

A Single Center Study of the Effects of Trained Fathers' Participation in Constant Breastfeeding

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Abstract- Constant breastfeeding that depends on the family support. Fathers' involvement is as an important factor of successful breastfeeding. The aim of this study was to evaluate the influence of fathers' participation in constant breastfeeding in Vali-E-Asr Hospital, Tehran, Iran. This interventional study was piloted on spouses of pregnant women participating in pregnancy courses. The case group consisted of fathers attending training courses of breastfeeding during pregnancy (Group A), and the control group was made up of fathers who did not take part in training courses (Group B). The courses were held three times from the 30th week of gestation to the end of pregnancy in a family health research center. Fathers attended three training sessions where they were trained by brochures. After delivery newborns were weighted and examined for jaundice (3-5 days, 30 days, three and six months after birth). According to mothers' views, spouses' participation, encouragement and support in group A, was 11 times more than group B. It means that 47 (94%) of spouses in the group A participated in mothers' constant breastfeeding, but fathers' participation in group B was 60% (30 spouses). This study showed that breastfeeding was more constant in the group that fathers participated in breastfeeding training course. One of the reasons for such a significant difference was spouses' participation, encouragement and support in the trained group. This study showed that fathers' involvement in training programs may influence constancy of breastfeeding.

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Introduction

Neonatal period is one of the most sensitive stages of life, and breastfeeding is the most essential issue which can meet all nutritional requirements of infants until six months of age (1). According to the WHO, breastfeeding cannot be replaced since it provides the ideal nutrition for healthy growth and development. Breastfeeding is considered as worldwide recommendation regarding public health, and infants have to be exclusively breastfed during the first six months of birth in order to reach the optimal growth, development and health. American Academy of Pediatrics (AAP) strongly recommends exclusive breastfeeding during the first six months of birth. Developing the attitude towards constant breastfeeding depends on the family support. Fathers' involvement is an important factor of successful breastfeeding. A study in University of Arizona in 1995 showed that changing

father's knowledge and attitude towards breastfeeding was effective in increasing its rate (1). Results of a study in John Hopkins University in 1992 indicated that fathers who attended pre-natal courses or their previous child was breastfed benefited from more awareness and information concerning breastfeeding, and they could have an important role in supporting breastfeeding (2).

A qualitative study in Brazil showed that knowledge and attitude of fathers who participate in breastfeeding promoted the idea of breastfeeding as a specific and useful characteristic of women (3). Moreover, another study in Brazil reported that fathers' participation during pregnancy and delivery provides desirable condition for mother and the newborn. They indicated that fathers' presence during breastfeeding have an obvious effect on the improvement of the breastfeeding period (4). Despite the importance of breastfeeding in Iran, mothers have not received any education in terms of consultation programs, and no consistent measures have been taken

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regarding fathers' training to attract their support and participation in breastfeeding; however, the current consideration has not been sufficient either. Therefore, this study was designed to evaluate the influence of fathers' participation in constant breastfeeding in Vali-E-Asr Hospital, Tehran, Iran. Having raised fathers' awareness, authors hope to take effective measures to improve breastfeeding program and promote children's health as an expected consequence.

Materials and Methods

This interventional study was piloted on spouses of pregnant women participating in pregnancy courses. The case group consisted of fathers attending training courses of breastfeeding during pregnancy (group A), and the control group was made up of fathers who did not take part in training courses (group B).

The course was held three times from the 30th week of gestation to the end of pregnancy in a family health research center. Participants were randomly selected and divided into two groups (50 participants in each group). Randomization was performed according to the table of random numbers. The case group was provided with an educational package on promoting fathers' participation. They attended three training sessions where they were trained by brochures. But no intervention was performed in the control group. After delivery, newborns were weighted and examined for jaundice (3-5 days, 30 days, three and six months after birth).

Data were collected in three questionnaires; the first included demographic and background data of spouses. The second questionnaire measured parents' awareness consisted of 20 multiple questions (using a three point Likert scale) (0-120 points). This questionnaire was designed based on consistent studies by five breastfeeding experts of Tehran University of Medical Sciences. This questionnaire was examined on 10 pregnant women to confirm its validity and reliability (Cronbach's $\alpha=80\%$). The third questionnaire included post-partum characteristics such as newborn's weight and method of breastfeeding. The second and third questionnaires were completed in one, three and six month follow-up intervals. Collected data were recorded in SPSS Version.16 and analyzed by statistical tests (X², T-test). Level of significance was considered 95%. The studied variables included obstetric history, age, education, occupation, birth weight, weight gain during the first 6 months, jaundice, and duration of breastfeeding and spouse's level of awareness.

Inclusion criteria were as follows:

- 1) Healthy mother with no underlying disease.
- 2) Healthy mother with no pregnancy complication.
- 3) Being in the second trimester of pregnancy.

Since this study was an educational intervention, and there were no invasive or medical intervention, spouses' verbal consent and awareness was considered enough.

This study was scientifically and ethically approved by the research deputy of Tehran University of Medical Sciences and registered with number 9887. The study was funded by the same university- maternal, fetal and neonatal research center.

Results

45% of the case group (group A) and 32% of the control group (group B) had a history of breastfeeding, which showed no significant difference. Groups A and B had no significant difference regarding mothers' awareness before training in terms of benefits of breastfeeding, contraindications of breastfeeding, milk storage, understanding the signs of infant's hunger and satiety, etc. Most of the mothers in group B significantly knew about melting frozen milk. No significant difference was seen between the two groups in terms of birth weight, weight at the 3rd and 6th months of age, and rate of weight gain in the 3rd and 6th months of age. Mothers' awareness in the two groups (A, B) was not significantly different before training; however, after training mothers in the group A benefited from a higher level of awareness than group B (103 ± 8.8 vs. 95.71 ± 4.1 , $P<0.0001$). Level of awareness after training was significantly raised in group A (8.50 ± 6 vs. 3 ± 0.351 , $P<0.0001$). Forty seven mothers (94%) of the group A continued breastfeeding until the end of the 6th month versus 38 (76%) in group B ($P<0.01$). Training fathers in group A led to more than 6 times increase in the probability of breastfeeding. According to mothers' views, spouses' participation, encouragement and support in group A, was 11 times more than group B. It means that 47 (94%) of spouses in the group A participated in mothers' constant breastfeeding, while this figure in group B dropped to 30 (60%). No significant difference was between the two groups regarding the jaundice; (36% (15 newborns) in the group A vs. 36% (17 newborns) in group B).

Discussion

Current study indicated that breastfeeding was more constant in the group with trained fathers about

breastfeeding. One of the reasons for such a significant difference was spouses' participation, encouragement and support in the training group. Sciacca JP (1995) designed a study on 68 primiparous and low-income women along with their spouses in the state of Arizona. A number of fathers were randomly selected and trained as the intervention group. The results indicated that in the intervention group training of spouses led to really tangible post-partum support in terms of breastfeeding. Also, awareness and attitude of the participant himself was considerably promoted (1).

Giuglinai ER (1994) carried out a comparative study on 92 breastfed and 89 formula fed infants to evaluate fathers' level of awareness. Results showed that the history of breastfeeding, training while pre-natal period and obtaining information (from health care personnel) regarding breastfeeding have a significant role in raising fathers' awareness and attitude. The study also reported that pre-natal period provides a suitable opportunity for fathers to increase their awareness and knowledge in terms of breastfeeding (2). Kenosi in 2011 reported a similar result. He believes that infants with a shorter period of breastfeeding belong to fathers who have very little awareness concerning importance and benefits of breastfeeding (3).

A qualitative study in Brazil in 2008 and 2009 _ in the form of four group discussions _ on 11 and 17 spouses showed that fathers' participation (besides mothers) in pregnancy and post-partum care has a deeply remarkable effect on raising their awareness and knowledge regarding breastfeeding and increasingly supporting their spouses (4,5).

Taşpınar (2012) in Turkey studied 203 fathers with newborns. 92% of them showed tendency towards breastfeeding, but only 58% had informed their wives about this issue. 88.7% of fathers were happy, since they could help their wives with breastfeeding, and 57% believed that breastfeeding could be mentally beneficial both for infant and mother. The study showed that the level of education, type of the family who had already been trained had an obviously significant impact on mothers' knowledge and attitude towards breastfeeding. Also, it was found that fathers' knowledge in terms of breastfeeding is limited. Although fathers like their infants to be breastfed, they are unable to participate significantly in this regard. Therefore, fathers can greatly benefit from breastfeeding training programs (6).

Rempel (2011) designed a qualitative study in Canada and interviewed 21 fathers. By considering the results of his study, he held the view that fathers can be good

supporters for their spouses and effective motivators in breastfeeding. Fathers are interested to be recognized as influential members of the child nutrition team in the family unit (7). Anja Aggarwal, *et al.*, study reported that fathers' understanding and knowledge of exclusive breastfeeding is incomplete and limited which needs to be modified by training and consultation to inform them about breastfeeding until six months of age. This could result in improved status of child nutrition in general (8).

According to the national guideline, training courses during pregnancy and post-partum are specifically designed for mothers, and usually other family members do not participate in such courses. This study showed that fathers' involvement in training programs would influence constancy of breastfeeding. Further studies are recommended in attracting family members' participation and support as well as applying new training methods to accomplish more promising results. This issue also is confirmed in other studies.

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