Several end of breastfeeding behaviors and complementary feeding practices of Turkish and Syrian refugee mothers

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ABSTRACT

Objectives: The purpose of this study was to compare breastfeeding and related factors (age, level of education, age at first pregnancy, etc.), and complementary feeding practices between Syrian refugee and native Turkish mothers.

Material and methods: This descriptive-comparative study examined the nutritional characteristics of infants aged 9 to 60 months whose mothers were Turkish or Syrian refugees who attended Kızıltepe State Hospital between January 2022 and July 2022.

Results: 204 mothers (126 Turkish and 78 Syrian) who had a child aged 9-60 months were included. The average age of the mothers was 27.60 ± 5.17 years for Turkish citizens and 28.91 ± 5.62 for Syrian refugees, without significant difference between the two groups (p: 0.091). Postpartum breastfeeding was 91.3% and breastfeeding duration was 12 (0-24) months in Turkish citizens; in Syrian refugees, breastfeeding was 84.6% and average breastfeeding time was 9 (0- 24) months (respectively, breast milk intake p: 0.144, uptake time p: 0.161; no statistical difference). Breastfeeding training was received by 23.8% of Turkish citizens and 5.1% of Syrian refugees; there was a significant difference between the two groups (p: 0.001).

Conclusion: In refugee groups, infant and maternal nutrition practices are disrupted. Working in conjunction with local and international organizations and state agencies that give help to refugee groups, the appropriate interventions, initiatives, supports, and awareness-raising activities would strive to improve practices in mother and baby nutrition and narrow gaps.

Keywords: refugees; breast feeding; complementary feedings; infant nutrition disorders.

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INTRODUCTION

Breast milk is often regarded as the nutrition that is most suited for the growth and development of newborns and babies, as it satisfies all of the requirements of an infant for the first six months after birth. Both the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO) believe that all children under the age of two should have the opportunity to consume nutritious food at the optimal period.1 The first one thousand days of a person's life is the most important period when it comes to ensuring that they receive the appropriate amount of nourishment. This time begins with the mother's pregnancy and continues until the child's second birthday. Breast milk is a crucial ingredient for the health and development of children during this "critical window" period. It contains vitamins, minerals, enzymes, and antibodies at a level that is sufficient to meet all the demands of infant in the first six months of life.² Because of this, the WHO and the UNICEF stress the importance of only giving breast milk to infants for the first six months of their lives or, if necessary, for the first four months, without giving them any water. They also recommend starting to give infants complementary foods after the sixth month and continue breastfeeding until they are two years old.³

Since the start of the civil war in Syria in 2011, millions of Syrians have fled across the border into Turkey and have remained there until the present day. According to the data from the General Directorate of Migration Management (GDMM) (2022), the year 2021 will be the year in which the highest number of Syrians will be granted temporary protection in Turkey. As of the most recent data collected on the 30th of August 2022, there are currently 3 685 839 Syrians living in Turkey.⁴ Humanitarian situations have been shown to raise child mortality by 2-70 times, even in populations that are otherwise healthy. In these kinds of situations, hygienic conditions deteriorate, issues with obtaining food arise, water-borne infections pose a potential risk to human life, and women and children suffer negative effects, both physically and psychologically. Therefore, the nutrition of children under 5 years old is in jeopardy; incorrect use of breast milk substitutes and interruptions in complementary feeding practices are occurring.^{5,6} Malnutrition patterns have been recorded in every crisis and disaster situation that has occurred up to this point due to the inappropriate distribution of breast milk substitutes.7-9

It is emphasized that the positive effects of breastfeeding under these conditions are 2 times more than the positive effects of breastfeeding under optimal conditions. It is stated that providing the appropriate nutrition for children aged 0-2 has a life-saving effect during disasters and emergencies.¹⁰ It is necessary to provide access to food for affected groups in disasters and emergencies, to provide cash assistance when necessary, to provide special nutritious foods for vulnerable groups, to support children aged 0-2 for adequate and balanced nutrition, and to prevent and treat nutritional deficiencies. micronutrient deficiencies, and acute malnutrition. This information comes from the United Nations High Commissioner for Refugees (UNHCR). It highlights the necessity of providing relevant information regarding food security and nutrition, as well as conducting analysis and programming.¹¹ In order to accomplish this goal, it is emphasized that the non-governmental organizations that are involved in studies that support maternal nutrition and infant nutrition should work in coordination with one another, that the authorities in the country and the local government should be included in the actions, that the field workers should be informed and supported in order to accurately determine the current situation and to select and carry out the necessary activities.12 It is important that the authorities in the country and the local government should be included in the actions. When it comes to nutrition, the groups who are at an even greater disadvantage in times of crisis and emergency, such as those experienced by refugee groups, are infants aged 0-2 years old. The aim of the study was to compare breastfeeding and related factors (age, level of education, age at first pregnancy, etc.), and complementary feeding practices between Syrian refugee and native Turkish mothers.

METHODS

This research is a descriptive-comparative examination of the nutritional characteristics of infants aged 9 to 60 months whose mothers were Turkish and Syrian refugees. A face-to-face questionnaire was administered to the mothers questioning their knowledge and practices about breast milk and breastfeeding.

The identity and health information of the patients were safeguarded according to the Helsinki Declaration criteria.

The sample of the study consists of mothers who attended Kızıltepe State Hospital (a

secondary hospital for the entire population) between January 2022 and July 2022 and met the inclusion criteria (Turkish and Syrian mothers with children aged 9-60 months who volunteered to participate in the study). Exclusion criteria were children with chronic diseases, and adopted children.

The approval of the research's ethical committee was received from the Mardin Artuklu University Clinical Research Board, under the number 66603. Moreover, the identity and health information of the patients were safeguarded according to the Helsinki Declaration criteria. Permission from administrative offices and informed consent from study participants was obtained before the beginning of data collection.

Statistical analysis

The IBM SPSS 24.0 Version software was utilized to do statistical analysis on the study's data. The Chi-square Test is used for examining the link between category traits and groups.

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As descriptive statistics, the mean, standard deviation, and median for numerical variables, as well as the number and percentage values for categorical variables, are provided. In statistical analysis, a p <0.05 value was recognized as significant.

RESULTS

During the study period, 251 mothers with children aged 9-60 months applied. Of them 32 mothers (19 Turkish and 13 Syrian) refused to participate in the study and 15 children had a chronic disease; 204 mothers were included in the study.

The demographic characteristics of the participants involved in the study are given in *Table 1*. The average age of the mothers was 27.60 ± 5.17 years for Turkish citizens and 28.91 ± 5.62 for Syrian refugees (p: 0.091). Among the two groups, illiteracy was 61.5% for Syrian refugees and 15.9% for Turkish citizens in terms of educational status (p <0.001).

TABLE 1. Demographic characteristics of participants

Demographic characteristics	Turkey (n: 126)	Syria (n: 78)	р
Age (years; mean ± SD)	27.60 ± 5.17	28.91 ± 5.62	0.091
Educational status			
Illiterate	20 (15.9)	48 (61.5)	<0.001
Literate	106 (84.1)	30 (38.5)	
Number of children, mean ± SD	2.88 ± 1.58	3.20 ± 1.54	0.164
Age at first pregnancy in years, mean ± SD	20.30 ± 3.15	20.76 ± 4.18	0.366
Number of residents in the home, median (min-max)	6 (3-20)	5 (3-10)	0.011
Smoking, n (%)	30 (23.8)	43 (55.1)	<0.001
Age of accompanied child in month, mean ± SD	25.16 ± 12.56	21.07 ± 11.37	0.020
Child's gender female, n (%)	59 (46.8)	38 (48.7)	0.793
Number of children, median (min-max)	2 (1-7)	3 1-7)	0.125
Length of intensive care unit stay in days, n (%)	61 (48.4)	27 (34.6)	0.053
Type of birth, normal birth, n (%)	59 (46.8)	46 (59)	0.092
Breast milk intake, n (%)	115 (91.3)	66 (84.6)	0.144
Length of breastfeeding in months, median (min-max)	12 (0-24)	9 (0-24)	0.161
First breastfeeding within 30 minutes, n (%)	81 (64.3)	46 (59)	0.447
Colostrum, n (%)	94 (74.6)	54 (69.2)	0.403
Additional food time, month, median (min-max)	6 (0-24)	6 (0-24)	0.064
Those who got education on breastfeeding, n (%)	30 (23.8)	4 (5.1)	0.001
Doctor control during pregnancy, n (%)	108 (85.7)	48 (61.5)	<0.001
Pacifier use, n (%)	64 (50.8)	44 (56.4)	0.435
Bottle use, n (%)	65 (51.6)	48 (61.5)	0.165
Breast milk	101 (80.2)	37 (47.4)	
Sugar water	13 (10.3)	24 (30.8)	
Infant's first meal n (%)			
Water	2 (1.6)	0	
Baby food	10 (7.9)	17 (21.8)	<0.001
Frequency of regular feeding, n (%))	81 (64.3)	43 (55.1)	0.193

The average number of children among Syrians was higher than that of Turkish citizens and was not statistically significant (3.20 ± 1.54) vs. 2.88 ± 1.58, p: 0.164, respectively). Age at the first pregnancy was also found to be similar between the two groups (Turkey; 20.30 ± 3.15 , Syria: 20.76 ± 4.18, p: 0.366). The number of individuals living at home was significantly higher in Turkish citizens compared to Syrians [Turkey 6 (3-20), Syria 5 (3-10), p: 0.011]. Smoking was significantly higher in Syrians than in Turkish citizens (55.1% vs. 23.8%, respectively, p<0.001). The mean age of the children who were accompanied at the time of their enrollment in the study was Turkish; 25.16 ± 12.56 month (9-60 month), Syrian; 21.07 ± 11.37 month (9-58 month); there was a statistically significant difference between the two groups (p: 0.020).

Postpartum breastfeeding in Turkish citizens was 91.3%, breastfeeding duration was 12 (0-24) months and in Syrian refugees, breastfeeding was 84.6% and average breastfeeding time was 9 (0- 24) months (respectively, breast milk intake p: 0.144, uptake time p: 0.161, no statistical difference).

Breastfeeding training was received by 23.8% of Turkish citizens and 5.1% of Syrian refugees, there was a significant difference between the two groups (p=0.001). In addition, physician control during pregnancy was significantly different between Turkish and Syrian mothers, 85.7% and 61.5%, respectively (p <0.001).

There was no difference between the two groups in terms of gender of the child, type of delivery, postpartum intensive care admission, breastfeeding within the first 30 minutes after birth, colostrum intake, time to supplementary food, pacifier use, bottle use and frequency of feeding the newborn.

The first food given to the baby was breast milk at a high rate (80.2%) and sugar water in second place (10.3%) in Turkish citizens, while the rates were 47.4% and 30.8% in Syrian citizens.

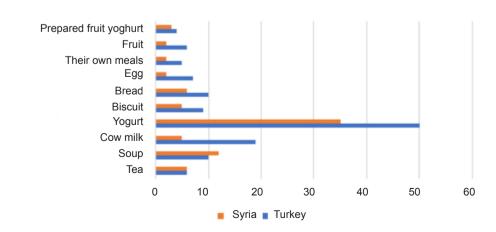
The views of the participants on what their preferences are when switching to additional food are summarized in *Figure 1*. As the participants add complementary foods, the Turkishs prefer biscuits, yogurt, cow's milk, and bread; the Syrians prefer biscuits, cow's milk, and soup.

Figure 2 shows the participants' perspectives on the significance of breastfeeding. The views of the Turkish participants were "disease prevention, having the finest nutrition," respectively, and the views of the Syrians were "easily accessible and economical."

Figure 3 summarizes the participants' opinions regarding the reasons for not breastfeeding. The views of the participants were determined to be "those without breastmilk, low breastmilk and baby's rejection of the breast" the most, respectively, by Turks and Syrians.

DISCUSSION

Considering the practices around the world, 3 out of 5 children are not breastfed in the first hour of life.¹³ Infants fed exclusively with breast milk in the first 6 months of life constitute only 40% of the world.^{14,15} While two out of every three mothers breastfeed their babies until the age of 1, the rate of breastfeeding decreases to 45% in the first 2 years of life.¹⁶





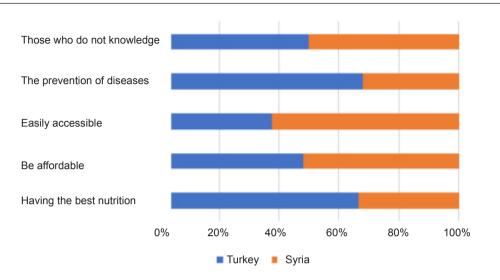
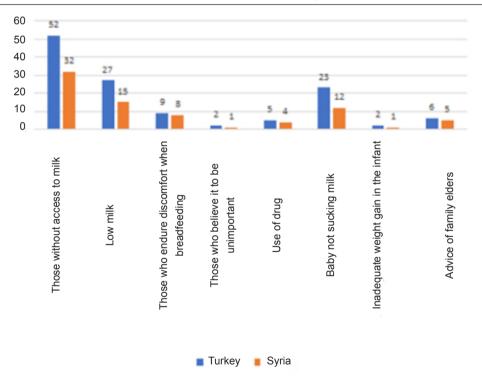


FIGURE 2. Participants' perspectives on the significance of breastfeeding

FIGURE 3. Opinions of the participants on the reason for not taking breast milk



There was no difference between the two groups in terms of the child's gender, type of delivery, postnatal intensive care admission, breastfeeding in the first 30 minutes after birth, intake of colostrum, time to supplementary food, pacifier use, bottle use, and frequency of feeding the newborn. The proportion of Syrian babies whose body weight Z score for age is below -2 SD is reported in the Turkey Demographic and Health Survey (TDHS) (2018) Report as follows: 4.2% for babies aged under 6 months, 6.3% for babies aged 6-8 months, 4.5% for babies aged 9-11 months, 2.7% for babies aged 12-17 months, and 2.8% for babies aged 18-23 months.¹⁷ Among Syrian infants, the proportion of male infants with low body weight for age was found to be higher. The rate of infants whose body weight for age is below -2 SD below the required Z score for age is higher in mothers with a low education level and a BMI below 18.5 kg/m^{2.18} In a study investigating the post-crisis feeding practices of 0-2 years in Lebanon, when asked why infant formula was used, 50% of the mothers stated that because of the stress; 40% stated that they applied to formula because of their limited access to food and insufficient nutritious foods, and 9% because of not finding the appropriate time to breastfeed. At the same time, reasons such as the fact that mothers can no longer breastfeed due to trauma, the doctor's recommendation of formula, and the baby's rejection of the breast have also been shown to be among the reasons why infants are fed with formula.¹⁹ In a study published in Bagladesh in 2019, it was stated that mothers said that they fed their babies with formula because they had difficulty in breastfeeding, because they thought baby formula was beneficial, and because family members, relatives, and a health worker recommended it.20 In studies conducted in Ethiopia and Vietnam, the rate of giving food/drink other than breast milk to babies born by cesarean section in the first 3 days after birth was higher than babies born by normal delivery.21

According to TDHS 2013 data, while the rate of exclusive breastfeeding for the first 6 months in Turkey was 30.1%, this rate was shown as 41.0% in the TDHS 2018 report.18,22. In a study conducted with Syrian mothers in Sanliurfa, it was reported that the rate of exclusive breastfeeding in the first 6 months was 53.6%.23 In the study of Yüzgüllü et al., the rate of exclusive breastfeeding for the first 6 months was found to be 37% in Turkish children.²⁴ Looking at the world, the regions with the lowest rate of exclusive breastfeeding until the sixth month are East Asia and the Pacific with 29%, followed by East and North Africa with 31%.²⁵ According to a UNICEF survey, for the first six months of life, 57% of infants in India, 74% of infants in Baghdad, and 75% of infants in Nigeria and Indonesia were exclusively breastfed.²⁶ Only 32.91% of the mothers in this study gave their infants only breast milk for the first six months. Even though 98.89% of infants have had breast milk at some point in their lives, only about 12% of infants exclusively breastfeed throughout the first six months. The first food given to the baby was breast milk at a high rate (80.2%) and sugar water in second place (10.3%) in Turkish citizens, while the rates were 47.4% and 30.8% in Syrian citizens.

According to data from the 2018 Turkey TDHS, 74% of children aged 6-23 months ingest cheese, 73% consume yogurt, 74% consume fruits, and 77% consume vegetables. Meat, fish,

and fowl are the foods given to children aged 6-23 months the least amount.¹⁸ In a survey conducted with Syrian groups, 81.9% of babies older than 5 months received a food from the bread and cereals group; 84.1% received a food from the dairy category; 30.4% consumed meat, poultry, or fish; 34% consumed legumes and oilseeds and 56.4% consumed eggs.²⁷ The most favored foods for the Turks in this study were biscuits, yoghurt, cow's milk, and bread; the most liked foods for the Syrians were biscuits, cow's milk, and soup.

Even in healthy societies, global experience has demonstrated that child mortality increases two- to seventy fold under humanitarian conditions. In such situations, sanitary conditions deteriorate, food access issues arise, water-borne infections can threaten life, women and children are badly impacted physically and psychologically, and consequently, the nutrition of children ages 0-2 is at risk.⁵ It is mentioned that supplying the proper nutrition to children ages 0-2 has a lifesaving effect during disasters and emergencies; the favorable effects of nursing under these situations are two times greater than under optimal settings.¹⁰ Although administering formula to infants aged 0-2 years may appear to be a solution, it should only be utilized as a last resor.5 In this study, it was established that the opinions of the participants regarding the significance of breastfeeding are primarily "disease prevention and optimal nutrition," whereas the views of the Syrian refugees are "easily accessible and affordable."

CONCLUSIONS

More should be done to promote mothers' awareness of issues like nutrition during pregnancy and nursing, nutrition and food diversity in young children, and how to improve behaviors in refugee communities and the local community. Both one-on-one therapy and group counseling are offered to mothers as forms of assistance. To identify the barriers to adequate and balanced nutrition, proper breastfeeding practices, exclusive breastfeeding for the first six months, and appropriate complementary feeding practices, and to take correct and effective action, it is necessary to expand refugee and local group's nutritional knowledge and practice field studies.

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