

Determination of Pregnant Women's Views on Fasting and Religious Attitudes: A Cross-sectional Study in Türkiye

Gebe Kadınların Oruç Tutmaya İlişkin Görüşlerinin ve Dini Tutumlarının Belirlenmesi: Türkiye’de Kesitsel Bir Çalışma

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ABSTRACT

Objective: This study aims to determine pregnant women's views on Ramadan fasting, their religious attitudes, and the relationship between them.

Materials and Methods: The study was designed as a descriptive and cross-sectional study and was conducted from the July-October 2021 with 252 pregnant women. The data were collected using the "Pregnancy Identification Form", "Opinions on Fasting During Pregnancy Form", and "Religious Attitude Scale".

Results: Of the pregnant women, 37.7% stated that Ramadan fasting should not be practised during pregnancy, according to Islam, and 29.0% of the pregnant women stated that they fasted during Ramadan. Pregnant women were found to have a high level of religious attitude with a mean total score of 35.57±5.62. The mean behavioral subscale score of women who fasted during Ramadan during pregnancy was lower than the mean score of women who did not fast (p=0.023).

Conclusions: It was found that one out of every three women fasted during pregnancy, their knowledge and opinions about fasting during pregnancy were insufficient, and they did not know the effects of fasting on maternal and infant health. Women who did not fast during pregnancy were found to have higher religious attitudes than those who fasted.

Keywords: Fasting, pregnancy, religion

ÖZ

Amaç: Bu çalışmanın amacı; gebe kadınların oruç tutmaya ilişkin görüşleri ile dini tutumlarının ve bunlar arasındaki ilişkinin belirlenmesidir.

Materyal ve Metot: Çalışma, tanımlayıcı ve kesitsel olarak tasarlandı ve Temmuz-Ekim 2021 tarihleri arasında 252 gebe kadınla gerçekleştirildi. Veriler "Gebe Tanımlama Formu", "Gebelikte Oruç Tutmaya İlişkin Görüşler Formu" ve "Dini Tutum Ölçeği" kullanılarak toplandı.

Bulgular: Gebelerin %37,7'si İslam dinine göre gebelikte oruç tutulmaması gerektiğini, %29,0'ının gebeliğinde ramazan orucu tuttuğunu ifade etti. Gebelerin DTÖ toplam puan ortalaması 35,57±5,62 ile yüksek düzeyde dini tutuma sahip olduğu bulundu. Gebeliğinde ramazan orucu tutan kadınların davranışsal alt boyut puan ortalaması, tutmayan kadınların puan ortalamasına göre daha düşüktür (p=0,023).

Sonuç: Her üç kadından birinin gebelikte oruç tuttuğu, gebelikte oruç tutmaya ilişkin bilgi ve görüşlerinin yetersiz olduğu, oruç tutmanın anne ve bebek sağlığına etkilerini bilmediği ortaya çıkmıştır. Gebeliğinde oruç tutmayan kadınların dini tutumlarının, tutanlara göre daha yüksek olduğu belirlendi.

Anahtar Kelimeler: Din, gebelik, oruç

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INTRODUCTION

Fasting, one of the five pillars of Islam, is obligatory for all healthy Muslims. However, according to Islamic law, women who have chronic health problems, are menstruating, pregnant or breastfeeding are exempted from fasting.¹ According to some verses in the Qur'an as well as some hadiths (Ibn Mâja, "Şıyâm", 12; Tirmidhi, "Şavm", 21; Nesâî, "Şıyâm", 51, 62), it has been ruled that "a woman who is afraid that fasting will harm herself or the baby in her womb or the baby she is breastfeeding can postpone her fast and break the fast she has started".² There are 1.9 billion Muslims worldwide. Over 98% of people living in countries like Iran, Yemen, Niger and Türkiye are Muslim.³ The duration of a one-day fast varies from 10–19 hours, depending on the geographical location of the country and the season. This period is of particular importance during pregnancy because the health of the expectant mother, fetus and newborn during this period is closely related to the quality of nutrition and adequate fluid intake of the mother. Prolonged fasting and dehydration may be dangerous for pregnant women. However, studies indicate that the percentage of Muslim pregnant women fasting at least one day during their pregnancy varies between 30% and 80%.⁴⁻⁷

The effects of fasting during pregnancy on maternal, fetal, newborn and child health are not known.⁶ Some studies have reported that fasting during long and hot summer days is closely associated with maternal fluid deprivation and dehydration,⁸ the risk of preterm birth,⁹ and low amniotic fluid index.¹⁰ However, some studies show that fasting has no adverse effects on perinatal health.^{11,12} Safari et al. found that women who fasted during the second trimester of pregnancy had a reduced risk of gestational diabetes and excessive weight gain during pregnancy.¹¹ Savitri et al. reported that fasting didn't affect perinatal mortality and morbidity.¹²

Many pregnant women fast during Ramadan for social, cultural, and religious reasons.^{13,14} Women's reasons for fasting during pregnancy are related mainly to religious reasons and religious necessity, whereas the reasons for not fasting are related to concerns about their health and the health of their babies.^{5,15}

However, no study was found that examined pregnant women's views on fasting, their religious attitudes, and the relationship between them. In this study, we aim to pregnant women's views on fasting their religious attitudes, and the relationship between them.

MATERIALS AND METHODS

Ethics Committee Approval: Approval was obtained from Ondokuz Mayıs University Social and Human

Sciences Ethics Committee (Date: 28.05.2021, decision no: 2021/461). Written and verbal consent was obtained from the pregnant women who agreed to participate in the study, and the identity information of the participants was not recorded on the data forms. The principles of the Declaration of Helsinki were followed at every stage of the research.

Study Design and Participants: This descriptive and cross-sectional study was conducted between July and October 2021. The study universe consisted of pregnant women who presented to the obstetrics outpatient clinic of a university hospital located in the Black Sea Region of Türkiye. A simple random sampling method was used for sample selection. Using the sample size calculation formula ($N=728$, $p=0.50$, $q=0.50$, $d=0.05$, $t=1.96$), 252 pregnant women were included in the study.

Inclusion Criteria: (i) Being Muslim, (ii) Being literate, (iii) Agreeing to participate in the study, (iv) To be able to communicate verbally and not have cognitive problems.

Exclusion criteria: (i) Having communication problems, (ii) Desire to leave the research.

Data collection instruments: The data of the study were collected using the "Pregnancy Identification Form", "Opinions on Fasting During Pregnancy Form", and "Religious Attitude Scale".

Pregnant Identification Form: This form, prepared by the researchers, includes a total of 13 questions to determine the demographic and obstetric characteristics of pregnant women.

Form of Opinions on Fasting in Pregnancy: This question form was developed by the researchers by reviewing the relevant literature.^{4,5,17} The form included a total of eight questions aiming to determine the opinions of pregnant women about fasting during pregnancy.

Religious Attitude Scale: It is a scale developed to measure individuals' attitudes towards Islam. The scale was developed in our country in 2011 by Ok.¹⁸ It consists of 8 items and 4 subscales in total. The subscale of the scale consists of cognitive, behavioral, emotional, and relational subscales. A 5-point Likert-type scale is used to calculate the scale score (1: strongly disagree, 5: strongly agree). Items 1 and 2 in the scale are scored inversely. The total score that can be obtained from the scale varies between 8 and 40. High scores on the scale indicate that individuals have high religious attitudes. In addition, according to the scores obtained from the scale items, the participants were classified as not religious at all (1.00-1.49=highly secular/completely secular), less religious (1.50-2.49=very secular), moderately religious (2.50-3.49=moderately secular), very religious (3.50-4.49=less secular), and very quite religious (4.50-5.00=very little secular or

not secular at all). The Cronbach's Alpha coefficient of the scale was 0.90.¹⁸ In this study, Cronbach's Alpha coefficient was found to be 0.89.

Data Collection: The researchers first informed the pregnant women who came to the outpatient clinic about the purpose, content and importance of the study. Written and verbal consent was obtained from pregnant women who agreed to participate in the study. Afterwards, the data was collected by the researchers using questionnaire forms and face-to-face interview techniques, taking into account the pandemic conditions (personal distance). In order to obtain reliable data, the names of the participants were not taken except for the consent form. Pregnant women were told that the data would only be used for scientific purposes and that personal information would remain confidential. It takes an average of 10 minutes to administer all questionnaire forms.

Statistical Analysis: The research data was analyzed using the IBM SPSS 22.0 version package program.

Descriptive data were evaluated using "mean, standard deviation, number, percentage, minimum and maximum values". The Kolmogorov-Smirnov test was used to examine whether the variables were normally distributed. Independent groups t-test, and one-way analysis of variance were used in the analysis. The statistical significance level was accepted as $p < 0.05$.

RESULTS

Regarding some demographic characteristics, the mean age of the pregnant women was 28.73±6.12 years (min:17, max:45), 43.3% were middle school graduates, and 76.6% were not working (Table 1).

Some obstetric characteristics of the pregnant women were as follows: number of pregnancies was 2.33±1.21 (min:1, max:6), number of births was 0.96±0.99 (min:0, max:5), 79.0% of the women had planned pregnancies, and 25.8% had risky pregnancies (Table 2).

Table 1. Distribution of some demographic and obstetric characteristics of pregnant women (n=252).

Characteristics	n (%)	
Educational status	Primary school	83 (32.9)
	Secondary school	109 (43.3)
	Higher education	60 (23.8)
Spouse's educational status	Primary school	93 (36.9)
	Secondary school	92 (36.5)
	Higher education	67 (26.6)
Employment status	Working	59 (23.4)
	Not working	193 (76.6)
Family income status	Income less than expenditure	52 (20.6)
	Income equal to expenditure	159 (63.1)
	Income more than expenditure	41 (16.3)
Planning status of current pregnancy	Planned	199 (79.0)
	Not planned	53 (21.0)
Current gestational week	First trimester	32 (12.7)
	Second trimester	64 (25.4)
	Third trimester	156 (61.9)
Pregnancy type	Spontaneous	224 (88.9)
	Assisted reproductive techniques	28 (11.1)
Risk status in the current pregnancy	Risky	65 (25.8)
	Normal	187 (74.2)

Table 2. The mean of pregnancy, birth, miscarriages and living children of women.

Characteristics	Mean±SD (min-max)
Age	28.73±6.12 (17-45)
Number of pregnancies	2.33±1.21 (1-6)
Number of births	0.96±0.99 (0-5)
Number of miscarriages	0.47±0.77 (0-4)
Number of living children	0.94±0.98 (0-5)

SD: Standard deviation; Min: minimum; Max: maximum.

It was found that 37.7% of the pregnant women stated that fasting should not be practised during pregnancy according to Islam, 46.0% wanted to fast during pregnancy even though it was not necessary, 29.0% fasted during Ramadan, and 47.6% of the pregnant women reported that their spouses had negative opinions about not fasting. While 27.4% of the women thought that fasting during pregnancy was harmful to the mother, 38.9% did not know whether fasting was harmful to themselves (Table 3).

Pregnant women were found to have a high level of religious attitude with a mean total score of 35.57 ± 5.62 . According to these findings, it can be said that the religious attitudes of pregnant women are quite good at the cognitive level. In contrast, their religious attitudes are less good at the behavioral level. According to the responses of the pregnant women to the scale items (4.44 ± 0.70), it was found that they had a highly religious (less secular) view (Table 4).

Table 3. Distribution of pregnant women's views on fasting (n=252).

Characteristics		n (%)
Consideration of the necessity of fasting during pregnancy according to your faith	Required	85 (33.7)
	Not required	95 (37.7)
	I don't know	72 (28.6)
Willing to fast when it is not necessary according to one's beliefs	Wants	116 (46.0)
	Does not want to	90 (35.7)
	Undecided	46 (18.3)
Ramadan fasting during pregnancy	Fasted	73 (29.0)
	Did not fast	179 (71.0)
Fasting beyond the Ramadan fasting period during pregnancy	Fasted	43 (17.1)
	Did not fast	209 (82.9)
Changes in baby movements during fasting^a (n=68)	Decreased	12 (17.6)
	Unchanged	26 (38.2)
	I didn't notice	30 (44.1)
Thinking that fasting during pregnancy harms the baby	I think so	85 (33.7)
	I don't think so	63 (25.0)
	I don't know	104 (41.3)
Thinking that fasting during pregnancy harms the mother	I think so	69 (27.4)
	I don't think so	85 (33.7)
	I don't know	98 (38.9)
Your partner's opinion about fasting during pregnancy	Positive	52 (20.6)
	Negative	120 (47.6)
	No idea	80 (31.8)

a: Answered by women who fasted during pregnancy.

Table 4. Distribution of total, subscale and mean scores of the Religious Attitude Scale (RAS) of pregnant women.

Scale		Mean±SD	Min-max
RAS	Cognitive subscale	9.61±1.31	2-10
	Behavioral subscale	8.30±2.27	2-10
	Emotional subscale	8.49±1.80	2-10
	Relational subscale	9.16±1.51	2-10
	Scale Total	35.57±5.62	10-40
RAS Items	1. I think religion is unnecessary.	4.83±0.65	1-5
	2. I think that religious belief does more harm than good to people.	4.77±0.76	1-5
	3. I get emotional when I listen to religious readings such as call to prayer, prayer or verse.	4.13±1.23	1-5
	4. I really enjoy when I participate in religious activities.	4.17±1.13	1-5
	5. I pay attention to whether my life is in accordance with religious values.	4.16±1.04	1-5
	6. I try to fulfil the requirements of the religion I believe in.	4.32±0.86	1-5
	7. I think that God helps me in difficult times.	4.56±0.80	1-5
	8. I feel that God is very close to me.	4.59±0.73	1-5
	Item Scale Total	4.44±0.70	1-5

SD: Standard deviation; Min: minimum; Max: maximum.

There was a statistically significant difference ($p < 0.05$) between their responses to the questions "Ramadan fasting status during pregnancy" and "Fasting status other than Ramadan fasting during pregnancy" and the mean scores on the RAS. The mean behavioral subscale score of women who fasted during Ramadan during pregnancy was lower

than the mean score of women who did not fast ($p = 0.023$). The mean scores in the behavioral and relational subscale and total scale scores of women who fasted during pregnancy other than Ramadan fasting were lower than the mean scores of women who did not fast ($p = 0.000$, $p = 0.046$, $p = 0.000$, respectively) (Table 5).

Table 5. Comparison of pregnant women's opinions about fasting and mean total and subscale scores on RAS.

Characteristics		RAS Subscales				RAS Total Mean±SD
		Cognitive Mean±SD	Behavioral Mean±SD	Emotional Mean±SD	Relational Mean±SD	
Consideration of the necessity of fasting during pregnancy according to your faith	Necessary (n=85)	9.76±0.85	8.40±2.18	8.75±1.42	9.32±1.09	36.24±4.41
	Not necessary (n=95)	9.45±1.73	8.60±1.93	8.56±1.89	9.14±1.57	35.76±5.77
	Don't know (n=72)	9.65±1.08	7.79±2.69	8.08±2.04	8.98±1.81	34.51±6.55
Test	<i>F/p</i>	1.315/0.270	2.752/0.066	2.849/0.060	1.015/0.364	1.958/0.143
Willing to fast when it is not necessary according to one's beliefs	Wants (n=116)	9.79±0.77	8.35±2.29	8.67±1.60	9.27±1.24	36.09±4.79
	Does not want (n=90)	9.48±1.59	8.52±1.95	8.37±1.95	9.06±1.63	35.45±5.98
	Undecided (n=46)	9.41±1.69	7.73±2.71	8.26±1.98	9.06±1.85	34.47±6.71
Test	<i>F/p</i>	2.048/0.131	1.878/0.155	1.134/0.324	0.602/0.549	1.394/0.250
Ramadan fasting during pregnancy	Fasted (n=73)	9.67±1.01	7.79±2.60	8.34±1.75	9.09±1.39	34.90±5.29
	Did not fast (n=179)	9.59±1.41	8.50±2.09	8.55±1.83	9.18±1.55	35.84±5.74
	Test	<i>t/p</i>	0.433/0.665	-2.282/ 0.023	-0.838/0.403	-0.448/0.655
Fasting beyond the Ramadan fasting period during pregnancy	Fasted (n=43)	9.48±1.38	6.58±2.72	8.02±1.62	8.74±1.31	32.83±5.07
	Did not fast (n=209)	9.64±1.29	8.65±1.99	8.58±1.83	9.24±1.53	36.13±5.57
	Test	<i>t/p</i>	-0.695/0.488	-5.796/ 0.000	-1.876/0.062	-2.008/ 0.046
Changes in baby movements during fasting^b	Decreased (n=12)	9.83±0.57	8.25±2.45	8.91±1.24	9.50±0.90	36.50±4.16
	Unchanged (n=26)	9.73±1.04	8.34±2.33	8.23±1.90	9.03±1.37	35.34±5.28
	Did not notice (n=30)	9.51±1.66	8.00±2.47	8.89±1.71	9.37±1.49	35.79±5.05
Test	<i>F/p</i>	0.320/0.727	0.147/0.864	1.208/0.305	0.640/0.531	0.220/0.803
Thinking that fasting during pregnancy harms the baby	She thinks so (n=85)	9.38±1.80	8.62±1.84	8.41±2.01	9.08±1.62	35.50±6.03
	She does not think so (n=63)	9.73±0.97	7.95±2.48	8.60±1.54	9.26±1.31	35.55±4.97
	She does not know (n=104)	9.73±0.95	8.25±2.43	8.49±1.79	9.16±1.53	3.63±5.70
Test	<i>F/p</i>	1.933/0.147	1.633/0.197	0.201/0.818	0.277/0.758	0.012/0.988
Thinking that fasting during pregnancy harms the mother	She thinks so (n=69)	9.47±1.63	8.50±1.89	8.24±1.92	8.92±1.67	35.15±6.28
	She does not think so (n=85)	9.80±0.84	8.22±2.30	8.74±1.61	9.35±1.20	36.11±4.75
	She does not know (n=98)	9.55±1.38	8.22±2.49	8.44±1.87	9.16±1.61	35.38±5.84
Test	<i>F/p</i>	1.341/0.263	0.388/0.679	1.476/0.230	1.518/0.221	0.636/0.530
Your partner's opinion about fasting during pregnancy	Positive (n=52)	9.69±1.02	8.61±1.92	8.51±1.74	9.46±1.05	36.28±4.38
	Negative (n=120)	9.59±1.53	8.45±2.14	8.57±1.83	9.17±1.55	35.79±5.76
	No opinion (n=80)	9.60±1.10	7.87±2.60	8.35±1.82	8.95±1.66	34.77±6.09
Test	<i>F/p</i>	0.114/0.893	2.183/0.115	0.377/0.686	1.828/0.163	1.319/0.269

b: Answered by women who fasted during pregnancy; SD: Standard deviation, t: independent groups t-test; F: one-way analysis of variance. Bold indicates statistically significant values.

DISCUSSION AND CONCLUSION

Looking at the studies on the subject, 30% of women living in the United States,¹⁶ 43% of women living in Germany,⁵ 55% of women living in Iraq,¹ 64% of women living in India,¹⁵ 84.9% of women living in Lebanon¹⁴ fasted during pregnancy. According to the study results, the rate of fasting among pregnant women varies between 30% and 88%. In this study, the proportion of women who fasted during the Ramadan fasting period during pregnancy was 29.0%. Compared to other Muslim countries (Indonesia, Pakistan, Iraq, India), this rate is relatively low. Women's decision to fast during pregnancy may have been influenced by the socio-cultural characteristics of the country in which they lived, their religious beliefs, how they perceived the practice of fasting, and the people they consulted for information on the subject (spouse, friends, family, religious officials and health professionals, etc.).

In Islamic law, it is clearly stated that pregnant women are exempted from fasting.¹ In the study by Seiremann et al., more than 80% of pregnant women reported that fasting is necessary during pregnancy.⁷ Leimer et al. found that 64% of women who fasted in the Ramadan fasting period during pregnancy did so due to religious obligation.⁵ In the study by Safari et al., 60% of women who fasted during pregnancy believed that fasting was mandatory for healthy pregnant women, and 18.1% believed that fasting was mandatory for risky pregnant women.¹¹ Ghazal et al. found that women who fasted did so because of the spiritual environment, and women who did not fast because of fear of harming themselves or their baby.¹⁴ In this study, 33.7% of pregnant women reported that fasting was necessary during pregnancy, 28.6% did not know whether fasting was necessary during pregnancy, and 46.0% reported that they wanted to fast even though it was not necessary. In addition, in this study, when pregnant women were asked about their husbands' attitudes towards fasting, 20.6% of the women stated that their husbands had a positive attitude. In the study by Seiremann et al., 80.1% of pregnant women reported that their husbands believed that fasting is necessary during pregnancy.⁷ In contrast, in the study by Leimer et al., only 8% of women who fasted during pregnancy stated that their husbands thought that they should fast during pregnancy.⁵ The factors that influence pregnant women's decision to fast include mostly religious necessity-obligation, spiritual environment and personal preference.

There is insufficient evidence on the long-term and short-term positive or negative effects of fasting during pregnancy on maternal and infant health.⁶ It has been reported that women who fasted during the second trimester of pregnancy had a lower risk of gestational diabetes and excess weight gain during

pregnancy than those who did not fast.¹¹ The proportion of women who thought fasting would be harmful to both themselves and their babies was 46% in the study by Lou and Hammoud.¹⁶ In the study by Seiermann et al., 33.7% of women stated that fasting during pregnancy was harmful to the baby, and 27.4% stated that fasting during pregnancy was harmful to the mother.⁷ These results suggest that women have inadequate knowledge about fasting and pregnancy outcomes and do not receive adequate information and counselling from health professionals.

Baby movements are an important parameter indicating fetal health status.¹⁹ In the study by Ghazal et al., 11.3% of fasting women reported a decrease in infant movements.¹⁴ Similarly, in this study, 17.6% of women reported a decrease in infant movements during fasting, and 44.2% did not notice it. The fact that most women do not know the effects of fasting during pregnancy on fetal health suggests that they are not aware of the changes in fetal movements. For this reason, women who choose to fast during pregnancy should be taught how to count fetal movement and should be told that if fetal movement decreases, they should immediately consult a healthcare provider.

Religious beliefs and religious attitudes affect women's health behaviors. High levels of spirituality and religiosity are known to improve mental health and quality of life in pregnant women.²⁰ In a study conducted in Iran, pregnant women were found to have moderate religious attitudes.²¹ In a study conducted with women with risky pregnancies in Türkiye, it was found that women had a high level of religious attitude.²² Similarly, in this study, it was determined that pregnant women had a high level of religious attitude and a very religious view. In addition, the mean behavioral subscale scores of women who did not fast during pregnancy were found to be significantly higher than women who did not fast during pregnancy, and the mean total and behavioral and relational subscale scores of women who did not fast beyond the Ramadan fasting period during pregnancy were significantly higher than women who fasted. The behavioral subscale reflects the extent to which religious values guide one's behavior, and the relational subscale reflects the extent to which one needs divine help.¹⁸ These results suggest that women do not consider fasting during pregnancy as a religious requirement.

In conclusion, it was found that women had high levels of religious attitudes; approximately one out of every three women fasted during pregnancy, their knowledge and opinions about fasting during pregnancy were insufficient, and they did not know how fasting affected maternal and infant health. It was determined that women who did not fast during

pregnancy had higher religious attitudes than those who fasted. All healthcare professionals, including midwives and nurses, should provide information and counseling to pregnant women in their care about the effects of fasting on maternal and infant health, explain the importance of nutrition and fluid intake to women who choose to fast, refer them to a nutritionist if necessary, and cooperate with religious leaders in this regard. The limitation of this study is that it was conducted only with pregnant women in a city in the Black Sea region of Türkiye.

Ethics Committee Approval: Our study was approved by the Ondokuz Mayıs University Social and Human Sciences Ethics Committee (Date: 28.05.2021, decision no: 2021/461). The study was carried out following the international declaration and guidelines.

Conflict of Interest: No conflict of interest was declared by the authors.

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