

DELIVERY OF ANTENATAL CARE SERVICES TO SYRIANS AND RESIDENT POPULATION LIVING IN ŞANLIURFA, TURKEY



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ÇUKUROVA UNIVERSITY
ŞANLIURFA HEALTH DIRECTORATE
HUMANITARIAN BOUNDARIES PROTECTION ASSOCIATION

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Abstract

A project for 40 Syrian guest women and 40 Turkish resident women with high-risk pregnancies was completed in May 2018 in the district of Eyyübiye in the city of Şanlıurfa, Turkey. It was coordinated by Çukurova University, in cooperation with Şanlıurfa Health Directorate and the Humanitarian Boundaries Protection Association and supported by WHO. The study included a survey of the reproductive health, and pregnancy and sociodemographic characteristics of women with high-risk pregnancies, and their height, weight and blood pressure were measured. Laboratory analysis of samples of the subjects' blood and haemoglobin checked for proteinuria. By providing care at home for the women, the project ensured that they were closely monitored and that gave birth in a healthy manner. This report is intended to help prevent infant and maternal deaths.

Keywords

Risky pregnancy, migrant, care at home.

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From left to right: Dr. Mahmut Aktas, Prof. Dr. Toker Erguder, Associate Professor Dr. Ersin Nazlican, Dr. Mehmet Yasar Simsek, Dr. Pavel Ursu, Professor Dr. Mustafa Kibar, Professor Dr. Muhsin Akbaba, Professor Dr. Harun Arıkan



FOREWORD

Çukurova University was established in 1973, and since then it has supported the development of the region by developing education/training activities, research/development studies and social projects addressing regional problems.

This project was designed to prevent high-risk pregnancies in Şanlıurfa province, which is close to our region, and protect both mothers' and fetuses' health and lives. Risky and high-risk pregnancies must be followed strictly and much more closely.

The project, Delivery of Antenatal Care Services to Syrians and Resident Population Living in Şanlıurfa – implemented jointly by the Şanlıurfa Health Directorate and the Humanitarian Boundaries Protection Association, with coordination by Çukurova University and support from WHO – aimed to ensure that women with risky pregnancies completed them in a health way.

We at Çukurova University wish to take part in implementing this kind of project at international level, jointly with WHO.

Professor Dr. Mustafa KIBAR
Rector, Çukurova University, Turkey



FOREWORD

The medical literature regards pregnancy as a natural process, but sometimes a woman's illness before she becomes pregnant or problems occurring during pregnancy can lead to various risks, turning pregnancy, which is a natural physiological process, into a risky or high-risk situation.

In recent years, Turkey has become the host of many Syrian citizens who have left their country because of the war in the Syrian Arab Republic. The Ministry of Health provides all health services for these Syrian guests. The temporarily protected Syrian women of reproductive age (15–49 years) are at risk of stillbirth, low-birth-weight babies, premature birth, puerperal infection and pregnancy complications due to the risks associated with emigration, and they constituted the target group of the project. The project aimed to provide the necessary services help such women give healthy birth. It addressed a sample of women with high-risk pregnancy, selected from both the Syrian guests and Turkish citizens living in Şanlıurfa province.

Thanks are due to the assistant coordinators of the project: Associate Professor Dr Ersin Nazlican, Dr Mehmet Yasar Simsek and Dr Mahmut Aktas. Also, I would like to thank Dr Pavel Ursu, WHO Representative to Turkey, for supporting the project.

We on the project team think that having similar projects carried out in our region and making their results more widely applicable will be very useful for the providers and receivers of perinatal services.

Professor Dr. Muhsin AKBABA
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ABBREVIATIONS

DM	Diabetes Mellitus
HPV	Human Papillomavirus
HT	Hypertension
IUD	Intrauterine Device
IUGR	Intrauterine Growth Restriction
max	maximum
min	minimum
SPSS	Statistical Package for the Social Sciences
TNSA	Turkey Demographic Health Survey (Türkiye Nüfus Sağlık Araştırması)

EXECUTIVE SUMMARY

Close monitoring and care are needed to reduce the adverse effects of high-risk pregnancies on mother and baby health. This study aimed to reduce maternal and infant mortality by health staff's monitoring, examination and training of pregnant women at home.

This cross-sectional study was planned in the Eyyübiye district of the city of Şanlıurfa. In Turkey, 31.1% of all pregnancies are in the high-risk category. Random sampling selected 40 pregnant Syrian women, under temporary protection in Turkey, for the project, who were joined by 40 pregnant Turkish women living in the same district, bringing the total to 80 high-risk pregnant women. A team of health care staff members visited these women at home, and conducted a survey of and followed their pregnancies.

The average age of the participating pregnant women was 28.1 years, although four were younger than 18. Most participants had a primary or lower education level. The average pregnancy rate was 5.1, and 60% had had four or more pregnancies. All the pregnancies were in the high-risk group. The biggest risks included frequent births and pregnancies in both the Turkish and Syrian women, but most had additional risks.

The study shows that close monitoring of women with risky pregnancies, including follow-ups by home monitoring, can obtain good results in terms of both mother and baby health. The use of an improved home monitoring system is recommended.

1. Introduction and Purpose

WHO defines risk as the probability of an increase in undesirable events with the occurrence one or more factors. In terms of pregnancy, risk means some complications that are not expected under normal circumstances, but may either exist before or occur during pregnancy.

The main objective of WHO's risk approach is to determine specific risk groups and risk situations specific to groups, and to develop strategies to prevent risk factors on the principle of providing some health services to everyone and more to those in need.

Risk assessment in pregnancy is a dynamic process that helps to determine whether a pregnant woman, fetus or newborn baby has any risk in terms of achieving prenatal care goals.

Pregnancy is a normal and a natural process. In some cases, existing illnesses of the mother prior to conception and subsequent problems during pregnancy lead to various risks. Called risky or high-risk pregnancies, they can, in some cases, threaten the health and even the life of mother and fetus. Risky and high-risk pregnancies should be followed strictly and much more closely. The factors that may lead to risks in pregnancy include:

- age status: being < 18 years or > 35 years;
- additional chronic illnesses: thyroid diseases, hypertension (HT), diabetes mellitus (DM) chronic heart disease, chronic liver disease, rheumatic diseases and systemic diseases such as diseases involving the vascular and other structures,
- being under- or overweight;
- close kinship between the parents of the fetus;
- medication use for epilepsy, psychiatric diseases, etc.;
- use of tobacco and alcohol; and
- health issues related to pregnancy: recurrent miscarriages or problems that arise owing to the pregnancy.

When reviewing a pregnant woman's obstetrical history, some factors can indicate a risky pregnancy:

- possibility of anaemia, intrauterine growth restriction (IUGR) and malpresentation increasing with parity;
- story of ectopic pregnancy or pregnancy loss (a risk of frequent recurrence);
- previous birth type (Caesarean, knowing that one Caesarean delivery is likely to be followed by others);
- an anomalous fetus or preterm birth (risk of recurrence): and
- a story of having a big baby (attention should be given for diabetes);

Alcohol use can lead to intrauterine growth restriction (IUGR) and fetal alcohol syndrome. Drug use can lead to neonatal drug withdrawal syndrome. Medical problems in the pregnant woman (such as HT, DM, heart disease, thyroid disease, anaemia, respiratory diseases, hepatic and gastrointestinal diseases, neuromuscular diseases, kidney diseases, autoimmune diseases, thromboembolic diseases) can lead to problems in pregnancy. Other important factors include: previous surgery, anaesthesia problems and blood transfusions.

The woman's gynaecological history includes important factors, such as:

- contraception: a woman who still has an intrauterine device (IUD) has a risk of miscarriage and premature birth;
- menstrual irregularity: if the patient does not know the date of her last menstrual period, it may be a problem to determine the duration; and
- specific infections: HIV, syphilis, human papillomavirus (HPV), gonorrhoea or hepatitis B.

The family history can reveal:

- genetic diseases: which carry the risk of recurrence (haemoglobinopathy) as well causing anxiety for the pregnant woman;
- DM in the family, increasing the possibility of gestational diabetes;
- HT;
- kidney disease;
- thromboembolic disease.

Problems can arise during pregnancy that are related to the mother:

- gestational diabetes;
- pregnancy hypertension, pre-eclampsia and eclampsia;
- vaginal bleeding in pregnancy;
- cervical insufficiency;
- premature rupture of membrane;
- premature birth threat in pregnancy;
- myoma in genital organs, presence of cyst;

and the fetus:

- multiple and twin pregnancies;
- growth deficiency of baby;
- oligohydramnios;
- polyhydramnios;
- Rh isoimmunization;
- fetal anomalies.

Although most women pass the pregnancy period without problems, none can predict the timing of a problem that may arise. Follow-up is very important for all pregnant women, since serious problems may occur later in a pregnancy, even though it has seemed normal from the beginning.

For women who are classed as having risky pregnancies from the start, it is vital that the risk of be determined in advance and the effect minimized by taking various measures. This can only be achieved through detailed examination of the pregnant woman by midwives, family doctors and gynaecologists as often as necessary.

Syrian women aged 15–49 years, who fled to other countries from a territorial conflict, are at risk of reproductive health problems such as stillbirth (in particular), low-birth-weight babies, premature labour, puerperal infections and pregnancy complications due to the risks brought by migration. Risks in pregnancy may lead to important health problems that threaten maternal and infant health, increase mortality and morbidity rates, and have physiological, psychological, social and economic dimensions. To prevent secondary diseases and deaths of pregnant women at risk, it is necessary to determine the risk factors and enable the women to benefit adequately from reproductive health services. Because risky pregnancies might occur depending on a health problem arising before as well as during pregnancy, close monitoring and care are required to reduce the negative effects of risky pregnancies on mother and baby health.

Advantages of Home Care for Women With High-Risk Pregnancies

The purpose of home care in high-risk pregnancies is to assess the health status of the pregnant woman in a different environment than a health care institution, to monitor the effects of defined risk factors, to apply a pregnancy-specific care plan and to evaluate the results. The home environment enables more integrated and comprehensive care. Pregnant women prefer it, as it enables them to remain with their families, protect their privacy and receive care in a comfortable and familiar environment. The regular monitoring of the mother and fetus creates a sense of confidence in women. Pregnant women receiving home care experience less anxiety and depression. In home care, the nurse and midwife can communicate with and observe women in their natural environment with their families. Educational tools can be adapted for use in home conditions and extended to other family members. Home care can reduce problems in pregnant women and newborn babies, as well as health care costs. Further, the pregnant woman is not exposed to infection sources of the hospital environment. Home care facilitates evaluation of the physical condition of the pregnant woman, strengthens her coping skills, enables the continuity of medical treatment and care, provides early detection of possible problems and makes intervention easier.

Some studies show the following relevant results.

- Pregnant women staying in a hospital experience more anxiety and depression, and decreased self-esteem and family functions.
- Pregnant women receiving home care due to the threat of premature birth have more positive outcomes and consider home care acceptable.
- Long-term hospitalization of pregnant women negatively affects their interaction with their babies and other family members.
- Among pregnant women with gestational diabetes, home care reduces the likelihood of low-birth-weight infants and promotes mother–infant interaction.
- When pregnant women receive home care, fetal/neonatal mortality is lower, and hospital stays are shorter for both the women in the prenatal period and the newborn babies.
- Pregnant women who receive home care due to a diagnosis of risk of preterm labour are reported to have babies with a higher average birth weight and gestational age of infants, and a lower incidence of chorioamnionitis.

Action Needed

Close monitoring and care are required to reduce the negative effects of risky pregnancies on mother and baby health. In the context of primary health care services, especially in the prevention of health problems, the provision of health services in the home environment enables more integrated and comprehensive care.

As a result, the project, Delivery of Antenatal Care Services to Syrians and Resident Population Living in Şanlıurfa, aimed to decrease maternal and neonatal mortality through monitoring, examination and training of Syrian women with risky pregnancies at home by health workers. Each team included at least one Syrian, who knows the culture and speaks the women's language.



While conducting a survey to and getting samples for blood sugar from a pregnant woman, Şanlıurfa, March 2018.

Photo: Şanlıurfa Health Directorate/Mahmut Aktaş

2. Tools and Methods

The Public Health Department, Medical Faculty, Çukurova University, the Şanlıurfa Health Directorate and the Humanitarian Boundaries Protection Association jointly carried out this cross-sectional study, with coordination by the Public Health Department, Medical Faculty, Çukurova University. According to the 2013 report of the Turkey Demographic Health Survey (TNSA),¹ 30% of births in overall Turkey include at least one preventable risk category. These data are similar to those of the Yenice Immigrant Health Centre, serving Syrian immigrants in the district of Eyyübiye in Şanlıurfa, which give a rate of 31.1%. For this reason, the project was conducted in Eyyübiye. There are 1026 pregnant Syrian women registered with the Yenice Immigrant Health Centre. Applying the risk levels of Turkish women to the Syrian women in the district meant that 319 of the 1026 belonged to the high-risk category. Random sampling was used to select the 40 pregnant Syrians included in the study. In addition, 40 pregnant Turkish women living in the same district were included, so that the project addressed 80 high-risk pregnant women in total.

Teams of health personnel visited the homes of these women. On the first visit, the health workers collected information of the women's sociodemographic characteristics through a questionnaire on their current and previous pregnancies. As mentioned in the Ministry of Health follow-up protocols, the teams used pregnancy follow-up cards to assess the women's pregnancy-related status, and their height, weight and levels of haemoglobin, blood pressure and blood sugar were measured. All the results were recorded.

In addition, risky pregnancies were evaluated through meetings organized twice a month with the teams at the women's homes. The doctor in the project coordination centre evaluated the data obtained from the home visits and the measures that were taken. Health care personnel strictly monitored the pregnant women and regularly worked to ensure healthy births.

The completed questionnaires were evaluated using the Statistical Package for the Social Sciences (SPSS) 20.0 program and statistical tests, such as frequency analysis, t-test and chi-square test, were applied.

Before the project started work, the required approval was obtained from the ethics committee of the Faculty of Medicine of Çukurova University, in its fifty-seventh decision on 13 April 2018.

¹ Hacettepe University Institute of Population Studies (2014). 2013 Turkey Population and Health Research. Ankara: Hacettepe University Institute of Population Studies, Turkish Ministry of Development and TÜBİTAK (http://www.hips.hacettepe.edu.tr/tnsa2013/rapor/TNSA_2013_ana_rapor.pdf, accessed 10 April 2018).

3. Project Activities

Compliance Training of Home Care Health Team

Within the project, the coordinator, the assistant coordinators, consultant doctors, two Turkish midwives, two Syrian midwives/nurses and a team of field orientation members conducted the study. Before starting the field work, these teams learned about compliance and the principles and working procedures of the project through in-service training organized by the Şanlıurfa Health Directorate, the Public Health Department of the Faculty of Medicine of Çukurova University and the Humanitarian Boundaries Protection Association. Having gained sufficient knowledge about what needed to be done within the scope of the project, the teams began field work, after a project launch organized by the Şanlıurfa Health Directorate and the Humanitarian Boundaries Protection Association, with the participation of local press and the presence of the project coordinator, the assistant coordinators and president and vice-president of the Public Health Department of Şanlıurfa Health Directorate.



Dr. Mehmet Yaşar Şimşek gives a speech at the project launch meeting, February 2018.

Photo: Şanlıurfa Health Directorate / Mahmut Aktaş



Mahmut Aktaş during project launch meeting, February, 2018.

Photo: Şanlıurfa Health Directorate / Mehmet Yaşar Şimşek



Dr. Ersin Nazlıcan during project launch meeting, February, 2018.
Photo: Şanlıurfa Health Directorate / Mahmut Aktaş



Participants listening to the presentations during the project launch meeting, February, 2018.
Photo: Şanlıurfa Health Directorate / Mahmut Aktaş

The Şanlıurfa Health Directorate runs the Syrian Immigrant Health Improvement Programme with the support of the United Nations Population Fund. Within the scope of this Programme, 20 Syrian women have been trained as health care providers, especially to keep children and mothers alive, to increase access to prenatal care and to prevent contagious diseases. A five-day training course was provided to Syrian women on preventing maternal and infant mortality, starting a healthy life, prenatal care, postnatal care, child health, hereditary diseases, teratogens, domestic violence, respiratory- and digestive-system diseases, infectious diseases, blood-borne diseases and first aid. Health care providers who were trained under this Programme helped to identify pregnant women at risk.

Here is the mission statement for the home health care teams.

- a. A home care plan should be developed, implemented and assessed with the involvement of the pregnant woman and her family.

- b. Training and counselling on nutrition, relaxation, activity, sexual life, fetal growth and development, signs and symptoms of complications and individual problems should be provided to pregnant women.

Knowledge requirements and potential learning strategies should be considered in the education of high-risk pregnant women and their families. In addition, pregnant women should also be taught to follow daily fetal movements. Also, parents with a high risk of premature birth should be informed about premature intensive care.

- c. Nurses and midwives caring for high-risk pregnant women should learn that bed rest results in situational and familial stresses. Methods of developing positive thinking, imagining, relaxation techniques, massage, receiving information on the situation, making use of educational materials, listening to fetal heartbeats and re-establishing confidence should be beneficial for the pregnant woman in coping with stress.
- d. Social support is very important in dealing with stress. The social support systems of the pregnant woman and her family are evaluated, and supportive care is given if necessary. A pregnant woman's social supports are her husband, friends, relatives and health care providers. In addition, nurses and midwives are also important as individuals who are able to answer pregnant women's special questions and share their problems.
- e. The pregnant woman should be helped in coping with problems emerging due to bed rest. Such women suffer from guilt, frustration, inhibition, loss of control, fear for babies' health and anxiety, as they do not fulfil their role at home. Nurses and midwives can make a pregnant woman feel more comfortable and independent at home, however, by supporting her and trying to eliminate all these negative feelings. Taking account of limitations of activity, performing exercises of the arm, back, leg and foot can reduce muscle pain and weakness. In addition, doing exercise can also help women to reduce stress and to feel comfortable and good.
- f. Establishing and using a standardized information form can be useful in ensuring the correct flow of information between the health institution and home, as well as the continuity of treatment and care.

In the study, providing health care services for women with risky pregnancies at home, with health care professionals including at least one Syrian person, increased confidence and facilitated communication. For this reason, each team always included a Syrian health care professional. Also during home visits; health care professionals gave training



During survey to a pregnant woman, Şanlıurfa, March 2018.
Photo: Şanlıurfa Health Directorate / Mahmut Aktaş

and consultancy services to the pregnant women about nutrition, resting, activity, sexual life, fetal growth and development, signs and symptoms of complications, and their individual problems, and the women's knowledge on pregnancy and health was increased. Health care professionals' efforts to provide support and eliminate negative feelings enabled the pregnant women to feel more comfortable and independent at home and to complete their pregnancies more safely. As a result of these services, Syrian women with risky pregnancies were enabled to have the desired access to adequate health care services.



While taking samples from a pregnant woman for blood sugar and haemoglobin during a survey, Şanlıurfa, March 2018.
Photo: Şanlıurfa Health Directorate / Mahmut Aktaş

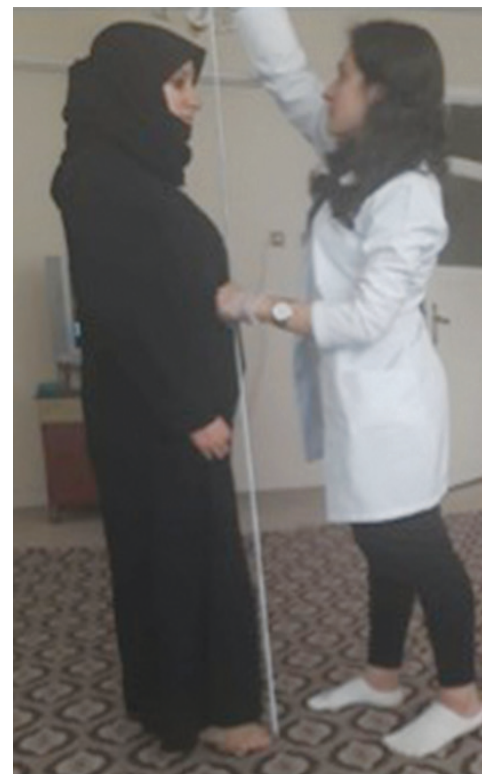
Vehicles were rented for the teams to make home visits. These vehicles were equipped with medical devices and materials to enable the teams to provide health care services and conduct simple tests in the women's homes. When necessary, the vehicles also transported pregnant women from home to hospital.

Monitoring and Evaluation Activities

The data obtained after home visits were evaluated by a doctor at the project coordination centre.



While measuring blood tension of a pregnant woman during a survey, Şanlıurfa, March 2018. *Photo: Şanlıurfa Health Directorate / Mahmut Aktaş*



While measuring height of a pregnant woman during a survey, Şanlıurfa, March 2018.
Photo: Şanlıurfa Health Directorate / Mahmut Aktaş

4. Findings

The mean age of pregnant women who participated in the study was 28.1 ± 7.2 (minimum (min) = 16, maximum (max) = 45). The mean age of their spouses was 33.0 ± 7.7 (min = 16, max = 54). Table 1 shows the distribution of women by age groups; four were aged under 18 years.

Table 1. Study participants' distribution by age group

Age groups (years)	Women	
	Number	% of total
< 18	4	5.0
18–22	19	23.8
23–27	16	20.0
28–32	18	22.5
33–37	14	17.5
≥ 38	9	11.2
Total	80	100.0



While taking samples from a pregnant woman for blood sugar during a survey, Şanlıurfa, March 2018.

Photo: Şanlıurfa Health Directorate / Mahmut Aktaş

The participants had low educational levels in general; 17 (21.2%) were illiterate and only six (7.5%) were university graduates (Table 2).

Table 2. Study participants' distribution by education status

Education status	Women	
	Number	% of total
Illiterate	17	21.2
Literate	7	8.8
Primary school	31	38.8
Secondary school	13	16.2
High school	6	7.5
University	6	7.5
Total	80	100.0

As to occupational distribution, 77 (96.2%) of the women in the study were housewives; two (2.4%) were farm workers and one (1.2%) was teacher. The participants' mean age at marriage was 19.3 ± 3.7 (min = 13, max = 30). Six women (7.5%) had married under the age of 18, which is accepted as childhood by WHO.

When the teams asked the women whether they were related to their spouses, 37 (46.3%) said they were: 18 of these women (22.5%) were close relatives of their spouses, while 19 (23.8%) were second-degree relatives. The rate of kinship with spouses was quite high.



While measuring blood tension of a pregnant woman, Şanlıurfa, March 2018.
Photo: Şanlıurfa Health Directorate / Mahmut Aktaş

The women's mean number of pregnancies was 5.1 ± 3.1 (min = 1, max = 13) (Table 3). Five (6.25%) of the women were in their first pregnancies.

Table 3. Study participants' distribution by number of pregnancies

Number of pregnancies	Women	
	Number	% of total
1-3	32	40.0
4-6	25	31.2
≥ 7	23	28.8
Total	80	100.0



While measuring blood tension of a pregnant woman, Şanlıurfa, March 2018. Photo: Şanlıurfa Health Directorate / Mahmut Aktaş

The women's average rates of live births before the study were 3.2 ± 2.4 (min = 0, max = 10) (Table 4).

Table 4. Study participants' distribution by number of live births

Number of live births	Women	
	Number	% of total
0	5	6.2
1-3	44	55.0
4-6	21	26.2
≥ 7	10	12.6
Total	80	100.0

Among the participants, 8 (10%) women had previously had stillbirths: four of these women had had one stillbirth; two had had two and two had had three. In addition, 33 (41.2%) of the women had had at least one miscarriage (Table 5). In addition, 24 (30.0%) of the women who participated to the study had had at least one abortion (Table 6).

Table 5. Study participants' distribution by number of miscarriages

Number of miscarriages	Women	
	Number	% of total
0	47	58.8
1	12	15.0
2	10	12.5
3	6	7.5
4	3	3.8
7	1	1.2
9	1	1.2
Total	80	100.0

Table 6. Study participants' distribution by number of abortions

Number of abortions	Women	
	Number	% of total
0	56	70.0
1	8	10.0
2	7	8.8
3	3	3.8
4	3	3.8
7	2	2.4
9	1	1.2
Total	80	100.0

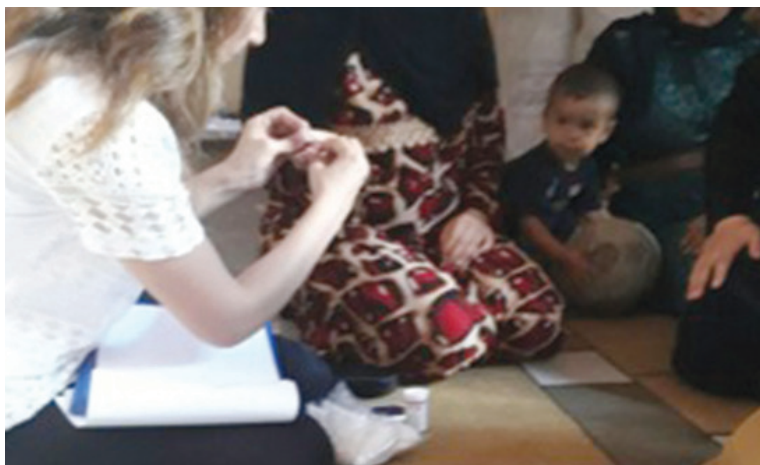


While taking samples from a pregnant woman for haemoglobin during a survey, Şanlıurfa, March 2018.

Photo: Şanlıurfa Health Directorate / Mahmut Aktaş

The survey also gave the following results on the participants' history.

- The women had a mean number of 3.1 ± 2.2 (min = 0, max = 10) living children; six (7.5%) had no children yet.
- As to first gestational age, 22 women (27.5%) had had their first pregnancy under the age of 18 years.
- 70 women (87.5%) stated that they knew at least one family planning method; 64 (80.0%) said that health care personnel had informed them about a family planning method.
- Most of the women (75 – 93.8%) said they had no chronic illnesses; one said that she had diabetes; two had thyroid disease; one had a blood disease and one stated that she had a chronic illness.
- When asked the year of their last pregnancy, two women (2.5%) said that it was the current year (2018), and 24 (30.0%) stated that it was 2017. For 26 women, the interval between two pregnancies was less than two years.
- For 44 (55%) of the women, the type of birth given was normal delivery.



While taking samples from a pregnant woman for haemoglobin during a survey, Şanlıurfa, March 2018.

Photo: Şanlıurfa Health Directorate / Mahmut Aktaş

An evaluation showed that 60 women (75.0%) had concluded their the most recent pregnancies with live births (Table 7).

Table 7. Study participants' distribution by the result of the most recent pregnancy

Result of previous pregnancy	Women	
	Number	% of total
Live birth	60	75.0
Miscarriage	9	11.2
Stillbirth	5	6.3
NA (no previous pregnancy)	6	7.5
Total	80	100.0

Other questionnaire results included the following: 66 women (82.6%) stated they had given birth in a hospital, and eight (10.0%) at home; four of the women (5.0%) stated that the child born of the previous pregnancy was sickly or disabled. Table 8 lists participants' responses to other questions about their health and health care during pregnancy.

Table 8. Study participants' responses to other questions about their health and health care during pregnancy (yes or no answers)

Health problem or intervention	Number (%)	
	Yes	No
Problem during pregnancy		
Blood pressure problem	11 (13.8%)	69 (86.2%)
Oedema complaint	14 (17.5%)	66 (82.5%).
Anaemia complaint	35 (43.8%)	45 (56.2%)
Health intervention during pregnancy		
Mineral or vitamin supplements	74 (92.5%)	6 (7.5%)
Tetanus vaccination	44 (55.0%)	36 (45.0%)
Having a vaccination card	44 (55.0%)	36 (45.0%)

In addition, 77 women (96.2%) knew that they needed to see a doctor for a check-up during pregnancy, even if they had no problems; three women (3.8%) did not. Two (2.4%) of the women stated that they had never had check-ups in their most recent pregnancies (Table 9).

Table 9. Study participants' distribution by the number of check-ups during previous pregnancy

Check-ups in previous pregnancy	Women	
	Number	% of total
None	2	2.4
1	1	1.2
2	2	2.4
3	3	3.6
4	1	1.2
5	2	2.4
6	2	2.4
7	4	4.8
≥ 8	57	72.1
NA (no previous pregnancy)	6	7.5
Total	80	100.0

Five (6.2%) women stated that they smoked during their pregnancy, and only one (1.2%) reported having had any x-ray during pregnancy. Table 10 shows the distribution of pregnant women according to their risk status. As shown in Table 10, the most frequent and important risk factor was frequent pregnancy and short intervals between births for both Turkish (65%) and Syrian (82.5%) women.

Table 10. Study participants' distribution according to risk situations

Risk situations	Number of women	
	Syrian	Turkish
Frequent pregnancy, frequent birth	33	26
Frequent miscarriage background	11	6
Stillbirth background	10	5
Rh incompatibility	6	–
First pregnancy at age < 18 years	4	7
Pregnancy at age > 35 years	2	9
First pregnancy	2	4
Obesity	2	2
Goitre	2	–
Multiple pregnancy	1	10
DM	1	1
Varicosis	1	–
HT	–	1
Asthma	–	1

Note. Some of the pregnant women had more than one risk factor.

During follow-up visits, eight of the Turkish pregnant women had safe and sound births. Another had a problem due to multiple pregnancy, and one her twins was kept in an incubator for a short while. Four of the Syrian women had safe and sound births during the period when follow-ups were conducted. Project teams are still following up with the remainder of the participants.

Stories of Some of the Pregnant Women Visited

Indirya Mirsat was visited on 6 March 2018. She was 43 years old. Her lifestyle was bad. She had lost her son-in-law during the war. She lives with her only daughter, aged 17. She is at risk as she due to her age, and said that she never goes for doctor check-ups. She has Rh incompatibility and was informed about it. She stated that she does not use any medication. The team advised her to go to the doctor owing to the risks she faces. At a later visit, she reported going to a doctor for check-ups and starting to use medication. Her medicines were examined and her weight, blood pressure, blood sugar and haemoglobin were tested. The team saw no problems and that her pregnancy continued normally.



While taking samples from a pregnant woman for haemoglobin, Şanlıurfa, March 2018.

Photo: Şanlıurfa Health Directorate / Mahmut Aktaş

A team visited Hatim Nevall on 7 March 2018. She was in her fourth pregnancy and looked pale. The team asked her if there was a problem and how she felt. She was silent during her examinations. On later visits, the team measured her weight, blood pressure, blood sugar and haemoglobin, and Hatim Nevall stated that she had had a mass under her shoulder for 12 years and had never been to a doctor about it. The team urged her to visit the doctor, at that visit and the next, but she said she did not go to the doctor because she was scared. After the team continued to urge her to see a doctor, she reported having done so on a later visit. The doctor had said that everything was normal and there was no problem with her pregnancy.

A team visited Iman Enveran on 8 March 2016. She is 33 years old and in her seventh pregnancy (with five live births). She reported pain in her feet and said she could not stand up. The team clearly saw her varicosis. She said that her financial condition is not good and she cannot go to the doctor. The team took her to hospital, and provided medicines and compression socks and advice on how to use them. Follow-ups continued on a regular basis. At the most recent visit, she said that her pain was alleviated and she felt better. Except for her varicosis, there was no complication about her pregnancy, which was continuing normally.

A team visited Abir Atiyyi on 12 March 2016. She is 26 years old, and in her sixth pregnancy, after four miscarriages and only one previous live birth. It had been two years since the last pregnancy ended. Due to her miscarriages, she was very unhappy and depressed. She said she had no problems with her spouse but was unhappy and could not sleep. The team checked her test results about pregnancy and medication. She was afraid of oligohydramnios and miscarriage for her current pregnancy. In talking to her, the team tried to raise her spirits, and referred her to a psychiatrist. At the visit on the following week, she seemed to feel a little bit better and said she had received support from a psychiatrist. At a later visit, she reported feeling lonely and sometimes unhappy. Having made suggestions about keeping her spirits up, at subsequent visits the team was glad to hear her say that she had been going to her check-ups regularly, and that her problems were getting better and she felt better. On the most recent visit, Abir Atiyyi looked much better, and welcomed and thanked the team. Her pregnancy follow-up has been very good so far.

A team visited Zelha El Mahmut on 6 March 2016. She is 35 years old and in her tenth pregnancy, with two previous miscarriages. She was examined. Her situation in general is fine but she reported itchiness on her head and body, and dizziness. The team identified eczema and advised her to see a doctor. During a recent visit, she reported seeing a doctor and the team checked her medications. She said that her itchiness was better, but that her blood pressure was continually low. The team repeated the health tests, and measured her blood pressure. When the team told her to take care of her nourishment, she reported continuous nausea and an inability to eat and drink. The team suggested that she eat salty crackers sometimes, and told her that the situation would improve, but she should move slowly while standing up; sudden movements could reduce her blood pressure and she should be careful.

5. Analysis of Results of Measured Values

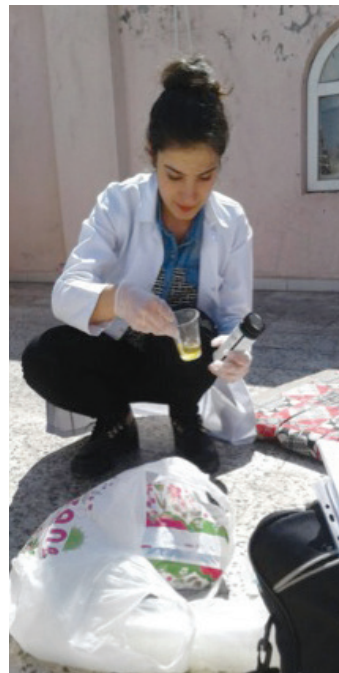
During home visits to risky pregnant women, their height, weight, blood sugar, blood pressure measurements and tests and urine analysis were made, and the resulted are shown in the figures below.

The urine of the pregnant women in the study was analysed for proteinuria, which was found in five Turkish women at the first check, five at the second, two in the third and two in fourth check. For Syrian women, proteinuria was found in four pregnant women in all checks. Pregnant women with proteinuria were directed to hospitals and necessary precautions were taken.



While taking samples from a pregnant woman for blood sugar and haemoglobin, Şanlıurfa, March 2018.

Photo: Şanlıurfa Health Directorate / Mahmut Aktaş



While analysing urine sample taken from a pregnant woman, Şanlıurfa, March 2018. *Photo: Şanlıurfa Health Directorate / Mahmut Aktaş*

Fig. 1 and 2 show the levels of blood sugar of the Turkish and Syrian pregnant women, respectively, who took part in the study. As seen in Fig. 1, seven Turkish women had blood sugar exceeding 100 mg/dl and the highest measured level was 115 mg/dl. In the four checks, the women's blood sugar levels were close to normal and they did not have any trouble with them. As Fig. 2 shows, tests of the blood sugar of Syrian women showed levels that were too high or too low. The highest measured value was 140 mg/dl and the lowest, 30 mg/dl. Those with hypoglycaemia received immediate interventions and were then referred to a specialist in internal diseases. In cases of hyperglycaemia, teams tried to control blood sugar by directing the women concerned to the hospital.

Fig. 1. Blood sugar status of the Turkish pregnant women

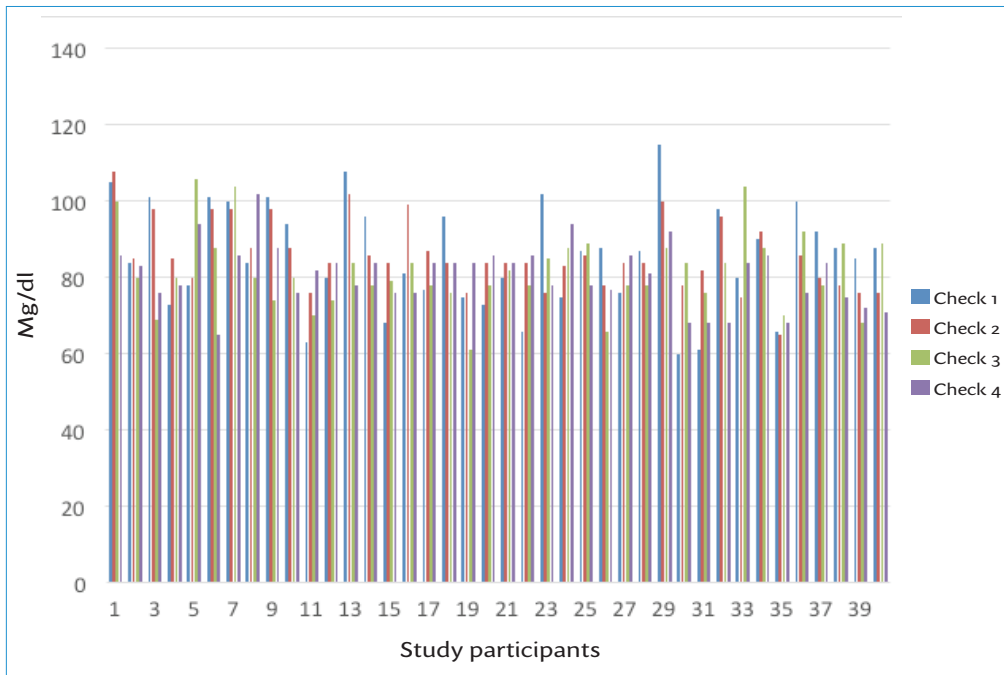


Fig. 2. Blood sugar status of the Syrian pregnant women

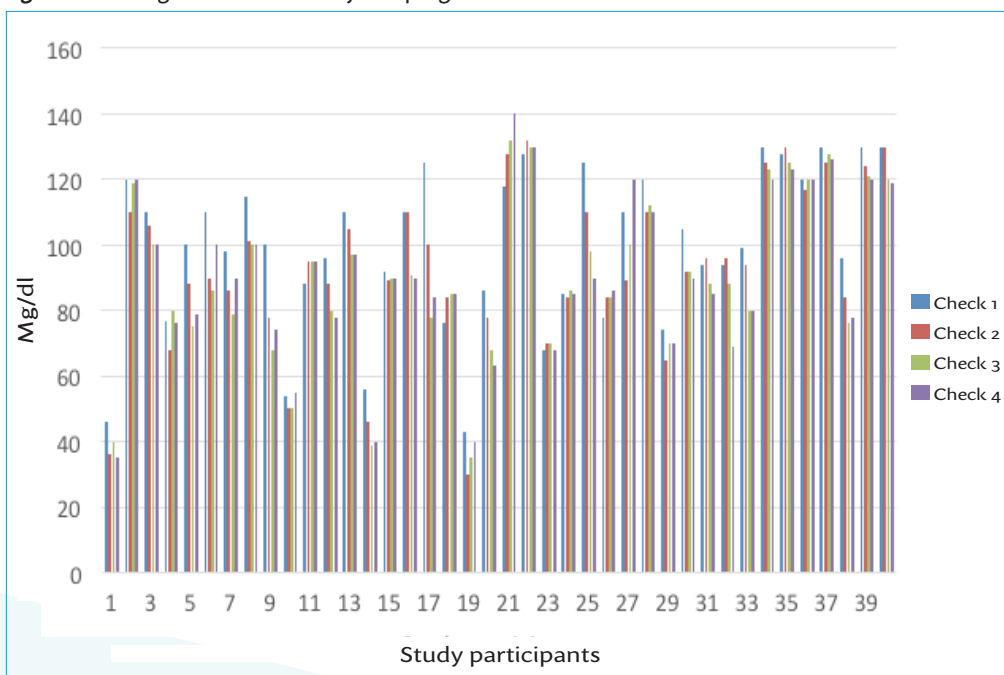


Fig. 3 and 4 show the haemoglobin status of the Turkish and Syrian pregnant women, respectively, who took part in the study. The lowest level seen in the Turkish participants was 10 mg/dl, which usually at normal levels at later checks. The first test of haemoglobin of the Syrian pregnant women showed that 14 had levels below 10 mg/dl. Giving training and iron supplements to the pregnant women given resulted in normal haemoglobin levels in later tests.

Fig. 3. Haemoglobin status of the pregnant Turkish women

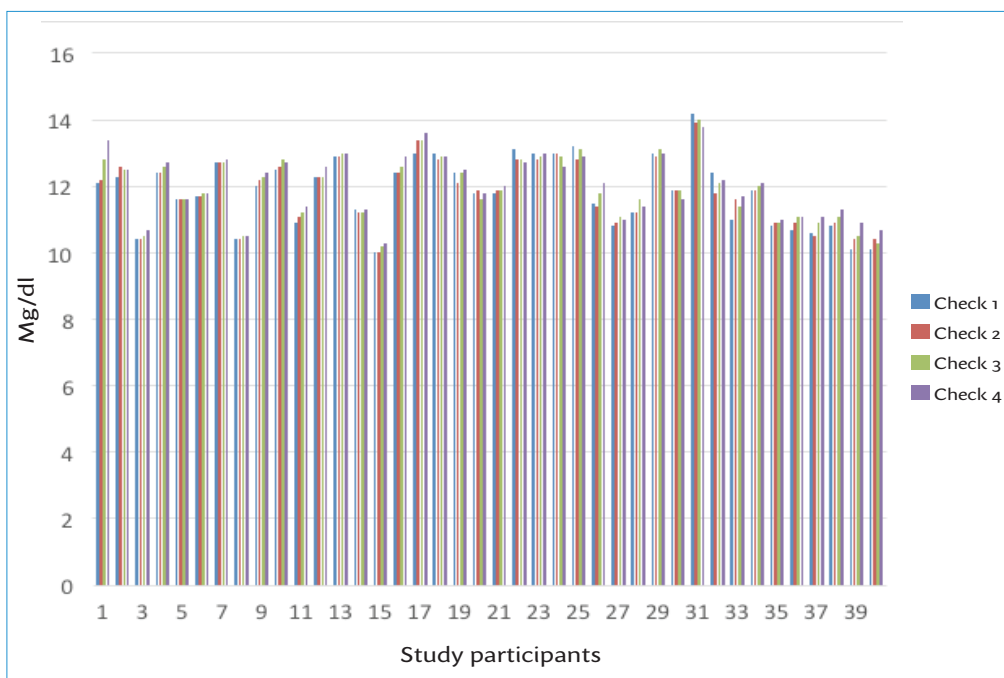


Fig. 4. Haemoglobin status of the Syrian pregnant women

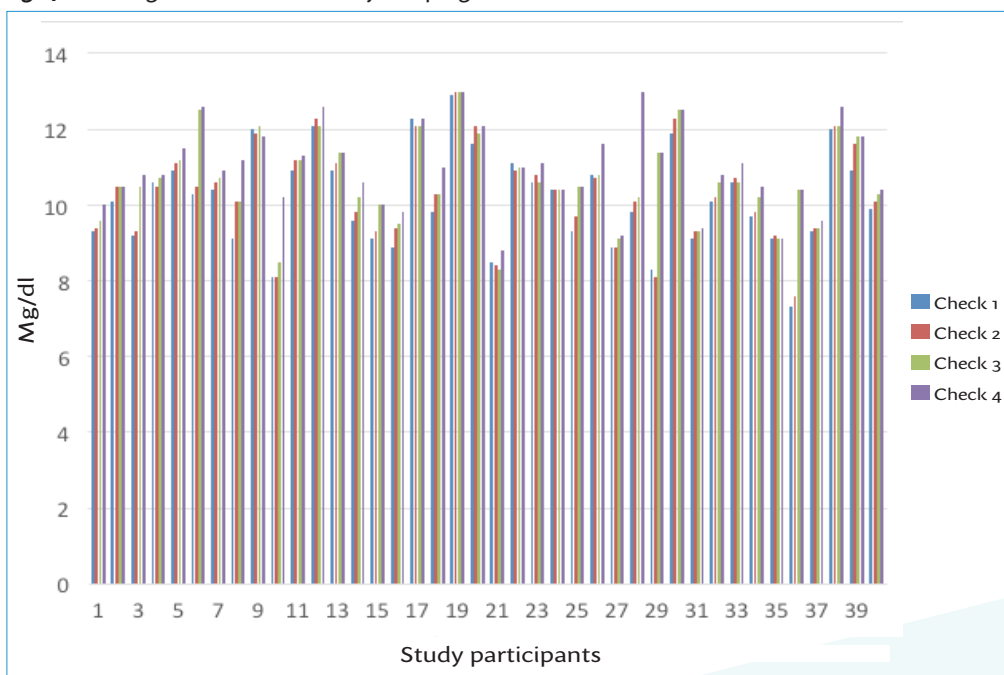


Fig. 5 and 6 show the levels of systolic blood pressure of the Turkish and Syrian pregnant women, respectively, who took part in the study. Two Turkish women were found to have high levels at the first check, but returned to normal limits in the subsequent tests, after the necessary interventions. The values for the systolic blood pressure of the Syrian pregnant women were within normal limits at all tests.

Fig. 5. Systolic blood pressure of the Turkish pregnant women

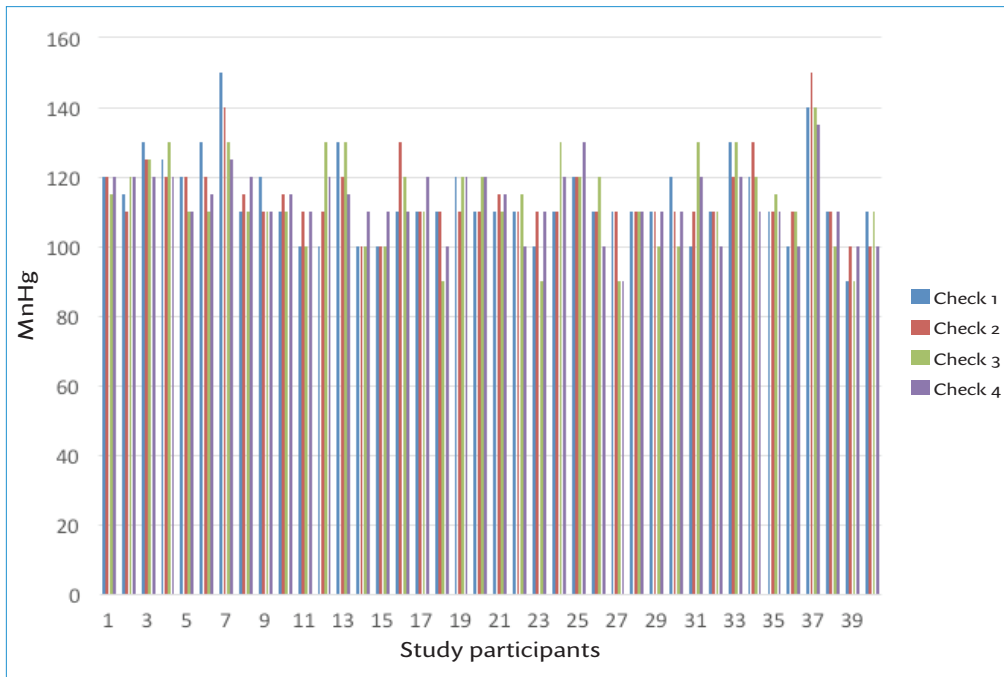


Fig. 6. Systolic blood pressure status of Syrian pregnant women

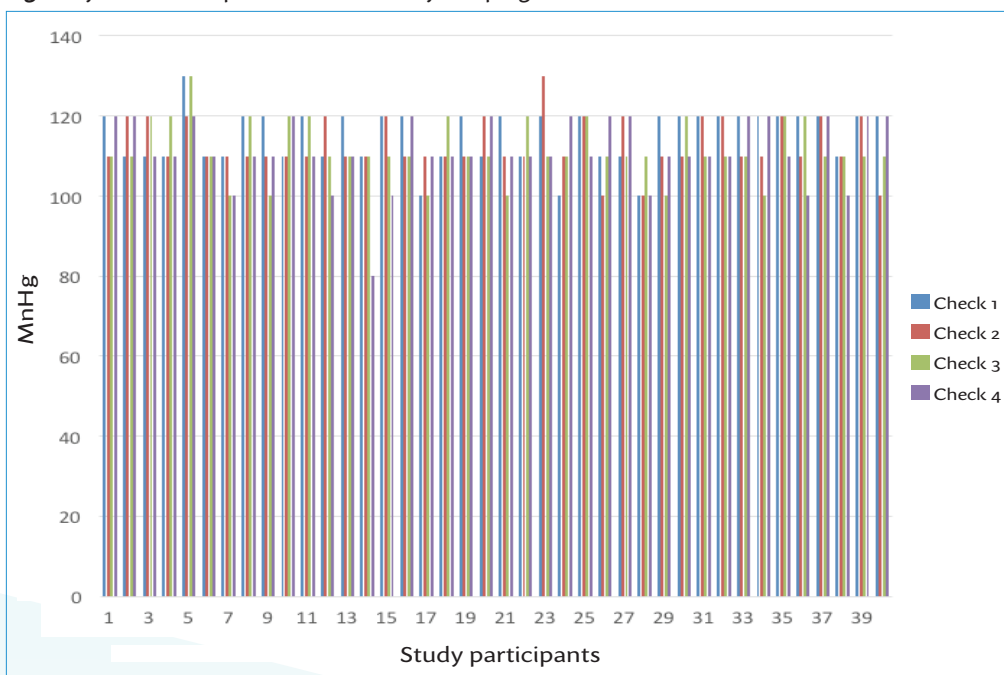


Fig. 7 and 8 show the levels of diastolic blood pressure of the Turkish and Syrian pregnant women, respectively, who took part in the study. The first test found one Turkish woman with high diastolic, as well as systolic, blood pressure. Subsequent checks found both at normal levels. All checks found normal values for diastolic blood pressure in the Syrian pregnant women.

Fig. 7. Diastolic blood pressure status of Turkish pregnant women

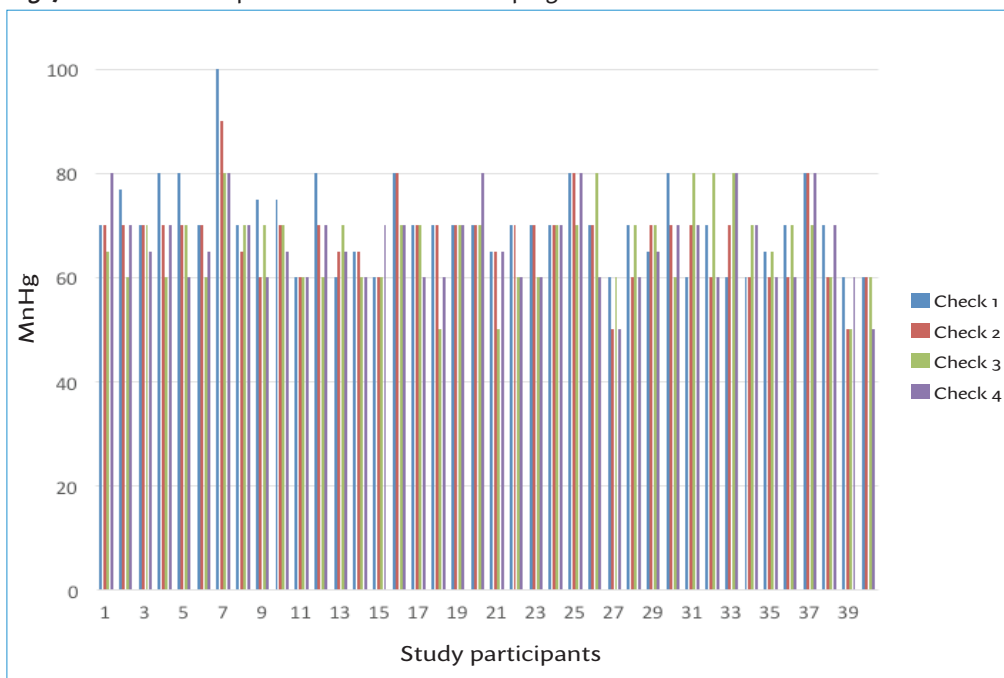


Fig. 8. Diastolic blood pressure status of the Syrian pregnant women

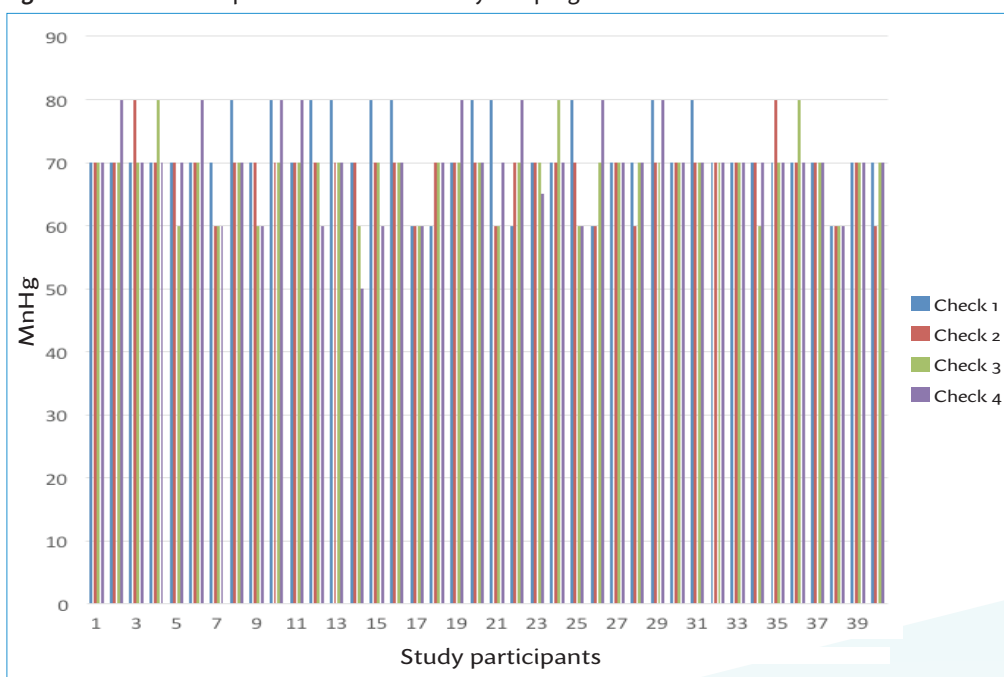


Fig. 9 and 10 show the weight of the Turkish and Syrian pregnant women, respectively, who took part in the study. Training on healthy nutrition was regularly given to all the Turkish women, especially those who are obese. The Syrian pregnant women also received training on healthy nutrition, and they were followed up for normal weight gain during their pregnancies.

Fig 9. Weight status of the Turkish pregnant women

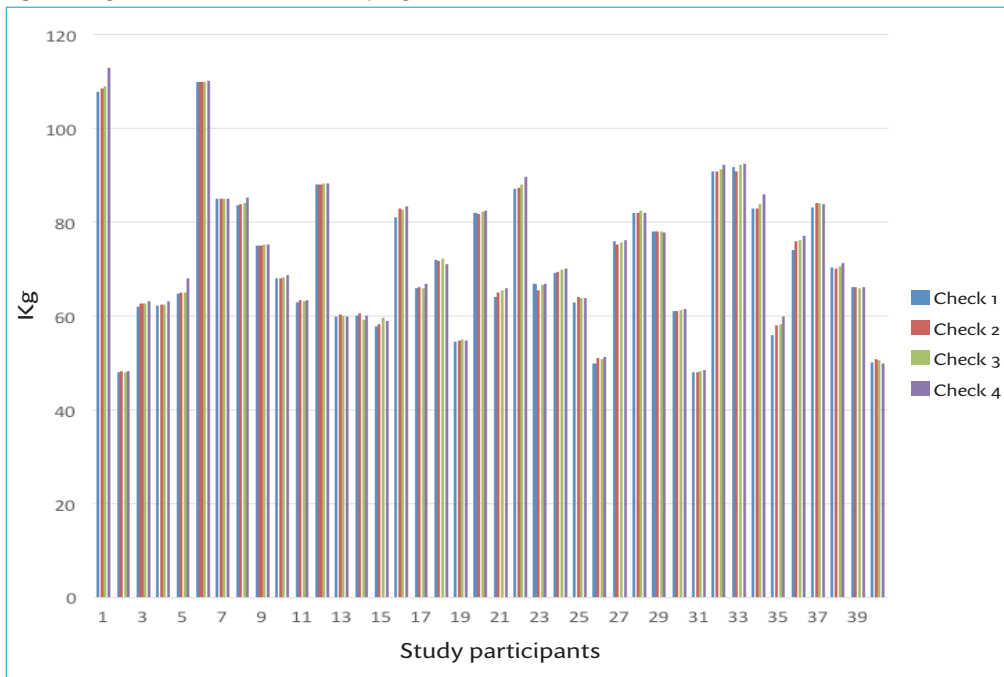
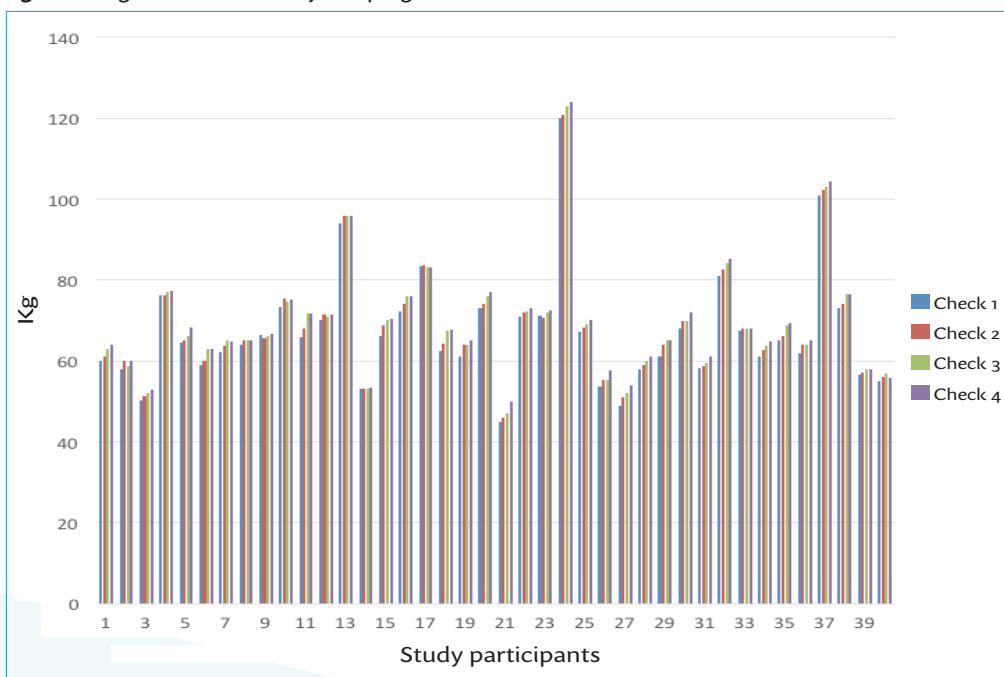
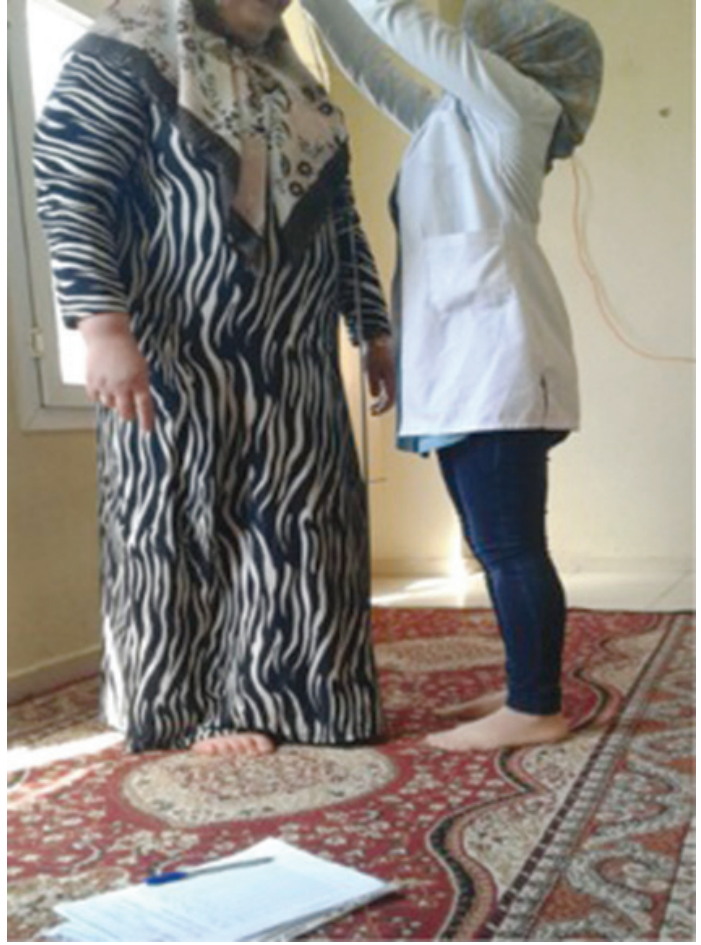


Fig. 10. Weight status of the Syrian pregnant women





While measuring height of pregnant women, Şanlıurfa, March 2018. *Photo: Şanlıurfa Health Directorate / Mahmut Aktaş*



While taking samples from a pregnant woman for blood sugar and haemoglobin, Şanlıurfa, March 2018.

Photo: Şanlıurfa Health Directorate / Mahmut Aktaş



While taking samples from a pregnant woman for blood sugar and haemoglobin during the survey, Şanlıurfa, March 2018.

Photo: Şanlıurfa Health Directorate/ Mahmut Aktaş

6. Results and suggestions

As described above, the project was conducted with 40 Syrian and 40 Turkish pregnant women with high risk pregnancies in the Eyyübiye district of Şanlıurfa province, and completed in May 2018. The results obtained from the questionnaires and laboratory tests were analysed in the statistical program and the findings were summarized above in tables and bar charts. The study results and suggestions proceeding from them are summarized here.

- The average age of the pregnant women participating in the study was 28.1 years. Four were aged under 18.
- The vast majority of the participants had primary-school or less education.
- Three of the participants had jobs outside the home.
- The women's average age at marriage was 19.3 years and six had been married before the age of 18.
- A total of 46.3% of the participants had married a close relative, and most had were related to their spouses.
- The women had had an average of 5.1 pregnancies; 60.0% had had four or more, and 27.5% had had their first pregnancies before age of 18.
- The women had an average live birth rate of 3.2.
- Among the participants:
 - 10.0% had had stillbirths;
 - 41.2% had had at least one miscarriage;
 - 30.0% had had at least one abortion;
 - for their most recent pregnancies, 45.0% had had a Caesarean delivery; 17.5% had had a stillbirth or miscarriage, and 10.0% had had their deliveries at home;
 - 6.2% had at least one chronic disease;
 - 13.8% reported having hypertension;
 - 17.5% complained of oedema;
 - 43.8% complained of anaemia.
- Of the study participants, 45.0% stated that they had not had a tetanus vaccination.
- All of the women were at high risk. The most common and important risk factors for both local Turkish citizens and Syrian refugees were frequent births and frequent pregnancies, and most had at least one additional risk factor.

Suggestions

1. Ensure that health organizations provide counselling services to increase awareness of reproductive health services in not only pregnant women but all women of reproductive age. Education is the most important of these services. A training plan should be made, and a programme, including topics such as what reproductive health means and what it consists of, should be scheduled regularly.

2. Closely follow up pregnant women at risk.
3. Ensure that women with risky pregnancies receive care not only in hospitals but also at their homes by arranging home visits.
4. Provide both medical control and psychological support through the home visits.
5. Ensure that reproductive health care services are effectively provided as part of basic health services.
6. Plan training to increase women's level of health literacy to enable them to act consciously to protect their reproductive health.
7. Improve and enhance service delivery by health care providers, by improving their knowledge and skills in reproductive health.
8. Prepare educational material to improve the communication between the health personnel delivering reproductive health services and the people receiving them in the regions with the largest populations of Syrian guests.
9. Organize special days and weeks of events, to increase awareness of reproductive health and healthy pregnancy and promote healthy behaviour. Ensure the participation of Syrian guests in these activities.
10. Organize detailed awareness training to enable families to prevent pregnancies in girls under the age of 18.
11. Organize training and activities for students and young people to raise their awareness of reproductive health and healthy pregnancy, in cooperation with nongovernmental organizations and associations to promote healthy behaviour.
12. Conduct activities to strengthen reproductive health services provided by health institutions.
13. Provide support for premarital counselling services to improve couples' awareness of reproductive health and to promote healthy behaviour.

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