

Knowledge, Attitude, and Practices of Breastfeeding and Weaning Among Mothers of Children up to 2 Years Old in a Rural Area in El-Minia Governorate, Egypt

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ABSTRACT

Aim: Was to describe the knowledge, attitude, and actual practices of mothers in a rural area in Egypt regarding breastfeeding, complementary feeding and weaning and to explore the effect of educational background and age on these views. **Materials and Methods:** A community-based cross-sectional study was conducted on 307 rural mothers who have a youngest child aged 2 years or less. Mothers were selected using systematic random sampling. **Results:** All the studied mothers knew that breastfeeding is the best nutritional source for the baby. The majority of the mothers had good knowledge about the advantages of breastfeeding for child. As regards weaning, majority (92.5%) of the mothers defined weaning as breastfeeding cessation. Most of the mothers (94.8%) agreed that breastfeeding protect child from infection, 96.1% agreed that it is the healthiest for infant, 76.5% agreed that breast milk lead to loss of figure, and 83.4% agreed that breastfeeding should be avoided during mother's illness. About 84% initiated breastfeeding immediately after delivery, and 42.7% of the studied mothers offered pre-lacteal feeds to baby before lactation. About thirty quarters (74.2%) of mothers fed colostrum. Exclusive breast-feeding was found to be associated with mother's education ($P < 0.0001$) but not with mother's age at birth, mother's occupation, or place of birth. **Conclusion:** There is a need for health care system interventions, family interventions, and public health education campaigns to promote optimal BF practices, especially in less educated women.

Keywords: Attitude, breastfeeding, Egypt, knowledge, practice, rural

Introduction

Breastfeeding is the best way of providing ideal food for healthy growth and development of infants, and its advantages range from physiological to psychological for both mother and infants.^[1] It is well-known that breastfeeding influences a child's health positively and improves nutritional status.^[2-4] A meta-analysis from three developing countries showed that infants who were not breastfed had a 6-fold greater risk of dying from infectious diseases within the first 2 months of life than those who were breastfed.^[5] Six months of exclusive breastfeeding and continued breastfeeding in first year of life could also prevent 1.3 million child deaths worldwide according to systematic reviews from the Bellagio Child Survival Study Group.^[6] In addition, incorrect infant feeding practices pose significant risk for malnutrition among children under the age of 5.^[7]

The American Academy of Pediatrics recognizes breastfeeding and human milk as the "normative standards for infant feeding." Given the documented health benefits, the Academy recommends exclusive breastfeeding for 6 months, followed by continued breastfeeding for at least 12 months as complementary foods are introduced.^[8] Weaning is the term usually used to describe the process of cessation of breastfeeding after a period of successful breastfeeding. This usually involves addition of food to infant's diet and/or replacement of breast milk in infant's diet with another type of milk (formula or whole milk). Maternal physiology, infant nutritional needs, infant development, especially the development of biting and chewing, and cultural issues all play a role in the timing of weaning.^[9]

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.^[10] Delayed breastfeeding initiation, colostrum deprivation, supplementary feeding of breast milk substitutes, early introduction of complementary feeding, and incorrect weaning from breast milk are commonly found practices in communities around the world.^[7,11-14]

Access this article online

Quick Response Code:



Website:
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DOI:
10.4103/2249-4863.137639

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This study was conducted to describe the knowledge, attitude, and actual practices of mothers in rural area regarding breastfeeding, complementary feeding and weaning and to explore the effect of educational background and age on these views.

Materials and Methods

A community-based cross-sectional study was conducted in a rural area, El-Minia governorate. By a multistage random sample, El-Minia governorate was found to be divided into 9 districts, from which El-Minia district was chosen randomly; then, El-Minia district was found to be divided into 40 villages, from which a village (Bany Ahmed) was chosen randomly. The study sample consisted of 307 women who have a youngest child aged 2 years or less. Mothers were selected using systematic random sampling. During visit to houses, if there was no child of 2 years or less, next house satisfying this criterion was included. The study was conducted during the period from April 2013 to August 2013. Verbal consent was obtained after the participants had been informed about the study objectives.

Data were collected by using designed well-structured questionnaire completed during face-to-face interviews with the mothers. Data collected included information regarding participants' demographics, knowledge, attitudes, and practices towards breastfeeding and weaning. This questionnaire also had been tested on a small number of eligible mothers as a pilot study to test the reliability of the questions and the time needed to conduct an interview with a mother. Then, proper corrections and adjustment had been fulfilled.

Statistical methods

The Statistical Package for Social Science (SPSS) for Windows (version 11.0) for statistical analysis was used. Quantitative data were presented by mean and standard deviation, while qualitative data were presented by frequency distribution. Chi-square test was used to compare between more than one proportion. A statistically significant level was considered when *P* value was less than 0.05.

Results

The mean age of the subjects was 28.4 ± 5.9 ; 44.3% of the studied mothers were able to read and write, and 93.2% were unemployed. As shown in Table 1, all the studied mothers knew that breastfeeding is the best nutritional source for baby. The majority of the mothers had good knowledge about the advantages of breastfeeding for child, 97.9% and 81.4% of the mothers knew that breast milk protects child from diseases as well as increases the intelligence of child, respectively. About 77% of the mothers knew that breastfeeding strengthens the relation between mother and her baby. Minor percentage of the participant mothers stated that breastfeeding prevents postpartum hemorrhage and protects mothers against cancer; (6.5%) and (4.6%),

respectively. Nearly 80% of the mothers were aware that the time of initiation of breastfeeding should be within 1/2 hour after labor. About one-third (33.6%) of the mothers knew the proper duration of exclusive breastfeeding. The majority (87.6%) of the participants knew that colostrum feeding is very nutrient for baby.

As regards weaning, majority (92.5%) of the mothers defined weaning as breastfeeding cessation. On the other hand, good percentage of the respondents knew that weaning should be started by addition of juices (63.2%) and soft food as yogurt (64.8%). About one-third (33.6%) of the participants knew that 6 months is the suitable age for starting weaning. Unfortunately, 42.6% did not know the suitable age to start weaning. Nearly half (50.2%) of the mothers reported that baby must be weaned completely from breast milk at the age of 2 years and 37.1% said after one and half years [Table 2].

Most of the mothers (94.8%) agreed that breastfeeding protects child from infection, 96.1% agreed that it is healthiest for infant, 76.5% agreed that breast milk lead to loss of figure, and 83.4% agreed that breastfeeding should be avoided during mother's illness [Table 3]. Table 4 presents the percentages of mothers regarding practice of breastfeeding; 83.7% initiated breastfeeding immediately after delivery, and 42.7% of the studied mothers offered pre-lacteal feeds to the baby before lactation. About thirty quarters (74.2%) of mothers fed colostrum. Majority (95.8%) of the participant fed their child on demand, and 82.7% of them fed their child from both sides at a time. About 32% of mothers breastfed their infants exclusively for 6 months and 71.7% night-fed their infant.

Table 1: Knowledge of the studied mothers about breastfeeding, rural area, El-Minia, 2013

Variable	No. (n = 307)	Percent
The best nutrition for the baby		
Breastfeeding	307	100
Artificial feeding	0	0
Advantages of breastfeeding for the child		
Increases immunity and protects child from diseases	300	97.7
Increases the intelligence of the child	250	81.4
Helps in early teeth eruption	5	1.6
Advantages of breastfeeding for the mother		
Cheap and strengthens the relation with mother	236	76.8
Breastfeeding is a natural contraceptive method	105	34.2
Prevents postpartum hemorrhage	20	6.5
Protects mother from cancer	14	4.6
Time of initiation of breastfeeding (Within 1/2 -1 hour after labor)		
Know	245	79.8
Don't know	62	20.2
Duration of exclusive breastfeeding (Up to age of 6 months)		
Know	103	33.6
Don't know	204	66.4
Colostrum feeding is very nutrient		
Know	269	87.6
Don't know	38	12.4

Table 2: Knowledge of the studied mothers about weaning, rural area, El-Minia, 2013

Variable	No. (n = 307)	Percent
Definition of weaning		
Breastfeeding cessation	284	92.5
Add other types of food beside breast milk	13	4.2
Do not know	10	3.3
Types of food used for starting weaning		
Juice	194	63.2
Yogurt	199	64.8
Egg yolk	61	19.8
Mashed cereals	43	14
Any food	11	3.6
Suitable age of baby to start weaning		
Less than 4 months	11	3.6
4-6 months	62	20.2
After 6 months	103	33.6
Do not know	131	42.6
Complete weaning from breast milk		
At 1 year	36	11.7
1.5 years	114	37.1
2 years	154	50.2
Do not know	3	1

Table 3: General beliefs of mothers, rural area, El-Minia, 2013

General beliefs	Disagree (%)	Agree (%)	Not sure (%)
Breastfeeding protects child from infection	8 (2.6)	291 (94.8)	8 (3.1)
Breastfeeding is old-fashioned	115 (37.5)	61 (19.9)	131 (42.7)
Breastfeeding is healthiest for infant	9 (2.9)	295 (96.1)	3 (1)
Breastfeeding is embarrassing	177 (57.7)	80 (26.1)	50 (16.3)
Breastfeeding fosters close bond between mother and child	11 (3.6)	294 (95.8)	2 (0.7)
Breast milk is best milk	23 (7.5)	270 (87.9)	14 (4.6)
Breastfeeding prevents going to work	110 (35.8)	129 (42)	68 (22.2)
Breastfeeding leads to loss of figure	52 (16.9)	235 (76.5)	20 (6.5)
Breastfeeding should be avoided during			
a. Sickness of mother	48 (15.6)	256 (83.4)	3 (1)
b. Sickness of baby	236 (76.9)	62 (20.2)	9 (2.9)
Total	307 (100)		

The table 5 showed that out of 307 children, 99 (32.2%) children received exclusive breast-feeding. Exclusive breast-feeding was found to be associated with mother's education ($P < 0.0001$) but not with mother's age at birth, mother's occupation, or place of birth.

Discussion

Knowledge about breastfeeding

Several studies over the world have shown that breastfeeding is the universal practice. It seems that mothers don't even consider alternative to this.^[15-17] In the present study also, all the mothers knew that breastfeeding is the best nutritional source for baby.

Table 4: Mothers' practice of breastfeeding, rural area, El-Minia, 2013

Variable	No. (n = 307)	Percent
Time of initiation of breastfeeding		
Immediately after labor (within 1/2 -1 hour after labor)	257	83.7
Within 24 hours	41	13.4
After 24 hours	9	3
Pre-lacteal feeds*		
Yes	131	42.7
No	176	57.4
Colostrum feeding		
Yes	228	74.3
No	79	25.8
Frequency of breastfeeding		
Scheduled	13	4.2
On demand	294	95.8
Feeding pattern/at a time		
From one side	53	17.3
From both sides	254	82.7
Exclusive breastfeeding for 6 months		
Yes	99	32.2
No	208	67.8
Night feeding**		
Yes	220	71.7
No	87	28.3

* Pre-lacteal food was defined as food/liquid to infant before initiating breastfeeding for the first time;
**Night feeding was feeds between 10 pm. and 6 am.

Table 5: Exclusive breastfeeding in relation to background characteristics of the mother

Variable	No.	Exclusive breastfeeding (Up to age of 6 months)	
		Yes No. (%)	No No. (%)
Mothers' education*			
Illiterate	58	16 (27.6)	42 (72.4)
Read and write	136	27 (19.9)	109 (80.1)
Basic education	89	43 (48.3)	46 (51.7)
Graduate	24	13 (54.2)	11 (45.8)
Total	307	99 (32.2)	208 (67.8)
Mothers' occupation#			
Housewife	286	88 (30.80)	198 (69.2)
Working	21	11 (52.4)	10 (47.6)
Total	307	99 (32.2)	208 (67.8)
Age of mother at birth			
≤24	80	21 (26.3)	59 (73.8)
25-35	187	61 (32.6)	126 (67.4)
>35	40	17 (42.5)	23 (57.5)
Total	307	99 (32.2)	208 (67.8)
Place of birth#			
Home	18	5 (27.8)	13 (72.2)
Hospital	289	94 (32.5)	195 (67.8)
Total	307	99 (32.2)	208 (67.8)

*X² (df) 25.9 (3); P < 0.0001; #X² (df) 4.18 (1); P = 0.05; X² (df) 3.25 (2); P = 0.1; †X² (df) 0.17 (1); P = 0.6

In a study conducted on Egyptian mothers in Assiut City, about 79% of the participants knew that breast milk promoted bonding between mothers and child and protects child from

diseases (Safaa *et al.*, 2012) in comparison to 76.8% and 97.7% of mothers in the present study knew that respectively.^[18] It was found that nearly 80% of the mothers were aware that the time of initiation of breastfeeding should be within ½ hour after labor and 87.6% of the participants knew that colostrum feeding is very nutrient for baby, but these figures were much higher than those reported by Chaudhary *et al.* (2011) who found that only 10% and 25% of mothers knew they had to start breastfeeding within ½ - 1 hour after birth and knew the benefits of colostrum, and this difference could be explained by valuable effort of health professionals who provide advice and support to mothers during antenatal care visits.^[19]

Knowledge about weaning

The current study showed that 92.5% of the mothers defined weaning as breastfeeding cessation and 4.2% defined weaning correctly as introduction of assistant food with breastfeeding; these findings were much lower than that reported by Safaa *et al.* (2012) who found that less than half of the mothers defined weaning correctly.^[18] Yogurt and juice were considered suitable as main diet for weaned infants by 64.8% and 63.2% of women. However, Walkers *et al.* (2006) who studied mothers' views on feeding infants around the time of weaning found that cow's milk was considered suitable as the main drink for weaned infants.^[20] About 33.6% of the participants knew that the suitable age for starting weaning is after 6 month compared to 44.6% as reported by Kishore (2008).^[21]

In the current study, 42.6% did not know the suitable age to start weaning. Nearly half (50.2%) of the mothers reported that baby must be weaned completely from breast milk at the age of 2 years, and 37.1% said after one and half years; these findings approximate what reported by Safaa *et al.* (2012).^[18]

The findings of the present study showed that most of the mothers agreed that breastfeeding protects child from infection and agreed that it is healthiest and best for infant, and 83.4% of mothers believed that breastfeeding should be avoided during mother's illness. Similar findings were observed by Woldegebriel (2002) who found that almost all mothers considered human milk as the best milk for good child growth compared to cow's milk and/or formula milk. A higher proportion of mothers considered breast milk alone sufficient enough to feed a baby up to the age of 6 months. Three quarters of mothers preferred not to breastfeed when mother gets sick and may lead to loss of figure. These are potentially harmful beliefs, which could lead to the dangerous practice of abrupt cessation. These harmful beliefs should be well addressed and minimized through continuous health education.^[22]

Mothers' practice of breastfeeding

This study showed that 83.7% of the mothers initiated breastfeeding immediately after delivery, which was much higher than what was reported by Shiv *et al.* (2012), which found that only 20.9% of mothers start breastfeeding within 1 hour

after delivery.^[23] About 32% of mothers breastfed their infants exclusively for 6 months, which is in agreement with Yeggamal and Chitra (2005) who found that 35% of the studied rural mothers breastfeed their infants exclusively for 6 months. Only 17.3% of women feed their child from one side until whole breast is emptied out. This way, the baby gets hind milk, which is required for brain development.^[24] This was similar to Chaudhary *et al.* (2011) who reported that 85% of mothers were feeding on both sides for 10 minutes each, thinking that feeding on one side is not enough for baby and some thought their breast size would become unequal.^[19]

The use of colostrum and avoidance of pre-lacteal foods are cornerstones in early infant nutrition and may be pre-requisites for the establishment of future exclusive breastfeeding. In this study, in practice, nearly 74% of infants had received colostrum. Out of 307 mothers, 42.7% gave pre-lacteal feed, which was greater than what found in a study conducted on Saudi mothers whom been admitted for delivery at maternity hospitals in Riyadh. Pre-lactical feeding was practiced by 10.5% of mothers.^[25]

Prolactin is secreted after feed to produce next feed. As secretion of prolactin is more at night, suckling at night is encouraged. In the current study, 71.7% of the mothers night-fed their infant, this was lower than that observed by Chaudhary *et al.* (2011) who studied knowledge and practice of mothers regarding breast feeding in Nepal and found that 90% mothers were practicing night feed.^[19]

In this study, a significant relation between maternal education and exclusive breastfeeding was detected. This was in coherence with Webb *et al.* (2009) who examined the associations between maternal academic skills and indicators for the initiation of exclusive breastfeeding and timely introduction of complementary foods; mothers in highest category of academic skills had greater odds of initiating exclusive breastfeeding.^[26]

Conclusion and Recommendations

Based on the findings of the present study, it was concluded that: Rural women had satisfactory knowledge about the advantages of breastfeeding for child and mother. However, some attitudes and practices of the mothers were suboptimal. This might be due to a low level of education. Hence, it is recommended to develop successful infant-feeding interventions aimed at promoting overall infant health, which can benefit from knowledge of these BF patterns. Our findings also support the need for health care system interventions, family interventions, and public health education campaigns to promote optimal BF practices, especially in less educated women. There is need for improving strategies for maternal care during the antenatal and postnatal periods. Training needs could be extended to staff at private clinics and to traditional birth attendants. This study also recommends further study on attitudes and practices of mothers on breastfeeding covering large sample in community level.

Acknowledgements

We are very much grateful to all participants of study for their kind cooperation.

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How to cite this article: Mohammed ES, Ghazawy ER, Hassan EE. Knowledge, attitude, and practices of breastfeeding and weaning among mothers of children up to 2 years old in a rural area in el-minia governorate, Egypt. *J Fam Med Primary Care* 2014;3:136-40.

Source of Support: Nil. **Conflict of Interest:** None declared.