



Gebelerin COVID-19 pandemi algıları ile kaygı düzeyleri arasındaki ilişki

The relationship between pregnant women's COVID-19 pandemic perceptions and anxiety levels

● Aygül Kıssal¹

● Leyla Yirci²

¹⁾ Tokat Gaziosmanpaşa University, Faculty of Health Science, Public Health Nursing Department, Assoc. Prof. Dr., Tokat.
{ORCID:0000-0003-4570-5031}

²⁾ Mamak State Hospital, Neonatal Intensive Care Unit, Specialist Nurse, Ankara. {ORCID:0000-0002-8763-5118}

İletişim adresi:

Leyla Yirci

E-mail: yildirimleyla19@gmail.com

Geliş tarihi: 28/04/2025

Kabul tarihi: 11/06/2025

Yayın tarihi: 29/09/2025

Tokat Gaziosmanpaşa University Ethics Committee approved the study (05/08/2020-E.35231) and Kartal Dr. Lütfi Kırdar City Hospital (08/07/2020-89513307-774.99). Informed consent form all participants. It is requested to be revised accordingly.

No conflict of interest declared.

Alıntı Kodu: Kıssal A. ve Yirci L. Gebelerin COVID-19 pandemi algıları ile kaygı düzeyleri arasındaki ilişki.
Jour Turk Fam Phy 2025; 16 (3): 168-1xx. Doi: 10.15511/tjtfp.25.00368.

This article is published online with [Open Access](https://www.turkishfamilyphysician.com) and distributed under the terms of the Creative Commons Attribution Non-Commercial License 4.0 (CC BY-NC 4.0).

Özet

Amaç: COVID-19 gibi salgın hastalıklar sırasında gebe kadınlar artan kaygı yaşamaktadır. Bu araştırmanın amacı, gebelerin COVID-19 salgınına ilişkin duyarlılık, korunma ve toplumsal güven algıları ile durumluk ve sürekli kaygı düzeyleri ilişkisini incelemektir.

Yöntem: Bu araştırma Kartal Dr. Lütfi Kırdar Şehir Hastanesi'nde tanımlayıcı ve ilişki arayıcı tipte yapılmıştır. Araştırmaya örneklem seçimi yapılmaksızın çalışmaya katılmayı kabul eden, daha önce herhangi bir psikiyatrik hastalığı bulunmayan, 18 yaş üstü, okuryazar ve iletişime açık 130 gebe kadın dahil edilmiştir. Veriler Gebe Tanıtım Formu, Genel Toplum COVID-19 Ölçeği ve Durumluk ve Sürekli Kaygı Ölçeği ile toplanmıştır.

Bulgular: Pandemiden korunma ile durumluk ve sürekli kaygı puan ortalamaları arasında istatistiki olarak, pozitif ve oldukça zayıf düzeyde anlamlı ilişki saptandı. Pandemi sırasında sosyal güven ile sürekli kaygı puan ortalamaları arasında istatistiki olarak negatif ve oldukça zayıf düzeyde anlamlı ilişki bulundu ($p<0.05$).

Sonuç: Bu salgında gebelerin orta düzey durumluk kaygı ve hafif düzey sürekli kaygı yaşadıkları saptanmıştır.

Anahtar kelimeler: Durumluk kaygı, gebe kadın, koronavirüs, sürekli kaygı

Summary

Aim: Pregnant women experience increased anxiety during epidemics such as COVID-19. The aim of this research is to investigate the correlation between pregnant women's perceptions of sensitivity, protection, and social trust regarding the COVID-19 outbreak and their state and trait anxiety levels.

Methods: This research was conducted as a descriptive and correlational type in Kartal Dr. Lütfi Kırdar City Hospital of a province. The study included 130 literate pregnant women who were over 18, did not have a previous psychiatric illness, and agreed to participate in the study through convenience sampling. The Pregnant Introductory Form, General Community COVID-19 Scale, and State and Trait Anxiety Scale were used to collect data.

Results: A positive, very weak, and statistically significant relationship was found between protection from the pandemic and the mean state and trait anxiety scores. A negative, very weak, and statistically significant relationship was found between social trust and the mean trait anxiety scores during the pandemic ($p<0.05$).

Conclusion: It was determined that pregnant women experienced moderate state anxiety and mild trait anxiety during this epidemic.

Keywords: State anxiety, pregnant woman, coronavirus, trait anxiety

Alıntı Kodu: Kısas A. ve Yirci L. Gebelerin COVID-19 pandemi algıları ile kaygı düzeyleri arasındaki ilişki. *Jour Turk Fam Phy* 2025; 16 (3): 168-1xx. Doi: 10.15511/tjtfp.25.00368.

Introduction

Pregnant women have been more sensitive and vulnerable psychologically during the COVID-19 outbreak compared to normal times.^(1,2) The first meta-analysis conducted on pregnant women noted a higher prevalence of anxiety in Western countries (38%) compared to Asian countries (7.8%).⁽³⁾ Pregnant women were affected by the COVID-19 outbreak by experiencing moderate and high levels of anxiety.⁽⁴⁻⁷⁾

All countries worldwide have taken strict measures such as quarantine and curfew to control the COVID-19 pandemic. In cases where home isolation was impossible or access to the hospital was not easy, women were hospitalized due to COVID-19 during pregnancy. In this process, pregnant women experienced uncertainties about how their or their baby's life would continue.^(2,4) It is of great significance for the health outcomes of mothers and babies that the pregnancy and birth process progress healthily and that anxiety levels are minimized during the birth and postpartum period.

There may be differences in perceptions of sensitivity, protection, social trust, and anxiety towards the pandemic among pregnant women due to different decisions taken by countries during the pandemic and differences in religious, economic, or cultural approaches. Although the pandemic seems to have lost its effect and the topic may seem to have lost its relevance, it is striking that there are very few studies on this subject in the literature.

It is important to have data in the literature on how pregnant women perceived these issues during the pandemic to be prepared for the ongoing demands of pregnant women within context of health services and any additional demands that may arise in the event of a

future pandemic. This research investigated the correlation between pregnant women's perceptions of sensitivity, protection, and social trust regarding the COVID-19 outbreak and their state and trait anxiety levels.

Materials and Methods

Research Design

This descriptive and correlational study was conducted in a city hospital of a province. Tokat Gaziosmanpaşa University Ethics Committee approved the study (05/08/2020-E.35231) and Kartal Dr. Lütfi Kırdar City Hospital (08/07/2020-89513307-774.99). The participants were informed, and their consent were obtained.

The universe of the research consisted of pregnant women who applied to the gynecology and obstetrics outpatient clinic of Kartal Dr. Lütfi Kırdar City Hospital in a province between August 15 and November 30, 2020. The inclusion criteria were being over 18 years of age, not having a previous psychiatric illness, being literate, open to communication, and agreeing to participate in the study. A sample of 130 pregnant women was included in the study. Seventy pregnant women declined to participate for various reasons, including concerns about their baby, boredom from long-term hospitalization, unwillingness to spare time, a desire to sleep, worries about COVID-19 due to spending a long time in the hospital, spouse objection, nervousness, and pain.

Data Collection Method

The research data were collected with the "Pregnancy Information Form", "General Community COVID-19 Scale", and "State and Trait Anxiety Scale".

Pregnant Introduction Form: There are 27 questions in the form prepared by the researchers after a thorough literature search.^(6,8,9) For the scope validity of the

questionnaire form, opinions were obtained from two nursing faculty members working in the relevant field and rearrangement were made. A preliminary study of the research was conducted by filling out the form by five pregnant women outside the sample for the clarity of the questions. Question structures were changed in accordance with the feedback and questions that were not understood at all were removed from the form.

General Community COVID-19 Scale: Bostan et al. developed this scale in 2020. The scale consists of 28 statements. The General Community COVID-19 scale has three sub-dimensions. These are: 12-item pandemic sensitivity sub-dimension, 7-item pandemic protection sub-dimension, and 9-item social trust during the pandemic period sub-dimension. Cronbach's alpha was 0.796.⁽⁸⁾ In this study, the Cronbach's alpha coefficient of the scale was found to be 0.56 for pandemic susceptibility, 0.66 for pandemic prevention, and 0.63 for social trust during the pandemic.

State and Trait Anxiety Scale: The scale, developed by Spielberger and colleagues in 1970, consists of 2 subscales with 20 statements each measuring state and trait anxiety. The scale is answered through four-point scales. This inventory was adapted to Turkish by Öner and Le Compte in 1983.⁽¹⁰⁾ Cronbach's alpha was determined as 0.90. Higher scores indicated more anxiety.

Scores obtained from the scale was evaluated as no anxiety between scores of 0–19, are considered no anxiety, 20–39 points represent mild anxiety 40–59 points are interpreted as moderate anxiety, and 60–79 points are considered severe anxiety whereas 60 points and above are considered need for professional help. In this study, Cronbach's α internal consistency was 0.61.

Collection of Data

The data were filled out by the pregnant women who agreed to participate in the study. It approximately took 15-20 minutes to fill out the forms. The data were collected in the waiting room of the obstetrics and gynecology clinic and in the patient room of the obstetrics clinic at a time when the pregnant women felt comfortable and safe. In the meantime no companions were allowed in the obstetrics clinic within the scope of COVID-19 preventive measures, that there was a ban on visiting, and that the patients stayed in single rooms allowing the data to be collected in a quiet and distraction-free environment.

Statistical Analysis

Data analysis was performed using the SPSS (Statistical Package for Social Sciences) 22.0 program at a statistical significance level of 0.05. Percentage, arithmetic mean, standard deviation were used for descriptive tests. T-test, Mann-Whitney U test, ANOVA, Kruskal Wallis and Pearson Correlation analysis were performed in the analyses. It was decided whether the data conformed to a normal distribution in terms of skewness and kurtosis values. The correlation was interpreted as weak correlation = 0.00-0.30, moderate correlation $r = 0.31-0.49$, strong correlation $r = 0.50-0.69$ and very strong correlation $r = 0.70-0.100$.⁽¹¹⁾

Dependent and Independent Variables in the Study

The dependent variables of the study are the pregnant women's state and trait anxiety scale scores, and pandemic susceptibility scores, precautions against the pandemic, and social trust scores during the pandemic.

The independent variables of the study are the pregnant women's age, gender, marital status, education

level, occupation, income level, family type, history of COVID-19 diagnosis in family/neighbor/pregnant woman, COVID-19 knowledge, general health perception, characteristics, and pandemic susceptibility, precautions against the pandemic, and social trust scores during the pandemic.

Limitations of the Study

In the current sample, participants were not selected as high-risk pregnancies. It should be noted that no selection was made for the application of what was learned and an inflexible guidance method was used. Therefore, the results of this study conducted on pregnant women in normal pregnancy cannot be generalized to all participants. A second limitation is that the data in the study is based on self-report. There may be underreporting or overreporting by the participants. In this study, clinical evaluation and examination were not performed to diagnose anxiety. These limitations require careful interpretation of the study's findings.

Results

The mean age of participants was 29.90 ± 7.02 years (Min:18 - Max:48), and the mean gestational week was 35.82 ± 4.67 (Min:20 - Max:41 gestational week). Of the participants, 88.5% were married, 31.5% were illiterate, 63.1% were housewives, 46.2% had income equal to expenditure, 65.4% had a nuclear family, 37.7% lived with their spouses and children, and 31.5% had a chronic disease. Of the participants, 36.1% had one child, and 62.3% became pregnant voluntarily (**Table 1**).

The majority of participants had a COVID-19 diagnosis in their family (91.5%), a neighbor (88.5%), a pregnant woman they knew (56.2%) and themselves (59.2%) (**Table 2**). Among participants diagnosed with

COVID-19, 44.5% receive treatment at home under quarantine. The rate of pregnant women who have information about COVID-19 is 59.2%. They reported that they received this information from the media (TV, radio, newspaper, etc.) at a rate of 38.5%. It was determined that 35.3% of the participants had a high level of anxiety about being infected with COVID-19, 41.5% about the pregnant woman's health, and 43.8% about the baby's health. At that moment, 16.2% of the participants perceived their general health as good. During/after delivery, 32.3% reported that they were concerned about being infected with COVID-19 (**Table 2**).

The mean score of "State Anxiety" was lower for those who had a definite diagnosis of COVID-19 in their families compared to those who did not. The mean score of "Precaution Against Pandemic" was lower for those who had a definite diagnosis of COVID-19 in a pregnant woman they knew compared to those who did not. The mean score of "Pandemic Sensitivity" was higher for those who had a diagnosis of COVID-19 in the pregnant woman herself compared to those who did not.

The mean score of "Precaution Against Pandemic" was higher for those who had information about COVID-19 compared to those who did not, and the mean score of "Social Trust" was lower these differences all showed statistical significance ($p < 0.05$). On the other hand insignificant difference were found when the mean scores of the General Community COVID-19 Scale subscales and the State and Trait Anxiety Scale scores were compared with other variables according to COVID-19 disease characteristics (**Table 3**).

A statistically insignificant correlation was determined between the Pandemic Sensitivity and State Anx-

Tablo 1: Pregnant women's descriptive and obstetric characteristics.

Variables		$\bar{X} \pm SD$	
Age	Min:18-Max:48	29.90 $\pm$ 7.02	
Gestational week	Min:20-Max:41	35.82 $\pm$ 4.67	
		n	%
Marital status	Married	115	88.5
	Divorced	15	11.5
Education status	Illiterate	41	31.5
	Primary-secondary school	28	21.5
	High school or equivalent	37	28.5
	Undergraduate and postgraduate	24	18.5
Occupational status	Housewife	82	63.1
	Officer	24	18.5
	Worker	21	16.2
	Retired	3	2.2
Income status	Income less than expenditure	45	34.6
	Income equal to expenditure	60	46.2
	Income more than expenditure	25	19.2
Family type	Nuclear family	85	65.4
	Extended family	29	22.3
	Fragmented family	16	12.3
People he/she was living with at the time	Spouse and children	49	37.7
	Alone	27	20.8
	Spouse	17	13.1
	Children	14	10.7
	Other (mother and father, sister, husband and in-laws, friends)	23	17.7
Presence of chronic disease	Yes	41	31.5
	No	89	68.5
Number of living children	First pregnancy	28	21.5
	1	47	36.1
	2	39	30.0
	3	8	6.2
	4 and above	8	6.2
Planned pregnancy	Yes	81	62.3
	No	49	37.7

Tablo 2: Pregnant women's characteristics related to COVID-19 disease (n=130).

Variables		n	%
The presence of a definite COVID-19 diagnosis in the family	Yes No	119 11	91.5 8.5
Presence of a definitive diagnosis of COVID-19 in a neighbor	Yes No	115 15	88.5 11.5
Presence of a definite diagnosis of COVID- 19 in a pregnant woman she knows	Yes No	73 57	56.2 43.8
Status of the pregnant woman diagnosed with COVID-19	Yes No	77 53	59.2 40.8
Current general condition of the pregnant woman diagnosed with COVID-19	Quarantine (home treatment) Recovered Inpatient treatment at the clinic Quarantine (no symptoms and treatment)	58 43 21 8	44.5 33.1 16.2 6.2
State of knowledge about COVID-19	Yes A little bit No	77 33 20	59.2 25.4 15.4
The place to get information about COVID-19	Media (TV, radio, newspapers) Health care professionals Friends, relatives, and environment Internet Other No information	50 24 20 12 8 16	38.5 18.5 15.3 9.2 6.2 12.3
Level of concern about COVID-19 transmission at the time	High Middle Little No	46 47 29 8	35.3 36.2 22.3 6.2
Level of anxiety about pregnant health due to COVID-19 at the time	High Middle Little No	54 44 26 6	41.5 33.8 20.1 4.6
Current level of concern about infant health due to COVID-19	High Middle Little No	57 43 27 3	43.8 33.1 20.8 2.3
General health perception at that moment	Middle Bad Good	84 25 21	64.6 19.2 16.2
Conditions that cause anxiety during/postpartum due to COVID-19*	Self-infection Infecting herself and losing her baby Infecting herself, infecting her family Self-infection and separation from the baby Self-infection and poor health of the baby Premature birth No anxiety	42 24 23 22 22 2 88	32.3 18.5 17.7 17.0 17.0 1.5 67.7

*More than one option was marked. Percentages are based on n

xiety Scale and Trait Anxiety Scale at a weak positive level ($r=0.125$ $p=0.155$; $r=0.162$ $p=0.066$, respectively). This study demonstrated significant weak positive correlations between the Precaution Against Pandemic and State Anxiety Scale scores ($r=0.198$ $p=0.024$), between the Precaution Against Pandemic and Trait Anxiety Scale scores ($r=0.289$ $p=0.001$). This study was found significant weak negative correlations between Social Trust During Pandemic and Trait Anxiety Scale scores ($r=-0.186$ $p=0.034$). There was a insignificant negative correlation between the Social Trust and State Anxiety Scale scores ($r=-0.036$ $p=0.685$, respectively) (**Table 4**).

A very weak positive and statistically insignificant correlation was determined between Pandemic Sensitivity and the State Anxiety Scale and the Trait Anxiety Scale scores ($r=0.125$ $p=0.155$; $r=0.162$ $p=0.066$, respectively). In this study, it was seen that there were significant weak positive correlations between the Pandemic Precautions Scale and the State Anxiety Scale scores ($r=0.198$ $p=0.024$), and the Pandemic Precautions Scale and the Trait Anxiety Scale scores ($r=0.289$ $p=0.001$). In this study, significant weak negative correlations were found between Social Trust During the Pandemic and the Trait Anxiety Scale ($r=-0.186$ $p=0.034$). An insignificant negative correlation also was found between Social Trust and the State Anxiety Scale ($r=-0.036$ $p=0.685$, respectively) (**Table 5**).

Discussion

In particular, pregnant women's feelings of fear, panic, and uncertainty are very important for maternal-infant health.⁽¹²⁻¹⁴⁾ Similar to other studies, this study showed that pregnant women were mostly informed about the coronavirus and that most of them

received information from the media such as television, radio and the internet.^(13,15-17) Crises are periods when the public's need for accurate and reliable media information increases. Studies in different countries and with different samples have determined the mean state and trait anxiety scores of pregnant women to be higher, ranging from 39 to 48, than those found in our study.^(2,7,18)

According to this study, while there was no statistically significant relationship between the amount of knowledge pregnant women had about COVID-19 and their anxiety levels, a lack of knowledge about COVID-19 was associated with high state and trait anxiety scores. Knowledge is reported to be an important variable in reducing anxiety.^(12,13,19)

In the present study, the state anxiety scale scores of participants with a family history of COVID-19 were statistically significantly lower than those without a family history ($p<0.05$). Based on this research, the mean score for "perception of protection from the pandemic" was lower in those who knew a pregnant woman with a definite COVID-19 diagnosis than in those who did not ($p<0.05$). The literature also emphasizes that a pregnant woman or one of her family members living in an area with a high number of confirmed COVID-19 cases is associated with a high level of anxiety about their pregnancy.^(4,6)

In the current study, the mean score for perceptions of pandemic sensitivity of pregnant women diagnosed with COVID-19 was higher than that of those who were not ($p<0.05$). It was found that a participant who had not felt any anxiety during pregnancy before being diagnosed with COVID-19 began to worry after the diagnosis. She feared she would infect her baby and that the baby's small body would not be able to fight the disease,

Tablo 3: Comparison of the mean scores of the general community COVID-19 scale subscales, state and trait anxiety scale based on pregnant women's COVID-19 disease characteristics.

Variables		General Community COVID-19 Scale			Anxiety Scale	
		Pandemic Sensitivity	Protection Against Pandemic	Social trust during the pandemic	State Anxiety Scale	Trait Anxiety Scale
		$\bar{X} \pm SD$	$\bar{X} \pm SD$	$\bar{X} \pm SD$	$\bar{X} \pm SD$	$\bar{X} \pm SD$
All pregnant women		3.41±.45	3.78±.56	2.98±.63	48.11±7.68	35.32±6.99
Presence of a definite COVID-19 diagnosis in the family	Yes	3.40±0.45	3.75±0.56	2.97±0.62	47.50±7.29	35.29±7.07
	No	3.55±0.42	4.08±0.50	3.02±0.84	54.73±9.00	35.64±6.31
		U=566.5 p=0.460	U=438.0 p=0.069	U=582.0 p=0.543	U=356.5 p=0.012	U=621.5 p=0.782
Presence of a definite COVID-19 diagnosis in a neighbor	Yes	3.43±0.44	3.76±0.56	2.95±0.64	48.02±7.33	35.70±6.97
	No	3.30±0.53	3.97±0.53	3.18±0.60	48.80±10.25	32.40±6.64
		U=725.5 p=0.316	U=664.0 p=0.146	U=663.5 p=0.146	U=853.5 p=0.948	U=608.5 p=0.063
Presence of a definite COVID-19 diagnosis in a pregnant woman she know	Yes	3.41±0.44	3.64±0.53	2.98±0.62	48.49±6.87	35.56±6.80
	No	3.42±0.46	3.96±0.56	2.98±0.66	47.61±8.64	35.02±7.27
		t=-0.068 p=0.946	t=-3.275 p=0.001	t=0.001 p=0.999	t=0.646 p=0.519	t=0.439 p=0.661
Pregnant woman's status of COVID-19 diagnosis	Yes	3.48±0.44	3.78±0.55	3.00±0.62	47.64±7.52	35.92±7.34
	No	3.32±0.45	3.79±0.59	2.95±0.66	48.79±7.92	34.45±6.40
		t=2.018 p=0.046	t=-0.142 p=0.888	t=0.461 p=0.645	t=-0.843 p=0.401	t=1.180 p=0.240
Current general condition of the pregnant woman diagnosed with COVID-19	Quarantine (no symptoms and treatment)	3.44±0.39	3.88±0.47	3.36±0.60	42.25±2.49	29.25±4.53
	Quarantine (home treatment)	3.31±0.44	3.79±0.60	2.97±0.68	49.17±7.83	35.41±7.24
	Inpatient treatment at the clinic	3.50±0.39	3.90±0.37	2.89±0.60	47.43±5.84	35.33±6.24
	Recovered	3.50±0.48	3.69±0.60	2.96±0.59	48.09±8.50	36.33±7.00
		KW=6.913 p=0.075	KW=3.521 p=0.318	KW=3.985 p=0.263	KW=6.285 p=0.099	KW=7.324 p=0.062
Knowledge about COVID-19	Yes	3.44±0.46	3.92±0.56	2.87±0.66	47.87±7.74	35.77±6.63
	Little	3.37±0.47	3.62±0.54	3.05±0.56	47.15±6.84	33.88±6.14
	No	3.36±0.36	3.50±0.44	3.27±0.58	50.60±8.56	36.00±9.34
		KW=0.912 p=0.634	KW=11.165 p=0.004	KW=6.120 p=0.047	KW=2.540 p=0.281	KW= 1.861 p=0.394

U: Mann-Whitney U test, KW: Kruskal wallis test, X: Mean, SD: Standard deviation, t: Student's t test.

which caused her to experience fear and anxiety.⁽²⁰⁾ It has been reported that the pregnancy and birth process was affected by the COVID-19 outbreak and that pregnant women who were anxious about the future had significantly higher anxiety levels.^(14, 21) It is expected that the fear of transmitting the disease from the mother to the baby and anxiety about the baby's health can contribute to overall anxiety levels.^(14,21) It is expected that the fear of transmitting the disease from the mother to the baby and anxiety about the baby's health.

The mean score of "protection against the pandemic" was higher for those who had information about COVID-19 than those who did not ($p<0.05$). Individuals with adequate knowledge about COVID-19 take the necessary protective measures, which may help to decrease their anxiety levels.⁽¹³⁾ Another study reported that due to anxiety about COVID-19, 64.6% of pregnant women postponed or canceled prenatal appointments and ultrasound examinations, and 18.1% used only one type of personal protective equipment other than masks.⁽¹²⁾ Pregnant women who were well-informed during the pandemic may have been more consciously directed toward taking the necessary protective measures against COVID-19.

Our study revealed that participants who had knowledge about COVID-19 had lower mean "social trust" scores than pregnant women who did not have knowledge about the virus ($p<0.05$). In a study with parallel findings, it was found that more than 35% of pregnant women isolated themselves, avoided socializing, and stayed away from crowded environments to prevent getting the disease. Additionally, 32.4% of pregnant women quit their jobs due to fear of COVID-19, and 19.7% began working from home.⁽¹⁴⁾

During the pandemic, the physical, social, and mental health of pregnant women who remained in social isolation for a long time were negatively affected.^(3,22,23) There was a weak but statistically significant positive correlation, weakly between the "precaution against pandemic and state anxiety scale and trait anxiety scale". Studies in the literature support our results.^(13,17,24)

There was a statistically significant, positive, and weak correlation between the "perception of protection against the pandemic" and the scores on the state anxiety and trait anxiety scales. Studies in the literature support our results.^(13,17,24) These data suggest that COVID-19 anxiety causes changes in the daily lives and social relationships of pregnant women, and that mothers may increase their protective measures against COVID-19 infection due to their heightened health responsibilities during the pandemic.

Our study found a weak and statistically significant negative correlation between "social trust and the trait anxiety scale" during the pandemic. Pregnant women with inadequate social support in times of crisis, such as a pandemic, experience more negative psychological problems during periods of quarantine and isolation.^(17,22,25,26) It is emphasized that COVID-19 not only continues to evolve and spread but may also lead to future pandemics or endemic diseases.

Therefore, healthcare providers, policymakers, and researchers should examine how to best improve the mental health of obstetric patients during such events.⁽²⁾ Our results indicate that social support is needed to maintain mental health for pregnant women in preparation for other possible pandemics in the future. Particularly in the care of individuals with high levels of anxiety, it will be important to coordinate online in-

interventions or virtual social support programs. Due to public health imperatives in maternal and child health, it is recommended that hospitals and clinics use technology to combat anxiety.⁽²²⁾

Conclusion

As a result, this research determined that pregnant women had moderate state anxiety and mild trait anxiety during the COVID-19 pandemic. It was thought that the participants' concerns about their baby's health, such as the transmission of COVID-19 to their baby, separation from their baby after birth, or inability to breastfeed, caused moderate anxiety.

In the study, it was found that the presence of a definite COVID-19 diagnosis affected the level of state anxiety; pregnant women who did not have a definite COVID-19 diagnosis complied more with protective measures against the pandemic, pregnant women diagnosed with COVID-19 were more sensitive to the pandemic, pregnant women who had information about COVID-19 complied more with measures, and pregnant

women who did not have information about COVID-19 had more social trust during the pandemic.

Current findings reveal the importance of mental health monitoring and intervention during pregnancy, especially during pandemics. Accordingly, it can be recommended to evaluate the anxiety levels of pregnant women, to screen and monitor at-risk groups, to make healthcare professionals aware of the factors that increase anxiety during pregnancy, to take necessary measures to prevent the pregnant women from raising their anxiety about COVID-19 infection, to be cautious against overwhelming information in the media, to provide accurate and reliable information, and to review women's social support systems.

Ethics approval: Tokat Gaziosmanpaşa University Ethics Committee approved the study (05/08/2020-E.35231) and Kartal Dr. Lütfi Kırdar City Hospital (08/07/2020-89513307-774.99). Informed consent forms were also obtained from all participants.

Tablo 4: The relationship between the subscales of the general community COVID-19 scale and state and trait anxiety in pregnant women.

General Community COVID-19 Scale		State Anxiety Scale	Trait Anxiety Scale
Pandemic sensitivity	r	0.125	0.162
	p	0.155	0.066
Protection against pandemic	r	0.198	0.289
	p	0.024	0.001
Social trust during the pandemic	r	-0.036	-0.186
	p	0.685	0.034

* r: Pearson Correlation; p: Sig. (2-tailed)

Financial Interests: No.

Conflict of Interests: No.

Author contributions: **Consept:** Aygöl Kıssal; **De-
sing:** Aygöl Kıssal, Leyla Yirci; **Supervision:** Aygöl

Kıssal; **Data collection and/or processing:** Aygöl Kıssal, Leyla Yirci; **Analysis and/or interpretation:** Aygöl Kıssal; **Literature search:** Aygöl Kıssal, Leyla Yirci; **Writing:** Aygöl Kıssal, Leyla Yirci; **Critical review:** Aygöl Kıssal.

References:

1. Akgor U, Fadiloglu E, Soyak B, Unal C, Cagan M, Temiz BE, et al., Anxiety, depression and concerns of pregnant women during the COVID-19 pandemic. *Arch Gynecol Obstet* 2021;304:125–30.
2. Rabinowitz EP, Kutash LA, Richeson AL, Sayer MA, Samii MR, Delahanty DL. Depression, anxiety, and stress in pregnancy and postpartum: A longitudinal study during the COVID-19 pandemic. *Midwifery* 2023;121:103655.
3. Ghazanfarpour M, Bahrami F, Rashidi Fakari F, Ashrafinia F, Babakhanian M, Dordeh M, et al. Prevalence of anxiety and depression among pregnant women during the COVID-19 pandemic: a meta-analysis. *J Psychosom Obstet Gynaecol* 2022;43:315–26.
4. Moyer CA, Compton SD, Kaselitz E, Muzik M. Pregnancy-related anxiety during COVID-19: A nationwide survey of 2740 pregnant women. *Arch Womens Ment Health* 2020; 23:757-65.
5. Muñoz-Vela FJ, Rodríguez-Díaz L, Gómez-Salgado J, Fernández-Carrasco FJ, Allande-Cussó R, Vázquez-Lara JM, et al. Fear and anxiety in pregnant women during the COVID-19 pandemic: A systematic review. *Int J Public Health* 2023;68:1605587.
6. Saccone G, Florio A, Aiello F, Venturella R, De Angelis MC, Locci, et al. Psychological impact of coronavirus disease 2019 in pregnant women. *Am J Obstet Gynecol* 2020;223:293-95.
7. Sinaci S, Özden Tokalioglu E, Ocal D, Atalay A Yılmaz G, Keskink HL, et al., Does having a high-risk pregnancy influence anxiety level during the COVID-19 pandemic? *Eur J Obstet Gynecol Reprod Biol* 2020;255:190-96.
8. Bostan S, Erdem R, Ozturk YE, Kilic T, Yilmaz A. The effect of COVID-19 pandemic on the Turkish society. *Electron J Gen Med* 2020;17:em237.
9. Tunçel NT, Süt HK. The effect of anxiety, depression and prenatal distress levels in pregnancy on prenatal attachment. *The Journal of Gynecology - Obstetrics and Neonatology* 2019;16:9-17.
10. Öner N, Le Compte A. "Handbook of state-trait anxiety inventory". Istanbul, Bogaziçi University Publication. 1983.
11. Tavşancıl E. Tutumların Ölçülmesi ve SPSS ile Veri Analizi. 6. Baskı. Ankara, Nobel Akademik Yayıncılık. 2019.
12. Ding WJ, Lu Y, Zhou W, Wei Z, Zhou M, Chen M. Knowledge, attitudes, practices, and influencing factors of anxiety among pregnant women in Wuhan during the outbreak of COVID-19: A cross-sectional study. *BMC Pregnancy & Childbirth* 2021;21:1-9.
13. Demirel Bozkurt Ö, Taner A, Doğan S. Anxiety levels, coping behaviors, and affecting factors of pregnant women during the COVID-19 pandemic process. *Journal of Nursology* 2022;25:69-76.
14. Özcan H, Elkoca A, Yiğitbaş Ç, Aydın Kartal Y. State-trait

- anxiety condition and its affecting factors in pregnant women linked to the COVID-19 pandemic. *Psychiatr Danub* 2022;34:356-63.
15. Corbett GA, Milne SJ, Hehir MP, Lindow SW, O'connell MP. Health anxiety and behavioural changes of pregnant women during the COVID-19 pandemic. *Eur J Obstet Gynecol Reprod Biol* 2020; 249:96-97.
16. Diamanti A, Sarantaki A, Kalamata N, Vivilaki V, Varnakioti D, Lykeridou A. Pregnancy during the pandemic: The psychological impact of COVID-19 on pregnant women in Greece. *Eur J Midwifery* 2023;7:2.
17. Mizrak Sahin B, Kabakci EN. The experiences of pregnant women during the COVID-19 pandemic in Turkey: A qualitative study. *Women Birth* 2021;34:162-69.
18. Stepowicz A, Wencka B, Bieñkiewicz J, Horzelski W, Grzesiak M. Stress and anxiety levels in pregnant and post-partum women during the COVID-19 pandemic. *Int J Environ Res Public Health* 2020;17:9450.
19. Doncarli A, Araujo-Chaveron L, Crenn-Hebert C, Vacheron MN, Léon C, Khireddine I, et al. Mental health of pregnant women during the SARS-CoV-2 pandemic in France: Evolution of self-perceived psychological state during the first lockdown, and anxiety frequency two months after the lockdown ended. *Plos One* 2023;18:e0272108.
20. Demir R. Prenatal and postpartum emotions, thoughts and concerns of a pregnant woman with coronavirus disease. *Gevher Nesibe Journal of Medical and Health Sciences* 2022;7:43-8.
21. Bell AJ, Afulani P, Compton S, Barringer S, Kaselitz E, Muzik M, et al., Understanding how COVID-19 affected black pregnant women early in the pandemic: A cross-sectional survey. *Midwifery* 2024;130:103915.
22. Harville EW, Wood ME, Sutton EF. Social distancing and mental health among pregnant women during the coronavirus pandemic. *BMC Women's Health* 2023;23:189.
23. Rokicki S, Mackie TI, D'Oria R, Flores M, Watson A, Byatt N, et al. A qualitative investigation of the experiences of women with Perinatal Depression and anxiety during the COVID-19 pandemic. *Maternal and Child Health Journal* 2024; 28(2):274-86.
24. Awad-Sirhan N, Simó-Teufel S, Molina-Muñoz Y, Cajiao-Nieto J, Izquierdo-Puchol MT. Factors associated with prenatal stress and anxiety in pregnant women during COVID-19 in Spain. *Enferm Clin* 2022;32:5-13.
25. Cigăran RG, Botezatu R, Minecan EM, Gică C, Panaitescu AM, Peltecu G, et al., The psychological impact of the COVID-19 pandemic on pregnant women. *Healthcare* 2021;9:725.
26. Paz-Pascual C, Artieta-Pinedo I, Bully P, Garcia-Alvarez A, Espinosa M. Anxiety and depression in pregnancy: associated variables during the COVID-19 pandemic period. *Enfermería Clínica (English Edition)* 2024;34(1):23-33.

Alıntı Kodu: Kıssal A. ve Yirci L. Gebelerin COVID-19 pandemi algıları ile kaygı düzeyleri arasındaki ilişki. *Jour Turk Fam Phy* 2025; 16 (3): 168-1xx. Doi: 10.15511/tjtfp.25.00368.