reduction in working hours are recommended. Workplace accommodations could assist working mothers to continue breastfeeding after returning to their work. The present study also revealed deficient knowledge about exclusive breastfeeding practices. Interventions to improve exclusive breastfeeding should target family and community members and include training of health workers in counseling to resolve breastfeeding problems.

References:

1. Al-Jassir, MS; El-Bashir, BM; Moizuddin, SK; and Abu-Nayan, AA (2006): Infant feeding in Saudi Arabia: mothers attitudes and practices. East Mediterranean Health Journal; 12 (1-2): 6-13.
2. Al-Shoshan, AA (2007): Factors affecting mother's choices and decisions related to breastfeeding practices and weaning habits. Pakistan Journal of Nutrition; 6 (4): 318-322.
3. Arts, M; Geelhoed, D; De Schacht, C; Prosser, W; Alons, C and Pedro A (2011): Knowledge, beliefs and practices regarding exclusive breastfeeding of infants younger than 6 months in Mozambique. J Hum Lact; 27 (1): 25-32.
4. Bata, M; Boulghourjian, C; Abdallah, A; and Afifi R (2006): Breastfeeding and feeding practices of infants in a developing country: a national survey in Lebanon, Public Health Nutrition; 9 (3): 313-319.
5. Black, RE; Morris, SS and Bryce, J (2003): Where and why are 10 million children dying every year? Lancet; 361: 2226-2234.
6. Barona-Vilar, C; Escribá-Agüir,V and Ferrero-Gandía, R (2009): A qualitative approach to social support and breastfeeding decisions. Midwifery; 25 (2): 187-194.
7. Bryce, J; Boschi-Pinto, C; Shibuya, K; Black, R (2005): WHO estimates of the causes of death in children. The Lancet; 365 (9465): 1147-1152.
8. Dana, R (1979): Breastfeeding and food policy in a hungry world. Academic Press, New York.
9. Ekambaram, M; Bhat, VB and Ahamed, MA (2010): Knowledge, attitude and practice of breastfeeding among postnatal mothers Curr Pediatr Res 14 (2): 119-124.
10. El-Kariri, M and Kanoa, B (2007): Infant feeding in Gaza strip: Mother knowledge, attitudes and practices. Annals of Alquds Medicine; 3: 58-65.
11. Fjeld, E; Siziya, S; Katepa-Bwalya, M; Kankasa, C; Moland, K and Tylleskär, T (2008): No sister, the breast alone is not enough for my baby' a qualitative assessment of potentials and barriers in the promotion of exclusive breastfeeding in southern Zambia. International Breastfeeding Journal; 3: 26.
12. Heining, M and Dewey, K (1996): Health advantages of breastfeeding for infants: a critical review. Nutr Res Rev; 9: 89-110.
13. John, R (2005): Knowledge, attitude and practice of employed mothers about breastfeeding. Nursing Journal of India; 96 (4): 85-86.
14. Jones, G; Steketee, RW; Black, RE; Bhutta, ZA and Morris, SS (2003): How many child deaths can we prevent this year? Lancet; 362: 65-71.
15. Kanoa, BJ; El-kariri, M; Adel Monem, AA and Al-Dalou,A. (2011): Breastfeeding, complementary feeding, and weaning practices, among children up to 2 years old in Gaza Strip. Annals of Alquds Medicine; 7: 15-26.
16. Kramer MS, Chalmers B, Hodnett ED, Sevkovskaya Z, Dzikovich I, Shapiro S, Collet JP, Vanilovich I, Mezen I, Ducruet T, Shishko G, Zubovich V, Mknuik D, Gluchanina E, Dombrovskiy V, Ustinovitch A, Kot T, Bogdanovich N, Ovchinikova L, Helsing E (2001): Promotion of breastfeeding intervention trial (PROBIT): a randomized trial in the Republic of Belarus. JAMA; 285 (4): 413-420.
17. Kruger, R and Gericke, G (2001): Breastfeeding practices of mothers with children (aged 0-36 months) in a rural area of South Africa. A qualitative approach. Journal of Family Ecology and Consumer Sciences; 29: 60-71.
18. Kruger, R and Gericke, G (2004): A qualitative approach for exploration of feeding practices, knowledge, and attitudes on child nutrition framework. Tydskrifvir Gesinsekologie en Verbruikerswetenskappe; 32. ISSN 0378-5254.
19. Leong, LK (2009): Knowledge, attitude and practice on breastfeeding in Klang, Malaysia. The International Medical Journal; 8 (1): 17-22.
20. Li, R Zhao, Z; Mokdad, A; Barker, L and Grummer-Strawn, L (2003): Prevalence of breastfeeding in the United States: the 2001 National Immunization Survey. Pediatrics, 111(5 part 2):1198-1201.
21. Livingstone, VH; Willis, CE; Abdel-Wareth, LO; Thiessen, P and Lockitch, G (2000): Neonatal hypernatremic dehydration associated with breast-feeding malnutrition: a retrospective survey. CMAJ; 162 (5): 647–652.
22. Moreland, J and Coombs, J (2000): Promoting and supporting breastfeeding. Am. Fam. Physician, 61: 2093-2109.
23. Moussa Abba, A; De Koninck, M and Hamelin, A (2010): A qualitative study of the promotion of exclusive breastfeeding by health professionals in Niamey, Niger International Breastfeeding Journal; 8: 5-8.
24. Pant, I and Chothia, K (1990): Maternal knowledge regarding breastfeeding and weaning practices. Indian J Pediatr; 57: 395-400.
25. Tarrant, M; Fong, D; WuIrene, K; Lee, E; Alice Sham, W; Lam, C and Dodgson, J (2010): Breastfeeding and weaning practices among Hong Kong mothers: A prospective study. BMC Pregnancy Childbirth; 10: 27.
26. Uauy, R and Solomons, N (2005): Diet, nutrition and the life-course approach to cancer prevention. American Society for Nutrition. J Nutr; 135: 2934S-2945S.
27. United Nations Statistics Division (2005): Progress towards the Millennium Development Goals, 1990–2005.[http://unstats.un.org/unsd/mi/goals_2005/goal_1.pdf]
28. WHO (2011): The optimal duration of exclusive breastfeeding: Report of an expert consultation. World Health Organization, Geneva.
29. Yousswf, MM; Essawy, MA and Darwiah, AM (1991): Maternal approach to breastfeeding and weaning at Alexandria, Tanta and Assiut: a comparative study. The Bulletin of the High Institute of Public Health; xxi (2): 401-416.