

**ORIGINAL ARTICLE****Studying the Consulting Effect on Exclusive Breastfeeding Education in Pregnant Women by the Hygienic Caregivers of the Health and Therapeutic Centers on the Knowledge and Performance of Mothers (Case Study: Tehran, District 10 & 11)****Mehraneh Shojaee**

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E-mail: [mehraneshojaei95@gmail.com](mailto:mehraneshojaei95@gmail.com)**ABSTRACT**

*During consecutive years, the fundamental role of breastfeeding has been recognized in children's growth and health and even mothers' health. Breast feeding is enough for the infant just in the first six months of the birth. In the second six months of the birth, half of the necessary energy is provided by the breast milk and the other half is provided by complementary feeding. Training that all mothers are able to breastfeed is a difficult task, thus they should comprehensively be thought. On the other hand, women's protection by the society and family has a specific importance. Having more and better knowledge and attitude makes mothers have more self-confidence to breastfeeding after childbirth and increases the success of breastfeeding. The aim of this research is investigating the effect of counseling on exclusive breastfeeding education in pregnant women by the health caregivers of the hygienic and Therapeutic centers on mothers' knowledge and performance in Tehran, District 10 and 11. The method of this research is descriptive-analytic. questionnaire was used for collecting the data. Statistical society was 100 mothers referring to the health centers. The data were analyzed using SPSS. The results demonstrated that counseling increases mothers' knowledge and performance in the field of exclusive breastfeeding ( $p < 0.001$ ).*

**Keyword:** exclusive breastfeeding, Breastfeeding, knowledge, mothers' performance

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**INTRODUCTION**

Breastfeeding is the healthiest and the most natural kind of nutrition for the infants. It provides all nutritional needs of the infant in the first six months of the birth. It is so important for the infants' health in the world [1]. Exclusive breastfeeding as a policy to increase child's survival and alleviate the rate of child diseases is a recommendation by the world health organization all around the world so that this organization emphasizes that all countries follow up and promote exclusive breast feeding program by the age of 6 months [2]. Regarding the fact that the correct protection can have an effective role in the promotion of mothers' knowledge level and as a result in the exclusive breast feeding increase, the surveys also have demonstrated that mothers greatly make decisions about breastfeeding to their infants before childbirth [3, 4]. According to the last report of Monitoring System and evaluation of the pregnancy Health in 2005, exclusive breast feeding has been 23.1% in Iran and 25.5% in Hamedan city. Lots of factors such as age, marriage, education level, family income, mother's received protection from the family, making decision to breastfeeding in pregnancy period, experiences related to the first breast feeding, maternal self-confidence and self-efficiency play role in the duration of breastfeeding [5]. One of the important factors in the infants' breastfeeding is women's subjective norms which include spouse, mother, friends, and health caregivers that are determinative in the beginning and continuation of breastfeeding [6, 7]. Different surveys in Iran and all over the world have been done about the effect of education on the successful breastfeeding that all of them in general demonstrated the positive effect of

education. Surveys of Peyman and Shishegar in Tehran city with the aim of comparing the effect of breast feeding education over the knowledge and performance rate of those mothers having caesarean and those mothers having natural childbirth as well as Aghababaei *et al.* in Hamedan City demonstrate that education has positive effect on increasing knowledge and performance rate of mothers [8, 9]. Infancy, in terms of growth and evolution is one of the most sensitive courses of every individual's life and feeding the infant in this course has an espcific importance [10]. Meanwhile breast milk is the most complete food during the first several months of life for the infant. What is recommended as a natural feeding in the first six months of life for the infant is the exclusive breast milk. Breast milk is an appropriate, ideal feeding for the infant's growth and evolution and has a biological, unique emotional effect on both mother and infant's health. It is also an inseparable component of the reproduction process that has an important performance for the mother's health. the importance of breast milk is also noted in narrations and Quranic verses in true religion of Islam [11]. According to the definition of World Health Organization, infant's feeding up to the age of six months just by breast milk without water and food except for medicines, vitamins, authorized supplements is called exclusive breastfeeding. Cross-sectional studies in Canada demonstrate that although 90.3% of the Canadian mothers feed their infants by their own breast milk, but in less than 25% of them exclusive breast feeding up to six months has been observed. This rate has even been less than the entire country (nearly 9.6 %) [12]. Survey of Olang *et al.* demonstrated that only 56% of the Iranian infants had exclusive breast feeding up to the age of 4 months and 28% of them had exclusive breast feeding up to the age of 6 months. This has been less than the recommended rate of World Health Organization. However, 86% of the infants had the experience of feeding by breast milk up to the age of 2. in another study, up to the sixth month, this extent has been reported 44 percent [13].

#### *Benefits of breastfeeding*

Breast milk has a specific importance because of having lots of known and unknown substances particularly essential fatty acids for the evolution of nerves and brain growth. World Health Organization has a strong emphasis on the continuation of exclusive breast feeding in the first six months of the life. There are lots of definitions about exclusive breast feeding by breast milk in the scientific resources but the definition that is used more than the others is "Feeding infants by breast milk singly, without feeding with other food substances and even water that these substances do not include medicines, the vaccine, vitamins, essential food supplements". Exclusive breast feeding has been recommended by the World Health Organization as a policy in order to increase the infants' survival and to alliviate infants' diseases rate in all over the world so that this organization emphasizes that all countries follow up and promote exclusive breast feeding programs of infants up to the age of six months [2]. Breast milk has preventive effects on the reduction of mortality, the incidence of diarrhea, intestinal bleeding, abdominal colic, asthma, acute respiratory infections, atopic diseases, and jaundice in infancy and reduction of the risk of diabetes, weight gain and obesity in the future. Exclusive breast feeding alliviates the possibility of being infected with acute respiratory infections up to 8 times and the possibility of death caused by this disease up to 4 times. breastfeeding prevents infectious diseases especially digestive problems that cause lots of mortality and diseases in the developing countries [14]. Although breastfeeding is a natural way of feeding, its continuation up to the age of six months is difficult for some mothers. Some of the known risk factors can have an effect on the ability of mothers in breast feeding and make an obstacle for them. Some of these factors are medical problems such as cesarean, preterm birth, low knowledge of mothers, low social economic condition, child care by others, early returning of the mothers to the workplace that can cause early cessation of breast feeding even in the appropriate situation [15, 16]. Mothers are not able to feed their infants up to the recommended course [17]. The older mothers and mothers having more than one child have more tendency to continue breastfeeding [18]. The children fed by breast milk have higher intelligence, moreover, breast milk in the infants suffering painful procedures has painkiller effect. Breast milk not only alleviates disease rate of the infancy, infant's sudden death syndrome, respiratory and digestive and ear infections, allergy, asthma, obesity but also decreases the rate of ovarian and breast cancer among mothers. Exclusive breast feeding is the best feeding for the infants up to the age of six months that in addition to providing physical and physiological needs, it is the supplement of psychological needs of the infant, especially mother. This has been one of the important recommendations of World Health Organization and "UNICEF during several years ago. Exclusive breast feeding in addition to having positive effects on the infant and mother has obvious effects on the family and society economy because of not consuming milk powder.

There might be some problems in the infants' feeding: feeding low weight infants should be in a way that it does not lead to respiratory distress, aspiration, or infant fatigue. The times of breast feeding and its volume in these infants are so important because they are apt to rapid reduction in blood sugar and

necrotizing enterocolitis [19]. Bodies of these infants tries to continues the same intrauterine growth rithm. Therefore they need more energy and calory than natural infants that if they do not receive these substances, they will be overcome by the reduction of blood sugare and azotemia. These infants have a weak power of sucking and they have a small stomach volume. There is no coordination among breathing, sucking, and swallowing, then they should be fed more times, on the other hand, these infants are prone to the reduction of blood sugare because of little storage of the energy producer substances. The pattern of low weight infants' breast sucking is in the form of sucking courses and subsequently pause and then the long course of deep sucking. Feeding by breast milk has a positive effect on the process of physical and mental evolution of the infants in their future life [20]. Ineffectiveness of feeding because of lack of knowledge or inappropriate viewpoint in these infants can cause cardiorespiratory instability, early fatigue during feeding and excessive irritability, prolongation of the time of sleeping, inconsistency among swallowing, sucking and breathing to newborns and this condition exposes these infants to higher dangers of weight loss and growth disorder in the early infancy. The training that has been presented in the health centers, hospitals and public media to the mothers for feeding their infants has improved the knowledge of majarity of mothers in the field of breastfeeding higher than the limit average, but this knowledge is more about the advantages and importance of breastfeeding for the mother and infant and their knowledge about the problems of a successful breast feeding in the premature infants is low and limited and there is no logical, effective solution for the prevention of these problems while facing them. On the other hand consultation with mothers can increase the continuation of exclusive breastfeeding in the newborns at the end of the period of prematurity and performance improvement of the mothers' breastfeeding and weight gaining of the premature infants.

*Patterns of exclusive breast feeding in the first six months of the life in different places of the world*

in china, 80% of the infants are fed by breast milk exclusively in the first four to six months. In general, exclusive breast feeding from 1 to 90 % is different in different parts of the world [21]. The outbreak of exclusive breast feeding up to the age of six months has been 35.1 in Uganda, 51.6 in Ghana, and 27.4 in Saudi Arabia. Exclusive breast feeding in the meadle east in 2000 to 2006 years has been reported on average 28% and 16% in Pakistan, 25% in Iraq, 31% in Saudi Arabia, 38% in Egypt and 44% in Iran [21]. in the U.S in 2000, 35% of the mothers have fed their own infants up to the age six months by their breast milk exclusively but this statistics has reached 50% [22], while demographic and health syrveys in 2000 and incorporating observation and evaluation that was conducted by ministry of Health and treatment in 2004 reported exclusive breast feeding up to the end of six months 24% and 27% respectively.

## LITERATURE REVIEW

Masoumi et al in the year 2014 investigated the effect of consultation for the continuation of exclusive breast feeding among mothers having an infant in late period of prematurity, who were hospitalized in Fatemiyeh Hospital in Hamedan in 2014. The results showed that after a month of following up, the continuation of exclusive breast feeding in the exam group infants had a significant difference with the control group infants in the terms of the times of breast feeding, not using the liquids and feeding other than breast milk and using milk powder during day and night and breast feeding performance. At the end of the monthly follow up, the average weight of the exam group infants was  $588.54 \pm 2818.62$ g that this difference is significant statistically. In the control group, the average weight of the infants was  $607.175 \pm 2422.58$ g. The results also demonstrated that according to the findings, consultation of mothers' breast feeding can improve the continuation of exclusive breast feeding and then weight gaining of the premature born infants and also improve the breast feeding performance of their mothers. Therefore it is suggested that breast feeding counseling sessions be held for all mothers having premature infants [23].

Tayebi and Kermanshahi in the year 2013 investigated the effect of the supportive program on the exclusive breast feeding. According to the results, the rate of exdclusive breast feeding in the exam group was 56.7% and 27.3% in the control group that had a significant difference statistically ( $P=0.018$ ). Regarding sugar water and herbal medicines consumption in both group, there was a significant difference with Khi 2-test ( $P=0.007$ ) but in terms of consuming the powder milk, there was not this significant difference ( $P=0.45$ ). The results demonstrate that supportive program increases the exclusive breast feeding items and according to the importance of exclusive breast feeding and reduction of its rate, it should be emphasized on the available supportive programs performance in the health centers [24].

Olang et al. studies demonstrated that only 56% of the Iranian infants up to the age of 4 months and 25% up to the age of six months have had exclusive breast feeding. This is a low rate compared with the recommended rate of the World Health Organization [25].

Ahmadi et al in the year 2014 investigated the effect of the training program based on the theory of the programmed treatment on the knowledge and breastfeeding performance in the pregnant women having the first baby. The findings demonstrated that there was a significant difference in the average of the knowledge score, the perceived behaviour's control, subjective norms and performance of breast feeding among women of the intervention and control groups after performing educational intervention ( $P < 0.05$ ). It was not seen a significant difference statistically in the mean of the attitude scores, behavioural intention and treatment between two groups. The results demonstrated that the performed training based on the theory of programmed treatment is able to increase the knowledge and improve breast feeding performance of the mothers. Therefore, designing and performing educational program is recommended to increase the rate of the knowledge and improve breast feeding performance based on the theories of behavior change [26].

Babaei et al in 2009 investigated the effect of training breastfeedings in the primagravida mothers in Fatemiyeh Hospital in Hamedan. The results demonstrate that just 3% of the research units had a good knowledge about breast feeding before training, while the rate was increased to 55.5% after training. There is a difference between the knowledge rate before training and knowledge rate after training ( $P = 0.00$ ). in the field of performance, 30.5% of the research units had a good performance about breast feeding before training, while this rate reached to 70.5% after training. The statistical test demonstrated that the performance rate had a difference before and after training ( $P = 0.001$ ). Correlation rate between knowledge and performance before and after training was calculated using spearman correlation test. The final consequence of the given training about breast feeding has been so effective in the increase of knowledge rate and development of mothers' performance level [8].

Roby et al. demonstrated that the training of breast feeding has a lot of effects on improving mothers' knowledge and attitude in 2004. Scott et al. demonstrated that there is a significant and positive relation between the continuation of breast feeding and and mothers' knowledge and attitude in 2006 [8].

Sharifi Rad et al surveys demonstrated that the training of breast feeding based on BASNEF model can increase mothers' knowledge and attitude to breast feeding . According to the mentioned subjects and the importance of this subject, the available survey was conducted with the aim of studying the effect of counseling exclusive breast feeding on mothers' knowledge and attitude having premature infants, hospitalized in Fatemiyeh Hospital in Hamedan in the years 2014-2015 [7].

## MATERIAL AND METHODS

This descriptive analysis survey is of Cross-Sectional type. Research community in contains mothers referring to the health and therapeutic centers of Tehran district 10 and 11 in order for monitoring the child's growth. Sample size of the research was selected through the simple random method and 100 people were selected. The data were collected using a questionnaire. The questionnaire included the demographic information and 14 questions about mother's knowledge about exclusive breast feeding of the infant (benefits of breast feeding, disadvantages of lack of on time breast feeding for the infant, period of exclusive breast feeding, breast feeding and its effect on the infant's immunity, duration of sucking mother's breast, necessity to liquids while exclusive breast feeding of the infants) were ranked between 0 and 20, and 6 questions were ranked between zero to 10 regarding exclusive breast feeding and roommating after the childbirth and the times and periods of breastfeeding and using milk powder and sugar water and herbal medicines and the duration of breastfeeding in the first six months of childbirth. The data were analysed using the SPSS.

## RESULTS

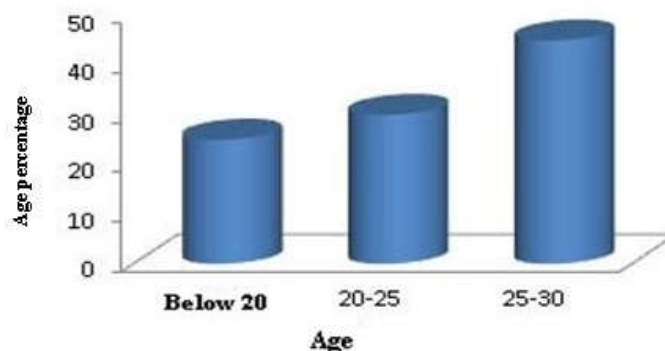


Fig. 1: frequency percentage of the ages of the respondent mothers to the questionnaire

According to “Fig. 1”, it is indicated that most of the referred mothers to the health and therapeutic and responder centers were between the age of 25 to 30.

Table 1: Comparison of the mothers’ performance and knowledge about exclusive breast feeding based on mean

variable	Mean	Standard deviation
performance	5.8	1.4
knowledge	14.6	3.7

Table 2: Comparison of the correlation of mothers’ age based on knowledge and performance

Statistic of Pearson correlation coefficient	Performance	Knowledge
Mother’s age	-0.22	-0.32

Table 3: the effect of counseling on mothers’ knowledge and performance

Variable	Before counseling	After counseling
	Mean of (Standard deviation)	Mean of (Standard deviation)
Knowledge	(3.7) 14.6 P<0.001	(3.9) 20.6 P< 0.001
Performance	(1.4) 5.8 P< 0.001	(2.4) 6.5 P<0.001

According to the above table we can conclude that through counseling with mothers, their knowledge and performance in the field of exclusive breast feeding can increase and therefore their breast feeding performance will be improved.

**DISCUSSION AND CONCLUSION**

Counseling mothers results in raising their awareness and performance in the field of infants ‘exclusive breast feeding and as a result the improvement of mothers’ breast feeding. The results of this research are the same as Masoumi *et al* [23] in relation to the effect of counseling exclusive breast feeding on the awareness and attitude of mothers having premature infant.

Aghababaei *et al.* [8] demonstrated that training breast feeding has a great effect on the improvement of knowledge and attitude of nursing mothers. Scott *et al* demonstrated that there is a significant and positive relation between the continuation of breastfeeding and the mothers’ knowledge and attitude rate. In the available survey, there was a significant statistical relation between mother’s age and performance and knowledge about the exclusive breast feeding so that older mothers had the weaker performance to the exclusive breast feeding which can be because of the more number of children. Ertem also demonstrated in his survey that there is a significant relation between age and infant’s exclusive breast feeding. According to the findings and information we also understood that mothers’ knowledge in the field of exclusive breast feeding is in the average level. Since there is a significant relation between knowledge and performance statistically, it can be concluded that by increasing mothers’ knowledge in the field of exclusive breast feeding, their performance also improves in this field. Therefore, training mothers about the benefits of breast milk and giving information to them about exclusive breast feeding in the first six months of the infant’s life will have a considerable contribution to the improvement of society infants’ health. The surveys also demonstrated that mothers greatly make decision about breast feeding to their infants before childbirth.

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