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Comparing maternal breastfeeding self-efficacy during first week and sixth week postpartum

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Abstract

Introduction: The ideal nourishment for the first 12 months of a child's life comes from breastfeeding its mother's milk, and maternal self-efficacy is one factor which affects breastfeeding duration. Therefore, the present study aimed to compare the maternal breastfeeding self-efficacy during the first week and sixth-week postpartum.

Methods: This descriptive, analytical study was conducted on 767 women referring to the Family Health Research Center of Rasht in 2014. Mothers were selected through continuous sampling. For data collection, we used demographic questionnaires, and Dennis breastfeeding self-efficacy scale. For data analysis, Chi-square, Mann-Whitney U, Pearson's correlation coefficient and multiple regression were performed using SPSS version 19.

Results: In this study, most mothers had scores compatible with moderate self-efficacy in the first week, and in the sixth week had high self-efficacy for breastfeeding. There was a significant relationship between breastfeeding self-efficacy (BSE) score and employment status ($p<0.0001$). Also, we found significant BSE score differences between primiparous and multiparous women ($p<0.001$).

Conclusion: Results of the study indicate that breastfeeding duration increases the breastfeeding self-efficacy levels. So, Developing and implementing appropriate approaches are needed to improve breastfeeding duration in mothers.

Keywords: Infant; Self-efficacy; Breastfeeding

1. Introduction

Breastfeeding is the ideal nourishment for the first 12 months of an infant's life (1). Exclusive breastfeeding is currently recommended during the first six months of life, by the American Academy of Pediatrics because it is an infant's most natural nourishment (2). Breastfeeding is associated with a lower risk of respiratory tract infections, asthma, otitis media, gastroenteritis, atopic dermatitis, obesity and diabetes. Its advantages for mothers include: reduced risk of postpartum depression, breast cancer and ovarian cancer (3). The rate of breastfeeding among Iranian mothers is similar to that of many countries, their prenatal intention to breastfeed is low (4). A study by Olang, on 63,071 infants aged less than 24 months in Iran, showed that breastfeeding at six months after birth was 56.8% and 27.7%, respectively (5). Although most mothers believe breast milk is the ideal food for newborns (6). A study by Nasserpour et al., showed that the rate of infants' exclusive breastfeeding was very low, and only 37% of babies remain breastfed exclusively up to 6 to 8 weeks after birth (7). In spite of the high rate of initiation, breastfeeding drop-off rate increases after mothers' discharge from hospital (8), because many breastfeeding

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(maternal and infant) challenges may occur during the postpartum (9). These challenges include pain, nipple shape, perceived insufficient milk supply and infants' difficulty to suckle (10). But worldwide investigative studies on breastfeeding initiation and duration have shown it to be a significant variable related to breastfeeding self-efficacy (11). In Bandura's cognitive-social theory, self-efficacy is a cognitive dynamic process that assesses people's beliefs and ability to conduct a healthy behavior. The Breastfeeding Self-Efficacy Theory was developed by Dr. C. L. Dennis. Breastfeeding Self-Efficacy Scale is a measuring instrument to recognize the role self-efficacy plays in relation to breastfeeding behavior (12). Self-efficacy is a strong sense that persuades a person to involve themselves fully in an activity, through possible hardships and obstacles (13). Mothers with a low self-efficacy may decide not even to initiate breastfeeding or stop early due to the absence of effective coping skills, while a mother with a high self-efficacy for breastfeeding tends to start breastfeeding and continue even through the challenges (14). Women with higher perception of self-efficacy will be determined to be successful in spite of failed efforts (15). A lot of mothers express problems with breastfeeding in the early months post-delivery (16). Breastfeeding self-efficacy (BSE) refers to a mother's perceived capability or assurance to breastfeed, and affects her choices regarding breastfeeding (17). Rasht is the capital city of Gilan Province, Iran. The reason for choosing this city to conduct this study was the lack of study in this field in Rasht. Exclusive breastfeeding is regarded as a child's survival strategy for growth by the Ministry of Health and Medical Education, and in recent years many steps have been taken to promote breastfeeding. But recently, the prevalence of exclusive breastfeeding up to 6 months has been reported as less than 28% in urban areas (18). However, many studies have observed the consequences of BSE for the duration of the six weeks, but little study has been done to conclude maternal BSE at several stages of the postpartum period. So, the purpose of the present study is to make a comparison between maternal BSE at the 1st week and 6th week post-delivery.

2. Material and Methods

2.1. Design and setting

A descriptive- analytic approach was used in this study. The study population included 767 breastfeeding women who were referred to the Family Health Research Center in Rasht, and met the inclusion criteria. Samples were selected continuously to participate in this study. Mothers of all newborn babies are treated in this center between two and five days after childbirth for congenital hypothyroidism screening.

2.2. Selection criteria

In this study, the inclusion criteria were being Iranian, living in Rasht, aged over 16 years old, started breastfeeding, no history of high-risk pregnancy, feeding the infant with breast milk in the past 24 hours, having telephone access and having basic education. Exclusion criteria consisted of mothers with breast abnormalities, eating disorder, or children with cleft palate.

2.3. Measurement tools and data collection

The study started in March and was accomplished by December 2014. In order to gather data, demographic characteristics items were prepared by the research team to collect the socio-demographic data and used Dennis' Breastfeeding self-efficacy scale short form (BSES-SF) to evaluate BSE (19). BSES-SF is a 14-item scale with a score range from 14-70. BSES-SF consists of constructive declarations such as "I can always determine that my baby is getting enough milk" and "I can always be satisfied with my breastfeeding experience." Contributors were required to degree their agreement with the declaration based on the Likert-type scale. Reply '1' showed that the contributor was not at all assured and a reply of '5' showed that the contributor was very sure with the declaration. Instrument reliability was reported with a Cronbach's alpha of 0.94. BSES was translated into Persian by two linguistics, and two experts in the health care field independently. BSES has been used previously in the Iranian community, and in a previous study, Persian version of BSES had high internal consistency reliability (α=0. 82). In this study, the content validity method was used to achieve instrument scientific validity. To determine the reliability, a pilot study was performed using 10 eligible subjects. The Cronbach's alpha coefficient was calculated as 0.89 representing the internal consistency of the questions. All participants were informed of the objective and design of the study, written consent was received from the participants, and it was explained that they were free to leave if they wished. Subsequently, the study participants were asked to complete BSES at two time periods, the Time 1 data point was at first week postpartum and the Time 2 data point was at six-weeks after childbirth, to determine and compare the maternal breastfeeding self-efficacy at Time 1 and 2. At Time 1, participants received questionnaires from the research assistant to assess breastfeeding self-efficacy in the Family Health Research Center. The second time (six weeks postpartum) BSE assessments were conducted by telephone follow up. For data analysis, the statistical SPSS 19 software was used (20).

2.4. Data analysis

Descriptive statistics (frequencies, percentages means and standard deviations), chi-square, Pearson correlation coefficient and Multivariable linear regression were used for statistical purposes. The relationship or difference is considered significant if it was <0.05.

2.5. Research ethics

The design of the study was approved by the Ethics Committee of Gilan University of Medical Sciences, Gilan, Iran. Institutional approval was obtained from the board of the Family Health Research Center. The participants were informed about the purpose of the study and the process to be used, and signed an informed consent form. The participants were informed that they could discontinue the research at any time for any reason.

3. Results

In this study, from the 858 selected mothers, according to inclusion and exclusion criteria, 767 subjects participated in the study. The participants' age ranged from 16 to 46 years and the average age was 28.2 years. Mean score and standard deviation of BSE during the first week was 57.64±9.94 and in the sixth week was 62.66±7.57. An analysis of the chi-square test showed that there was a statistically significant relationship between levels of education and breastfeeding self-efficacy score. Additionally, Mann-Whitney U test results showed that there was a statistical significant relationship between BSE score and employment status ($p<0.0001$). Significant BSE score differences were observed between primiparous and multiparous women ($p<0.001$). Significant differences were observed between the mean BSES-SF scores according to type of delivery (vaginal versus cesarean section). Mean BSE scores did differ significantly according to birth weight and prematurity of the newborn. There was statistically significant difference between BSE in the first week and sixth week after birth. The mean score of the maternal breastfeeding self-efficacy increased during this period ($p<0.001$). Results of the sixth week assessment showed that there was a rise in overall breastfeeding self-efficacy score or in any of the subscales. There was improvement in mean scores of BSE between first week (M=57.64; SD=9.94) and sixth week (M=62.66; SD=7.57). BSE score varies from 14 to 70 points. When the respondent obtains between 14 and 32 points, she is considered to have Low efficacy; between 33 and 51, Moderate; and between 52 and 70, High efficacy. Most mothers in the first week (53.71%), had scores compatible with moderate self-efficacy and in the sixth week (42.24%), had high self-efficacy for breastfeeding. There was a statistically significant difference in the comparison of mean time of exclusive and non-exclusive breastfeeding, within moderate and high efficacy scores.

4. Discussion

The objectives of this descriptive-analytic study, were to examine the effect of breastfeeding duration on breastfeeding self-efficacy. Based on the results of this study, some of the maternal demographic characteristics (employment status, levels of education, type of delivery) are significantly responsible for different levels of BSE. BSE has been associated with biological, social and psychological characteristics of the mother as well as policies of the hospital and community health services, and postpartum support (21, 22). Dennis (2002) and Meedya et al. (2010) shown that employment status and education are associated with breastfeeding duration and exclusivity (23, 24). It has been consistently shown that inverted nipples, sore nipples, engorgement and mastitis are negatively associated with BSE. Thulier and Mercer (2009) reported that physical challenges were encountered during breastfeeding such as discomfort caused by sore nipples, engorgement, mastitis and plugged ducts (25). The results from this study, indicate that BSE of women at the end of the sixth postpartum week were significantly different than the first week and breastfeeding duration increased BSE levels. These findings are consistent with other reports (26, 2). Glassman et al. investigated the impact of BSE and sociocultural factors on early breastfeeding. They found that the optimal duration of breastfeeding had a positive influence on BSE than other factors, such as the mother's educational background and social status (27). Women with high scoring BSE in the first week was 29.4% but showed a progressive rise (50.98%) at six weeks. The association of breastfeeding duration with BSE score, showed that mothers who breastfeed longer had higher self-efficacy scores (28). The positive correlation between breastfeeding duration and BSE score, may be because of increase in maternal confidence (29). The results of this study have an essential duration of breastfeeding. Therefore, health education strategies that give sustenance to breastfeeding women and increase breastfeeding rates may be made available BSE for mothers. These self-efficacy increasing approaches may increase assurance of a mother in her breastfeeding abilities, and to persist if she does encounter problems (30). In this study, there was no significant relationship between duration of breastfeeding and the age of the mother or the weight of the infant. In Hajian's study however, there was a statistically significant relationship between these variables (31). In Khayyati's study, there was no relation between the mother's age and

breastfeeding duration (32). Though, in McCarter's study, it showed that the age of less than 19 and over 25 had a negative consequence on duration of breastfeeding (33).

5. Conclusions

The results of this study, show that breastfeeding efficacy is significantly related to breastfeeding duration, and exclusive breastfeeding duration could increase BSE of mothers. The association between breastfeeding duration and maternal breastfeeding efficacy was significant and had predictive value. The results described, indicate that the assessment of breastfeeding duration may be helpful to gauge the maternal breastfeeding efficacy. In order to increase the rates of short duration and exclusivity levels of breastfeeding, it is suggested health professionals consistently evaluate high risk mothers who may stop early and recognize the BSE levels of mothers.

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Conflict of Interest:

There is no conflict of interest to be declared.

Authors' contributions:

Porshaban was responsible for design, data collection, and writing the thesis in Persian. Pakseresht and Bostani were involved in design interpretation, writing, and finalizing the paper in English.

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