



Examining the Effect of Demographic Variables on Various Aspects of the Breastfeeding Mothers' Health

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ABSTRACT

Introduction & Objective: Planning to improve lifestyle through training breastfeeding mothers and transferring this training to children leads to raising healthier children. The goal of this paper is to examine the effect of demographic variables on different aspects of breastfeeding mothers' health.

Method: In this quasi-experimental interventional study, 97 mothers who referred to clinics in Fasa were randomly divided into case (n = 48) and control (n = 49) groups. In order to collect data, the questionnaire of health-promoting lifestyle by Walker et al. which includes 52 questions and the questionnaire of demographic variables were applied. After the first stage of distributing the questionnaires was done, 5 class sessions of training were held for the case group. SPSS20 software and correlation coefficient test were used for analyzing the data.

Results: It was found that the highest and lowest scores, both before and after the intervention, are related to spiritual growth and interpersonal relationships; respectively. In the case group, there was a significant relationship between the income level and the spiritual growth (p value = 0.02) and in the control group, age was significantly associated with nutrition. (P value = 0.02). Various dimensions of the questionnaire were compared with education, which only in the case group, it had a significant difference with spiritual growth (p value = 0.02).

Conclusion: Demographic variables such as age, education and income unavoidably affected on various aspects of health. Of course, in the case of education and spiritual growth at the undergraduate level, this difference was significant and inverse. This issue can be due to excessive preoccupation with academic issues and sometimes people move away from spirituality due to the non-inclusion of teaching these issues in the universities of the country.

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INTRODUCTION

Health is a basic human need and the basis of the successful operation of individuals and communities. Therefore, all countries around the

world were required to work for the health improvement of the people of their community by the Ottawa Charter, adopted in 1986. What is emphasized in this charter is that health is a

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common issue throughout all countries and cultures, and health organizations in countries are trying to achieve it [1-2].

Nowadays, in all around the world, instead of focusing just on treatment strategies, it is tried to promote health by making plans and training people in the community. Research studies have indicated that the cause of many of these problems is the lifestyle and type of health behaviors of people, and performing health-promoting behaviors is one of the best ways by the help of which people can maintain and control their health [3-4]. Health-promoting behaviors are one of the major determinants of health, and performing these behaviors contributes to a positive quality of life [5]. Considering the difficulties which exist in creating, maintaining, and improving health-promoting behaviors, as well as the complexity of these behaviors, it is necessary to use theories or models of changing behavior in this field. Because theories identify the main factors that affect the desired behavior, recognize the relationships between these factors and introduce the conditions, the way and time of these relationships. So, theories are useful in detecting the elements that should be considered as the main axis of interventions [6]. One of the comprehensive and predictive models used to study health-promoting behaviors which provides a theoretical framework for discovering the factors influencing these behaviors is the Pender's Health Promotion Model (HPM). Pender's model includes health-promoting behaviors and psychosocial health. The health promotion behaviors section includes the following categories: Feeling healthy about personal health, physical activity, eating habits. Psychosocial health includes the following: spiritual growth, interpersonal communication, stress management [7].

Mothers are one of the most important basics of a society, and their health has a direct impact on the health of society, especially during breastfeeding, mothers' health becomes much more prominent, and as their health must be studied and promoted in all respects, Pender's theory is the most complete theory of their lifestyle.

Physical activity and exercising is one of the items that mothers need to be aware and educated about its effects. Barriers to physical and sports activities are divided into two categories: personal factors and environmental factors, which should be identified and considered before making sportive plans for these people [9-8]. Personal factors are a function of the mother's condition such as income, number of children being cared of [10-13], lack of a suitable companion for exercising and inappropriate family behavior [14, 15]. Environmental factors include lack of access to adequate vehicles and facilities, lack of security in

neighborhoods, and lack of adequate information about health [16, 17].

Healthy lifestyle and health-promoting behaviors are very influential on the health of women during and after pregnancy. For instance, healthy eating and exercising in the postpartum period increase maternal health in the short and long term. A diet including fruits and vegetables, and low-fat food reduces the risk of many diseases [18, 19]. Research studies have indicated that a low-dairy diet increases the risk of non-contagious diseases for example type 2 diabetes, high blood pressure, cardiovascular disease and some cancers [20, 21]. Healthy nutrition, especially after the birth of a baby, is very important for adequate breastfeeding [22]. Studies have shown that some women, despite having a healthy diet during pregnancy, do not continue this process after childbirth [23, 24].

Lifestyle is an influential factor and arises from various aspects of life that are important to the individual, and the scope of it includes health, occupational, economic, social, psychological, psychological and family issues. Therefore, this factor is also very significant as one of the criteria for measuring and caring for women's health [25]. Another significant factor related to the postpartum period is breastfeeding. This issue remains in the mind as a memory and experience and can be a critical period in terms of health in women's lives [26]. Breastfeeding is an important issue in public health that has been introduced for many years, as the best method of child nutrition in the first year, and according to many researchers, breastfeeding increases life expectancy in women [27].

The World Health Organization and the American Academy of Pediatrics recommend exclusive breastfeeding as the optimal way to feed a baby for the first 6 months of life and recommend that it to be continued until 12 months of age [28]. On the other hand, the importance of breast milk has been mentioned in Quranic narrations and verses [29].

Breastfeeding facilitates postpartum weight loss, increases uterine contractions to control uterine bleeding, improves uterine return through releasing oxytocin, reduces the risk of breast cancer, reduces the risk of osteoporosis, reduces the risk of pregnancy and inhibits the progression of uterine endometriosis [30]. Several studies have also indicated the psychological, immunological, economic biomedical and nutritional benefits of breastfeeding on maternal and infant health [31-33].

There is also a direct relationship between maternal and paternal depression in behavioral sleep problems in infants [34]. The stress of the mother, depressive symptoms [35], overall health of parents [36]. and depressive symptoms are associated with behavioral sleep problems in infants [37].

In 2016, in Australia, a study was conducted on 448 women who had become mothers for the first-time, during their postpartum months to examine nutrition and exercise related to the health advice in Australian postpartum mothers. This research displayed that women receive significantly less health advice regarding healthy eating and physical activity after childbirth than during pregnancy. On the other hand, people who receive health advice do not make any changes in their lifestyle, and therefore, appropriate methods should be found to enhance physical activity and nutrition for women after the childbirth [38]. Considering that our country is a developing country, paying attention to the health and well-being of mothers, especially in areas other than physical health, has not been taken into account. Considering the direct effect of mothers' physical, mental and social health on children and the formation of mental and physical health of children in childhood on the one hand, and the lack of sufficient studies on indicators of mothers' health on the other hand, conducting scientific and statistical studies seemed necessary, thus, in this study, through using sample collection and statistical processes, it was tried to measure mothers' health in the current situation and its relationship with factors such as age, education and family income. These statistical samples can be used as the basis for officials and various organizations to make plans for cultural, health and social education, and finally, using the results obtained before and after the necessary training, the degree of necessity and efficiency of these methods should be examined and used in micro and macro planning.

Considering these explanations, the issue of the present study is that; 1) What is the score of health-promoting behaviors before and after training? 2) Is there a significant relationship between demographic variables (gender, age, literacy and income) and health-promoting behaviors before training?

METHODOLOGY

The present study is of a quasi-experimental intervention type. The statistical population is breastfeeding mothers referring to clinics in Fasa. The number of required samples based on the study of Ahmadi et al. and considering the 95% confidence level and 80% statistical power at the error level of at least 12 scores difference between the two study groups based on the mentioned study in each intervention and control group was calculated to be at least 48 people [39, 40]. In order to control possible random errors and increase the statistical power of the test and on the other hand to compensate for possible losses, it was decided to study 50 people in each group.

$$n = \frac{(Z_1 + Z_2)^2(S_1^2 + S_2^2)}{d^2}$$

For sampling in this study, the random cluster method was used. In this way, the samples were selected from four clinics in Fasa, and then they were selected randomly (even numbers) from the list of patients. In this study, a questionnaire of demographic variables (age, literacy and income) and the questionnaire of the health promoting lifestyle have been used. This questionnaire is adapted from the tools of Walker et al. The health promoting aspects included in this questionnaire are nutrition, exercise, social relationships, mental health, psychological problem, physical health, spirituality, and hope. This 52-item questionnaire has been designed on a 4-point Likert scale from Never to Always. The Cronbach's alpha coefficient reported by Walker et al. for this instrument is 0.94. After the first stage of distributing and collecting questionnaires was done, in 5 sessions of the necessary and appropriate training in various aspects of health related to a healthy lifestyle were held for the case group; the training was in the form of lectures as well as question and answer sessions. Then an educational pamphlet was distributed among them. After one month, the samples (case and control) were collected again and the questionnaires were redistributed. Data analysis was performed using descriptive and inferential statistics in SPSS statistical software version 20. Findings were reported as number (percentage) and mean (standard deviation). Correlation coefficient was used to scrutinize the relationship between variables. In all analyses, the maximum error of the first type was considered 0.05.

RESULTS

According to (Table 1) In general, this study was performed on 97 breastfeeding mothers referring to clinics in Fasa, with a mean age of 29.5 in the case group and 29.77 in the control group and the average income level of the case group was 1370333 Tomans, and it was 1837521 Tomans in the control group.

The scores of the dimensions of the questionnaire in each of the six sub-categories after and before the intervention have been given separately in (Table 2) and (Table 3). As it is clear, the maximum and minimum scores both before and after the intervention belong to spiritual growth and interpersonal relationship (23.29 ± 6.16 and 4.70 ± 1.57 before the intervention and 24.65 ± 6.56 and 5.5 ± 1.76 after the intervention; respectively).

DISCUSSION

As can be seen in (Table 4), we examined the effect of the demographic variables of age and income in

each of the case and control groups and on all six sub-categories of the lifestyle questionnaire. In the case group, income level had a significant relationship with spiritual growth (p value = 0.02) and in the control group, age was significantly associated with nutrition (p value = 0.02).

According to (Table 5) and (Table 6) and (Table 7) various dimensions of the questionnaire were compared with education, which was only significantly different from spiritual growth in the case group (p value = 0.02).

CONCLUSION

Considering that the new health paradigm implies that being healthy depends on many factors such as social factors, level of awareness and even personality traits, and also the quality of life encompasses all aspects of life, including health: it can be claimed that health-promoting behaviors have positive effects on quality of life, so that people with health-promoting behaviors are healthier and have less load of disease and disability.

In this study, 97 breastfeeding mothers referring to clinics in Fasa were studied to identify the effect of demographic variables on health-promoting behaviors. For making this measurement, various models have been introduced, the most famous of which is the Pender's model that has been used in this study.

In this study, the maximum and minimum scores of the questionnaire were related to the aspects of spiritual growth and interpersonal relationships, respectively, which were almost similar to other studies.

Demographic variables such as age, education, and income will inevitably affect different aspects of health. In this study, before the intervention in the study group, there was a significant relationship between income level and spiritual growth and education, and in the control group, there was a significant relationship between age and nutrition; of course, in the case of education and spiritual growth at the undergraduate level, this difference was significant and inverse. This issue can be due to excessive preoccupation with academic issues and sometimes people getting away from spirituality due to the non-inclusion of teaching these issues in universities of the country. There was no significant difference between demographic variables and six different aspects of health after training.

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Table 1. Descriptive characteristics of demographic variables (age and income)

Variable		Number (frequency)	Mean	Standard deviation
Age	Case group	44	25.59	5.03
	Control group	42	29.77	8.51
Income level	Case group	30	1370333.33	793705.77
	Control group	32	1837521.21	1060891.14

Table 2. Descriptive characteristics of the scores of the questionnaire dimensions in the case and control groups before the intervention

Before intervention	Spiritual growth	responsibility	Nutrition	Stress management	Physical activity	interpersonal relationships
Mean ± Standard deviation	23.29±6.61	14.62±5.61	14.28±4.24	13.00±4.52	6.71±4.33	4.70±1.57
Maximum	34	27	25	24	20	9
Minimum	7	3	3	5	0	2

Table 3. Descriptive characteristics of the scores of the questionnaire dimensions in the case and control groups after the intervention

Before intervention	Spiritual growth	responsibility	Nutrition	Stress management	Physical activity	interpersonal relationships
Mean ± Standard deviation	24.65±6.56	15.93±5.70	15.79±4.68	13.63±4.61	8.65±5.73	5.05±1.76
Maximum	39	30	27	24	20	9
Minimum	11	2	3	5	0	2

Table 4. Relationship between age and income with the dimensions of the questionnaire before training

Factor before intervention	Spiritual Growth		Responsibility		Nutrition		Stress Management		Physical Activity		Interpersonal Relationships	
	r	p	r	p	r	p	r	p	r	p	r	p

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Age	Case	0.01	0.95	0.10	0.56	0.08	0.66	0.01	0.92	0.20	0.23	0.02	0.90
	Control	0.13	0.44	0.02	0.86	0.35	0.02	0.25	0.13	0.002	0.99	0.002	0.99
Income	Case	-0.47	0.02	0.21	0.30	0.09	0.67	0.01	0.94	0.26	0.18	0.005	0.98
	Control	0.07	0.69	0.06	0.72	0.05	0.78	0.15	0.42	0.04	0.80	0.33	0.64

Table 5. The relationship between education and the dimensions of the questionnaire before education

Factor intervention before		Spiritual Growth	Responsibility	Nutrition	Stress Management	Physical Activity	Interpersonal Relationships
		p	p	p	p	p	p
Education	Case	0.02	0.38	0.88	0.45	0.81	0.34
	Control	0.83	0.24	0.28	0.48	0.80	p-value>0.05

Table 6. Relationship between age and income with the dimensions of the questionnaire after training

Factor intervention after		Spiritual Growth		Responsibility		Nutrition		Stress Management		Physical Activity		Interpersonal Relationships	
		r	p	r	p	r	p	r	p	r	p	r	p
Age	Case	0.01	0.92	0.05	0.75	0.17	0.31	0.28	0.09	0.30	0.66	0.19	0.21
	Control	0.08	0.61	0.02	0.86	0.31	0.57	0.23	0.16	0.09	0.54	0.002	0.99
Income	Case	0.32	0.12	0.04	0.81	0.34	0.08	0.28	0.16	0.76	0.71	0.58	0.76
	Control	0.02	0.90	0.06	0.72	0.01	0.94	0.12	0.51	0.06	0.72	0.33	0.64

Table 7. The relationship between education and the dimensions of the questionnaire after education

Factor intervention after		Spiritual Growth	Responsibility	Nutrition	Stress Management	Physical Activity	Interpersonal Relationships
		p	p	p	p	p	p
Education	Case	0.21	0.27	0.18	0.81	0.053	0.22
	Control	0.83	0.24	0.37	0.75	0.79	p-value>0.05