




Perinatal trends and birth outcomes of Syrian refugee and turkish women


Suriyeli mülteci ve türk kadınlarının perinatal eğilimleri ve obstetrik sonuçları

Alper İleri¹ 

Can Ata² 

Hande İleri³ 

Suna Yıldırım Karaca¹ 

Ayşe Rabia Şenkaya⁴ 

¹ Obstetrics and Gynecology, University of Health Sciences Tepecik Education and Research Hospital, Izmir, Turkiye

² Obstetrics and Gynecology, University of Demokrasi Buca Seyfi Demirsoy Education and Research Hospital, Izmir, Turkiye

³ Family Medicine, University of Health Sciences Tepecik Education and Research Hospital, Izmir, Turkiye

⁴ Obstetrics and Gynecology, Izmir Bakircay University Cigli Training and Research Hospital, Izmir, Turkiye

ABSTRACT

Aim: The impact of migration on health is far-reaching, making migrant populations particularly vulnerable, fueling health inequalities and resulting in serious implications for global health. The aim of our study to assess antenatal care, pregnancy and neonatal outcomes of Syrian refugee women in Turkiye.

Material and Methods: Syrian and Turkish pregnant women who delivered between 2013-2019 were recruited and categorized into groups according to maternal age at delivery. First trimester combined test, second trimester triple test, preterm delivery, maternal anemia; neonatal stillbirth, APGAR scores, birth weight and breastfeeding status were assessed.

Results: 4992 Syrian and 6846 Turkish pregnant women were included. Maternal anemia was higher in Turkish patients in 20-34 and ≥35 age groups. First trimester combined test, APGAR scores and birth weights were lower in Syrian women. Preterm rates higher in Turkish patients in only 20-34 age group. Second-trimester triplet tests were only higher in Turkish women in ≥35 age group. Low birth weight was higher in younger Syrian patients. Satisfying breastfeeding results were found in Syrian women.

Conclusion: Our study stated that Syrian women are at risk of low birth weight in adolescent and 20-34 age groups and low rates in first trimester combined test in all age groups. However decreased risk of pregnancy complications such as maternal anemia, preterm delivery, cesarean delivery and satisfying breastfeeding results were found in Syrian patients.

Keywords: Syrian, refugee, pregnancy, outcomes.

ÖZ

Amaç: Göçün sağlık üzerindeki etkisi geniş kapsamlıdır ve göçmen nüfusu özellikle savunmasız hale getirmekte, sağlık eşitsizliklerini körüklemekte ve küresel sağlık üzerinde ciddi sonuçlar doğurmaktadır. Çalışmamızın amacı, Türkiye’de yaşayan Suriye’den göç etmiş gebelerin doğum öncesi bakım, gebelik ve yenidoğan sonuçlarını değerlendirmektir.

Corresponding author: Alper İleri
Obstetrics and Gynecology, University of Health Sciences
Tepecik Education and Research Hospital, Izmir, Turkiye
E-mail: alper_ileri@hotmail.com
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Gereç ve Yöntem: 2013-2019 yılları arasında doğum yapan Suriye'den göç etmiş ve Türkiye Cumhuriyeti (TC) vatandaşı gebeler, doğumdaki anne yaşlarına göre gruplara ayrıldı. Birinci trimester kombine testi, ikinci trimester üçlü testi, erken doğum, maternal anemi; ölü doğum, APGAR skorları, doğum ağırlığı ve emzirme durumu değerlendirildi.

Bulgular: 4992 Suriye'den göç etmiş ve 6846 ve TC vatandaşı gebe dâhil edildi. Maternal anemi, TC vatandaşı gebelerde 20-34 ve ≥ 35 gruplarda daha yüksekti. İlk trimester kombine testi, APGAR skorları ve doğum ağırlıkları Suriye'den göç etmiş gebelerde daha düşüktü. Sadece 20-34 yaş grubundaki TC vatandaşı gebelerde preterm doğum oranları daha yüksekti. İkinci trimester üçlü testler sadece ≥ 35 yaş grubundaki TC vatandaşı kadınlarında daha yüksekti. Düşük doğum ağırlığı Suriye'den göç eden genç gebelerde daha yüksekti. Suriye'den göç etmiş kadınlarda tatmin edici emzirme sonuçları bulundu.

Sonuç: Çalışmamız, Suriye'den göç etmiş gebelerin adolesan ve 20-34 yaş gruplarında düşük doğum ağırlığı ve tüm yaş gruplarında ilk trimester kombine testte düşük oranlar açısından risk altında olduğunu gösterdi. Ancak Suriye'den göç etmiş gebelerde maternal anemi, erken doğum, sezaryen doğum ve tatmin edici emzirme sonuçları gibi gebelik komplikasyonları riskinde azalma bulundu.

Anahtar Sözcükler: Suriyeli, göçmen, gebelik, sonuçlar.

INTRODUCTION

Since 2011, an estimated 4.812.204 million Syrian refugees have left for neighboring countries, primarily Lebanon, Türkiye, and Jordan (1). Of all Syrian refugees in Türkiye, 49.2% are female (1). The impact of migration on health is far-reaching, making migrant populations particularly vulnerable, fueling health inequalities and resulting in serious implications for global health.

Routine perinatal healthcare is an effective method to optimize pregnancy outcomes and the lifelong health of women and their offspring (2). Late access to maternity care can result in adverse perinatal outcomes (3). Vulnerable pregnant women, face barriers to accessing healthcare including maternity care (4). This disparity in access to, and use of, perinatal healthcare can lead to significant health inequalities. Failure to effectively reach and provide optimal perinatal care for refugee women will result in failure to reduce health inequalities for this vulnerable group of women and their neonates.

The aim of the study to assess antenatal care, pregnancy and neonatal outcomes of Syrian refugee women in Türkiye.

MATERIALS and METHODS

A retrospective cross-sectional study was conducted in Buca Seyfi Demirsoy Research and Teaching Hospital, one of the highest birth rate in west region of Türkiye. Turkish and Syrian singleton pregnant women over 20 weeks who delivered between 2013 and 2019, with no missing data, were recruited.

Maternal-fetal and neonatal data were obtained from clinical databases of obstetric facility. Pregnant women were categorized into 3 groups according to maternal age at delivery (≤ 19 years, 20-34 years, ≥ 35 years). Antenatal care, pregnancy and neonatal outcomes assessed were: maternal age, gestational age at birth, preterm delivery, first trimester combined test, second trimester triple test, maternal hemoglobin (Hgb) at birth, pregnancy anemia, mode of delivery, if available primary or repeat cesarean and cesarean indication; birth height, birth weight, neonatal cranial circumference, low birth weight, macrosomia, neonatal sex, first and fifth minute APGAR score, neonatal death and breastfeeding.

Gestational age at birth was calculated by the last known menstrual period and confirmed by 1st or 2nd trimester ultrasound examination. ≤ 19 years were defined as adolescent (5) and ≥ 35 years as advance maternal age (6). Preterm delivery was defined as delivery occurring before 37 completed weeks of gestation. Anemia for pregnancy was defined as <10.5 g/dl at second and as <11 g/dl at third trimester. Pregnancy hypertension variable included both chronic hypertension, gestational hypertension, HELLP, pre-eclampsia, pre-eclampsia superimposed and eclampsia. Low birth weight (LBW) neonates are sub-grouped to the degree of smallness at first weight determination after birth: low birth weight (LBW) as less than 2500 grams, very low birth weight (VLBW) as less than 1500 grams, extremely low birth weight (ELBW) less than 1000 grams. Macrosomia was defined as

neonates' birth weight over 4000 grams. Breastfeeding only act is considered as feeding without formula milk.

Statistical analysis was performed using IBM SPSS 24. $p < 0.05$ was considered statistically significant. The distribution of continuous variables was evaluated with Shapiro-Wilk test. Mann Whitney U test for ordinal and Chi-square and Fisher's Exact test for categorical data was performed. Study was approved by local ethical committee (2019/7-20).

RESULTS

4992 Syrian refugee and 6846 Turkish pregnant women over 20 weeks who delivered, with sufficient data, were recruited.

In Turkish vs Syrian adolescent patients; mean gestational week, age, Hgb, APGAR 1', APGAR 5', birth weight were 39.34 ± 1.70 (min-max:24-42.6) vs 39.47 ± 1.84 (min-max:22.5-42.4), 17.93 ± 0.94 (min-max:14-19) vs 17.85 ± 3.91 (min-max:14-19), 11.01 ± 1.27 (min-max:7.4-14.1) vs 11.06 ± 1.26 (min-max:6.5-13.6), 7.90 ± 0.55 (min-max:0-9) vs 7.84 ± 0.85 (min-max:0-8), 8.90 ± 0.63 (min-max:0-9) vs 8.80 ± 0.82 (min-max:0-9), 3200.71 ± 489.53 (min-max:600-4750) vs 3101.35 ± 493.62 (min-max:470-4500) respectively. In Turkish vs Syrian patients aged between 20-34 years old; mean gestational week, age, Hgb, APGAR 1', APGAR 5', birth weight were 39.24 ± 1.54 (min-max:22-42.6) vs 39.48 ± 1.50 (min-max:22-43), 26.87 ± 4.30 (min-max:20-34) vs 24.78 ± 3.91 (min-max:20-34), 10.97 ± 1.24 (min-max:7.7-14.7) vs 11.24 ± 1.20 (min-max:7.4-14), 7.92 ± 0.48 (min-max:0-9) vs 7.81 ± 0.94 (min-max:0-8), 8.93 ± 0.43 (min-max:0-9) vs 8.79 ± 0.80 (min-max:0-9), 3303.98 ± 483.81 (min-max:360-6050) vs 3177.61 ± 484.27 (min-max:420-5150) respectively. In Turkish vs Syrian advanced maternal aged patients; mean gestational week, age, Hgb, APGAR 1', APGAR 5', birth weight were 39.06 ± 1.76 (min-max:23-42.6) vs 39.25 ± 1.65 (min-max:28.4-42.2), 37.62 ± 2.77 (min-max:35-51) vs 37.69 ± 2.89 (min-max:35-49), 10.98 ± 1.25 (min-max:7.7-14.1) vs 11.22 ± 1.19 (min-max:7.1-13.5), 7.92 ± 0.51 (min-max:0-9) vs 7.78 ± 1.04 (min-max:0-8), 8.91 ± 0.59 (min-max:0-9) vs 8.75 ± 1.01 (min-max:0-9), 3308.49 ± 514.48 (min-max:500-5870) vs 3234.70 ± 598.04 (min-max:610-4700) respectively. Maternal age was found higher in Turkish pregnant in 20-34 age group ($p=0.000$).

Hemoglobin was observed higher in Syrian refugees in 20-34 and ≥ 35 groups ($p=0.000$, $p=0.001$). APGAR 1' and 5' scores were higher in Turkish patients in all age groups ($p=0.000$, $p=0.000$). Birth weights were found increased in Turkish patients in all age groups (≤ 19 , 20-34, ≥ 35 ; $p=0.000$, $p=0.000$, $p=0.046$ respectively) (Table-1).

In antenatal care assessment first trimester combined tests were higher in Turkish patients in all age groups ($p=0.000$). However second-trimester triplet tests were only higher in Turkish women in ≥ 35 age group ($p=0.000$). Maternal anemia was significantly higher in Turkish patients in 20-34 and ≥ 35 groups ($p=0.000$, $p=0.004$). Normal spontaneous vaginal delivery rates were higher in Syrian refugees in 20-34 and ≥ 35 age groups. ($p=0.000$, $p=0.020$). Preterm delivery rates higher in Turkish patients in only 20-34 age group ($p=0.029$). Sex of neonates and stillbirth rates were similar in both groups at all ages. In ≤ 19 age patient group while LBW, VLBW and ELBW rates were higher in Syrian women, macrosomia was found increased in Turkish patients ($p=0.000$). In 20-34 age group only LBW was higher in Syrian and macrosomia again was higher in Turkish women ($p=0.000$). LBW and macrosomia were found higher in Syrian women in ≥ 35 group ($p=0.000$). Syrian women were found breastfeeding their infants without any formula in all age groups ($p=0.000$, $p=0.000$, $p=0.000$) (Table-2). In adolescent group repeated cesarean delivery, placental abruption, abnormal placentation and prior uterine surgery rates were found higher in Syrian women (13.3%, 0.2%, 0.2%, 0.1%); in all other indications Turkish patients were ahead ($p=0.000$). In 20-34 age group cord prolapse and maternal severe disease were higher in Syrian women (0.1%, 0.1%) and also other indications were found increased in Turkish patients ($p=0.000$). Cephalopelvic disproportion, failure to progress during labor, fetal malpresentation, when ≥ 35 patients, pregnancy hypertension and placental abruption were higher in Syrian women (4.1%, 3.1%, 3.8%, 0.7% and 0.7%); however other indications were found increased in Turkish patients ($p=0.000$) (Table-3).

Table-1. Demographics, clinical features of maternal and neonatal outcomes.

	Adolescent			Aged Between 20-34			Old maternal age		
	Turkish (n=1061) Median (25p.- 75p.)	Syrian (n=1076) Median (25p.- 75p.)	<i>p</i>	Turkish (n=4612) Median (25p.-75p.)	Syrian (n=3624) Median (25p.- 75p.)	<i>p</i>	Turkish (n=1173) Median (25p.-75p.)	Syrian (n=292) Median (25p.- 75p.)	<i>p</i>
Gestational age at birth (week)	40 (38,6-40,2)	40,2 (39,2-40,2)	0,000	39,5 (38,5-40,2)	40,2 (39,1-40,2)	0,000	39,5 (38,4-40,2)	40,1 (38,6-40,2)	0,015
Maternal Age	18 (17-19)	18 (17-19)	0,690	27 (23-31)	24 (22-28)	0,000	36 (36-40)	37 (36-39)	0,359
Hemoglobin (g/dl)	11,1 (10,1-12)	11 (10,2-12)	0,205	11 (10,1-11,9)	11,4 (10,3-12,2)	0,000	11 (10,1-11,9)	11,4 (10,0-12,1)	0,001
APGAR 1' min	8 (8-8)	8 (8-8)	0,124	8 (8-8)	8 (8-8)	0,000	8 (8-8)	8 (8-8)	0,006
APGAR 5' min	9 (9-9)	9(9-9)	0,000	9 (9-9)	9 (9-9)	0,000	9 (9-9)	9 (9-9)	0,000
Birth weight (gr)	3200 (2900-3520)	3132 (2870-3425)	0,000	3300(3000-3600)	3190 (2900-3480)	0,000	3300 (3000-3640)	3267,5(2882,5-3620)	0,046

Table-2. Clinical features of antenatal, pregnancy and neonatal outcomes.

	Adolescent			Aged Between 20-34			Old maternal age		
	Turkish n (%)	Syrian n (%)	<i>p</i>	Turkish n (%)	Syrian n (%)	<i>p</i>	Turkish n (%)	Syrian n (%)	<i>p</i>
First-trimester combined test	339 (32)	31 (2,9)	0,000	2218 (48,1)	220 (6,1)	0,000	570 (48,6)	18 (6,2)	0,000
Second-trimester triple test	70 (6,6)	69 (6,4)	0,862	491 (10,6)	408 (11,3)	0,376	384 (32,7)	26 (8,9)	0,000
Maternal Anemia	526 (49,6)	542 (50,4)	0,713	2407 (52,2)	1631 (45)	0,000	610 (52,0)	124 (42,5)	0,004
Birth Type									
NSVD	786 (74,1)	759 (70,5)	0,067	2697 (58,5)	2573 (71)	0,000	810 (69,1)	181 (62)	0,020
CS	275 (25,9)	317 (29,5)		1915 (41,5)	1051 (29)		363 (30,9)	111 (38)	
Cesarean Type									
Primary	237 (22,3)	174 (16,2)	0,000	790 (17,1)	401 (11,1)	0,000	810 (69,1)	181 (62)	0,020
Secondary	38 (3,6)	143(13,3)		1125 (24,4)	650 (17,9)		363 (30,9)	111 (38)	
Neonatal Sex									
Male	561 (52,9)	569 (52,9)	0,997	2328 (50,5)	1817 (50,1)	0,760	583 (49,7)	152 (52,1)	0,471
Female	500 (47,1)	507 (47,1)		2284 (49,5)	1807(49,9)		590 (50,3)	140 (47,9)	
Neonates Alive	1057 (99,6)	1071 (99,5)	1,000	4606 (99,9)	3614 (99,7)	0,214	1169 (99,7)	290 (99,3)	0,342
Stillbirth	4 (0,4)	5 (0,5)		6 (0,1)	10 (0,3)		4 (0,3)	2 (0,7)	
Preterm Birth	76 (7,2)	59 (5,5)	0,110	241 (5,2)	152 (4,2)	0,029	86 (7,3)	26 (8,9)	0,434
Birth Weight									
ELBW	3 (0,3)	7 (0,7)	0,000	16 (0,3)	10 (0,3)	0,000	4 (0,3)	2 (0,7)	
VLBW	1 (0,1)	9 (0,8)		168 (3,6)	11 (0,3)		1 (0,1)	2 (0,7)	
LBW	56 (5,3)	68(6,3)		4119 (89,3)	208(5,7)		51 (4,3)	15(5,1)	
Normal	953 (89,8)	977 (90,8)		302 (6,5)	3238 (89,3)		1032 (88)	246 (84,2)	0,153
Macrosomia	48 (4,5)	15 (1,4)		302 (6,5)	157 (4,3)		85 (7,2)	27 (9,2)	
Breastfeeding	398 (37,5)	655 (60,9)	0,000	1527 (33,1)	1940 (53,5)	0,000	346 (29,5)	131 (44,9)	0,000

Table-3. Cesarean indications.

	Adolescent			Aged Between 20-34			Old maternal age		
	Turkish n (%)	Syrian n (%)	<i>p</i>	Turkish n (%)	Syrian n (%)	<i>p</i>	Turkish n (%)	Syrian n (%)	<i>p</i>
Repeated Cesarean Delivery	38 (3,6)	143 (13,3)	0,000	1129(24,5)	655(18,1)	0,000	286(24,4)	70(24,0)	0,000
Fetal Distress	73 (6,9)	60 (5,6)		262 (5,7)	148 (4,1)		32 (2,7)	5 (1,7)	
Cephalopelvic disproportion	74 (7)	39 (3,6)		219 (4,7)	78 (2,2)		15 (1,3)	12 (4,1)	
Failure to progress during labor	44 (4,1)	37 (3,4)		172 (3,7)	90 (2,5)		13 (1,1)	9 (3,1)	
Fetal malpresentation	34 (3,2)	65 (3)		103 (2,2)	64 (1,8)		8 (0,7)	11 (3,8)	
Abnormal placentation	1 (0,1)	2 (0,2)		11 (0,2)	6 (0,2)		5 (0,4)	0 (0)	
Cord prolapse	1 (0,1)	0 (0)		1 (0)	2 (0,1)		2 (0,2)	0 (0)	
Pregnancy Hypertension	8 (0,8)	2 (0,2)		6 (0,1)	4 (0,1)		1 (0,1)	2 (0,7)	
Prior uterine surgery	0 (0)	1 (0,1)		8 (0,2)	2 (0,1)		0 (0)	0 (0)	
Placental Abruption	0 (0)	2 (0,2)		2 (0)	0 (0)		1 (0,1)	2 (0,7)	
Vulvar Condyloma Lesion	1 (0,1)	0 (0)		0 (0)	0 (0)		0 (0)	0 (0)	
Congenital Anomaly	0 (0)	0 (0)		2 (0)	0 (0)		0 (0)	0 (0)	
Maternal Severe Disease	1 (0,1)	0 (0)	2 (0)	2 (0,1)	0 (0)	0 (0)			

DISCUSSION

We generated some important findings some of them updating previous knowledge. In contrast to the other researches, decreased risk of adverse perinatal and neonatal health measures among migrant women was found.

National antenatal care in Turkiye includes four visits to family medicine physician and two basic obstetrician visits for first trimester combined test and fetal congenital anomaly screening. Other screenings such as diabetes pregnancy, immunizations are practised by primary care; congenital anomaly screening by perinatology centers. In 2013, the Turkish government declared that all Syrians would be entitled to the same health services as citizens (7). But still they have no access to primary care and have no attended family physician. The results should be interpreted in this context.

In antenatal care first trimester combined test rates were higher in Turkish pregnant in all age groups and second trimester triple test rates were

higher in ≥35 age group. These could be results of the lack of primary care access in Syrian refugees. Syrian women could have difficulties knowing what kind of antenatal care was available, who was providing it, and how best to access it. Also the other refugees have another reasons for not seeking antenatal care. Many of them were used to their family doctors in Syria, and simply unaccustomed to the facilities and practices of new place; and maybe have distrust to doctors in Turkiye. Also others do not think antenatal care is important and only visit the doctor when they think there is something wrong (8). Our findings were limited to hospital's computer based data. However we can assume since there is no attended family physician, immunizations and primary care screenings were inadequate.

We found half of the adolescent pregnant were complicated with anemia in both Syrian and Turkish patients. Adolescence has its own adverse pregnancy outcomes, but regarding

maternal anemia they seem not to be affected by the migration status. Yet Syrian pregnant's hemoglobin rates were higher in 20-34 and ≥ 35 age groups and resulted less maternal anemia in these patients. There is limited data on refugee maternal anemia. Until now what is known is pregnancy anemia is common among refugee women related with poorer nutrition (9). But recently authors couldn't find any difference in comparison between citizens and refugees (10). Researchers revealed pregnant women who received information about the importance of iron supplementation during pregnancy were more likely to be compliant than those who were not (11). Ministry of Health in Türkiye provide with free-of-cost vitamin and iron supplementation in line with routine pregnancy follow-up guide for refugees (12). With positive health policies and governments efforts on adequate antenatal care provided for Syrian women, could explain the study's data. Still all that inconsistent data need for assess further.

Since 1985, the World Health Organization (WHO) has recommended maintaining a CS rate between 5 and 15 percent (13), although the optimal rate remains controversial. While our total cesarean rates were around %29 in younger patients, older aged Syrians had %38. Primary cesarean rates in Syrian women younger than 35 years were seemed to reach the targets. However since older maternal age has been known for negative outcomes, it is understandable high rates in both ethnic groups. In Türkiye 2018 reports stated total CS rate was 37.5% and primary CS 14.4% in all deliveries (14). Including our c-section rates in Turkish women –in line with the trends- can be related to limited role for midwives, and women's misunderstanding of the CS procedure and its safety as well as practising defensive medicine with some overmedicalized birth process considering excessed malpractice penalties.

Even with so-called higher risk for pregnancy complication and some reports with lower gestational age at birth (15-16), increased rates in Syrian pregnant's in our findings similar with other researchers'(17). In consistent data with another refugee study (18), preterm birth was not higher in Syrian groups in our results. The evidence to date suggests that higher risk of preterm delivery is consistent with socioeconomic disadvantages and discrimination rather than genetic mechanisms. So researchers on migrant women strongly suggest that environmental

influences in the receiving country are most important drivers of the preterm rate (16).

While Syrian vaginal birth rate were higher in 20-34 group, c-section rates were higher in both adolescent and old maternal age groups. It is congruent with others' findings (15, 19). It is reasonable to think refugee status increased pregnancy complications. However 20-34 group Turkish pregnant's had increased cesarean rates in our study. Surprising data is also consisting with an other researchers' study (10). Primary cesarean rates also increased in Turkish patients in all age groups. Thus higher age in Turkish women could be the key point in those results and age could be a confounding factor. Tertiary hospitals admit higher risk profiles patients so it could explain conflicting data.

Authors in a systematic review confirmed recently; higher stillbirth, neonatal and infant mortality rates in some migrant groups yet outcomes varied both by country of origin and by receiving country (20). It's comforting that we found no difference in stillbirth rates between Syrian and Turkish patients in all age groups. It could be a proof that Türkiye presents less social deprivation and barriers of access to health care for refugees. Still there were increased LBW, ELBW rates in 20-34 aged pregnant's from Syria and additionally VLBW also was increased in Syrian adolescents. Researchers were reporting low birth weight in neonates from refugee mothers, but at the same time violence associated low birth weights were noted (21, 22). Accordingly we noted macrosomia was higher in Turkish patients in adolescent and 20-34 aged patients similar to other authors' results (23). Researchers have also found that infants of migrants were more likely to be misclassified based on the country's birth weight curves, suggesting the need for ethnic specific, culturally sensitive standards (24).

Similar to our results; previously low APGAR scores have recorded in the majority of refugee infants (23), nevertheless other physicians confronted (15, 19). Majority announces reasons for the poorer outcomes among refugee mothers and neonates. They have been shown to have more medical problems, but fewer interventions than receiving-country counterparts (25, 26). They also experienced a larger burden of poverty-related adverse circumstances (such as low social status and poor nutrition), social problems (such as accommodation, transport, care of their accompanying children),

communication problem, emotional problems. All these factors may play a significant role in poorer perinatal and infant outcomes (25, 26).

The clinicians reported Syrian women most likely to initiate breastfeeding without formula milk in early infants. Considering lack of breastfeeding interventions and supposed inadequate antenatal care and it was curious results. But few authors reached similar results while others differ (27, 28). In the most of the studies the importance of being cared for by family was mentioned (29). The dominant role of female relatives must be the key point on supporting breastfeeding especially in a new country. It could be run both ways. Female family members who are available to assist a new mother to participate in the traditional postpartum practices of their native countries were considered by migrant mothers to be important in the maintenance of breastfeeding. Another mother could consider formula milk is the best option for preserving their own and baby's health in between constraints of a new place and an absence of a family. Socioeconomic status is mostly related with duration of breastfeeding than first initiation. In the absence of a supportive network, women may turn to health professionals for advice. We should underlined the need for policies that support continuation and not just initiation of breastfeeding. Barriers that migrant and refugee women experience when seeking services,

including language barriers, experiences of discrimination, and conflicting belief systems should be exceeded with innovative intervention strategies.

Our study will be new perspective in a small number of work, combining adolescent and advanced maternal age, other than 20-34 years old Syrian patients. Our study stated that even with the risk factors of immigration, decreased risk of pregnancy complications such as maternal anemia, preterm delivery, ceseran delivery and also satisfying breastfeeding results were found in Syrian patients.

CONCLUSION

It is likely that migrant groups have a mixture of protective and risk factors which, when combined, dilute the effects of migration. Study stated that Syrian women are at risk of low birth weight in adolescent and 20-34 age groups and low rates in first trimester combined test in all age groups. However decreased risk of obstetric complications such as maternal anemia, preterm delivery, cesarean delivery and also satisfying breastfeeding results were found in Syrian patients.

Conflicts of interest: The authors certify that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

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