

Evaluation of Prenatal Education Provided to Immigrant Women

Göçmen Kadınlara Verilen Doğuma Hazırlık Eğitiminin Değerlendirmesi

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ABSTRACT

Objective: Migration often has the most significant negative health consequences for women and children. This study aimed to examine the impact of an antenatal education program provided to Syrian pregnant women who migrated to Turkey on their level of knowledge about women's health.

Method: This quasi-experimental study included 437 refugee and migrant pregnant women who participated in a prenatal education class, forming the study's population. The sample comprised 298 participants (68.2%). Data were collected using a socio-demographic and obstetric information form and a questionnaire to assess knowledge levels.

Results: There was a significant increase in the knowledge levels of pregnant women after the training compared to before. Prior to the training, the participants already had relatively higher knowledge levels regarding breastfeeding, family planning, and infant care. However, their knowledge about childbirth processes was the least informed.

Conclusion: Prenatal education programs provided to refugee and migrant women are effective. While knowledge levels regarding family planning, breastfeeding, and infant care are satisfactory, further research is needed to explore their attitudes and behaviors.

Keywords: Health education; Immigrants; Reproductive health; Pregnancy; Women's health

ÖZ

Amaç: Göç, en çok kadın ve çocukların olumsuz sağlık sonuçları yaşamasına neden olur. Bu çalışmada Türkiye'ye göç etmiş Suriyeli gebe kadınlara doğum öncesi verilen eğitim programının, kadın sağlığı bilgi düzeyine etkisini incelemek amacıyla yapılmıştır.

Yöntem: Yarı deneysel nitelikteki çalışmada gebe eğitim sınıfından eğitim alan toplam 437 mülteci ve göçmen gebe, araştırmanın evrenini oluşturmuş olup tamamı araştırmaya dâhil edilmiştir. Araştırma katılan gebe sayısı 298 (%68,2) dir. Araştırmada veri toplamak için sosyo demografik ve obstetrik bilgi formu, bilgi düzeyini ölçmek amacıyla anket formu kullanılmıştır.

Bulgular: Gebelerin eğitim öncesine göre eğitim sonrası bilgi düzeyi arasında anlamlı düzeyde artış olduğu görülmüştür. Gebeler eğitim öncesinde de emzirme, aile planlaması ve bebek bakımı konularında daha fazla bilgi düzeyine sahiptir. En az bilinen konu doğum eylemine ait içeriktir.

Sonuç: Mülteci ve göçmen kadınlara verilen doğuma hazırlık eğitimleri etkilidir. Aile planlaması, emzirme ve bebek bakımı konularında bilgi düzeyleri iyi olmasına rağmen tutum ve davranış hakkında yeni çalışmalara ihtiyaç vardır.

Anahtar Kelimeler: Gebelik; Göçmen; Kadın sağlığı; Sağlık eğitimi; Üreme sağlığı

Introduction

In 2020, it was reported that there were approximately 281 million international refugees and migrants globally, which is equivalent to 3.6% of the global population. In 2019, the number of women who were refugees and/or migrants was 130 million (3.4% of the global female population), and this figure increased to 135 million in 2020 (3.5% of the global female population) (1).

The intensity of transit referred to as a "corridor" between two countries in the international migration process results in demographic, economic, health, and social outcomes for the destination country. Notable migration corridors exist worldwide. The corridor from Mexico to the United States is the largest in the world, comprising approximately 11 million people. The corridor from the Syrian Arab Republic to Turkey, primarily consisting of refugees displaced due to the civil war in the Syrian Arab Republic, ranks second globally. The corridor from India to the United Arab Emirates, largely composed of labor migrants and refugees, ranks third. The bilateral corridor between the Russian Federation and

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Ukraine ranks fourth and fifth among the largest corridors in the world (2).

More than 80% of the total refugee population worldwide comes from the Syrian Arab Republic, Afghanistan, South Sudan, Myanmar, the Democratic Republic of the Congo, Somalia, Sudan, the Central African Republic, Eritrea, and Burundi. Turkey hosts over 3.6 million refugees, primarily from Syria, making it the largest host country in the world (2).

According to data announced by the Ministry of Interior's Directorate General of Migration Management, as of May 9, 2024, the number of registered Syrian refugees under temporary protection in Turkey is 3,115,536 (3). The proportion of Syrian women is 47.8%, while the number of men exceeds that of women. This disparity decreases with age; among those aged 45 and over, the number of women exceeds that of men. Women and children constitute 73.4% of Syrians (2,285,154 individuals) (4).

While both women and men migrate globally at similar rates, women and children are disproportionately affected. Discrimination, poverty, and lack of education adversely impact the physical, economic, and social lives of migrant women and, consequently, their health. Challenges arise from the inability of pregnant women and children to register with the healthcare system, undocumented women's delayed access to screening, treatment, and care, limited access to contraception and pregnancy termination, and negative health conditions related to language barriers (Bimay, 2022). As of December 31, 2020, there were 519,000 infants aged 0-4 years among Syrian refugees, the majority of whom were born in Turkey (4). According to the Turkey Demographic and Health Survey (TNSA), while the total fertility rate in Turkey is 2.3, the total fertility rate among Syrians in Turkey is 5.3. It is understood that 93% of Syrian births occur in healthcare institutions (5). Additionally, there is a lack of sufficient studies in the literature on the training and outcomes regarding reproductive health, preparation for pregnancy, childbirth, and postpartum care for these women who receive extensive services from

healthcare institutions. However, the inability of healthcare personnel, who are health educators, to communicate in a common language with the refugee and migrant service recipients is a significant barrier in this area (6).

There is a need to strengthen preventive health services that can address health issues arising from migration. Primary healthcare services, which form the basis of health services, are the most effective and cost-efficient means of removing barriers faced by disadvantaged groups (7). Sexual and reproductive health, as part of primary healthcare services, is considered a critical component for the overall health and quality of life of communities. In this context, maternal and newborn care is especially important because the periods of pregnancy, childbirth, and postpartum are vital for safeguarding the health of mothers and babies. Good maternal and newborn care includes the provision of necessary medical and supportive services at every stage of the pregnancy process (8). Preconception education enables expectant mothers to prepare for pregnancy and childbirth. These educational programs enhance the health awareness of prospective mothers, help them be better prepared for the processes of pregnancy and childbirth, and thereby improve health outcomes for both mothers and infants. Furthermore, they support the awareness of parents regarding infant care, breastfeeding, and family planning. Such preventive services strengthen health indicators in communities, safeguard maternal and infant health, and enhance the overall well-being of societies. Therefore, it is crucial to increase access to sexual and reproductive health services and facilitate access to preconception education programs (9).

A literature gap has been identified regarding interventions for pregnancy education aimed at refugee and migrant women in Turkey. This study aims to evaluate the educational levels of refugee and migrant women participating in a childbirth preparation class regarding reproductive health and preparation for childbirth, both before and after the training. The study examines the change in knowledge levels of married refugee and migrant women who participated in a reproductive health development project designed to enhance

knowledge and skills about pregnancy, childbirth, postpartum care, infant care, breastfeeding, and family planning, specifically targeting refugees and migrants settled in Kayseri.

Methods

Research Type: This study utilized a single-group pre-test/post-test design. The STROBE checklist was applied for reporting.

Research Location and Dates: This study was conducted in the Pregnant Women Training Class at the Kayseri Migrant Health Center from March 1, 2022, to March 1, 2023.

Research Population and Sample: The research population consisted of 437 refugee and migrant women who applied to the Pregnant Women Training Class at the Kayseri Migrant Health Center between March 1, 2022, and March 1, 2023. The inclusion criteria for pregnant women participating in the study were as follows:

- Being a foreign national and classified as a refugee, migrant, or asylum seeker in the country,
- Having listening and speaking skills in Arabic and/or Turkish (those without writing skills were not excluded from the study, as translators would be provided),
- Being single-fetal pregnant with a gestational age of over 20 weeks,
- Possessing a medical report stating that there were no health problems that would prevent participation in exercise and training,
- Agreeing to participate in the study and signing the consent form.

A power analysis was conducted to determine the appropriate sample size. Among the women who applied to the pregnant women training class, the number of pregnant women who agreed to participate in the study was 298 (68.2%).

Data Collection Tools: To collect data in this study, a personal information form, pregnancy, birth, postpartum periods, and a questionnaire to evaluate knowledge levels regarding reproductive health were used. All forms for data collection were developed by the researcher through a literature

review (11-13).

Personal Information Form: This form contains nine questions regarding the socio-demographic characteristics of the pregnant women and 24 questions concerning their obstetric characteristics.

Knowledge Assessment Form: The questions were prepared based on the curriculum of the Ministry of Health's pregnant women's training class. A total of 21 questions were asked, covering three topics each of reproductive organs and functions, pregnancy formation and physiology, labor, postpartum period, breastfeeding, family planning, and infant care. One point was awarded for each correct answer, with a minimum score of 0 and a maximum score of 21.

The questionnaires for data collection were initially prepared in Turkish. To ensure the validity and reliability of the Turkish form, it was pilot-tested with 20 Turkish-speaking pregnant women. The Arabic translation was then carried out by two translators from the Turkish Red Crescent Community Center. To assess the comprehensibility of the items, completion time of the test, and sections where participants experienced difficulty, the Arabic translation was re-administered to 20 pregnant women who had completed the Turkish questionnaire. Participants were asked to read each item aloud and explain their understanding and thoughts in their own words. The questionnaire was reviewed and finalized with the researcher and translators (14).

Training Content

The training sessions were designed according to the Ministry of Health's maternity education curriculum. The content included topics such as pregnancy, childbirth, postpartum care, breastfeeding, infant care, nutrition, and family planning.

Training Implementation

The training, planned in accordance with the principles of adult education, was delivered by two midwives certified by the Ministry of Health. Each participant received a five-session program in the Maternity Education Class of the Migrant

Health Center. The training program consisted of two components: theoretical and practical, with a total duration of 30 minutes for each face-to-face session, each part lasting 15 minutes.

• **Theoretical Component (15 minutes):**

Fundamental concepts related to pregnancy, childbirth, postpartum care, and infant care were explained using PowerPoint presentations and video demonstrations. Each topic was selected to provide the necessary foundation for practical applications.

• **Practical Component (15 minutes):**

Participants practiced infant care techniques, breastfeeding positions, and postpartum self-care procedures using model babies and practical materials. The practical component allowed for skill practice that aligned with the theoretical knowledge. Throughout the sessions, two Red Crescent Community Volunteers fluent in Arabic and Turkish provided additional translation and interpreter support, as well as distributed bilingual brochures and booklets summarizing the session content.

Survey Administration

Before the first lesson, the researchers informed the participants about the purpose of the questionnaire and how to complete it. Informed consent forms were signed by those who agreed to participate in the study, followed by the administration of the pre-test questionnaire. Turkish-speaking participants were provided with Turkish forms, while Arabic-speaking participants received Arabic forms, and they were asked to complete them. Immediately after the training sessions, the post-test of the Helsinki Declaration 2008. questionnaire was administered following the same procedure as the pre-test.

Data Analysis

The survey data were loaded into SPSS 22 for analysis. The Kolmogorov-Smirnov Test was applied to determine whether the data exhibited normal distribution, and it was found that the data did not meet normal distribution characteristics. For the analyses, the Wilcoxon Signed-Rank

Test, a non-parametric statistical technique, was employed.

Ethical Considerations: This research was conducted in accordance with the Declaration of Helsinki and ethical approval was obtained from Kayseri City Hospital Clinical Research Ethics Committee (576/2022) and with the written consent of the participants. In line Declaration of Helsinki, participants were informed of the study through an introduction text containing details about consent, which they were required to approve before participating in the survey.

Results

All 298 participants in the study consisted of refugees who migrated from Syria. The average age was 24.3 ± 5.9 years (minimum: 15, maximum: 43). Among the participants, 44% had completed middle school, and 88.6% reported their income was less than their expenses.

The median number of pregnancies among the participants was 3 ± 2.1 (minimum: 1, maximum: 14), the median number of living children was 2 ± 1.5 (minimum: 0, maximum: 8), and the median number of miscarriages was 0 ± 1.1 (minimum: 0, maximum: 8). According to the pre-survey, the average gestational age of those participating in the training program was 24.6 ± 8.7 weeks. Additionally, 17.8% of the participants were experiencing their first pregnancy, while 4.4% reported having had no live births due to miscarriage.

51.4% of the group indicated that they had previously experienced a normal delivery, with 90% of those having had an unassisted vaginal birth. Regarding their current pregnancies, 47.3% of the participants stated that they had not planned for delivery, while 37.2% of those who planned indicated they wished to have a vaginal birth. Furthermore, 30.9% of the participants reported attending their first pregnancy check-up between 5-8 weeks, while 10.4% stated they had never attended a check-up. In terms of health check-ups related to pregnancy, 68.1% preferred hospitals, while 9.4% chose migrant health centers.

Table 1. Comparison of Participants' Scores Before and After Education, Kayseri-2023

Content Topics	Average Score		Kruskal-Wallis H Testi	p
	Pre-test	Post-test		
Structure and Function of Reproductive Organs	1,79±0,9	2,52±1,0	121,96	0,001
Pregnancy Formation and Physiology	1,63±0,96	2,61±0,85	126,03	0,001
Labor	1,41±1,03	2,56±0,96	119,25	0,001
Postpartum Period	1,51±1,01	1,79±0,85	187,37	0,001
Breastfeeding	2,28±1,09	2,53±0,58	3,21	0,201
Family Planning	2,37±0,69	2,71±0,51	4,163	0,125
Baby Care	2,29±0,70	2,65±0,57	18,97	0,001
Average Total Score	12,92±4,80	17,38±3,37	167,45	0,001

Table 2. Preferred Methods for Coping with Labor Pain, Kayseri-2023

Preferred Methods for Coping with Labor Pain (n:71)	Number	%
Exercising/doing sports	22	7.4
Making sounds/humming/moaning	13	4.4
Taking a bath	10	3.4
Listening to the Quran/Praying	10	3.3
Getting a massage	9	3.0
Doing breathing exercises	4	1.3
Consuming dates	2	0.7
Consuming cinnamon	1	0.3

Based on the pre-test questionnaire results, it was determined that the participants had a higher knowledge level regarding breastfeeding, family planning, and infant care compared to other topics. Conversely, their knowledge level concerning the content related to childbirth was found to be the lowest (Table 1). According to the post-test results, there was a significant increase in knowledge levels regarding the educational content, except for breastfeeding and family planning topics ($p < 0.001$) (Table 1).

No significant difference was found in the pre-test knowledge levels regarding family planning methods between those who did not desire their current pregnancy and those who did (χ^2 : 0.861, $p > 0.05$).

When comparing whether participants experienced any issues during their most recent pregnancy with their attendance at the first pregnancy check-up, no significant results were observed. Among the reported issues, nausea and vomiting were the most common, followed by

bleeding and dizziness. 60% of participants stated they did not experience any problems during their most recent pregnancies. The proportion of those who had never attended a pregnancy check-up up to the date of the study was 10.4%.

54.4% of the participants reported having concerns about childbirth. No significant difference was found between the number of pregnancies and the level of anxiety regarding childbirth ($\chi^2 = 0.132$, $p > 0.05$). 68.1% expressed fear of childbirth pain, while 51.3% found the delivery room environment intimidating, 31.5% described it as crowded, and 13.4% perceived it as noisy.

It was observed that 76.2% had no knowledge or methods to cope with childbirth pain, while 7.4% indicated they preferred to engage in sports and exercises to alleviate pain (Table 2).

91.3% of the participants wished to have a support person present during childbirth. Among these, 50% preferred their mother, 26.8% their partner, and 14.1% their sibling. The individual they

wished to assist with the delivery was reported to be a doctor by 89.6% of the participants. Regarding the recommendation for participation in the maternity education class, 57.4% were suggested by midwives and nurses, 21.1% by friends, 17.8% through social media, and only 2.7% by their doctors. Participants indicated preferences for information on childbirth (%30.9), coping with childbirth anxiety (%17.4), breastfeeding and maternal nutrition (%12.4), and comprehensive information about postpartum care (%12.4). 62.8% preferred to receive education from midwives, while 30.2% preferred doctors.

97% (n: 289) expressed satisfaction with the education they received. Among them, 41.6% felt more knowledgeable about childbirth, 11.7% about pregnancy and infant care, 12.4% about family planning, 12.1% about infant care and breastfeeding, 6.7% about managing fear of childbirth, and 6% about coping with pain.

Discussion

The study included 298 pregnant women, all of whom were refugees who migrated from Syria. It has been observed that, similar to the traditions of Middle Eastern countries, Syrian refugees and migrants tend to marry at an early age and experience their first pregnancies during adolescence (16). Among the research group, 22.8% were pregnant at 19 years of age or younger. Reports indicate that the rates of early marriage, which were already high before the Syrian civil war, have significantly increased due to forced migration (17). Notably, 10.4% of the research group reported that they had never attended a prenatal check-up, despite being, on average, at 24 weeks of gestation, while 19.8% stated that they did not want their current pregnancy.

Effective utilization of primary healthcare services could facilitate easier access to emergency contraception and family planning services. In our study, Syrian participants demonstrated a higher knowledge level regarding family planning compared to other topics. A study conducted in Jordan also found that Syrian women had a high level of awareness regarding

modern contraceptive methods (18). However, our research did not investigate the perspectives of refugee and migrant women towards contraception. Literature indicates that there is a lack of information, awareness, and barriers to access concerning contraception among women (19). Traditionally, the cultural importance of childbirth among Syrian women serves to assure their partners of fidelity and maintain their partners' commitment to the household. Consequently, the prevalence of contraception remains low (20). According to a study involving Syrian women, 46.80% expressed that tubal ligation is sinful (21). Effective information dissemination and educational programs appear to have a positive impact within this community. Nevertheless, it is crucial to recognize that some cultural and religious beliefs still exert influence, necessitating the adoption of culturally and religiously sensitive strategies to enhance access to health services and provide accurate information.

Based on the pre-test results, one of the topics participants were most knowledgeable about was breastfeeding. However, only 73% of Syrian infants in Turkey were breastfed within the first hour after birth, and only 51.6% of infants aged 0-5 months continued to be breastfed (5). A study on breastfeeding behavior among Syrian mothers in Turkey reported low levels of breastfeeding literacy (22). Misconceptions about breastfeeding can pose threats to infant health. Yalçın and colleagues identified several erroneous practices among Syrian mothers related to traditional infant feeding, including the introduction of sugary water, packaged fruit juices, baby food, anise tea, dates, cumin, chamomile tea, and zamzam water (22). Our study aimed to enhance mothers' knowledge about infant feeding during pregnancy. It was found that Syrian participants had a good level of knowledge about breastfeeding, with a noticeable increase in knowledge levels post-education. A study by Özkaya and colleagues also reported positive attitudes among Syrian women towards breastfeeding, supporting the findings of our research (23).

In our study, the topic with the least knowledge among participants, which showed a significant

increase in knowledge levels after education, was labor. This finding aligns with previous research indicating that studies on Syrian refugee and migrant women's access to reproductive health services predominantly focus on pregnancy, childbirth, and postpartum health services (19). Research by Güngör et al. highlighted that the normal delivery rate among Syrian pregnant women is higher than that of Turkish women (24). Adverse obstetric outcomes, such as preterm birth, premature rupture of membranes, low birth weight, and anemia, are reportedly more common among refugees and migrants in Turkey (25).

In this context, the low knowledge level regarding labor among Syrian refugee and migrant women and the significant increase observed following education are noteworthy. Understanding the challenges these women may face during the birthing process and knowing the preventive measures they can take before childbirth are critical. Therefore, it can be emphasized that educational programs and awareness campaigns about labor have the potential to positively impact these women's health and pregnancy outcomes. This approach can contribute to improving access to reproductive health services for Syrian refugees and migrants and alleviating the challenges they face during childbirth.

Research on birth preparation classes indicates that such classes assist women in preparing for childbirth (26). Birth preparation classes help families understand the normal and abnormal signs of labor and the actions they should take regarding potential adverse obstetric conditions. Additionally, it is essential to provide birth preparation training meticulously for vulnerable groups to reduce concerns related to childbirth. Our study showed that birth preparation training increased women's knowledge levels. A study conducted in Turkey noted that refugee and migrant women experience both positive and negative birth experiences (27).

In our study, 51.3% of participating women found the delivery room environment intimidating, while 31.5% viewed it as crowded. This perception underscores the importance of birth

preparation training in addressing the concerns of refugee and migrant women regarding childbirth and their perceptions of the delivery environment. Additionally, Syrian refugee women showed low awareness and usage of methods to manage labor pain. Numerous factors influence a woman's attitude or beliefs about childbirth (28,29). However, no studies have specifically investigated the effect of being a refugee or migrant on childbirth anxiety. These findings highlight the need for further research to understand the birth experiences of refugee and migrant women and enhance the effectiveness of birth preparation training. It is crucial to develop birth preparation programs tailored to meet the cultural, social, and emotional needs of refugee and migrant women.

Refugee and displaced women experience poorer health outcomes compared to host country populations. It is particularly recommended to strengthen health education to enhance the confidence and security of refugee and displaced women regarding maternal and child health and reproductive health (19). Birth preparation training can provide educational programs that help women prepare for reproductive health, pregnancy, childbirth, postpartum care, and infant/child health. Individuals who have migrated from other countries require information about the host country, the healthcare system, and the processes they will face, as well as guidance on personal mental and physical changes and adaptation to new life with a baby (30).

Limitations

This study only includes pregnant women from the Maternity Education Class of the Kayseri Migrant Health Center and does not represent the entire population of refugee and migrant pregnant women.

Conclusion

In conclusion, the educational program aimed at increasing the knowledge levels of refugee and migrant women regarding reproductive health, supporting their preparation for the childbirth process, and improving their access to healthcare services has proven to be effective.

However, it is essential to consider the influence of cultural factors to enhance the effectiveness of the education provided to refugee and migrant women. Specifically, assessments regarding attitudes and behaviors related to family planning, breastfeeding, and infant care should take these factors into account.

This study can serve as a significant resource for policymakers, healthcare professionals, and non-governmental organizations, contributing to the development of strategies aimed at improving the health and well-being of these communities.

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