

Göçün 10. Yılında Mülteci Anne ve Yenidoğanların Perinatal Değerlendirilmesi

Perinatal Outcomes of Refugee Mothers and Newborns in The Tenth Year of Migration to Turkey

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ÖZET

Amaç: Artan göç olaylarından sonra az gelişmiş ülkelerden milyonlarca birey mülteci olarak yaşamaktadır. 2011 yılında başlayan göçün 10. yılında mültecilerin sağlık durumlarını değerlendirerek mültecilerin doğum oranlarını ve ülkemizde doğan bebeklerin sağlığını incelemeyi amaçladık.

Materyal ve Metot: Hastanemizde 2983 doğum dosya ve hastane bilgi sistemi verileri kullanılarak retrospektif olarak incelendi. Anne yaşı, gebelik sayısı, gebelik süresi, bebeklerin antropometrik ölçümleri ve doğum şekli değerlendirildi.

Bulgular: Analiz edilen 2893 doğumdan sırasıyla 2435 ve 458 doğum Türk vatandaşları ve mülteciler tarafından yapılmıştır. Mülteciler arasında gebelik sayısı yüksekti ($p<0.001$). Geç preterm, term ve posterm doğum oranlarında istatistiksel anlamlılık saptanmamakla birlikte, mültecilerde erken preterm ve preterm doğum anlamlı olarak daha yüksek bulundu ($p<0,001$); Mültecilerde normal doğumlar daha yüksek olarak saptandı.

Sonuç: Artan mülteci sayısı ve göç olayları önemli sağlık sorunları arasındadır. Artan mülteci nüfusuna bağlı doğurganlık oranları da hem gebelik hem de erken doğum sayılarını artırmaktadır. Mültecilerin ekonomik sorunlarına eşlik eden sağlık sigortasının olmaması da mültecilere ev sahipliği yapan ülkelerde bir diğer önemli sorun olarak öne çıkmaktadır.

Anahtar Kelimeler: Bebek, anne sağlığı, göç, gebelik, mülteci.

ABSTRACT

Aim: Millions of individuals from underdeveloped countries live as refugees after increasing migration events. In the 10th anniversary of the migration commencing in 2011, we aimed to evaluate the health status of refugees and examine refugees' birth rates and babies' health born in our country.

Materials and Methods: 2983 births were examined retrospectively, using file and hospital information system data. Maternal age, number of pregnancies, duration of pregnancy, babies' anthropometric measurements, and mode of deliveries were evaluated.

Results: Of 2893 births analyzed, 2435 and 458 births were given by Turkish citizens and refugees respectively. Number of pregnancies was high among refugees ($p<0.001$). Although no statistical significance was detected in late pre-term, term, and post-term birth rates, early pre-term and pre-term births were found to be significantly higher in refugees ($p<0.001$); normal births were higher in refugees.

Conclusion: The increasing number of refugees and increasing migration events are among important health challenges. Fertility rates due to the increasing population of refugees also increase the number of pregnancies and premature births. The lack of health insurance accompanying the economic problems of refugees comes to the fore as another important problem in countries hosting refugees.

Keywords: Baby, maternal health, migration, pregnancy, refugee.

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INTRODUCTION

Based on the figures provided by the United Nations High Commissioner for Refugees (UNHCR) for 2022, more than 100 million people continue to live as refugees or asylum seekers around the world (1). Due to the ongoing civil war since 2011, Syria is now the country with the highest number of refugees (6.7 million), and the neighboring country of Syria, Türkiye is the country hosting the most refugees across the world. As of 2020, there are 3.7 million refugees in Türkiye, and under the data released by UNHCR, external migration to Turkey is mostly from Syria, Afghanistan, and Iraq (2, 3), and these refugees are mostly composed of women and children.

It is known that refugees cannot benefit from the services of maternal-children health care and family planning sufficiently; unwanted pregnancies and gynecological diseases are common; the controls of pregnancies are not performed, and the rates of maternal and perinatal mortality increase. On the other hand, in the studies conducted in Europe, a great number of refugees have been determined not to use the health services provided for them (4,5). Regarding reproductive health, refugee women have also been found to carry a higher risk in terms of having babies with low birth weight, giving premature births, malpresentation, placenta previa, amniotic fluid anomalies, fetal anomalies, antenatal mortality and congenital malformations (6). On the other hand, Turkey is one of the rare countries offering unlimited and free health services to refugees so that they can maintain their normal lives.

However, there is limited information on how the provision of free health care or the length of the time spent in target countries affects perinatal outcomes. The present study aimed to compare the perinatal outcomes of refugee mothers and their children 10 years after migration with those of host families.

MATERIALS AND METHODS

In this retrospective cross-sectional study, the records of 2893 postpartum mothers and their newborns in 2021 at a

university hospital were reviewed. Based on the personal identification numbers, mothers were divided into two groups: Turkish citizens and refugees. As well as recording such factors as maternal age, gestational period, number of pregnancies, single and multiple pregnancies, the status of still or live births, management, and causes of deliveries, the sex of the newborns, age of births (week), birth weight, and whether or not the newborns were only breastfed in the first days of the delivery were also recorded. In addition, the need for hospitalization in the neonatal intensive care unit (ICU) due to any diagnosis during the first month was evaluated in terms of the length of hospitalization and the ways of discharge from neonatal ICU, and the data obtained were compared between Turkish citizens and refugees.

Statistical Analysis

Data were summarized as mean \pm standard deviation and Median (Min.-Max.) for continuous variables, frequencies, and percentiles for categorical variables. Student's t-test and/or Mann Whitney U test were used for independent two-group comparisons, considering the results of the Shapiro-Wilk normality test. The chi-square test was used for proportions and its counterpart Fisher's Exact test was used when the data were sparse. A "p" value of less than 0.05 was considered statistically significant and Statistical analyses were performed using the Statistical Package for Social Sciences for Windows, version 25.0 (SPSS, IBM Corp., Armonk, NY, U.S., 2017).

Ethical Approval

In our study, written consent was obtained from all the cases participating in our study, in

accordance with the Declaration of Helsinki. Ethics Committee permission was obtained from the local Ethics Committee with the decision dated 27.10.2022 and numbered 136-SBKA EK.

RESULTS

The differences between the groups consisting of the refugees and Turkish citizens were investigated in terms of the variables considered regarding continuous measurements, and the medians of both groups were found to be statistically different only in terms of the number of pregnancies ($p < 0.001$). The number of pregnancies by Turkish women was observed to be significantly lower than that of refugee women (Table 1).

Table 1. Characteristics of mothers given births, and values of newborns' measurements.

	Refugees		Turkish Citizens		p
Maternal age (years)	26.30 \pm 5.70	25 (16-57)	26.72 \pm 5.86	26 (16-45)	0.188
Number of Pregnancies	3.39 \pm 1.79	3 (1-12)	2.64 \pm 1.49	2 (1-13)	<0.001
Duration of Pregnancies	38.91 \pm 2.23	39.3 (22.3-42.6)	39.1 \pm 1.77	39.3 (22.4-46.2)	0.149
Birth weight	3286.03 \pm 560.69	3310 (555-4900)	3252.05 \pm 494.65	3275 (500-4960)	0.187*
Height	49.87 \pm 2.56	50 (28-56)	49.98 \pm 1.92	50 (28-58)	0.843
Head circumference	34.93 \pm 1.81	35 (17-48)	34.99 \pm 1.59	35 (5-51)	0.904

*The student's t-test and all others from p values were obtained through the Mann-Whitney U test. Mean \pm S.Dev. and Median (Min.-Max.)

Of 2893 births examined in the study, 2435 were born to the citizens of the Republic of Turkey (1233 girls vs. 1202 boys). Even so, the remaining 458 births were performed by refugee mothers (249 girls vs. 209 boys). Ten of the births by refugee mothers and 38 of the births born to the citizens of the Republic of Turkey were multiple pregnancies. Five of the refugee mothers' pregnancies and 17 of the pregnancies by Turkish citizens ended in stillbirth, and there was no statistically significant difference in terms of sex and number of babies. In addition, babies were also evaluated in terms of age of birth (weeks), and types and causes of births. While there was no significant difference between the term births of the pregnancies, the rate of <34-week births among pre-term births was found to be four times higher among refugees ($p<0.001$). Given the mode of deliveries, the rate of normal births was observed to be higher in refugees, and the difference was statistically significant ($p<0.001$) (Table 2).

Table 2. Epidemiological characteristics of newborns

		Refugees (n) (%)	Turkish Citizens (n) (%)	<i>p</i>
Sex	Female	249-54.37	1233-50.64	0.143
	Male	209-45.63	1202-49.36	
Exitus/Survivors	Exitus	453-98.91	2418-99.3	0.376*
	Survivors	5-1.09	17-0.7	
Single/Multiple	Single	448-97.82	2397-98.44	0.338
	Multiple	10-2.18	38-1.56	
Terms	Early Pre-term	7-1.52	3-0.12	<0.001*
	Moderate Pre-term	7-1.52	8-0.32	
	Late Pre-term	25-5.45	189-7.76	
	Term	410-89.51	2213-90.88	
	Post-term	9-1.96	22-0.9	
Birth weight	Extremely Low	4-0.87	6-0.25	0.283*
	Very low	1-0.22	5-0.21	
	Low	22-4.8	120-4.93	
	Normal	403-87.99	2172-89.2	
	Macrosomic	28-6.11	132-5.42	
Only breastfeeding in the first days	No	80-17.47	503-20.66	0.128
	Yes	378-82.53	1932-79.34	
Mode of delivery	Normal Delivery	322-70.31	1429-58.69	<0.001
	Cesarean section	136-29.69	1006-41.31	
Types of Cesarean section	Normal	322-70.31	1429-58.69	<0.001
	Repeated cesarean section	72-15.72	598-24.56	
	Primary cesarean section	64-13.97	408-16.76	
Presentations	Cephalic	437-96.26	2347-96.58	0.612
	Breech	16-3.52	69-2.84	
	Others	1-0.22	8-0.33	

p values through the *Fisher's exact test

Of 2435 babies born to Turkish citizens and 458 babies born to refugees, 422 (17.1%) and 83 (18.1%) were followed up or hospitalized in the neonatal units of our hospital due to any complaint or diagnosis, respectively. No significant difference was detected between the two groups in terms of the

rates of hospitalization in neonatal units, length of hospital stay, and ways of discharge from the hospital. In addition, two babies died in each group during the stay in the neonatal period, and although there was a percentage difference, no statistical difference was found between both groups ($p=0.128$) (Table 3).

Table 3. Statistical analyses of newborns admitted to neonatal intensive care units

		Turkish Citizens	Refugees	<i>p</i>
Stages of neonatal ICU	Primary	288-68.25	54-65.06	0.850
	Secondary	70-16.59	15-18.07	
	Tertiary	64-15.17	14-16.87	
Ways of discharge	Reference to tertiary facilities	41-9.72	10-12.05	0.240*
	Discharge for status	27-6.4	4-4.82	
	Discharge with good health	350-82.94	66-79.52	
	Treatment rejection	2-0.47	1-1.2	
	Exitus	2-0.47	2-2.41	
Exitus/Survivors	Survivors	420-99.53	81-97.59	0.128*
	Exitus	2-0.47	2-2.41	
Length of hospital stay		5.95±5.44 [5.0(1.0-38.0)]	5.72±5.87 [4.0(1.0-37.0)]	0.406#

**p* values through Fisher's exact test, and #*p* values through the Mann-Whitney U test. Descriptive statistics, Mean±St. Dev.(SD) [Median (Min.-Max.)] and (n), (%)

DISCUSSION

In the present study, the prenatal and perinatal data of the refugees migrating to Turkey within the last decade were examined and compared with those of the newborns born to Turkish citizens and Turkish mothers' pregnancies taking place in our hospital in 2021. There was no significant difference between both groups in terms of the rates of hospitalization, length of hospital stay, and modes of hospital discharge.

Migration also affects the delivery preferences of women of reproductive age. For most refugee women, giving birth to children is important to preserve their traditional cultural characteristics and the continuity of their status (7). Thus, a refugee woman tries to increase her fertility. Refugees more frequently becoming pregnant have been reported to benefit less from primary health services related to maternal and children's health care and family planning (9). Regarding reproductive health, refugee women are also at higher risk in terms of having babies with low birth weight, giving premature births, antenatal mortality, and congenital malformations.

Based on the findings of a study where 949,593 births were evaluated between 1997 and 2012 in Sweden (2018), it was determined that low birth weight was 1.47 times higher, and post-term labor was 1.41 times higher in the refugee group, compared to the Swedish-born population (8). The most common reproductive health problems among refugee women in Türkiye are infectious diseases, inability to benefit from family planning services, inability to benefit from services of prenatal care, higher rate of births at home without health professionals, irregular menstruation, spontaneous abortions,

and multiple and short-term pregnancies (9). In our study, the number of pregnancies was higher in refugees than that in Turkish citizens ($p < 0.001$). In addition, the rates of early and moderate pre-term births were determined to be significantly higher in refugees ($p < 0.001$). The higher rates of pregnancies and premature pre-term births may suggest that the risk of perinatal morbidity and mortality may be higher in births born to refugees.

The ideal rate of cesarean sections reported by the World Health Organization (WHO) is between 10-15%; however, the rate of cesarean sections is today well above this rate (10). It has been accepted that the rates of perinatal and maternal morbidity and mortality will increase when the number of cesarean sections becomes lower or higher than the determined rate. In terms of the methods of deliveries, the rate of normal spontaneous vaginal deliveries was statistically significantly higher in refugees at 70.31%, compared to that of Turkish citizens at 58.69% in our study ($p < 0.001$). It may be asserted that the high rate of cesarean sections among Turkish citizens will increase the rate of perinatal morbidity and mortality.

In another study conducted in Türkiye in 2016, it was stated that refugees have difficulties in communicating due to language barriers while receiving health care and experience many challenges in communicating with health care providers, as well as those in performing the procedures (11). In 2018, the factors affecting the reproductive health of refugee women in Geneva were reported to be economic inadequacies, language barriers, real or perceived social discrimination, lack of information, and feelings of shame (12). As a governmental policy or at institutional levels, novel strategies such as facilitating the use of interpreters, and training both healthcare providers and recipients on the coverage and eligibility of services are needed to increase refugees' quality of life in host countries (13). In addition, it has been emphasized that the programs of language and pictogram can be performed to increase the accessibility to health information and services recommended for refugees - that is, to elevate health literacy among refugees (14). In addition, an interpreter was appointed to each hospital by the Turkish Ministry of Health in 2018. The service provided by interpreters continues 24 hours a day in our hospital. This service has aimed to overcome the language barriers and contribute to the health policies put into effect for refugees in Turk. Compared with the findings reported in previous studies, it may be asserted that refugees may have been less affected by social discrimination and cultural negativities due to the similar religious and cultural structures between Syria and Türkiye, as well as spending longer time in Türkiye and resolving the language problem in hospitals.

Turkey has implemented a generous health policy towards nearly 3.5 million refugees from Syria. Syrian refugees have been integrated into the health insurance system in Turkey in the same way as Turkish citizens, and therefore have the right to free access to public primary, secondary, and tertiary health care services. Unregistered Syrian refugees can also benefit from preventive and emergency health services free of charge (15). Refugees are registered with family physicians of Turkey. The fact that refugees can apply free of charge to secondary and tertiary health facilities along with the family physicians at the primary centers and the compulsory follow-up of those with pregnancy in the system can be suggested to have positive effects on maternal and children's health status.

The retrospective nature of the study was a limitation.

CONCLUSION

In conclusion, there was no difference between refugee mothers/their newborns and Turkish mother/their newborns in terms of hospitalization rates and length of hospital stay. However, the number of pregnancies, pre-term births and the rates of vaginal delivery were higher among refugees. The similarity of perinatal mortality and morbidity rates may be related to the fact that Turkey offers free health services to refugees without separating them from its own citizens. Despite all these factors, differences in pregnancy and birth parameters may be due to sociocultural differences or other differences requiring further studies.

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Conflict of Interest: The authors have no conflict of interest regarding this study.

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REFERENCE

1. Forced displacement hit record high in 2021 with too few able to go home. <https://www.unhcr.org/tr/en/35613-forced-displacement-hit-record-high-in-2021-with-too-few-able-to-go-home.html> (Accessed on 20.06.2023).
2. Çelik N, Sevil Ü. Migration and Women. *Türkiye Klinikleri Obstetric-Women's Health and Diseases*. 2016; 2:274-9.
3. Gümüş Y. Effect of the Immigration on Health. *Journal of Anatolia Nursing and Health Sciences*. 2015; 18:63-7.
4. Öztürk A. Effects of Migration on Women's Health. *Türkiye Klinikleri J Public Health-Special Topics* 2017; 3:41-8.
5. Juárez S, Mussino M, Hjern A. Being a Refugee or Having a Refugee Status? Birthweight And Gestational Age Outcomes Among Offspring of Immigrant Mothers in Sweden". *Scand J Public Health*. 2019; 47:730-4.
6. Suarez L, Hendricks KA, Cooper SP, Sweeney AM, Hardy RJ, Larsen RD. Neural Tube Defects Among Mexican Americans Living on the US-Mexico Border: Effects of Folic Acid and Dietary Folate. *Am J Epidemiol*. 2000; 152:1017-23.
7. Aksu H, Sevil Ü. Migration and women's health. *Maltepe University Journal of Nursing Science and Art*. 2010; 2:133-8.
8. Juárez S, Mussino M, Hjern A. Being a Refugee or Having a Refugee Status? Birthweight And Gestational Age Outcomes Among Offspring of Immigrant Mothers in SwedeN. *Scand J Public Health*. 2019; 47:730-4.
9. Tuzcu A, Ilgaz A. Effects of Migration on Women Mental Health. *Current Approaches in Psychiatry*. 2015; 7:56-67.
10. Başar F, Sağlam YH. Women's Choice of Delivery Methods and The Factors That Affect Them. *Journal of Current Researches on Health Sector* 2018; 8:59-74.
11. Önal A, Keklik B. A Study on the Problems Encountered By Refugees and Asylum- seekers in Their Access To Healthcare Services In Isparta Province. *Suleyman Demirel University The Journal of Visionary*. 2016; 7:132-48.
12. Schmidt NC, Fagnoli V, Epiney M, Irion, O. Barriers to Reproductive Health Care For Migrant Women in Geneva: A Qualitative Study. *Reproductive Health*. 2018; 15:1-10.
13. Urich, L. Family-centred maternity and newborn care: Canadian national guidelines. *International Journal of Childbirth Education* 2000; 15: 45.
14. Simich L. Health literacy and immigrant populations. *Public Health Agency of Canada and Metropolis Canada, Ottawa, Canada*. 2009. <https://multiculturalmentalhealth.ca/wp-content/uploads/2020/10/10.1.1.545.5077.pdf> (Accessed on 21.06.2023)
15. Aygün A, Kirdar MG, Tuncay B. The effect of hosting 3.4 million refugees on native population mortality. *Journal of Health Economics* 2021; 80:102534.