

Maternal Knowledge and Attitude toward Exclusive Breastfeeding in Six Months after Birth in Shiraz, Iran

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Abstract

Background

To develop the culture of breastfeeding, it is needed to know the level of maternal knowledge. Hence, the aim of this study was to evaluate maternal knowledge and attitude toward exclusive breastfeeding in six months after birth in Shiraz, Iran.

Materials and Methods

This was a cross-sectional study carried out on mothers who referred to health centers. Four health centers were selected from four geographic areas of Shiraz city; finally, 201 mothers were selected and their demographic information and knowledge and attitude toward exclusive breastfeeding were gathered through a researcher-made questionnaire. Data were analyzed using SPSS version 14.0.

Results

201 mothers who were 18-45 years old were studied. 43% of them were 30-34 years old. 46% of maternal education level was bachelor and Master of Science or more and 80% of them were housewives. Their level of knowledge was low (69.2%), moderate (11.4%) and high (19.4%) respectively. Regarding the level of attitude 11.4% of them were low, 15.4% of them were moderate and the others were high. There was a significant relationship between maternal knowledge with parents' education and infants' nutrition (breastfeeding) ($P < 0.05$). Also, there was a significant relationship between maternal knowledge and attitude toward.

Conclusion

Although maternal attitude about exclusive breastfeeding was good, but maternal knowledge about breastfeeding was low. So, this problem leads them to initiate and continue breastfeeding with serious challenges. Therefore, health policy makers should train mothers to improve their knowledge for breastfeeding promotion.

Key Words: Attitude, Breastfeeding, Iran, Knowledge, Maternal.

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1- INTRODUCTION

Maternal Milk is the best food for all infants because of all known beneficial effects in both maternal and child health. World Health Organization (WHO), American Academy of Pediatrics (AAP) and American College of Obstetrician and Gynecologist (ACOG), recommend breastfeeding for the first months of the life (1-4). The current efforts of health agencies for improving breastfeeding are carried out to reach the goal of 2020 for healthy people, 82% for early breast feeding, 46% for exclusive breastfeeding in three months of life and 26% for exclusive breastfeeding in six months of life (5, 6).

In a report from Pregnancy Risk and Monitoring System (PRAMS) held on 2000 to 2001, was revealed that 68% of mothers had initiated breastfeeding and 17% of them had stopped breast feeding in the first month. The reason of stopping initial breastfeeding like the reasons of Centers for Disease Control and Prevention (CDC) (7) were: American African race, maternal age below 25 years, low maternal education, smoking mothers and pre mature baby (8).

Many studies (9-12) have revealed that supportive educational programs should provide appropriate knowledge for all individuals involved in breastfeeding process including mothers, families and health workers in order to promote breastfeeding. A systematic study showed that educational and supportive programs for maternal knowledge promotion before and after birth improved the initiation and continuation of breastfeeding (13).

One study showed that electronic education method had a higher effect on level of awareness about postpartum breastfeeding among mothers in comparison to paper based method. So, health providers are suggested to apply this method to improve maternal knowledge

and provide them with care (14). Clinics have important roles in parents' knowledge, parents training, providing a suitable place for starting breastfeeding during hospitalization, giving consultation for maternal diet and supporting breastfeeding during hospitalization and after discharge (1, 3, 4, 7, 15).

In Iran, breastfeeding promotion committee has tried a lot to improve families' knowledge about benefits of breastfeeding and inform them about maternal problems during breastfeeding. In our previous study (16), it was revealed that 90% of mothers, initially started breastfeeding and more than half of them started breastfeeding in an hour after birth in baby friendly hospitals. But after visiting mothers at clinics in Shiraz, we found that gradually some mothers had stopped breastfeeding in few months after birth due to lack of knowledge and insufficient skills. So, we decided to evaluate maternal knowledge and attitude toward breast feeding in Shiraz and compare the results with other cities and countries.

Different Iranian studies carried out in Yazd (17), Mashhad (18), Sari (19), Khoramabad (20) and Semnan (21) in order to evaluate maternal knowledge and attitude about breastfeeding. They showed that mothers had moderate level of knowledge about breastfeeding and there was significant relationship between breastfeeding and factors such as educational level, parity and history of previous breastfeeding. Other studies in India (22), Saudi Arabia (23) and Nepal (24) revealed maternal low level of knowledge.

A study carried out in Riyadh (25), showed that maternal attitude toward breastfeeding was low. Another study in four European centers showed, mothers who had a negative attitude toward breastfeeding in public were less likely to breastfeed in public and more likely to discontinue

breastfeeding earlier. So, perceived social norms may exert a stronger influence on breastfeeding in comparison to maternal attitude and knowledge toward breastfeeding (26). Therefore, we aimed to evaluate maternal attitude and knowledge toward exclusive breastfeeding in six month after birth in Shiraz-Iran.

2- MATERIALS AND METHODS

This was a descriptive cross-sectional study. The population of this study were mothers with infants under 24 months who referred to health centers (growth and development unit) for monitoring their children growth. Participants were selected by random simple sampling from health centers after sample estimation, during 2015 to 2016. Measuring tool was a researcher made questionnaire which validity and reliability was proved by experts and statistical tests respectively. Chronbach's alpha reliability coefficient was used to determine the reliability of the knowledge and attitude questionnaire (0.729).

The questionnaire contained demographic information (such as parental age, education, occupation, type and place of delivery, infant nutrition, number of children, etc.); 20 questions about maternal knowledge toward exclusive breastfeeding (benefits of breastfeeding, disadvantage of lack of timely breastfeeding, exclusive breastfeeding period, breastfeeding role in protecting infants and the need for liquids during breastfeeding), and also included 10 questions about maternal attitude toward exclusive breastfeeding among children.

Iranian mothers with children less than 24 months without congenital abnormalities, mental and physical illness included in this study and they did not have any history of alcohol, drugs addiction and mental problem. The protocol of the survey was approved by the Research committee of Islamic Azad University Kazeran branch, Fars province, South West of Iran. After

coordination with health manager informed written consent was obtained from the mothers. Most of questionnaires were completed by medical student as trained researcher. All data was gathered from mothers' questionnaires.

The sample size calculated 201 persons by using the following formula with confidence interval (CI) of 95%, standard deviation (s) of 0.36 and estimating error (d) of 0.05 and Z shows standard normal distribution.

$$n = \frac{Z_{\alpha/2}^2 \times s^2}{d^2} = \frac{3/84 \times 0/130}{0/0025} = 200/2565 \approx 201.$$

The sampling according to the four geographic areas in the Shiraz city was done; four health care centers were chosen and from each center, about 50 mother less than 45 years of age with children of < 24 months referred to health centers were selected (**Figure.1**). We consider the score one for correct answer and score zero for incorrect answer or I don't know answer.

Hence the sum of scores was determined for knowledge and attitude aspect separately. Then, data analysis was performed according to the following categories:

- The scores 19-20 were considered as excellent,
- 17-18 as very good, 15-16 as good,
- 13-14 as moderate and
- 12 or less as weak.

The variables were compared with the Chi-square test, Pearson and Spearman correlation coefficient (SPSS for Windows 23.0 release). Pearson correlation coefficient was used for normally distributed variables, and Spearman was used for ordered categories. P-values of < 0.05 were considered to be statistically significant.



Fig.1: Location of Shiraz city, Iran

3- RESULTS

201 mothers with the age range between 18-45 years old were studied. According to **Table.1**, about 43% of mothers were between 30-34 years old. 46.3% of mothers had bachelor or more degree and only 5% of them were under diploma. 12% of fathers' educational degree was under diploma, but 38% of them had bachelor or more. Only 20% of mothers were working and the others were housewives. Most of mothers had received their information from health centers (46%) and physicians (23%). Most of mothers (66%) had given birth in private hospitals. 49.7% of parents had single-child; and 68.1% of infants were breastfed exclusively.

Mean score of maternal knowledge score toward advantages of breast milk was 11.03 ± 3.28 (out of 20) and maternal attitude toward exclusive breastfeeding was 16.46 ± 3.11 (out of 20). Regarding the

level of knowledge, 139 mothers (69.2%) had low level, 23 mothers (11.4%) had moderate level and 39 mothers (19.4%) had high level of knowledge which showed maternal low knowledge toward breastfeeding. 73.2% of mothers had high level of attitude and the remainders were in low and moderate level, which showed positive maternal attitude toward exclusive breastfeeding.

According to the results of Pearson and Spearman statistics (**Table.2**), there was a significant difference between parents' education and their level of knowledge, as if parents with academic education had higher level of knowledge [mother ($P=0.048$), father ($P=0.002$)]. There was a significant difference between infants' nutrition type and maternal knowledge ($P=0.005$).

There was a significant correlation between the place of delivery ($r=0.281$ and $P=0.004$) and the number of children ($P=0.037$) with attitude. It means that mothers who had given birth in private hospitals and had fewer number of children had higher level of attitude. There was a significant positive correlation between level of knowledge and attitude ($r=0.322$ and $P<0.001$).

There was not a significant difference between maternal age and the number of children with their level of knowledge. Similarly, there was not a significant difference between parents' occupation states and their knowledge toward breastfeeding.

Table-1: The frequency of maternal demographic information referred to Shiraz health centers

Variables	Number	Frequency (%)
Mother's age		
< 20	3	1.6
20-24	18	9.8
25-29	51	27.7

Variables	Number	Frequency (%)
30-34	79	42.9
35-39	29	15.8
> 40	4	2.2
Mother's education		
Under diploma	10	5.3
Diploma	64	33.9
Associate degree	22	11.6
Bachelor	85	45.0
Master	4	2.1
PhD	4	2.1
Father's education		
Under diploma	22	11.8
Diploma	68	36.4
Associate degree	26	13.9
Bachelor	61	32.6
Master	2	1.1
PhD	8	4.3
Number of children		
1	91	49.7
2	75	41.0
3	15	8.2
4<	2	1.1
Mother's occupation		
Working%	146	79.8
Housewife%	37	20.2
Father's occupation		
Self-employed	115	59.9
Employee	77	40.1
Infant's gender		
Girl	90	50.3
Boy	89	49.7
Nutrition type		
Breastfeeding	126	68.1
Formula	10	5.4
Both	49	26.5
Place of birth		
Public	59	33.5
Private	117	66.5
Knowledge resource		
Health center	83	45/9
Physician	41	22/7
Both	17	9.4
Other	40	22.1

Variables	Number	Frequency (%)
Type of delivery		
Section/Cesarean	126	66.0
Vaginal delivery	65	34.0

Table-2: The correlation between variables and maternal attitude and knowledge toward exclusive breastfeeding

Variables	Pearson correlation	P-value
Mother's age and knowledge	0.194	0.228
Mother's age and attitude	0.165	0.157
Mother's education and knowledge	0.351	0.048
Mother's education and attitude	0.228	0.228
Fathers education and knowledge	0.262	0.002
Fathers education and attitude	0.114	0.625
Mother's occupation and knowledge	0.074	0.442
Mother's occupation and attitude	-0.061	0.561
Father's occupation and knowledge	0.116	0.277
Father's occupation and attitude	0.044	0.960
Place of birth and knowledge	0.172	0.148
Place of birth and attitude	0.281	0.004
Exclusive breast feeding and knowledge	0.033	0.005
Exclusive breast feeding and attitude	0.014	0.791
Number of child and knowledge	-0.105	0.790
Number of child and attitude	-0.153	0.037
The source of knowledge and knowledge	0.101	0.149
The source of knowledge and attitude	0.030	0.614

4- DISCUSSION

Maternal attitude and knowledge toward exclusive breastfeeding are important factors to promote breastfeeding. So, present study has tried to evaluate them. According to the results in present study, the prevalence of exclusive breastfeeding in the first 6 months of life was 68%. It was almost

similar to other studies carried out in Mashhad (73.8%) (18) and Yazd (72.9%) (17), and it was better than the results of studies conducted in Nepal (15%) (24), India (15%) (22), and the study done in Abdulaziz hospital (25%) (23). In this study, 19.4% of mothers had high level of knowledge, 11.4% of them had moderate level of knowledge and 69.2% of them had

low level of knowledge about breastfeeding. Regarding attitude level, 11.4%, 15.4% and 72.2% of mothers had low, moderate and high level of attitude, respectively, which showed good and positive maternal attitude toward breastfeeding, but their level of knowledge about breastfeeding was low. One study in Khoram Abad (20), showed that 55%, 39% and 6% of mothers had high, moderate and low levels of knowledge, respectively, about breastfeeding.

In another study conducted in Semnan (21), it was found that 6%, 43.8% and 50% of mothers had low, moderate and high level of knowledge, respectively. Moreover, one study in Sari (19) showed that 36.7% of mothers had good level of knowledge and 57.2% of them had moderate level of knowledge, whereas 7.1% and 68.6% of mothers had negative and relatively positive attitude and the others had completely positive attitude about breastfeeding. Other studies in Yazd (17) and Mashhad (18), revealed that maternal knowledge about exclusive breastfeeding was at moderate level, but their attitude was at moderate and low level respectively. In a study conducted by Gadhavi et al. (22) in India, maternal knowledge toward exclusive breastfeeding was low. One study (23) in Shah Abdul Aziz hospital, revealed that mothers had low level of knowledge and performance. In Saeid et al study (25) in Riyadh, it was shown that mothers had high level of knowledge about breastfeeding, but maternal attitude was at low level. Moreover, one study (24) in Nepal, showed that mothers did not have enough knowledge about breastfeeding. These results suggested that mothers' awareness varied in different areas due to different social norms, supportive and educational programs, effective baby-friendly hospital, efficient health providers and mass media.

In the present study, there was not a significant correlation between maternal

age and their level of knowledge. It showed that younger mothers did not have lower level of knowledge in comparison to older mothers; similar to the result of a study carried out in Semnan (21) and unlike the results of studies conducted in KhoramAbad (20), Mashhad (18) and Yazd (17). In this study there was a positive significant correlation between maternal knowledge and their education level similar to the results of other studies carried out in Mashhad (18), Yazd (17), KhoramAbad (20) and Semnan (21).

It means, mothers who had academic education had the highest level of knowledge and this result was not in line with the result of study done in Sari (19) and Mashhad (27). It is clear if the maternal educational level is high, their access to scientific resources such as books and journals will be higher. Furthermore, many universities present educational packages related to breastfeeding and infants' proper nutrition that these programs have positive and influential effect on maternal knowledge for educated parents. According to the results of this study, there was a significant correlation between fathers' educational level and maternal knowledge which is similar to the result of study carried out in Mashhad (27, 28). According to the result of the present study, there was not a significant difference between the number of children and the level of knowledge, which is unlike the results of KhoramAbad (20) and Mashhad (27) studies. The result of this study showed that there was not a significant correlation between parents' occupation and their knowledge and attitude toward breastfeeding, which is similar to the results of Yazd (17) and Mashhad (18, 27) studies, and it is unlike the results of KhoramAbad (20), Semnan (21) and Riyadh (25) studies. The present study showed that there was not a significant correlation between maternal knowledge and the source of information

and place of delivery which is unlike the result of study in Sari (19) as if mothers who had given birth in private hospitals had little knowledge toward breastfeeding.

4-1. Limitations of the study

The limitations of this study were lack of cooperation from primary health centers and lack of access to family physician centers which led to limitation in the number of samples.

5. CONCLUSION

In this study, despite maternal good attitude, they did not have good knowledge about exclusive breastfeeding. Since there was a positive significant correlation between maternal knowledge and exclusive breastfeeding, lack of sufficient knowledge about exclusive breastfeeding could lead to early stop breastfeeding. Therefore, health policy makers should do fundamental and practical actions to train mothers and promote their level of knowledge.

6- CONFLICT OF INTEREST: None.

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