



The Level of Awareness Regarding Ten Steps Guideline for Successful Breastfeeding among Hospital Staff

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Authors' contributions

This work was carried out in collaboration between both authors. Authors MK and AAS participated in design, draft and interpretation, analysis and wrote paper and authors read and confirm final proof Both authors read and approved the final manuscript.

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ABSTRACT

Introduction: The purpose of this study was to determine the level of familiarity of hospital personnel with the executive instruction on breastfeeding promotion in the hospital.

Methods: This cross-sectional study was performed on hospital personnel who had entry criteria. Their awareness of the breastfeeding guidelines was checked and recorded on the checklist. This checklist consists of two parts, the first part of which is the demographic information including age, gender and work experience of the participants. The second part of the checklist contains ten questions. In this study, statistical analysis was performed based on SPSS 23 software. In the statistics section, frequency and percentage were used.

Results: In this study, 451 and 228 personnel of Amirkabir and Taleghani Hospitals were enrolled, 75.6% and 76.75% of Amir Kabir Hospital and Taleghani Hospital staffs had an acceptable familiarity with these guidelines. In addition, employees of Taleghani Hospital obtained higher scores than Amir Kabir Hospital staff and this difference was statistically significant. In other words, Taleghani hospital staff was generally more familiar with the guideline for promoting breastfeeding. The age of the personnel has a meaningful relationship with their level of knowledge and

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employees with the age of 41 to 50 years have the highest level of awareness. The level of knowledge of personnel showed a significant relationship with work experience, where the highest level of personnel awareness was observed in employees with a history of over 20 years.

Conclusion: Although the awareness of hospital staff was good about the 10-point action plan for promoting breastfeeding, however, more training was needed to achieve more favorable outcomes. Our findings showed that personnel with less work experience had less information in this regard.

Keywords: Milk; breastfeeding; hospital; mother.

1. INTRODUCTION

Breastfeeding is always a nutrition standard for babies. Before the emergence and development of commercial formulations, breastfeeding was actually the only way to feed babies. During the twentieth century, with significant advances in the nutrition of infants, alternative milk was provided for babies.

In the twenty-first century, despite significant advances in formulations, breastfeeding continues to be the best way for feeding infants and the harmonious development of the child instead [1]. Breastfeeding support methods have evolved over time and are currently quite well defined and codified. Discussion and support for lactating women and multi-faceted approaches can significantly contribute to this success and lactation improvement, especially in women living in urban areas and women with low income and poor economic status [2-5]. Breastfeeding provides the best physical and mental development for breastfeeding [6]. Inadequate or inappropriate Nutrition is a priority aspect for the health of new-borns [7].

The American Academy of Pediatrics recommends breastfeeding as the sole source of food in the first 6 months of infancy and it is advisable for continuous breastfeeding until one year and as long as there is a willingness [8,9].

Breastfeeding provides compelling benefits for infant, mother and community, it is capable of reducing the incidence or severity of diarrhea, respiratory diseases, otitis, bacteremia, bacterial meningitis and necrotizing enterocolitis [10]. In mothers who have a milking experience, there is a risk of postpartum hemorrhage, prolonged amenorrhea, a reduction in the risk of ovarian cancer and breast cancer prior to menopause, and possibly a reduction in the risk of osteoporosis [10].

Benefits of breastfeeding for the community include lowering health care costs due to fewer illnesses and reducing the absenteeism of employees due to care for sick children [11]. Breast milk also has antibodies against bacteria and viruses (IgA) and nonspecific immune agents such as macrophages and nucleotides that are capable of helping reduction of infection. Although successful breastfeeding has undeniable benefits for mother and infant and insufficient breastfeeding may causes severe growth slowdown and hyponatremic dehydration in the infant [12]. Also taking this element into account, the familiarity of the staff of a hospital with the instructions for breastfeeding is essential. Therefore, the aim of this study is to determine the level of familiarity of hospital personnel with the executive instruction for promoting breastfeeding in the hospital.

2. MATERIALS AND METHODS

This cross-sectional study was carried out on the personnel of Amir Kabir Hospital and Taleghani Hospital in Arak, Iran and ethical committee was approval by Arak University of Medical Science. Since this study was carried out in a census, it is not necessary to calculate the sample size and then all hospital personnel who had entry criteria were included in the study.

2.1 Inclusion Criteria

1. Personnel of Amir Kabir Hospital and Taleqani.
2. Personnel satisfaction to participate in the study.

2.2 Exclusion Criteria

1. Un-satisfaction of personnel to participate in the study.

The staff's knowledge in promoting breastfeeding was assessed and recorded on the checklist.

The checklist consists of two parts, the first part of which is demographic information including age, gender and work experience of the participants, 5 categories have been distinguished: (under 20 years of age, 21-30, 40-31, 41-50 years and 51-60 years), gender (male or female) and work experience status (person under 20 years of age, 5 years, 5-10 years, 10-15 years, 15-20 years and over 20 years).

The second part of the checklist included questions that consisted of the following. The second part of the checklist included 13 questions which are:

1. Has there been a systematic policy to promote breastfeeding and is it available to you?
2. Do you have enough training to gain the skills needed to implement breastfeeding policy?
3. Are the pregnant mothers given adequate education about breastfeeding?
4. Can mothers start a skin-to-skin contact within the first half-hour of the birth in a hospital and can they start breastfeeding within an hour?
5. Do pregnant mothers learn the method of breastfeeding and its continuity?
6. Do baby get any other fluids other than milk?
7. Is it necessary to run a room-mate program with a baby in the hospital?
8. Does breastfeeding work according to the needs of the infant?
9. Is there a possibility to expressing milk repeatedly and storing it for the infant?
10. Is the parent allowed to use a baby bottle or pacifier?
11. Are there support groups for breastfeeding mothers?
12. Are mothers introduced to breastfeeding mothers' support group, when they are being discharged?

2.3 Data Analysis

In this research, statistical analysis was performed based on SPSS 23 software. In the statistics section, frequency and percentages were used along with the charts. Chi-square test was used as a test of significance.

3. RESULTS

A total of 679 people were enrolled in the study including 451 from Amir Kabir Hospital and 228 from Taleghani Hospital. According to Table 1,

the highest frequency of the age of both hospital personnel was between the ages of 31 and 40, where 41.02% of Amir Kabir hospital staff and 40.35% of Taleghani hospital personnel were in this age range.

It was also observed that 354 (78.49%) of Amir Kabir hospital personnel and 217 (95.2%) of Taleghani hospital personnel were female. The most frequent category of work experience belonged to the one from 5 to 10 years (28.16%; 127 individual) and work experience under 5 years (31.14%; 71 individuals) in Amir Kabir Hospital and Taleghani hospitals, respectively.

In the descriptive statistics of how the participants' personnel responded to the 10 questions, questions 1, 10, 4, 7, 8, 3, 9, 6, 2, 12, 11, 5 were those with the highest level of awareness among staff.

The lowest level of knowledge is related to questions 5 and 11, with percentages of 90.45% and 71.5% in Taleghani Hospital, respectively, and in Amir Kabir Hospital with 76.05% and 81.37%, respectively.

The highest awareness was related to questions 1 and 10 in Taleghani Hospital with frequency of 100% and 96.9%, respectively, while it was attributed to 96.67% and 95.79% in Amir Kabir Hospital.

The lowest level of knowledge is related to questions 5 and 11, which was 90.45% and 71.5% in Taleghani Hospital, respectively, and 76.05% and 81.37% in Amir Kabir Hospital, respectively.

Regarding the degree of acceptance of the participants, out of a total of 451 personnel at Amir Kabir Hospital, 341 (75.6%) received the required score and 110 (24.6%) did not succeed in obtaining a pass mark.

In Taleghani Hospital, out of a total of 228 personnel, 175 reached the required score the grade required for acceptance, and 53 (23.25%) did not earn an acceptable score. Taken together, a total of 516 (76.1%) in the two hospitals were able to earn a passing score, and 163 (23.9%) did not score, while 163 people (23.9%) did not succeed in earning an acceptable score.

Comparison of personnel scores in Amirkabir and Taleghani hospitals showed that the mean scores obtained by Amir Kabir hospital staff was

Table 1. Descriptive statistics of demographic information

		Amir Kabir frequency (Percent)	Taleghan frequency (Percent)
Age	Under 20	3 (0.67%)	0 (0%)
	30-20	151 (33.48%)	71 (31.14%)
	40-31	185 (41.02%)	92 (40.35%)
	50-41	104 (23.06%)	57 (25%)
	60-51	5 (1.11%)	0 (%0)
	Unanswered	3 (0.67%)	8 (3.51%)
	Sex	Female	354 (78.49%)
Male		97 (21.51%)	11 (4.8%)
History	Under 5 years	114 (25.28%)	71 (31.14%)
	5-10years	127 (28.16%)	69 (30.26%)
	10-15years	65 (14.41%)	11 (4.82%)
	15-20years	46 (10.20%)	27 (11.84%)
	Over 20 years	91 (20.18%)	37 (16.23%)
	Unanswered	8 (1.77%)	13 (5.70%)

32.27% (SD: 5.57) and the mean scores obtained by Taleghani hospital personnel was 33.19% (SD: 3.93). The difference between the two groups was statistically significant (P= 0.014), indicating that Taleghani hospital staff had higher scores than Amir Kabir Hospital staff.

Scores obtained by age are shown in Table 2. The results did not show that people under the age of 20 with an average of 23% earned the lowest score, and those aged 41 to 50 years with an average of 33.38% also obtained the highest score.

Table 2. Scores based on age

Age	Frequency	Mean	Standard deviation
Under 20	3	23	0
20-30	222	31.81	5.63
31-40	277	32.95	32.95
41-50	161	33.38	33.38
51-60	5	25.54	25.54

The difference in the scores obtained was significant in terms of age (P= 0.0001), indicating

that increased age was related to their high work experience, resulting in better score.

According to Table 3, the difference in obtained scores was found to be significant in terms of age. With the help of Tukey's post-hoc comparisons, the differences between the groups were statistically significant. In addition, there was a significant difference between the age group under 20 years old and the groups 20-30, 30-31, 41-50 and 60-51 years old.

There is also a significant difference in terms of obtained score between the age group of 20-30 years old and the age groups of 50-41 and 60-51, and a significant difference between the age groups of 40-31 and the age group of 41-50 years with the age group of 51-60 years was observed.

This table that the highest average score was achieved by people with a work experience of 5-10 or more than 20 years, while the lowest average score was obtained by people with a work experience of 10-15 years (Table 4).

Table 3. Post hoc test comparison for age groups

years	Under 20	30-20	40-31	50-41
30-20	(P=0.021)*			
40-31	(P=0.006)*	(P=0.085)		
50-41	(P=0.004)*	(P=0.022)*	(P=0.914)	
60-51	(P=0.958)	(P=0.045)*	(P=0.009)*	(P=0.005)*

Table 4. Scores obtained based on work experience

Age (Years)	Frequency	Mean	Standard deviation
Under 5	185	32	5
10-5	196	33.52	4.54
15-10	76	31.25	6.07
15-20	73	32.19	6.21
Over 20	128	33.25	3.98

*P-value=0.002**

Table 5. Tukey's range test for work experience

Age (Years)	Under 5	10-5	15-10	20-15
10-5	(P=0.025)*			
10-15	(P=0.799)	(P=0.007)*		
15-20	(P=0.999)	(P=0.292)	(P=0.776)	
Over 20	(P=0.19)	(P=0.989)	(P=0.045)*	(P=0.595)

The table of analysis of variance also showed a significant difference between groups ($P = 0.002$). Using this Tukey test, this difference was further examined. Based on the Table 5, we find that most groups have scored close to each other, however, personnel with an experience of work under 5 years of age had a significant difference with 10-5 years old work experience.

Persons with work experience of 5-10 years showed a significant difference compared to 10-15 years. Furthermore, 10-15 year experienced people had a significant difference in work experience with people over 20 years of age.

This reflects the fact that further experience leads to more experience and improved scores. Finally, people with work experience of 15-20 years did not show any significant difference with any of the groups.

4. DISCUSSION

Breastfeeding plays a very important role in improving general health and preventing the disease in the baby and mother. It has also been observed that these benefits persist both in the short and long term period. Breast milk is not only a complete nutritional factor for the growth and development of the baby but also plays a very important role in the prevention of

gastroenteritis, respiratory infections, [13] middle ear infections, urinary tract infection, atopic diseases, diabetes mellitus, hypertension and obesity [14]. On the other hand, feeding with formula causes the child to encounter certain health hazards that do not occur in breastfeeding. Some of these hazards include the possibility of increasing or decreasing the concentration of compounds in formula at the time of preparation and the potential risk of infection when preparing it through baby bottle and other supplies [15]. Lactation also has significant benefits for the health of mothers. Studies have shown that women without breastfeeding are significantly more at risk for epithelial ovarian cancers and breast cancers compared with those who have breastfeeding [16].

Considering the importance of breastfeeding for babies, mothers, and general health, numerous initiatives have been taken to promote breastfeeding in recent years. One of these measures was the development of a program to promote breastfeeding aimed at improving the health, growth and nutrition of children. The program consists of ten guidelines which is designed for successful breastfeeding in a Baby-friendly Hospital (maternity wards and pediatric wards).

Since the familiarity of the implementation personnel of the program plays a key role in the implementation of this program, study was aimed to determine the level of familiarity of hospital personnel with the executive instruction on the promotion of breastfeeding in a Baby-friendly Hospital in a cross-sectional study.

In the present study, 451 and 228 personnel of Amir Kabir Hospital Taleghani hospital personnel were enrolled. The results showed that 75.6% of the staff of Amir Kabir Hospital and 76.75% of Taleghani Hospital staff were in an acceptable position regarding the familiarity with these guidelines.

It was observed that Taleghani hospital staff had higher scores than Amir Kabir hospital staff and this difference was statistically significant. In the other word, Taleghani hospital staff was generally more familiar with the ten steps of the breastfeeding guidelines. Our results showed that the age of the personnel had a significant relationship with their knowledge, and employees with the age of 41 to 50 years had the highest level of awareness. Furthermore, the level of knowledge of personnel has a significant relationship with their work history, therefore, the highest level of knowledge of personnel was in employees with a work experience of more than 20 years. This suggests that experienced staff has more information about breastfeeding guidelines.

The findings of this study were consistent with previous studies. Froozani and colleagues have examined the effect of mothers' training on breastfeeding in the first 4 months of the birth. They showed that exclusive breastfeeding in mothers with the necessary training was significantly higher than the control group.

In addition, the number of days of diarrhea in the neonates of the case group was significantly lower than the control group. As a result, education of mother has played a very important role in promoting breastfeeding [17]. Mardani and colleagues reported that the level of awareness of mothers about the benefits of breast milk was generally good. However, this level of awareness needs to be enhanced by providing the necessary training to families, consequently important steps will be done to promote breastfeeding [18]. A similar result was also found in a study by Abbas Gholizadeh and his colleagues in 2017, in which conducting counseling and education programs in health

care centers can be effective in maintaining and promoting breastfeeding [19].

5. CONCLUSION

Although the awareness of hospital staff was good about the 10-point action plan for breastfeeding, but more training was needed to provide more favorable results in this regard. Additionally, personnel with fewer years of work had less information on the subject. Another significance of this study is that staff training was probably more stringent in past years and that in recent years it is less effective.

CONSENT

It is not applicable.

ETHICAL APPROVAL

As per international standard, ethical committee was approval by Arak University of Medical Science.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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