

Health Practices of Turkish Expectant Mothers

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Abstract:

Objective: Health practices during pregnancy are important to support mother - child health and the safety of the delivery. Defining these health practices can help to support vulnerable groups at risk. This study aims to determine the health practices of Turkish expectant mothers and analyze related factors.

Methods: A total of 350 pregnant women were reached in this cross-sectional study from a state hospital in İstanbul during their prenatal visits. Data were collected with a Personal Information Form and Health Practices in Pregnancy Questionnaire-II (HPQ-II).

Results: Most (65.1%, n=228) were between 18-31 years, mean age 29.69±6.61 (18-45) years, with junior high school degree (55.7%, n=195), and housewives (90.3%, n=316). Nearly all (98.6%, n=345) followed routine examinations, were in the second trimester (51.7%, n=181), had planned pregnancy (86.6%, n=303), but had no pregnancy school attendance (96.6%, n=338). For most expectant women (55.7%, n=195), doctors were information resources. The average HPQ-II score was 108.76±5.36 (93-123). Analysis results emphasize a significant difference between education level, smoking behavior, stillbirth, and the HPQ-II score. Especially, elementary school graduate women, smokers, and those with stillbirth experience had a lower HPQ-II score (P<0.05).

Conclusion: Study results indicate the importance of improving the education level of women in mother and child health care and community health. Communities with higher levels of education will also contribute to better health practices. However, indicators like smoking behavior and previous history of stillbirth can also be considered important risk factors for lower health practices in pregnancy.

Keywords: Pregnancy, Healthy Lifestyle, Women, Public Health, Midwifery, Nurses

Health practices during pregnancy are important activities which have important impact on health of the pregnant woman, fetus, and newborn. All practices include targeted activities to achieve the healthy pregnancy outcomes. It is of great importance for the health of the mother and baby to take care of their health at all stages. These health practices during pregnancy consists of balanced nutrition/nutrition, weight control, regular exercise, oral and dental care, education about pregnancy and

birth, smoking, drinking alcohol, and the use of illegal substances drugs, risky sexual behaviors and attitudes, and protection from infectious agents [1]. Neglecting health practices increases the risk of complications related to the whole pregnancy period and birth, which cause a serious threat to maternal and infant health, and also, hence, amplifying the mortality and morbidity rates. It is a crucial protection step for pregnant women to take these practices as a necessity. Mothers and candidates must take responsibility and

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take action to stay emotionally and physically healthy for themselves and their baby [2]. The midwife is responsible for providing professional initial and ongoing comprehensive support that includes mother-child health, prenatal, birth, and postnatal care services. They work at clinical-based and also community-based health centers and reach women before pregnancy, during pregnancy, during labor, and even after the delivery. They have a noteworthy place in determining, monitoring, and providing training on health practices and behaviors [3, 4]. While more research is needed on this topic, some studies reveal aspects of healthcare practices during pregnancy in Türkiye. Beyaz *et al.* [5] from the eastern part of Türkiye presented data from Muş city. In this study, pregnancy health practices were found to be affected by the working status, educational level, family structure, first motherhood age, number of pregnancies, birth experience, preferred delivery type, whether the pregnancy is planned or not, routine check-up status, and the number of check-ups. Prenatal and postnatal training programs for pregnant women and their families should be expanded, and participation in these programs should be encouraged [5]. Healthcare practices are quite effective. While compliance contributes positively to quality of life [6], high maternal anxiety levels can negatively affect healthcare practices. The opposite is also true [7]. The limited existing literature on this subject indicates that more research is needed. This study aimed to determine health practices in pregnant women and to specify the factors associated with these practices. These findings will give some more insight into sensitive and vulnerable groups to take preventive precautions and also emphasize the role and responsibilities of midwives.

METHODS

Ethical Approval, Informed Consent, and Permissions

Ethical approval for the study was obtained from the Clinical Research Ethics Committee of Istanbul University-Cerrahpaşa (07.05.2019/ A-33). The necessary institutional permissions were obtained from the Istanbul Health Directorate to conduct the study at a state hospital in Istanbul. The principles of

the "Declaration of Helsinki" were adhered to throughout the study. Pregnant women interviewed throughout the study were informed about the purpose, importance, and possible publication platforms. Confidentiality of information was maintained. Informed consent was obtained from pregnant women who freely consented. Informed consent was obtained from pregnant women who voluntarily agreed to answer the survey questions.

Research Design and Sample

The study population consisted of pregnant women visiting antenatal outpatient clinics for their routine examinations at a state training and research hospital in Istanbul. Based on the estimated number of total births (n=3900) at this hospital, a sample size with a 95% confidence interval of 350 pregnant women. Pregnant women were volunteers in this study. However, additional criteria for the sampling were;

- Expectant mothers between 18 and 45 ages
- Fluent in Turkish and no communication problem
- Reading and signing the informed consent form.

Pregnant women who did not meet these criteria and those with acute pregnancy complications were not included in the study.

Data Collection Methods

The Personal Information form developed by the researcher in light of the relevant literature. Data in this form was collected under sociodemographics (age, education, marriage age, occupation, workin status, spouses's education, spouse job, income level, family type etc.), social support features (spouse support, family and social support etc.), obstetric informations (number of pregnancy, living children, stillbirth experience, first pregnancy age, pregnancy week, planed pregnancy, risky pregnancy), health and medical data (chronical disease situation, regular medication use, body mass index, weight gain during pregnancy), pre-pregnancy health practices (doctor vists when ill, regular dictor visit behaviour, weight control, balanced nutrition, regular excercise, smoking, alcohol behaviour, hobby practices, participating in health trainings) [1, 2, 4, 5]. The data collection tool was the Health Practices in Pregnancy Questionnaire-II (HPQ-II), developed by Lindgren [1]

in 2001 and updated in 2005. The Turkish validity and reliability study of HPQ-II was published by Er [8]. This tool consists of 34 items. However, during the Turkish validity and reliability study, the “marijuana use” item was because of low average score in internal validity and reduced to 33 items. The scale is rated over a five-point scale Likert type scale ranging from one (never) to five (always). The items measure the qualification of health practices. It includes questions related with balance of rest and exercise, safety measures, nutrition, avoiding the use of harmful substances, obtaining health care, and obtaining information. In the questionnaire the items 6, 7, 21, 22, 23, 24, 25, 26, 32, and 33 are coded reversely from 5 to 1. Total score range were between 33-165. The Cronbach alpha of the Turkish version was 0.74 in the Turkish validity and reliability study. High scores indicate a good level of health practices [8]. Deniz and Bayraktar [6] found the Cronbach's alpha 0.68. However, the Cronbach's alpha value of this study group was 0.55. The researchers' registration, assignment, follow-up, and analysis steps were compliant with the strengthening the reporting of observational studies in epidemiology (STROBE) statement guidelines [9]. Expectant mothers who visit the outpatient clinic for routine controls were invited to participate in this study. After information sharing about the purpose of the study and informed consent, women fill out the data collection form themselves.

Statistical Analysis

Data were analyzed with SPSS 24.0 for Windows (SPSS, INC., Chicago, IL) statistical program. Descriptive and analytical analysis were used. Number, percentage, arithmetic mean, and standard deviation values were used in descriptive statistics for the data analysis. The normality of the data distribution was assessed using Skewness-Kurtosis values and the Kolmogorov-Smirnov test (+1 and -1). While the independent samples t-test was used for the variables in which two independent groups were compared were normally distributed. The Mann-Whitney U test was used for the variables that did not show normal distribution. In order to compare more than two groups, One-Way Analysis of Variance (ANOVA) was used for the normally distributed variables, and the Kruskal-Wallis test was used for non normally

distributed variables. Homogeneity of variances was determined by Levene's test. As a multiple comparison test, LSD Post Hoc test was used if the variances were equal. Dunnett T3 Post Hoc was used if variances were not equal. The Pearson correlation (r) test was used to test relationship of some variables. Significance value P under the value of $P < 0.05$ was considered as statistically significant in the study. The results were evaluated at a confidence of 95%.

RESULTS

According to the socio-demographics, most (65.1%, $n=228$) were between 18-31 years, have 8 years of basic education (70%, $n=245$), are housewives (90.3%, $n=316$), no active work life (98.3%, $n=344$), all married, and 97.7% ($n=342$) got married with ≥ 18 years of age and no consanguineous marriage (97.1%, $n=340$) (Table 1). More than half of the spouses (63.7%, $n=223$) also had basic education (≥ 8 years) and worked as civil servants (71.4%, $n=250$). Most pregnant women (92%, $n=322$) reported their economic level as income equal to expenses, and live as a nuclear family (94.3%, $n=330$). Support from spouse (90.9%, $n=318$) and social environment (97.4%, $n=341$) was defined by the women as sufficient. Socio-demographic features frequency, and their comparisons according to mean health practices scores (HPQ-II) are also shown in Table 1. Mean value comparisons were similar among groups ($P > 0.05$). State of health data and pre-pregnancy health behaviors are given in Table 2. Most (97.7%, $n=342$) have no chronic disease. According to the BMI, 34.9% ($n=122$) were in normal limits, 28.5% ($n=100$) overweight (BMI 25-30), and 36.6% ($n=126$) obese (BMI ≥ 30). Most (94%, $n=329$) reported not being able to manage weight. A main part (92.9%, $n=325$) do not visit a doctor in every illness situation, do not exercise regularly (93.5%, $n=327$), have no hobbies (91.1%, $n=319$), and do not participate in health education programs (98%, $n=343$). None of the women reported alcohol, drug use before the pregnancy. However, 2.3% ($n=78$) reported smoking before pregnancy. According to the HPQ-II average scores comparisons, mean value distributions show similarities according to chronic disease, body mass index, doctor visit behavior, managing normal weight,

TABLE 1. Health Practices in Pregnancy Score (HPQ-II) According to Sociodemographics (n=350)

Variables	n	%	Mean±SD	t/ F	P-value
Age					
18-31	228	65.1	109.08±5.52	1.52	0.13
32-45	122	34.9	108.17±5.02		
Education					
8 years	245	70.0	108.60±5.61	0.92	0.36
≥9 years	105	30	109.14±4.73		
Elementary	50	14.3	105.86±5.74		
Junior Highschool	195	55.7	109.30±5.37	5.99	0.001
Highschool	86	24.6	109.08±4.82		
University and more	109.42	5.4	109.42±4.43		
Occupation					
Housewife	316	90.3	108.68±5.31	0.47	0.70
Labourer	22	6.3	109.63±6.31		
Civil servant	7	2.0	108.42±5.31		
Freelance	5	1.4	110.80±4.81		
Work status					
Employer	6	1.7	110.16±2.92	0.65	0.52
Unemployed	344	98.3	108.74±5.39		
Marriage age					
<18 years	8	2.3	111.37±3.06	1.39	0.16
≥18 years	342	97.7	108.70±5.39		
Consanguineous marriage					
Yes	10	2.9	110.30±6.21	0.91	0.36
No	340	97.1	108.71±5.34		
Spouse's education					
8 years	223	63.7	108.75±5.63	0.036	0.97
≥9 years	127	36.3	108.77±4.86		
Occupation					
Labourer	9	2.6	105.55±5.19	0.18	0.83
Civil servant	250	71.4	108.50±5.47		
Freelance	91	26	109.80±4.89		
Income level					
Less than expense	14	4	110.07±2.70	1.52	0.22
Equal	322	92	108.80±5.45		
More than expense	14	4	106.64±4.79		
Family type					
Nuclear type	330	94.3	108.76±5.36	0.05	0.96
Big family	20	5.7	108.70±5.48		
Spouse support					
Sufficient	318	90.9	108.66±5.38	1.16	0.24
Inufficient	32	9.1	109.81±5.10		
Environmental support					
Sufficient	341	97.4	108.76±5.39	0.007	0.99
Inufficient	9	2.6	108.77±4.20		

SD, Standard deviation. t, Independent sample t-test. F, Tested by one-way ANOVA with post-hoc Bonferoni test. Statistically significant P-values are shown in bold.

TABLE 2. Health Practices in Pregnancy Score (HPQ-II) According to State of Health and Pre-Pregnancy Health Behaviors (n=350)

Variables	n	%	Mean±SD	t / F	P-value
Chronic disease					
Yes	8	2.3	111.50±4.34	1.46	0.14
No	342	97.7	108.70±5.37		
Body Mass Index (BMI)					
Normal (20-25)	122	34.9	108.49±5.23	1.63	0.197
Overweight (25-30)	100	28.5	109.58±5.49		
Obese (≥30)	128	36.6	108.76±5.36		
Visit doc when ill					
Yes	25	7.1	108.76±5.40	0.006	0.996
No	325	92.9	108.76±5.36		
Manage normal weight					
Yes	21	6	109.28±6.84	0.45	0.64
No	329	94	108.73±5.26		
Exercise routinely					
Yes	23	6.6	109.65±6.00	0.82	0.41
No	327	93.4	108.70±5.32		
Smoke					
Yes	78	2.3	107.01±4.86	3.32	0.001
No	272	77.7	109.26±5.40		
Hobbies					
Yes	31	8.9	105.80±5.31	3.26	0.001
No	319	91.1	109.05±5.28		
Attend health education					
Yes	7	2	109.85±4.77	0.54	0.59
No	343	98	108.74±5.37		

SD, Standard deviation. t, Independent sample t-test. F, Tested by one-way ANOVA with post-hoc Bonferoni test. Statistically significant P-values are shown in bold.

exercising routinely, and attending health education programs ($P>0.05$) (Table 2). However, significance was seen in smoking and also hobby activities. Non-smokers (109.26 ± 5.40) had significantly higher HPQ-II scores than smokers (107.01 ± 4.86) and those who do not have any hobbies (109.05 ± 5.28) also had higher scores than the group (105.80 ± 5.31) with hobbies ($P=0.001$).

The distribution of obstetrics and pregnancy monitoring features and HPQ-II mean score comparisons are given in Table 3. More (51.4%, $n=180$) than half of the women have no birth

experience, median values were pregnancy was 2 (min-max= 1-6), number of living children 1 (min-max= 0-6), stillbirth 0 (min-max= 0- 1), spontaneous abortion 0 (min-max= 0-1). none of the women had a curettage. Most (51.7%, $n=181$) of the women were in the second trimester, followed by the third trimester (37.7%, $n=132$). Mean gestational week was 24.85 ± 8.69 (range: 10-40). Most (86.6%, $n=303$) had a planned pregnancy, followed their routine pregnancy follow-ups (98.6%, $n=345$), and had not attended a prenatal education program (96.6%, $n=338$). Their information resource was mainly the doctor (55.7%,

TABLE 3. Health Practices in Pregnancy Score (HPQ-II) According to Obstetric Features and Pregnancy Monitoring (n=350)

Variables	n	%	Mean±SD	t / F	P-value
Birth experience					
No	170	48.6	108.85±5.79	0.31	0.75
Yes	180	51.4	108.67±4.93		
Trimester week					
First (1-13 week)	37	10.6	108.78±5.05	0.37	0.98
Second (14-27 week)	181	51.7	108.90±5.46		
Third (28-40 week)	132	37.7	108.57±5.34		
Planned pregnancy					
Yes	303	86.6	108.58±5.39	1.61	0.10
No	47	13.4	109.93±5.08		
Routine antenatal examinations					
Yes	345	98.6	108.73±5.36	0.85	0.39
No	5	1.4	110.80±5.35		
Pregnancy course attendance					
Yes	12	3.4	107.08±4.69	1.10	0.27
No	338	96.6	108.82±5.38		
Information source					
Doctor	195	55.7	108.59±5.40	0.41	0.79
Midwife	9	2.6	108.11±4.98		
Internet	93	26.6	108.83±5.37		
TV	30	8.6	109.90±6.26		
Friends	23	6.6	108.69±6.26		

SD, Standard deviation. t, Independent sample t-test. F, Tested by one-way ANOVA with post-hoc Bonferoni test.

n=195) followed by internet/social media (26.6%, n=93), TV (8.6%, n=30), friends (6.6%, n=23), midwives (2.6%, n=9), but no nurses. In this context, HPQ-II mean score distributions showed a similar distribution between the groups in all variables ($P>0.05$).

At final stage a correlation analysis was conducted including age, education level (primary school, secondary school, high school, university), marriage age, income level, first pregnancy age, gestational week, number of pregnancies, living children, stillbirths, spontaneous abortions, body mass index value, and total HPQ-II scores (Table 4). Despite mothers' education level and stillbirth number, other variables show similar correlation with total HPQ-II scores ($P>0.05$). However, mothers' education level

increase correlated with a higher total HPQ-II score ($r=0.141$; $P=0.008$). Just the opposite number of stillbirths and the total HPQ-II score ($r=-0.123$; $P=0.021$) were inversely correlated. A total of 7 mothers in our study group had experienced one stillbirth.

DISCUSSION

Our study group was a young group of women between 18-31 years old, junior high school graduates (55.7%), and housewives (90.3%). In Türkiye Demographic and Health Survey (TDHS) results, highest age-specific fertility rate is in the range of 25-29 years, our results also shows a similar age range

with TDHS. According to TDHS 2018, 14.5% of the female population is within the 30-34 age range, and 15% of them are placed in the 35-39 age group. 41% of women have a high school and higher education and 28% are working [10]. Our study, compared with TDHS 2018, the difference in education level stands out. According to the latest country data, there is an increase in the education level of women between the ages of 15-49 in Turkey.

Study results using the HPQ-II comparisons show differences. Our score was 108.76 ± 6.61 (range: 93-123) in this study. Er's [8] found HPQ-II score of 124.12 ± 12.09 in the first institution and 130.26 ± 10.79 in the other institution. In another study Tirkeş [11] found a mean HPQ-II score as 121.57 ± 1.53 (range: 87-149). In Lindgren's [1] study, the scale score was 138.49 ± 12.42 (range: 100-163). In another study, the mean HPQ-II score was 112.64 ± 13.87 (range: 73-141) [12]. Our HPQ-II scale values were similar in comparison to the literature. Moreover, a significant difference was found between the HPQ-II score and education level, smoking rate in this study. Increase in education level also supported higher HPQ-II score. However smoker expectant women show lower health practices scores. These results indicate insufficient health practices in smokers and lack of knowledge in

pregnancy health practices. Education level and smoking behavior are determined as key parameters in health practices and scores. These results showed similarities with other literature which suggests that the health awareness and healthy lifestyle behaviors become the proportional to the level of education [13-17]. In a study by Solmaz and Şahin [18], 44.3% of pregnant participants were in the 17-25 age group, and the mean age was 26.84 ± 5.32 . While there was no significant difference between the age groups across studies, the mean ages were similar. In the same study, 36.7% of pregnant women were high school graduates, and 70.92% were housewives. In the study by Kaya and Gölbaşı [19], mean age was 26.62 ± 4.00 , 63.6% were 26 years of age or older, and 42.4% were high school graduates. When the participant groups in these three studies were examined, it was seen that the participants in our study had a significantly lower level of education and were not actively working. Participants' sociodemographic characteristics and scale scores revealed a significant difference between them and their level of education. As participants' level of education increases, their scale scores increase, suggesting they have positive health practices. Studies by Solmaz and Şahin [18], Beyaz *et al.* [5], and Kaya and Gölbaşı [19] also found similarities between education levels and HPQ-II scale scores. An examination of the participants' general health status and habits before pregnancy revealed that 2.3% of them were smokers. Similar studies in the literature have found no association between smoking and HPQ-II scores. This study found significantly lower scale scores in pregnant women who smoked before pregnancy. This suggests that pregnant women who smoke have poor health practices. Smoking is a serious public health problem worldwide. During pregnancy, it has short- and long-term negative effects on both the mother and the fetus. It can lead to congenital anomalies and even fatal fetal consequences, including death. It is crucial for expectant mothers to abandon negative habits and focus on positive ones. In light of data on obstetric characteristics and habits, no significant difference was found between the scores obtained by pregnant women according to different habits. In this study, 51.4% of pregnant women were multiparous, 51.7% were in the second trimester, and 86.6% planned this pregnancy. 98.6% of pregnant women attended routine

TABLE 4. Correlation Analysis of Selected Variables and Total HPQ-II Score (n=350)

Variables	HPQ-II Score	
	r	P-value
Age	-0.023	0.670
Education level	0.141**	0.008
Marriage age	-0.068	0.206
Income level	-0.091	0.091
Number of pregnancies	-0.047	0.378
Number of alive children	-0.022	0.688
Number of stillbirths	-0.123*	0.021
Number of spontaneous abortions	-0.038	0.483
First pregnancy age	-0.068	0.206
Pregnancy week	-0.031	0.557
Body Mass Index	-0.019	0.723

HPO-II, Health Practices in Pregnancy Questionnaire-II; r, Pearson correlation coefficient.

Statistically significant P-values in bold.

follow-ups. In a study conducted by Beyaz *et al.* [5], 67.7% of pregnant women were multiparous, 96.5% were in the second trimester, 75.3% had planned pregnancies, and 74.1% attended routine check-ups. While participant characteristics were similar between the two studies, the fact that 98.6% of pregnant women attended routine check-ups aligns with the Turkish average. In Turkey, 90% of pregnant women received at least one prenatal care visit, and 96% received at least 4 prenatal care visits [20]. The higher rate in this study is due to the number of participants and the fact that it is a regional study. In this study, 55.7% of pregnant women emphasized that they received information about their pregnancies and births from doctors, 26.6% from the internet, and 2.6% from midwives. In our study, the rate of prenatal care among pregnant women was high, but the low rate of information received from midwives suggests difficulty in reaching midwives during this process and the disruption of midwifery services. Gök *et al.* [21] reported that 70% of pregnant women received information from doctors, 55.6% from midwives/nurses, and 58.8% from the internet. Another study from Türkiye [22] reported receiving information from healthcare professionals to be 57.7% and 42.3% from the internet. While the rate of receiving information from doctors/healthcare workers is high, the rate of receiving information from the internet is significantly higher. This data demonstrates the significant role technology has taken in our lives, suggesting that it is a source of information as much, and sometimes even more, than that of a professional. Mean score values of this study (109.22 ± 5.96) were lower than other study results from Türkiye. Including Er [5] who reported findings from two centers as 124.12 ± 12.09 and 130.26 ± 10.79 . Tirkeş [11] 121.57 ± 1.53 , Beyaz *et al.* [5] 109.8 ± 12.9 , Balaban and Özkan [23] 118.86 ± 17.19 , Bayrak and Kanbur [22] 123.01 ± 9.39 , Gök *et al.* [21] as 97.53 ± 11.59 , Kaya and Gölbaşı [19] 121.57 ± 10.3 , and Solmaz and Şahin [18] 103.90 ± 15.46 . The studies were conducted in different provinces in Türkiye, and the fact that the results did not differ significantly suggests that a general health attitude has emerged. Common points in the studies are that the education level is generally secondary or high school, and pregnant women frequently use the internet as a source of information. When the correlation analyses of the

factors related to the health practices of the participating pregnant women were examined, the HPQ-II scale correlation with age, income status, age of marriage, number of pregnancies, number of living children, number of spontaneous abortions, age at first pregnancy, gestational week and body mass index values showed a similar distribution. Pregnant women's level of education was found to be significantly correlated with their HPQ-II scores. As their level of education increases, so do their scale scores. In the study, 70% of pregnant women had completed eight years of education, and 30% had a university degree. The maximum possible score on the scale was 165, while the highest score in this study was 123. According to the data, it is predicted that higher levels and years of education can lead to higher scale scores, thus enabling pregnant women to adopt healthier practices. Correlation analysis revealed a significant relationship between the HPQ-II total score, education level, and the number of stillbirths. An inverse relationship was found between the number of stillbirths and the HPQ-II total score ($r = -0.123$; $P = 0.021$). Data indicate that as education level increases, the scale score increases, while the number of stillbirths decreases. As education level increases, pregnant women become more selective about their own and their baby's health, taking preventative steps to improve their health. A woman's increased education level and health literacy are important indicators of increasing the development level of herself, her family, and the country in which she lives.

Strengths and Limitations

The strengths and limitations of the study are listed as follows:

Strengths: Data collected directly through face-to-face interviews, and providing information on specific, period-specific health practices, such as those related to pregnant women.

Limitations: Findings are limited by participants' reports. Particularly, statements regarding smoking, alcohol, and drug use are accepted as is. It is not possible to comment on the results for larger populations. More comprehensive quantitative and qualitative studies on the subject are needed. Larger databases will contribute to broadening the scope of the topic.

CONCLUSION

In conclusion, this study revealed the health practices of Turkish expectant mothers and analyzed related factors. Study results indicate the importance of improving the education level of women. Higher education level will contribute to improved health awareness and health practices. However, study results show also that indicators like smoking behavior and previous history of stillbirth can also be considered important risk factors for lower health practices in pregnancy. Special programs for women should be developed in smoking cessation programs. A common health like overweight, obesity indicate insufficiency in weight control correlated with wrong eating habits and sedentary life style. Women-oriented and pregnancy programs should be developed for weight control and balanced nutrition. Women from all socioeconomic levels can be reached through state and private hospitals' pregnancy education programs and community-based education programs including Family Health Centers. Health care professionals like nurses and midwives are in the key position to provide care for expectant mother as an educator and consultant, as a source of more information, at all stages before pregnancy, during pregnancy, delivery and after birth.

Ethics Approval and Consent to Participate

This study was approved by the İstanbul University-Cerrahpaşa Clinical Research Ethics Committee (Decision No: A-33; date: 17.05.2019). All procedures were conducted in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki Declaration and its later amendments. Informed consent was obtained from pregnant women who freely consented. Informed consent was obtained from pregnant women who voluntarily agreed to answer the survey questions.

Data Availability

All data generated or analyzed during this study are included in this published article. The data that support the findings of this study are available on request from the corresponding author, upon reasonable request.

Authors' Contribution

Study Conception: BA; Study Design: BA, ÖG, ME, ŞY; Supervision: BA, ÖG, ME, ŞY; Funding: BA, ÖG; Materials: BA, ÖG; Data Collection and/or Processing: BA, ÖG, ME, ŞY; Statistical Analysis and/or Data Interpretation: BA, ÖG, ME; Literature Review: BA, ÖG; Manuscript Preparation: BA, ÖG, ME; and Critical Review: BA, ÖG, ME, ŞY.

Conflict of Interest

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Generative Artificial Intelligence Statement

The author(s) declare that no artificial intelligence-based tools or applications were used during the preparation process of this manuscript. The all content of the study was produced by the author(s) in accordance with scientific research methods and academic ethical principles.

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REFERENCES

1. Lindgren K. Testing the Health Practices in Pregnancy Questionnaire-II. *J Obstet Gynecol Neonatal Nurs*. 2005;34(4):465-72. doi: [10.1177/0884217505276308](https://doi.org/10.1177/0884217505276308).
2. Kılıç Doğan E, Şen Aytakin M, Kahraman Şimşek A, Alparslan Ö. Anneliği İlk Kez Deneyimleyecek Gebelerin Gözünden Anne Olmak: Bir Metafor Analizi [Becoming a mother from the perspective of pregnant women who will experience motherhood for the first time: A metaphor analysis]. *Pediatr Pract Res*.

- 2025;13(3):69-75. doi: 10.21765/pprjournal.1681830. [Article in Turkish]
3. Türk Ebeler Derneği. Ebelik Mesleğinin Tanımı. Available at : www.turkebelerderneği.org. Accessed December 12, 2025.
4. Aktaş Reyhan F, Şenlik B. Kadınların Aile Sağlığı Merkezlerindeki Ebelik Hizmetleri İle İlgili Görüşleri [Women's Views on Midwifery Services in Family Health Centers]. KTO Karatay Üniversitesi Sağlık Bilimleri Dergisi. 2025;6(1):30-40. doi: 10.59244/ktokusbd.1595519. [Article in Turkish]
5. Beyaz E, Gökçeoğlu S, Özdemir N. Muş İl Merkezinde Gebelerin Sağlık Uygulama Düzeylerinin Belirlenmesi Determination the Health Practice Levels of Pregnant Women in the Muş City Center]. Van Sag Bil Derg. 2020;13(2):9-16. [Article in Turkish]
6. Deniz M, Bayraktar E. Examining the relationship between positive health behaviors and quality of life in pregnant women, Journal of Health Sciences. 2023;32(2):292-300. doi: 10.34108/eujhs.1187156.
7. Kışlak D, Köse S. Investigation of the effects of distress on health practices in pregnant women. Erzincan University Journal of Science and Technology. 2022;15(3):987-995. doi: 10.18185/erzifbed.1201964.
8. Er S. Gebelikte sağlık uygulamaları ölçeği Türkçe formunun geçerlik ve güvenilirlik çalışması [yüksek lisans tezi], İzmir: Ege Üniversitesi, Sağlık Bilimleri Enstitüsü;2006.
9. Cuschieri S. The STROBE guidelines. Saudi J Anaesth. 2019;13(Suppl 1):S31-S34. doi: 10.4103/sja.SJA_543_18.
10. Hacettepe University Institute of Population Studies, Türkiye Population and Health Survey. Available at: https://hips.hacettepe.edu.tr/tr/2018_tnsa_analiz_ve_rapor-56. Accessed November 29,2025.
11. Tirkeş D. Gebe kadınların sağlık uygulamaları ve etkileyen faktörlerin incelenmesi [yüksek lisans tezi]. Sivas: Cumhuriyet Üniversitesi, Sağlık Bilimleri Enstitüsü;2012.
12. Çapık A, Sakar T, Apay, SE. Gebelikte Sağlık Uygulamaları İle Duygusal Zeka Arasındaki İlişki [Relationship Between Health Practices and Emotional Intelligence in Pregnancy]. Uluslararası Hakemli Hemşirelik Araştırmaları Dergisi. 2016;6(6):75-88. doi: 10.17371/UHD.2016616569. [Article in Turkish].
13. Pirinççi E, Polat A, Köroğlu A, Kumru S. Bir Üniversite Hastanesinde Doğum Yapan Kadınların Doğum Öncesi Bakım Alma Durumu ve Etkileyen Faktörler [Prenatal Care Conditions of Women Who Delivered in an University Hospital and Influencing Factors]. ADU Tıp Fakültesi Derg. 2010;11(2):1-7. [Article in Turkish].
14. Turgut N, Güldür A, Çakmakçı H, et al. Gebe Okulunda Eğitim Alan Gebelerin Bilgi Düzeyleri Üzerine Bir Araştırma [A Study About Knowledge Level of Pregnants That Educated in Pregnancy School]. Hemşirelik Akademik Araştırma Dergisi. 2017;3(1):1-8. doi: 10.5222/jaren.2017.001. [Article in Turkish].
15. Taş F, Gülpak M, Oktay AA, Demir N. Kadın Doğum ve Çocuk Hastanesinde Doğum Yapan Kadınların Doğum Öncesi Bakım Alma Durumları [Receiving Care Prior to Giving Birth for Women who Gave Birth at The Maternity and Children's Hospital]. KSÜ Tıp Fak Der.2019;14(1):24-30. doi: 10.17517/ksutfd.487188. [Article in Turkish].
16. Yılmaz L, Koruk F, Koruk İ. Şanlıurfa'da Bir Devlet Hastanesinde Doğum Yapmış Kadınların Doğum Öncesi Bakım Hizmetlerini Alma Durumu, Bu Hizmetlerin Niteliği ve Etkileyen Faktörler [The Status of Receiving Antenatal Care Services for Women Who Have Delivered in a State Hospital in Şanlıurfa, the Quality of These Services and Related Factors]. Mersin Univ Sağlık Bilim Derg. 2018;11(2):209-218. doi: 10.26559/mersinsbd.424153. [Article in Turkish].
17. Aygar H, Metintaş S. Bir Kalkınma Göstergesi Olarak Anne Ölümleri [Maternal Mortality as a Development Indicator]. ESTÜDAM Halk Sağlığı Dergisi. 2018;3(3):63-70. [Article in Turkish]
18. Solmaz E, Şahin E. Gebelerin Sağlık Uygulamaları ile Gebelik Stresi İlişkisi ve Etkileyen Faktörlerin İncelenmesi [Examination of the Relationship between Pregnancy Stress and Health Practices in Pregnant Women and the Factors Affecting It]. Etkili Hemşirelik Dergisi. 2024;17(3):362-373. doi: 10.46483/jnef.1516048. [Article in Turkish]
19. Kaya D, Gölbaşı Z. Gebe Kadınların Sağlık Uygulamaları ve Etkileyen Faktörlerin İncelenmesi [Examination of Pregnant Women's Health Practices and Affecting Factors]. Gazi Sağlık Bilimleri Dergisi. 2023; Özel Sayı: 25-32. [Article in Turkish]
20. Yavuz FN, Kaya SP, Kaplan S. Doğum Öncesi Bakım Önerilerinin Ulusal ve Uluslararası Rehberlere Göre Karşılaştırılması [Comparison of Prenatal Care Recommendations Based on National and International Guidelines]. Türkiye Sağlık Araştırmaları Dergisi. 2025; 6(2):9-21. [Article in Turkish]
21. Gök MŞ, Küçük K, Kanbur A. Gebelerde Sağlık Okuryazarlığı ile Sağlık Uygulamaları Arasındaki İlişkinin İncelenmesi [Examination of the Relationship Between Health Literacy and Health Practices of Pregnant Women]. STED. 2023;31(6):409-417. doi: 10.17942/sted.1021910. [Article in Turkish]
22. Bayrak E, Kanbur A. Gebelerde İnternet Yoluyla Karar Alma İle Sağlık Uygulamaları Arasındaki İlişkinin İncelenmesi [Examining the Relationship Between Decision-Making via Internet and Health Practices in Pregnant Women]. İnönü Üniversitesi Sağlık Hizmetleri Meslek Yüksek Okulu Dergisi. 2022;10(1):255-269. doi: 10.33715/inonusaglik.1010546. [Article in Turkish]
23. Balaban S, Özkan H. Gebelikteki Sağlık Uygulamalarının Prenatal Bağlanmayla İlişkisi ve Etkileyen Faktörler [The Correlation of Health Practices in Pregnancy with Prenatal Attachment and Effective Factors]. Göbeklitepe Journal of Medical Science. 2021;4(6):118-128. [Article in Turkish]