

# Knowledge, Attitude and Practice of Mothers about Exclusively Breastfeeding in Sabzevar in 2017

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## ABSTRACT

**Background:** Exclusive breastfeeding is one of the most important issues for public health and Pediatricians in developing countries. Despite the importance of exclusive breastfeeding, only 39% of children in the world are breastfed during the first six months of life.

**Methods:** This study was a Cross-sectional descriptive-analysis conducted on a total number of 396 breastfeeding mothers in 2017. The data collection tool was a structured questionnaire, including demographic information, questions about knowledge and attitude, and performance. We collected the data through face-to-face interview.

**Results:** Based on our results mean and standard deviation of knowledge score of exclusive breastfeeding, attitude, and performance were reported as  $7.6 \pm 2.4$ ,  $43.1 \pm 3.3$ , and  $5.1 \pm 0.9$ , respectively.

Frequency rates of participants who had high performance, knowledge, and attitude level were, 93.4 % (370), 26 % (103), and 98.5 % (390), respectively.

**Conclusion:** The present study indicated that the majority of mothers had a positive attitude and practice desired however knowledge score was low. Maternal education and relatives was one of the important determinants of exclusive breastfeeding. Health care professionals have important roles in providing suitable fields for these interventions. Using open and extensive questions in other studies can help in finding the causes of breastfeeding cessation during infancy.

**Keywords:** Attitude, Exclusive breastfeeding, Infants, Knowledge, Performance

## Introduction

Diarrhea, respiratory infections, and malnutrition are the most common causes of death the world over especially in developing countries (1). According to UNICEF reports, more than 10,000,000 children die every year, mainly from diarrhea, respiratory infections and malaria (2). Although breastfeeding increase infant immunity and reduces healthcare cost in future(3), it has declined all over the world in recent years specially in developing countries, as a result of a change in lifestyle and related factors, such as urbanization, maternal employment outside home(4), and social media advertisements. Breastfeeding appears to be influenced by social,

cultural, and economic factors. Breastfeeding is highly recommended by the World Health Organization for the protection, optimal growth, development, and health in infants (5, 6). Exclusive breast feeding is defined as child feeding with human milk without complementary foods (5).

Exclusive breastfeeding prevents malnutrition and helps to achieve the Millennium Development Goals, such as reducing neonatal mortality and improving maternal health (7, 8). It is important, particularly in developing countries due to extreme poverty, disease burden, and low access to primary health care (6). Studies indicated that 35% to 50% of women give up breastfeeding

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three month after birth in developing countries and turn to complementary foods since then (9, 10). It is reported that life of 3500 babies would be safe if every infant was exclusively breastfed during the first 6 months of life (11)

Maternal performance in breastfeeding is influenced by religious attitude and knowledge. Moreover, maternal attitudes are associated with longer and more successful breastfeeding.

This study aimed to assess beliefs, knowledge, and performance of mothers about exclusive breastfeeding in the first six months of birth.

## Methods

The current study was a community based cross-sectional descriptive-analytic study, and the study population included breastfed mothers in Sabzevar in 2017. The sampling method was a multistage sampling technique. A total number 396 breastfeeding mothers who met the inclusion criteria were selected and enrolled in the present study out of all mothers referring to health centers in Sabzevar in 2017. Inclusion criteria included: 1) breastfeeding just with mothers' own milk, 2) current breastfeeding, 3) no recent disease 4) no major birth defects, such as CHD (congenital heart disease), cleft lip, and palate. Exclusion criteria entailed: 1) maternal disease, such as cancer and breast abscess, 2) divorce 3) use of drug with contraindications to breastfeeding. After obtaining permission from health centers authorities, the aims of the study were explained to all participants. The written consent was obtained from all mothers willing to participate in the study and they could withdraw from the study at any stage. We collected the data by face to face interview by trained interviewer. The researchers collected data on mother performance in a private room.

### Data collection instruments

The data collection tool was a questionnaire, including demographic information, questions about knowledge and attitude, and performance. This questionnaire includes knowledge, attitude and performance with 14 questions in the first two sections and 6 questions in the third section. The questions on attitude are in Likert scale and in Knowledge and performance in the form of optionally. The questionnaire was validated by Narjes Bahri et al.

### Demographic instrument

This questions elicited background information on mothers and husband, such as age, education,

employment, family income, number of delivery, number of pregnancy, the length of the current breastfeeding, gestational age one of the important determinants of exclusive breastfeeding. Health care professionals have important roles in providing suitable fields for these interventions. Using open and extensive questions in other studies can help in finding the causes of breastfeeding cessation during infancy and the interval between pregnancies.

## Structured instrument

### 1. Knowledge section

This section includes 14 items to measure knowledge of the mothers about exclusive breastfeeding. Each item had 4 options. The total number in this section was 0-14.

### 2. Attitude section

This section includes 14 items to measure knowledge of the mothers. The items were in the likert scale and each item had 4 possible responses. A 4-point Likert scale containing strongly disagrees, disagree, agree, and strongly agree was applied to all questions. The total number in this section was 14-56.

### 3. Performance section

This section entailing 6 items examines the mother's performance while breastfeeding. The trained interviewers ask mothers to give milk to the baby and examine how to hug the infant and breast feed him/her. The answers are yes and no and the total number in this section was 0-6.

### Statistical analysis

In this questionnaire hasn't a response of the negatively worded items. The data were analyzed using SPSS (version 16) and described as mean $\pm$ SD and percent. The statistical tests used to examine the relationship between variables included correlation, independent samples test, and one-way ANOVA. P-value of 0.05 was considered as statistically significantly.

### Ethical consideration

Ethical approval was obtained from Research Ethics Committees of Sabzevar University. Written and informed Consent obtained from Participants in the study.

## Results

### Description

This Cross-sectional descriptive analytical study was performed on women referred to health

centers in Sabzevar in 2017. The study population included breast feeding mothers (N=396). The mothers mean age was 28.2±6.1 and 80.3 % (n=318) (age range of 20-35 years) and the fathers mean age was reported as 32.9±6.0. More than two thirds of mothers were house wives (92.2%) and their husbands were labor (73%). Half of the families had a relatively desirable income (51.8 %) (Table 1).

The mean was 2.1± 1.0 in parity, 1.8 ± 0.8 in the number of deliveries. The average gestational age at birth was 38.7±2.0 weeks, and breastfeeding duration was 4.5± 4 month. The majority of deliveries occurred in autumn. The mean score of knowledge, attitude and practice, was reported as 7. 6±2.4, 43.1±3.3, and 5.1±0.9, respectively.

According to the scoring system, threshold suggested in knowledge score of less than 9 considered to education intervention and higher than 10 considered to have a high level of knowledge (Table 2).

According to the scoring system in the questionnaire, threshold suggested in attitude score is 14-56. The score of less than 35 considered to education intervention and higher

than 36 considered to have high levels of attitude (Table 3).

According to the scoring system in the questionnaire, threshold suggested in practice score is zero to six. The score of less than 3 considered to education intervention and higher than 4 considered to have a high level of practice (Table 4).

It was reported that 93.4 % (n=370) of participants had high practice level, 26 % (n=103) had a high knowledge level, and 98.5 % (n=390) had high attitude. We investigated the factors influencing knowledge, attitude, and practice using a linear regression test. Related factors with knowledge were found to be maternal age (P=0.03), education (P=0.01), and pregnancy interval (P=0.04). Factors exerting an impact on attitude were education (P=0.013) and income (P=0.015), and breastfeeding length (P=0.006) was revealed to have an effect on practice.

In mothers with a high knowledge score, the majority of participants had the age range of 25-35 years (85.4%=88), and the mean years of education was 12.7±2.9.

Maternal income and education revealed to have an effect on attitude level. In this study

**Table 1.** Demographic characteristics

Variables	Group	Frequency	Percent
Age group	<19	28	7.1
	20-35	318	80.3
	>36	50	12.6
maternal employment	homeworker	365	92.2
	Employed	28	7.1
	labor	3	0.8
Husbands' job	Employed	84	21.2
	labor	289	73
	Unemployed	23	5.8
Income	Desirable	113	28.5
	Somewhat desirable	205	51.8
	Undesirable	78	19.7

**Table2.** Mothers' knowledge of exclusive breastfeeding

Knowledge of exclusive breastfeeding	Correct answer
The most important time for successful breastfeeding is the first half hour of birth	73.5% (291)
Breast size does not matter in breastfeeding success	82.1% (231)
One of the reasons for the inadequate breastfeeding is insufficient infant sleep*	22.5% (89)
Sitting status is recommended for breastfeeding in an infant with a small mouth*	44.2% (175)
Breastfeeding reduces postpartum bleeding by causing the uterus contraction *	35.4% (140)
The best time to store milk is the morning after the infant feeding*	30.1% (119)
The best way to use a stored frozen breast milk is to shake it in the boiling water*	24% (94)
The increasing infant's eye movements is a sign of hunger	63.9% (253)
Diarrhea is less likely to occur in an infant who receives breast milk	63.1% (250)
An infant that is fed with breast milk sufficiently, the stool is soft and yellowish mustard	91.4% (362)
The use of a pacifier causes more feeding infant	52.5%(208)
Alhagi maurorum and cotoneaster are useful in neonatal jaundice recovery	61.1% (242)
Exclusive and frequent breastfeeding in the first 6 months of birth prevents pregnancy	57.3% (227)
Putting a drop of milk on the wound of a breast is a useful treatment for wound healing	86.4% (396)

\* Gaps in mothers' knowledge

**Table 3.** Mothers' attitude of exclusive breastfeeding

Attitude to exclusive breastfeeding	Positive	Negative
Breast sucking increases the secretion of milk	100%(396)	-
The first half hour after delivery is the best time to breastfeed	98.4%(390)	1.5%(6)
It is best for the infant to be fed on a timed basis	18.4%(63)	81.6%(323)
When the mother is angry, it is better not to breastfeed her infant	86.8%(344)	13.2%(52)
The stored milk is not usable for the infant*	82.8%(228)	17.2%(68)
The composition of breast milk is different at the beginning and end of lactation and this plays an important role in feeding the baby	95.5% (378)	4.5%(18)
Breast feeding immediately after delivery reduces post-delivery bleeding	84.3%(324)	15.6%(62)
Mothers with small breasts have lower milk levels	6.8%(27)	93.2%(329)
Breast milk is not useful immediately after delivery	5%(20)	95%(366)
Infants with breast feeding need extra water in hot weather*	44.2%(175)	55.8%(221)
Infants with diarrhea should not be breastfed*	91.7%(363)	8.4%(33)
Breast feeding can prevent breast cancer	94.7%(374)	5.5%(22)
Fear, lack of self-esteem, and concern reduce milk production	92.4%(366)	7.6%(30)
Long time interval between breastfeeding causes more milk production*	55.8%(221)	44.2%(175)

\* Gaps in mothers' attitude

**Table 4.** Mother's practice toward breastfeeding

Practice	Positive
During breastfeeding, the mother supports infant's buttock in addition to head and shoulder	56.1%(222)
Infant's head is cradled near mother's elbows	94.2%(373)
The infant's body and head place on a stretch	89.6%(355)
At the time of breastfeeding, the mother's fingers are far enough away from the areola	94.9%(376)
Four fingers are placed under the breast and thumb on the breast	86.1%(323)
When the breast is sucked, the baby's lower lip is back	96%(380)

participants with higher attitude scores were reported to have higher education ( $11.9 \pm 3.8$  versus  $7.3 \pm 1.2$ ) and more income (80%=312 versus 28%=78).

This study indicated a positive correlation between knowledge of breastfeeding and practice ( $r=0.31$ ,  $p<0.0001$ ) in the assessment of the relationship between knowledge and attitude to practice.

## Discussion

In this cross-sectional study, we assessed knowledge, attitude towards exclusive breastfeeding and its practice in mothers. Related factors contributing to knowledge, attitude and practice were evaluated.

The mothers' attitudes were mostly positive and practice of exclusive breastfeeding were high level; however, the mothers' knowledge was found to be low contrary to what has been mentioned in other studies (6). Factors associated with low level of knowledge included maternal level of education, maternal age, and pregnancy interval.

Gaps in knowledge included misconceptions about the reasons for the inadequate breastfeeding, maternal benefits of breastfeeding, the best time and way to store breast milk for infant, and how to breastfeed under certain circumstances(12, 13,14). Other studies on this subject pointed out that one of the most important

reasons for delay in initiation of breastfeeding was family restriction(15, 16).The mother's knowledge of reducing postpartum bleeding by breastfeeding, reduces mother's concern and unnecessary visits to specialist in the postpartum. The lack of awareness about the best time to store milk increases the early commencement of formulas or supplement foods and diarrhea.

The majority of findings were gaps and misconception in knowledge which is due to insufficient training of healthcare providers and consultation with relatives. Health care providers can provide a more effective training by appropriate communication with mothers and encouraging them to visit healthcare centers again. They can even use educational aid devices, such as slides, educational movie, and new learning method of group discussion (14, 17, 18). A higher knowledge score was observed at the age range of 25- 35 years, which can due to an increase in the number of births and frequent visits to health care centers.

Although the attitude score was high, gaps included importance of stored breast milk in feeding of the infant, indication of water consumption in infant, the importance of breastfeeding in the presence of diarrhea and interval between feedings meals. This gap needs special attention because it poses a daunting challenge especially to mothers who work outside and have problems with exclusive

breastfeeding. These mothers especially employed ones need intervention to increase their confidence and correct their beliefs. This important issue has been noted in other studies (19). The mothers' misconception about the best measure in infant diarrhea has led to a high incidence of infant's mortality in developing countries. Mother's belief that infants do not need excessive water in hot weather causes dehydration, tachycardia, and restlessness resulting in unnecessary drug treatment, high direct (diagnostic and therapeutic) and indirect costs. This is a negative attitude that long interval between breastfeeding causes more milk production since decreasing the frequency of breastfeeding leads to a decrease in milk secretion, increased use of formula, early onset of food, and intake of diarrhea infections.

Education on exclusive breastfeeding can be provided by health care professional and specialists (18). Influential factors that influence attitude level were found to be family income and education. In this study participants with higher attitude scores had higher education and more income. The other studies indicated that income has a positive impact on mothers' attitude toward breastfeeding (6) that can be attributed to the fact that family income is directly one of the social class determiners. The results of the current study, except for education, were revealed to be contrary to the results of the study conducted by Khassawneh et al. (20). This study indicated a positive correlation between knowledge about breastfeeding and practice as revealed in other studies (21).

### Limitations and strengths

Cross-sectional studies are at the bottom of the evidence triangle. In this regard, the nature of the subject and small sample size make it difficult to establish a causal relationship and generalize the findings. Therefore, using a larger sample size can give community-based results. In This study, we used nonprobability sampling that this subject increase generalizability of our results. Moreover, the questionnaire is close-ended; however, open-ended items can provide better understanding of influential factors influencing practice, knowledge, and attitude toward exclusive breastfeeding.

### Conclusion

The present study indicated that the majority of mothers had a positive attitude and practice; however, knowledge score was found to be low. Maternal education and relatives were important

determinants of exclusive breastfeeding. Health care professionals play important roles in providing suitable fields for these interventions. Using open and extensive questions in other studies can help to find the causes of breastfeeding cessation during infancy.

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### Conflicts of interests

The authors declare that there is no conflict of interest.

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