

## Study of Maternal Knowledge and Attitude toward Exclusive Breast Milk Feeding (BMF) in the First 6 Months of Infant in Yazd-Iran

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### Abstract

#### Introduction:

Breast milk is a complete food for growing children until 6 months of age, and mothers, as the most important child health care, play a decisive role in their growth. So promoting their attitude toward the benefits of breastfeeding ensures guarantee child health in the future. This study aimed to assess maternal knowledge and attitude of mothers toward exclusive Breast Milk Feeding (BMF) in the first 6 months of infant life.

#### Materials and Methods:

This cross-sectional descriptive-analytic study was conducted on 190 mothers who referring to Yazd health-care centers for monitoring their 6-24 month year old infants. They completed questionnaire. Participants were selected by cluster and simple random sampling. Data were analyzed by descriptive-analytic tests and using SPSS 11.5.

#### Results:

Mean score of maternal attitude toward exclusive BMF was  $10.14 \pm 2.00$  (out of 14) and maternal knowledge score toward advantages of breast milk was  $10.12 \pm 2.015$  (out of 14). The incidence of exclusive BMF in the first 6 months of life study was 72.9%. Child growth was as follows: excellent growth (24.5%) and good growth (55.3%). ANOVA showed a significant difference between parents' education and maternal attitude and maternal knowledge towards exclusive BMF; whatever higher education of parents, more positive knowledge and attitude towards exclusive BMF ( $P < 0.05$ ). There was a significant direct relationship between knowledge and attitude (Spearman test,  $P\text{-value} = 0.000$  &  $r = 0.4$ ).

#### Conclusion:

Maternal knowledge and attitude towards exclusive BMF was moderate. It is essential to plan for mothers by officials in order to promote breast-feeding in the first 6 months of baby's life to enhance positive maternal attitude in this regard.

#### Keywords:

Attitude, BMF, Exclusive Breast Milk Feeding, Infant, Knowledge, Yazd.

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## Introduction

Quran as the main pillar of Islamic Sciences and felicity book of two House, has said the issue of breastfeeding within some verse, such as surah Baqara, verse 233 "and mothers should breastfeed their children for two complete years." Verses of Quran pay attention to breast milk issue directly are as follow: 1. Verse 15 of Sura Ahqaf 2. Verse 14 of Sura Luqman 3. Verse 23 of Sura Nisa , this verse is in relation to Kinship foster 4. Verse 6 of Sura Divorce 5. Verse 2 of Sura Hajj 6. Verse 7 of Sura Stories 7. Verse 12 of Sura Stories (1).

Breast milk is one of the healthiest methods of feeding infant and has obvious advantages for mothers and children. This milk contains nutrients which provide the best nutritional combination for the child at least up to 6 months. Breast milk feeding (BMF) reduces the risk of infectious diseases, diabetes, cancers, asthma and fat children, further more it also contains economical advantages (2). Epidemiological studies have shown the effect of human milk on reducing neonatal mortality caused by acute and chronic diseases (3,4). Breast milk provides all infant's nutritional requirements in the first 6 months of life and has a very important role in keeping children healthy (5) and early supplemental nutrition can have a negative influence on infant growth (5-7).

Experts believe that exclusive BMF in the first 6 months of life, has an important role in health and reducing children mortality (8,9) and besides to reducing neonatal mortality can prevent from childhood diseases (10-12). Breast milk has a special importance, since it contains known and unknown materials especially essential fatty acids for brain growth and nerves development (13). WHO and UNICEF emphasize on keeping exclusive BMF in the first 6 months of life (11,14-16).

Experts believe that children are the most valuable wealth of humanity and the most vulnerable age group, yet. Several studies

have shown that several factors cause disorder in children growth which their commonest are non-organic factors (17). Some non-organic factors which can cause infant growth retardation include: lack of maternal knowledge and consequently improper behaviors to child and infant nutrition with regard to time, quantity, quality and methods of supplemental nutrition (18). Some experts believe that maternal familiarity to nutritional requirements of children may provide a correct nutritional plan for them (19). However, there is a close relationship between malnutrition and poverty, main reason of malnutrition in many societies is not lack of food at home, but it is some other factors like cultural poverty, loss of health instruments and services, lack of knowledge in preventing infections and incorrect use of foods at time of children growth (20). Genetic factors play an important role in physical growth of children, but importance of proper and correct nutrition is not deniable (21).

In performed assessments by attendants in relation to promoting BMF, exclusive BMF patterns in the first 6 months of life in different places of the world are different. In china, 80% of infants in the first 4-6 months receive exclusive BMF (22). Generally, exclusive BMF range 1% to 90 % in different places of the world (23). Exclusive BMF incidence up to 6<sup>th</sup> month has been 35.1% in Uganda, 51.6% in Ghana and 27.3% in Saudi Arabia (24-26). Exclusive BMF has been reported in the Middle East 28% in 2000-2006, Pakistan 16%, Iraq 25%, Saudi Arabia 31%, Egypt 38% and in Iran 44% (27). Factors such as: economic- social factors, demographic, cultural, obstetrical and neonatal ones have been known effective in posing early exclusive BMF. These factors are varied in different societies (25, 28). In American (2000), 35% children had exclusive BMF, while it increased to 50% in 2010 (29,30). While according to Demographic Health Survey (DHS) (2000)

and Integrated Monitoring Evaluation System Survey (IMESS) (2004) in Iran, exclusive BMF up to 6<sup>th</sup> month has been reported 44% and 27%, respectively (31).

In several studies, controversial results have been reported on related factors to exclusive BMF. Some factors were assessed such as: infant gender, age, education degree, maternal occupation and parity, antenatal education and initial time of BMF postpartum (6-7,25-28,32). In some of the studies, there was no relationship between infant gender and exclusive BMF (6-7). In recent years, many attempts in health system of Iran have been done to promote exclusive BMF. With regard to the importance of exclusive BMF promotion and determining its related factors and also existence of controversial studies' finding in this sense, this study aimed to assess maternal knowledge and attitude of mothers toward exclusive BMF in the first 6 months of infant life.

### Materials and Methods

This cross-sectional descriptive-analytic study was conducted on mothers who referring to Yazd health-care centers for monitoring their 6-24 month year old infants. Sample size calculated 190 persons by using past studies in similar communities with considering  $\alpha=0.05\%$  and  $d=0.03\%$ . Participants were selected by cluster and simple random sampling in the way that initially Yazd city was divided into 3 clusters (health-care center number 1, 2 and 3), then 2 centers out of total Health – care Centers in each cluster were selected randomly (totally 6 health-care centers) by a cluster sampling method and then aimed sample was selected randomly in each health-care center. The researchers referred to maternal child care and vaccination units of health-care centers after coordination with the center's manager, introduced the research for the participants and obtained their informed consents. Then they obtained required data by completed

questionnaires and child's records. Research tool was a researcher-made questionnaire which was confirmed by content validity and internal consistency (Cranbach's alpha ( $\alpha=0.87$ ) reliability. The questionnaire consists of demographic information and 20 questions relating to maternal knowledge and attitude toward exclusive BMF. Data were coded and analyzed by descriptive and analytic [one-way analysis of variance (ANOVA), t-test] statistics and confidence coefficient 95% by SPSS-11.5.  $P < 0.05$  was considered significant.

### Results

190 mothers who qualified the inclusion criteria were assessed. Participants' mean age was ( $26.46 \pm 4.617$ ) years (range from 17- 43 yr). Family income was good (16.9%) and very good (3.2%). Majority of mothers were house worker (83.7%) and 65.8 of fathers were self employment. Majority of mothers had high school diploma (50.5%) which their fathers' education was primary (6.8%) and junior high school (29.5%) (Table 1). Child growth was as follows: excellent growth (24.5%) and good growth (55.3%).

**Table 1:** Frequency of Demographic Variables in Mothers Referring to Yazd Health- Care Centers

Variables	Frequency	Percent
Child growth status		
Excellent	46	24/5
Good	104	55/3
Moderate	31	16/5
Poor	7	3/7
Total	190	100
Maternal occupation		
House worker	159	83/7
Self employment	6	3/2
Employee	25	13/2
Total	190	100
Maternal education		
Primary	11	5/8
Junior high school	32	16/8
High school	96	50/5
Academic	51	26/8
Total	190	100
Family income		
Low	46	23/8
Moderate	106	56/1
good	32	16/9
Very good	6	3/2
Total	190	100

Mean score of maternal attitude toward exclusive BMF was 10.14±2.00 (out of 14) and maternal knowledge score toward advantages of breast milk was 10.12±2.01 (out of 14) (Table 2).

**Table 2:** Mean of Maternal Knowledge and Attitude about Exclusive BMF.

Variable	Mean	S.D	Total
Attitude	10.14	2.000	14
Knowledge	10.12	2.015	14

There was a significant direct relationship between knowledge and attitude (Spearman test, P-value= 0.000, r= 0.4). Whatever higher score of maternal knowledge, more positive attitude towards exclusive BMF (Table 3).

**Table3:** Association between Maternal Knowledge with Attitude on Exclusive BMF

Variable	Statistical tests	Attitude
Maternal knowledge	Pearson coefficient	0.442
	P-value	0.000

57.9% of mothers believed that supplemental food is necessary besides to breast milk in the first 6 months of life. 88.1% of mothers had agreement on immunized breast milk (Table 4).

Spearman test showed no significant relationship between knowledge and maternal age. On the other hand, there was a significant direct relationship between maternal attitude toward breast milk and its advantages with maternal age; whatever older maternal age, higher score of

attitude about breast milk and exclusive BMF in the first 6 months of life (Table 5).

**Table 4:** Maternal Attitude about some Factors Influencing Exclusive BMF

Attitude	Statistics	N	Percent
Supplemental nutrition is necessary beside to BMF	Totally agree	42	22/1
	agree	68	35/8
	no comment	28	14/8
	disagree	54	28/4
Total		190	100
Rol of infant's father about BMF	Totally agree	76	40
	agree	70	36/8
	no comment	28	14/7
	disagree	16	8/4
Total		190	100
Family support of infant's mother about BMF	Totally agree	39	20/7
	agree	78	41/5
	no comment	34	18/1
	disagree	37	19/7
Total		188	100

**Table 5:** Association between Maternal Age with their Knowledge and Attitude towards Exclusive BMF

Variable	Statistical tests	Attitude	Knowledge
Maternal attitude	Pearson coefficient	0.193	0.376
	P-value	0.000	0.000

ANOVA showed a significant difference between parents' education and maternal attitude towards exclusive BMF; whatever higher education of parents, more positive maternal attitude towards exclusive BMF (P<0.05) (Table 6).

**Table 6:** Mean Comparison of Maternal Attitude towards Exclusive BMF based on Parental Education

Attitude	Statistics	N	Percent	SD	DF	F	Pvalue
Maternal education	Primary	11	5/8	2/057	3	10/643	0/001
	Junior high school	32	16/8	1/215			
	High school	96	50/5	2/088			
	Academic	51	26/8	2/011			
	Total		190				
Father's education	Primary	13	6/8	2/017	3	9/126	0/003
	Junior high school	56	29/5	1/200			
	High school	71	37/4	2/008			
	Academic	50	2/875	1/984			
	Total		190				

ANOVA had not shown a significant difference between maternal location, birth sequence, family income, fathers' occupation and maternal attitude towards exclusive BMF ( $P>0.05$ ).

### Discussion

In the present, the incidence of exclusive BMF in the first 6 months of life study was 72.9%; which was in accordance with obtained results in China (22), but it is higher than national mean of exclusive BMF (31) and American (29- 30), Uganda and Ghana (24-26), Egypt, Iraq, Saudi Arabia (27) and Pakistan (16); the reason of this finding may be due to being religious of Yazd and people's belief which they should breast feed their infants for 2 whole years. In 2 recent decades, we have been observed promotion of breast feeding following achievement of scientific societies to global and new recognition toward value, importance and role of breast milk in providing child survival and health. Near monthly we observe publishing new information about being unique of breast milk in keeping and promoting desired health, growth and development of children and even its effects on adulthood in infants who breast fed and thus is emphasized on breast milk advantages for infant, mother and the community. But more than 14 centuries, important notes about breast milk have been mentioned as recommendations and trainings in Islamic trainings with the most comprehensive, beautiful and the strongest motivations. Having knowledge about these recommendations and correct use of them follow the most effective motivations of promoting infant nutrition with breast milk.

According to the present study, maternal knowledge about exclusive BMF was moderate which was in accordance with Mosaffa Hamami study (33). The present study showed that there was a significant difference between parents' education and maternal knowledge and attitude towards

exclusive BMF. Alaie et al showed that spouses (24%) and sister and mother-in-law (44%) and Kinsfolk or friends and medical staff (32%) were encouraging (34). In England, spouse support and accepting breastfeeding behavior were important factors in initiating and continuing breast feeding (35). Sweet also showed that spouses' support and their suitable attitudes towards breastfeeding have been effective in continuing breastfeeding preterm neonates (36). Gill showed that the other family members play role in successful breastfeeding (37). Pisacane stated that educating the fathers about the importance of BMF and eliminating the problems and barriers associated with increasing exclusive BMF at the first 6 months of life (38). Scott also showed that there was a significant and positive relationship between continuing BMF and knowledge, attitude and father support (39).

In the present study there was a significant relationship between maternal age and her knowledge about exclusive BM; so that older mothers had more knowledge about exclusive BMF. The reason can be due to having more children. Ertem also showed a significant relationship between age and exclusive BMF (40).

According to the present study there was no significant relationship between maternal location and her attitude about exclusive BMF. These findings are in accordance with Mir Mirahmadizadeh (41). One study in Canada showed a significant difference between duration of exclusive BMF in two groups of urban and rural children (42).

The present study showed a significant relationship between parents' education degree with exclusive BMF, which was in accordance with Savage's findings (43). The findings showed mothers who were university educated had more positive towards exclusive BMF.

## Conclusion

Exclusive BMF in the present study was higher than national mean of exclusive BMF and American, African countries like Uganda and Ghana and some countries Middle East region. On one hand, maternal knowledge and attitude towards exclusive BMF was moderate. Since there is a significant relationship between knowledge and attitude, we conclude that offering continuous educations to the mothers about breast milk advantages and informing them more about exclusive BMF in the first 6 months of infant life, can promote positive maternal attitude in this regard.

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