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Original Investigation

Smoking status and effects of happiness on smoking in turkish pregnant women

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ABSTRACT

Objective: The aim of this research was to explore smoking during pregnancy, features of pregnant women who smoke, factors that affect smoking during pregnancy, and effects of anxiety and happiness on smoking during pregnancy.

Methods: This was a cross-sectional and analytical study. The study was conducted at 16 family health centers in Aydın, Turkey. In total, 187 pregnant women were selected through stratified random sampling. Data were collected using a questionnaire developed by researchers (D.S, H.A,) the Beck Anxiety Inventory, and Oxford Happiness Questionnaire. Data obtained were analyzed using descriptive statistics, Chi-square test, logistic regression analysis, Kolmogorov–Smirnov test, Mann–Whitney U test, and receiver operating characteristic analysis.

Results: The rate of smoking was 32.1% before pregnancy and 13.9% during pregnancy. Not having a civil marriage and moving to another place increased smoking. There was a statistically significant difference in the smoking status and the number of cigarettes smoked before and during pregnancy between the groups. Smoking of spouses and other people increased the number of smoking women. There was no statistically significant difference (U=-1.465, p=0.143) between anxiety scores and smoking during pregnancy; however, the difference between happiness scores and smoking during pregnancy was significant (U=-2.804, p=0.005).

Conclusion: Feeling happy, smoking spouses or other people around the women, and the number of cigarettes smoked before pregnancy were found to affect smoking during pregnancy.

Keywords: Smoking, pregnancy, happiness and anxiety

INTRODUCTION

There is an increase in the number of pregnant smokers because smoking is widespread in the society, 90% of smokers start smoking before the age of 20 years, and the number of female smokers has increased. Globally, although smoking in pregnancy has reduced in recent years, it has still shown to be common in recent research (9%-46%) (1). According to the Centers for Disease Control and Prevention (2015), approximately 10% of women are reported to smoke during the last 3 months of pregnancy (2). Of all women who smoked 3 months before pregnancy, 55% quit during pregnancy. The rate of smoking in a pregnant population in France has been reported as 25.1% (3). In a field study from Germany [Schneider et al. (4)], the rate of smoking during pregnancy was found to be 13%. In a study in Lebanon, out of 102 smokers, only 21% stopped smoking, but 79% continued smoking in their pregnancy (5). The rate of smoking during pregnancy has been reported as 14.8% in a study conducted in Lithuania (6). According to Turkish Population and Health Study (TPHS; 2008), 11.4% of pregnant women smoke (7). A rise in the rate of smoking in a society increases smoking-related risks during pregnancy (8).

There is high risk of low birth weight, intrauterine growth retardation (IUGG), and sudden infant death syndrome due to smoking in pregnancy. In addition, the incidence of major birth defects increases. It has been reported that the incidence of cleft palate is higher among women smoking during the first trimester of their pregnancy. Smoking can also have effects on the respiratory system, such as deficiencies in the pulmonary functions, wheeze in the early infantile period, asthma, and lower respiratory tract infections. Effects of smoking on mental health and behavior include learning difficulties; hyperactivity; low intelligent quotient; mental retardation; behavioral, psychiatric, and cognitive side effects in childhood; attention deficit disorder; and low academic performance. Pregnant women can experience spontaneous abortion, placenta previa, abruptio placenta, early membrane rupture, placental hypertrophy, implantation dysfunction, hypertension, and preeclampsia (9, 10). Smoking in pregnancy is responsible for 5% of all newborn deaths, 10%-15% of preterm births, and 20%-30% of cases of low birth weight (11). In a study by Inoue et al. (12), a significant relation was found between the infant's height and weight and the mother's smoking status during pregnancy; however, the infant's height and weight was

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not significantly related to the father's smoking. They added that both the father's and the mother's smoking habit increased the risk of short stature.

Most people unable to overcome tobacco addiction note that they fail to quit smoking since they cannot manage stress. One-fourth of ex-smokers start to smoke again due to failure to manage stress (13). Pregnancy is considered a period during which many changes occur in the lives of pregnant women. Age at pregnancy, socio-economic status, low education levels, anxiety during pregnancy, and psycho-social stress play a role in increased smoking (14). In a study by Köse et al. (15), the most frequent reason to start smoking among women is stress (33.1%). One study revealed that depressed women were 4 times more likely to smoke during their pregnancy than were non-depressed women (16). As happiness scores during pregnancy increase, the rate of smoking decreases. Being happy during pregnancy has a positive effect on health behaviors (14).

Smoking during pregnancy is a health problem that prevents raising healthy generations due to its harmful effects on mothers and their babies. In fact, pregnancy is an opportunity for smoking women to give up this habit (17). Pregnancy itself has a supporting role in one's life and offering information about harmful effects of smoking can be an appropriate way of motivation (11). It has been reported that quitting smoking in pregnancy, regardless of trimesters, will improve pregnancy outcomes. Health professionals should revise their in-service training programs so that the rate of people ceasing to smoke can rise (17).

This study was performed to determine the rate of smoking in pregnancy, features of smoking pregnant women, effects of anxiety in pregnancy on smoking, effects of happiness in pregnancy on smoking, and factors affecting smoking during pregnancy.

METHODS

Design and Participants

This study has a cross-sectional analytical design and was conducted in 16 family health centers in Aydın, Turkey, between December 2, 2013, and April 11, 2014. The study population included pregnant women receiving care at family health centers in the city of Aydın during the study period. The study sample was created through stratified random sampling and included 187 volunteering pregnant women in their first, second, and third trimesters. Inclusion criteria were being literate, not diagnosed with any chronic diseases or psychiatric disorders, and aged 15-49 years.

Questionnaires and Interviews

Data were collected with a questionnaire developed by researchers (D.S, H.A), the Beck's Anxiety Inventory (BAI), and a short form of the Oxford Happiness Questionnaire (OHQ-SF). The questionnaire developed by the researcher composed of a total of 42 questions, of which 12 were open-ended and 30 were closed-ended questions. Of the 42 questions, 11 were about socio-demographic features, 16 were about social and psychological problems, 4 were about marriage, and 11 were about smoking status of the women and their spouses.

BAI is a self-rating scale developed by Beck et al. (18) to determine the frequency of anxiety experienced by individuals. The inventory is a 21-item, 4-point Likert scale, and each item is scored ranging from 0 to 3 (0: never, 1: mild, 2: moderate, and 3: severe). The lowest and the highest scores to be obtained are 0 and 63, respectively. High scores indicate severe anxiety. The validity and reliability for the Turkish population were tested by Ulusoy et al. (19). They found that the Cronbach's alpha internal consistency coefficient was 0.93 . In the present study, Cronbach's alpha was 0.83.

OHQ-SF was developed by Hills and Argyle (20) to evaluate happiness levels and is composed of 8 items. The validity and reliability for the Turkish population were tested by Doğan and Çötok (21). Internal consistency and test and re-test coefficients of the questionnaire were 0.74 and 0.85, respectively. A factor analysis of the questionnaire showed a one-factor structure. The original version of the questionnaire is a 6-point Likert scale (1: completely disagree, 6: completely agree). The Turkish version of the questionnaire is a 5-point Likert scale since more than 5 choices in Turkish causes difficulty in meaning and understandability, as the meanings of the choices can be very similar and can be difficult for respondents to discriminate between them. Items 1 and 7 were scored in the reverse order. The minimum and maximum scores to be obtained from the questionnaire are 5 and 35, respectively. Higher scores indicate higher levels of happiness. However, the questionnaire does not have a cut-off point. In addition, the Turkish version of the OHQ-SF is a self-report Likert scale composed of 7 items (1: completely disagree and 5: completely agree) (21). The Cronbach's alpha value of the OHQ-SF in this study was 0.64.

The pregnant women accepting to participate in the study were given the questionnaires and explained how to complete them. The women self-completed the questionnaires and requested the researcher to explain a question in case of lack of understanding. The participants completed all the data collection tools in 20-25 minutes.

Ethics

The ethical approval was obtained from the Public Health Directorate of Aydın Municipality and the Non-Interventional Clinical Research Ethical Committee of Adnan Menderes University. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Statistical Analysis

Obtained data were analyzed using Statistical Package for the

Social Sciences Version 16.0 (SPSS Inc.; Chicago, IL, USA). Descriptive statistics (numbers, percentages, and means), Chi-square test (Yates's correction for continuity and Fisher's and Monte Carlo Exact tests), and logistic regression analysis were used. Kolmogorov-Smirnov test was utilized to determine whether data were normally distributed. Since data about age were normally distributed, mean±standard deviation as descriptive statistics was used for the analysis, and since data about other variables were not normally distributed, median as descriptive statistics (25%-75%) was used for analysis. Mann-Whitney U test was used to compare groups when data were not normally distributed. Receiver operating curve (ROC) analysis was employed to determine the cut-off point of smoking-related continuous variables. The Cronbach's alpha values for BAI and OHQ-SF were determined using reliability analysis.

RESULTS

Out of all the smoking women, 42.3% were high school graduates, 73.1% were housewives, 61.5% had an income equal to their expenses, 96.2% had a health insurance, 88.5% were living with their spouses and children, and 80,8% lived in a city for most of their life. In addition, 11.5% women were living with their spouses' families. Table 1 shows the socio-demographic features of the women.

The most frequent stressor experienced by the women was financial problems (14.4%), followed by unemployment (8.6%), presence of a severe disease in a family member (5.9%), death of a family member (5.3%), moving to another place (5.3%), marital problems (2.1%), and changing job (0.5%). Most of the women were satisfied with their marriage (98.9%) and did not have any marital problems recently (95.2%). Table 2 summarizes stressors experienced by the women.

In total, 66.8% of women received training to stop smoking during their antenatal screening; 54.8% of them were noted to receive the training mostly from midwives. Overall, 32.1% of the women smoked before pregnancy and 40% of the smokers smoked 6-10 cigarettes a day; 13.9% of the women smoked during their pregnancy and 57.7% of the smokers smoked 1-5 cigarettes a day. In addition, 57.7% of the smokers were very worried about harmful effects of smoking on their babies, while 7.7% of the smokers were not worried about it. The passive smokers' rate was 55.6%; 62% of the smokers smoked in the same environment as other smokers and at least 1-5 cigarettes a day. Also, 17.1% of the smokers smoked together with a person except their husbands; 80.8% of the women noted that they smoked because of habit (Table 3a).

In total, 84.6% of the women wanted to stop smoking and 50% of them wanted to do so to avoid its harm on their babies. The most frequent reason for stopping smoking was avoidance of harm on babies (77.8%), followed by nausea and vomiting, disturbing effects of its smell, disgust, pressure and support from others, and pressure and support from spouses. The women quitting smoking did not receive recommendations and support

Table 1. Socio-demographic features of the women

Socio-demographic features of Nonsmokers	n (187) mean±SD	%
Age, years	27.8±5.1	
Duration of marriage years	6.0±4.76	
Marital status		
Civil marriage	176	94.1
Religious marriage	11	5.9
Education		
Primary school	53	28.3
Secondary school	43	23.0
High school	55	29.4
University or higher education levels	36	19.3
Occupation		
Housewife	150	80.2
Officer	9	4.8
Tradesman	4	2.1
Private sector	20	10.7
Having one's own business	3	1.6
Worker	1	0.6
Income		
Lower than expenses	47	25.1
Equal to expenses	127	67.9
Higher than expenses	13	7
Having an extended family		
Yes	35	18.7
No	152	81.3
Place of residence where women lived for most of their life		
Village	25	13.3
Small town	5	2.7
Town	22	11.8
City	135	72.2
Socio-demographic features of smokers	**n (26)**	**%**
Education		
Primary school	9	34.6
Secondary school	4	15.4
High school	11	42.3
University or higher education levels	2	7.7
Having a job providing income		
Yes	25	96.2
No	1	3.8
Income		
Less than expenses	9	34.6
Equal to expenses	16	61.5
Higher than expenses	1	3.8
Having a health insurance		
Yes	25	96.2
No	1	3.8
Family structure		
Nuclear family	23	88.5
Extended family	3	11.5
Place of residence where women lived for most of their life		
Village	1	3.8
Small town	1	3.8
Town	3	11.5
City	21	80.8

SD: standard deviation

Table 2. Stressors experienced by the women

Stressors experienced by the women	n	%
Financial problems		
Yes	27	14.4
No	160	85.6
Death of a family member		
Yes	10	5.3
No	177	94.7
Moving		
Yes	10	5.3
No	177	94.7
Changing job		
Yes	1	0.5
No	186	99.5
Marital problems		
Yes	4	2.1
No	183	97.9
Severe illness of a family member		
Yes	11	5.9
No	176	94.1
Unemployment		
Yes	16	8.6
No	171	91.4
Experiencing miscellaneous problems		
Yes	6	3.2
No	181	96.8
Satisfaction with marriage		
Yes	185	98.9
No	2	1.1
Experiencing a marital problem at the time of the study		
Yes	9	4.8
No	178	95.2
Presence of spouses' problems		
Yes	179	95.7
No	8	4.3

about the issue from nurses, midwives, or doctors (Table 3b).

The mean BAI score was 11.0 (min-max=5.0-17.25) in the smokers and 8.0 (min-max=4.0-13.0) in the nonsmokers without a significant difference (U=−1.465; p=0.143). The mean OHQ-SF score was 26.0 (min-max=23.75-29.0) in the smokers and 28.0 (min-max=26.0-31.0) in the nonsmokers with a significant difference (U=−2.804; p=0.005).

According to the ROC analysis, the cut-off point for the happiness score was 27 (area below the ROC curve: 0.671; p=0.005). The women were divided into 2 groups: those with a happiness score <27, i.e., the unhappy group, and those with a happiness score of >27, i.e., the happy group. The unhappy group smoked 2.938 times more than the happy group (p=0.012; odds ratio [OR]=2.938; 95% confidence interval [CI]=1.238-6.998).

There was no significant difference in the smoking status in terms of demographic features except for marital status. The women without a civil marriage smoked more than those with a civil marriage did, with a significant difference (χ^2=0.009; p=0.009). In fact, those without a civil marriage smoked 6.15 times more than those with a civil marriage did.

The rate of smoking was significantly higher among the women who moved to new homes during their pregnancy than those who did not (χ^2=0.035; p=0.035). Indeed, the women moving to a new place smoked 4.697 times more than those who did not (OR=4.697; 95% CI=1.228-17.967). Financial problems, unemployment, presence of a severe disease in a family member, death of a family member, and marital problems did not cause a significant difference in terms of smoking.

There was a significant difference in smoking during pregnancy between the women smoking in the antenatal period and those not smoking in the antenatal period (χ^2=60.352; p<0.0005). The higher the number of cigarettes the women smoked before pregnancy, the more likely they were to continue smoking during pregnancy. The higher the number of cigarettes was smoked in the antenatal period, the higher the number of cigarettes during pregnancy (χ^2=7.716; p=0.021).

The women whose spouses smoked in the same environment as them smoked significantly more than those whose spouses did not smoke in the same place (χ^2=21.426; p<0.0005), with a risk of smoking 9,324 times higher (OR=9.324; 95% CI=3.326-26.139). The women smoked significantly more when someone other than their spouses smoked in the same place as them (χ^2=0.021; p=0.021). This situation caused an increase in the number of cigarettes smoked by 3.176 times (OR=3.176; 95% CI=1.265-7.976).

DISCUSSION

Only one stressor, moving homes, was found to increase smoking significantly. Financial problems, unemployment, presence of a severe disease in a family member, death of a family member, and marital problems did not cause a significant difference for smoking. Satisfaction with marriage, having problems related to marriage, and having a good relationship with spouses did not cause a difference for smoking. It can be suggested that moving home is a condition causing severe stress. However, in a study by Beijers et al. (22), no significant relation was found between the severity of stressful events and starting smoking.

It was noted that 13.9% of the women smoked during their pregnancy. Most of the women smoked 1-5 cigarettes a day during this period. The rate of smoking during pregnancy was reported to be 13% by Schneider et al. (4), 12%-25% by Lumley et al. (16), and 14.4% by Chomba et al. (23), which are consistent with the results of the present study. It was reported to be 25.1% by Go-

Table 3a. Smoking status of the women I

Information about the smoking status of the women	n	%
Did they receive education to stop smoking during antenatal visits?		
Yes	62	33.2
No	125	66.8
Who offered education to stop smoking?		
Midwives	34	54.8
Doctors	6	9.7
Midwives and doctors	22	35.5
Did they smoke before pregnancy?		
Yes	60	32.1
No	127	67.9
How many cigarettes a day did they smoke before pregnancy? (n=60)		
1–5	19	31.7
6–10	24	40.0
≥11	17	28.3
Did they smoke during their pregnancy?		
Yes	26	13.9
No	161	86.1
How many cigarettes did they smoke during their pregnancy? (n=26)		
1–5	15	57.7
6–10	9	34.6
≥11	2	7.7
How much worried were they due to smoking?		
Extremely	15	57.7
Quite	3	11.5
Slightly	6	23.1
Never	2	7.7
Do they know what passive smoking is?		
Yes	104	55.6
No	83	44.4
Do the spouses smoke in the same room as their wives?		
Yes	71	38.0
No	116	62.0
How many cigarettes do their spouses smoke in the same room as them? (n=71)		
1–5	30	42.2
6–10	17	24.0
≥11	24	33.8
Is there anyone smoking in the same room as the women except for their spouses?		
Yes	32	17.1
No	155	82.9
Why do the women smoke during their pregnancy?	**(n=26)**	**%**
Because their spouses smoke		
Yes	2	7.7
No	24	92.3
Because they have been smoking for years/it has been their habit		
Yes	21	80.8
No	5	19.2
Because they think it helps to solve their problems		
Yes	4	15.4
No	22	84.6

Table 3b. Smoking status of the women II

What do the women think about their smoking habit?	n	%
Does smoking harm them and their babies?		
Yes	0	0.0
No	26	100
Do they want to stop smoking?		
Yes	22	84.6
No	4	15.4
Why do they want to stop smoking?		
To protect their babies' health	13	50.0
To protect their health and their babies' health	9	34.6
To protect their own health	4	15.4
Why do they stop smoking during their pregnancy?	**(n=34)**	**%**
Nausea and vomiting		
Yes	14	41.2
No	20	58.8
The idea that smoking gives harm to their babies		
Yes	27	79.4
No	7	20.6
Bad smell of smoking		
Yes	8	23.5
No	26	76.5
Feeling disgusted		
Yes	5	14.7
No	29	85.3
Pressure and support from spouses		
Yes	1	2.9
No	33	97.1
Pressure and support from people around		
Yes	3	8.8
No	31	91.2
Recommendations and support from nurses		
Yes	0	0.0
No	34	100.0
Recommendations and support from doctors		
Yes	0	0.0
No	34	100.0

mez et al. (3), 42% by Jabbour et al. (5), and 48% by Vivilaki et al. (24), which are higher than that in the present study. In the study on smoking during pregnancy in the low- and middle-income countries by Caleyachetty et al. (25), the highest and the lowest rates of smoking were found in South Asia (5.1%) and Africa (2%), respectively . These rates are lower than the ones in Turkey and Europe.

The rate of smoking in pregnancy in Turkey was reported to be 11.6% by Doğu and Berkiten (14), 12.8% by Altıparmak et al. (26), and 14.8% by Karçaaltınçaba et al. (27), which are consistent with that found in the current study, and the rate was reported as 54.8% by Durualp et al. (8), which is higher than that in this study. According to TPHS, 15% of the pregnant women were

smoking in 2003 and it decreased to 11.4% in 2008 (7). The fact that 1 in every 10 pregnant women smokes has been reported in the studies to be a serious problem.

Some studies have shown that the number of cigarettes smoked in pregnancy is 1-5 a day (14, 26). TPHS revealed that the mean number of cigarettes smoked daily in pregnancy was 10 in 2008 (7). Marakoğlu and Erdem (28) reported that 86.6% of the women were smoking continuously during their pregnancy, with 10 cigarettes daily. The aforementioned rates of smoking are higher than that found in the present study. The severity of preterm birth risk is proportional to the number of cigarettes smoked. The most severe effect appears in women smoking >10 cigarettes daily (29). As the number of cigarettes increases, harm inflicted on women and their babies also increases.

More than one-half of the women (57.7%) were worried due to their smoking in their pregnancy. Doğu and Berkiten (14) found that 52.8% of the women were very worried about their babies' health and that only 2% of the women were not worried about it. Even if it is a small percentage, the presence of women never anxious about their babies' health is actually disturbing.

Thirty-eight percent of the women's spouses were smoking in the same environment as them. The spouses (42.2%) were smoking at least 1-5 cigarettes a day. Also, 17.1% of the women were accompanied by someone other than their spouses. The rate of the women accompanied by their spouses while smoking was reported to be 53.6% by Doğu and Berkiten (14), 70.2% by Altıparmak et al. (26), and 55,4% by Durualp et al. (8). The foregoing reported rates are higher than that in the present study. The rate of the women accompanied by someone other than their spouses was reported to be 35.9% by Nakamura et al. (30), 31.9% by Altıparmak et al. (26), and 56.2% by Durualp et al. (8). Kadir et al. (31) investigated passive smoking in pregnant women in Latin America, Africa, and South Asia and found that smoking was most frequently allowed at home in Pakistan (91.6%). The reported rates of pregnant women accompanied by their spouses or others while smoking are higher than those found in the current study. These high rates suggest that people do not have sufficient information about effects of passive smoking on pregnant women and their babies.

While most of the pregnant women were planning to stop smoking, some proportion of the women did not have such a plan. One-half of the women planning to stop smoking in pregnancy noted that their primary aim was to protect their babies' health. Most of the pregnant women had already stopped smoking (77.8%) in case it harmed their babies, which is consistent with the results of the studies by Marakoğlu and Erdem (28), Doğu and Berkiten (14), and Durualp et al. (8). In a study by Vivilaki et al. (24), 83.3% of the women wanted to stop smoking during pregnancy, but 45.1% of them achieved their goal. Moreover, 55.8% of the women continuing to smoke during their pregnancy did so because they could not achieve it, and 9.3% of the women continuing to smoke did so because they did not consider it as an important health problem. The finding that the mothers quit smoking for protection of their babies' health is favorable, and indeed pregnancy can be considered an opportunity for smokers to give up their habit.

None of the women stopping smoking reported that they received recommendations or support about the issue from nurses. In a study by Marakoğlu and Sezer (9), 29% of the pregnant women were found to be given recommendations to stop smoking, and 18% were found to be provided guidance for the issue. In a study by Marakoğlu and Erdem (28), 6.8% and 4.5% of the pregnant women were recommended to stop smoking and offered support and guidance by physicians, respectively. In addition, 4.5% and 6.8% of the pregnant women were recommended to quit smoking and provided support and guidance by nurses, respectively. This evidence shows that a very low rate of smoking pregnant women could receive help from physicians and nurses about elimination of their habit. In the present study, the finding that none of the women could be offered help about cessation of smoking is striking. This suggests that health professionals are not very aware of effects of smoking during pregnancy.

The analysis of the relation between demographic features and smoking showed that a higher rate of the pregnant women without a civil marriage smoked. It may suggest that not having a civil marriage may cause worries. In addition, the analysis of the relation between stressors and smoking revealed a significant difference in the smoking status between the women moving to another place and those not moving, probably because moving home may cause severe stress in pregnant women.

Compared to the women whose spouses did not smoke in their presence, those whose spouses smoked in their presence smoked a significantly higher number of cigarettes. The women whose spouses smoked were 9 times more likely to have the risk of smoking in pregnancy. In a study by Marakoğlu and Erdem (28), 81.8% of the women whose spouses were smokers smoked during pregnancy. The women whose relatives and friends were also smokers smoked 3 times more frequently than other women. Marakoğlu and Sezer (9) found that 20% of the women whose spouses were smokers and 10% of those whose spouses were nonsmokers smoked at some stages of pregnancy. It can be suggested that smoking spouses, relatives, and friends create a serious risk of smoking in pregnancy.

The mean scores of OHQ-SF were found to affect the smoking status in pregnancy; the women with low scores smoked 3 times more than those with high scores did. Doğu and Berkiten (14) noted in their study that as scores for happiness with marriage increased, the amount of smoking decreased. Doğu and Berkiten (14) found out that smoking was one of the mechanisms used by pregnant women to cope with stress. It is known that smoking is

used as a mode to reduce unhappiness. It is clear that pregnant women need positive mechanisms to relieve stress.

Study Limitations

The limitation of this study is that data were collected with self-rated data collection tools: a questionnaire, BAI, and OHQ-SF. Therefore, the reliability of the findings is limited to the information provided by the participants.

CONCLUSION

Smoking is an unwanted behavior and pregnancy can be considered an opportunity to quit smoking. As it was clear in the present study, women are worried that smoking causes the most serious damage to their babies. Since this concern can force women to quit this habit, they should be provided support. This study also revealed that smoking spouses, relatives, and friends; prenatal smoking; and the extent of smoking before pregnancy had an effect on smoking during pregnancy. It is obvious that both pregnant women and their spouses and other people around them need education to stop smoking during pregnancy and that awareness of health professionals about the issue should also be raised. In addition, the present study showed that happy pregnant women smoked fewer cigarettes. Therefore, pregnant women could be encouraged to have activities that will keep them happy.

Ethics Committee Approval: Ethics committee approval was received for this study. Ethical approval was obtained from the Non-interventional Clinical Research Ethical Committee of Adnan Menderes University.

Informed Consent: Informed written consent was obtained from the patients participating in this study.

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