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ORIGINAL ARTICLE

The Impact of the COVID-19 Pandemic on the Stress Levels of Pregnant Women

COVID-19 Salgınının Gebelerin Stres Düzeylerine Etkisi

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ABSTRACT

Aim: This study aims to determine the effects of the COVID-19 process on pregnant women in the second and third trimesters, as well as the stress they have experienced and their health behaviors.
Material and Methods: The research is of descriptive cross-sectional type. The sample size was calculated using the G*Power program. Necessary permissions were obtained for the research. Due to restrictions in the data collection time period (November 2020-April 2021), 204 participants were reached by convenience sampling method using the online survey tool. A survey form consisting of three parts was used as a data collection tool. Personal information form including questions about sociodemographic characteristics, birth history, pregnancy and pandemic; Pregnancy Stress Rating Scale and Coronavirus Anxiety Scale were employed. High scores on the Pregnancy Stress Rating Scale indicate an increased level of stress during pregnancy. A high score on the Coronavirus Anxiety Scale indicates a high level of anxiety experienced during the coronavirus. In the study, number and percentage values were given, regression and correlation analysis and nonparametric tests were performed.
Results: It was found that pregnant women experienced moderate stress during the COVID-19 pandemic, and some obstetric characteristics such as gestational week, having problems in this and previous pregnancies, feeling fear of delivery, and having problems in previous delivery affected stress and COVID-19 anxiety. It has been observed that future anxiety increases in pregnant women who consider the measures taken as inadequate. The mean scores of the scales used in the study are 42.99 ± 24.58 (Min-max: 6-116, median: 40) for Pregnancy Stress Rating Scale, 2.60±3.26 (Min-max: 0-19, median: 2) for Coronavirus Anxiety Scale.
Conclusion: The COVID-19 pandemic is one of the factors contributing to increased stress and anxiety in pregnant women.

Keywords: Anxiety, COVID-19, pandemic, pregnant woman, stress.

ÖZ

Amaç: Bu çalışma, COVID-19 sürecinin ikinci ve üçüncü trimesterdeki gebeler üzerindeki etkilerinin yanı sıra yaşadıkları stres ve sağlık davranışlarının belirlenmesini amaçlamaktadır.
Materyal ve Metod: Araştırma, tanımlayıcı kesitsel tiptedir. Örneklem büyüklüğü G*Power programı kullanılarak hesaplanmıştır. Araştırma için gerekli izinler alınmıştır. Veri toplama zaman dilimindeki (Kasım 2020-Nisan 2021) kısıtlamalar nedeniyle çevrimiçi anket aracı kullanılarak kolayda örnekleme yöntemiyle 204 katılımcıya ulaşılmıştır. Veri toplama aracı olarak üç bölümden oluşan anket formu kullanılmıştır. Sosyodemografik özellikler, doğum öyküsü, gebelik ve pandemiye ilişkin soruların yer aldığı kişisel bilgi formu, Gebelik Stres Derecelendirme Ölçeği ve Coronavirüs Kaygı Ölçeği. Gebelik Stres Derecelendirme Ölçeğinde yüksek puanlar gebelik sırasında artan stres düzeyini göstermektedir. Coronavirüs Kaygı Ölçeği puanının yüksek olması ise koronavirüste yaşanan kaygı düzeyinin fazla olduğunu göstermektedir. Araştırmada sayı ve yüzde değerleri verilmiş, regresyon ve korelasyon analizi ile nonparametrik testler yapılmıştır.
Bulgular: Gebelerin COVID-19 salgını sırasında orta düzeyde stres yaşadıkları ve gebelik haftası, bu gebeliğinde ve önceki gebeliğinde sorun yaşamış olma, doğuma yönelik korku hissetme, önceki doğumunda sorun yaşamış olma gibi bazı obstetrik özelliklerin stres ve COVID-19 kaygısını etkilediği saptanmıştır. Alınan önlemleri yetersiz gören gebelerde gelecek kaygısının arttığı görülmüştür. Çalışmada kullanılan ölçeklerin ortalama puanları Gebelik Stresini Değerlendirme Ölçeği için 42,99 ± 24,58 (Min-max: 6-116, medyan: 40), Koronavirüs Anksiyete Ölçeği için 2,60 ± 3,26 (Min-max: 0-19, medyan: 2) olarak belirlenmiştir.
Sonuç: COVID-19 salgını gebe kadınlarda stres ve kaygı düzeyinin artmasında etkili faktörlerden biridir.

Anahtar Kelimeler: Anksiyete, COVID-19, pandemi, gebe kadın, stres.

Introduction

While the pandemic COVID-19 outbreak resulted in abrupt/unanticipated changes in the medical infrastructure's functioning (1), the literature indicates that epidemics are particularly dangerous for pregnant women, who face a higher mortality risk than the general population (2). Pregnancy is a rewarding yet challenging period of life that requires physical, psychological, and social adaptation as pregnant women often tend to experience anxiety. The global impact of the COVID-19 pandemic in 2019 has necessitated a revaluation of various aspects for pregnant women (3). For instance, a challenge had been the lack of consistent and verified information regarding the effects of the pandemic on pregnancy during its early stages. Studies showed that pregnant women during this period generally tended to experience higher levels of anxiety and emotional distress, particularly in the first trimester, compared to their counterparts in

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later stages of pregnancy (4). Some research has also suggested that higher education might be a risk factor for elevated anxiety levels in pregnant individuals (5). According to research conducted in Italy during the early period of COVID-19, pregnant women described the pandemic's psychological impact as "severe," with more than two-thirds reported feeling "anxious" (6). Numerous studies conducted in various countries concluded that pregnant women were impacted by this condition, exhibited depressive symptoms, and suffered from anxiety disorders (3, 7-11). The fact that the COVID-19 virus showed mutational properties and that epidemics remained with global fluctuations also affected the clinical process of the pregnancy and the emotional states of pregnant women during the process. Many factors such as isolation, decrease in social support, disturbance of routines, and misinformation affect pregnant women's well-being (6).

The COVID-19 pandemic is important in terms of emotional reactions such as anxiety, distress, and fear, all of which negatively impact pregnant women. According to the literature, pregnant women are concerned about their own and their infant's health as a result of the pandemic. Their expectations for antenatal care have deteriorated; they lack reliable information, and their daily routines and social interactions have lessened (12).

This study aims to determine the effects of the COVID-19 process on pregnant women in the second and third trimesters, as well as the stress they experienced and their health behaviors.

Material and Methods

Survey type

The present quantitative and descriptive cross-sectional study utilized a general survey model. Due to the globalization of the epidemic and the restriction of close contact associated with social isolation, data were obtained via an online survey between November 2020 and April 2021 on the internet environment. Google surveys were used for this purpose. The participants were included in the study on a voluntary basis. The information text attached to the survey mentioned the purpose of the research, and access to the questions was provided to those who voluntarily agreed to participate in the study. The survey links were sent to participants through social media platforms.

Population and Sample of the Study

The G*Power 3.1 program was used to calculate the sample size [effect size = 0.20, 1-β = 0.80, α = 0.05]. The effect size was taken as 0.20 in line with Cohen's reference intervals (13). It was determined that a minimum of 199 pregnant women should be included in the sampling, and the study was concluded with 204 participants. The study consists of pregnant women in the second and third trimesters who stated that they had not been diagnosed with any psychiatric disorder. The data were collected through non-probability and convenience sampling methods.

Data Collection Tools

The questionnaire form consists of three parts.

Personal Information Form: It includes questions about sociodemographic characteristics, obstetric history, pregnancy, and pandemic (4,5,10,14,31).

Pregnancy Stress Rating Scale (PSRS): The items in the scale are positive and graded with a five-point Likert type. While the answer "absolutely no" is scored as 0 point, "very severe" is scored as 4 points. The total score is the prenatal stress score. The minimum score that could be obtained from the scale was 0, and the maximum score was 144. A higher score indicates a higher perceived level of prenatal stress. The scale, originally developed in 1983 by Chen and his colleagues, initially consisted of 30 items but was later expanded to 36 items. The Turkish validity and reliability study of the scale was adapted into Turkish by Aksoy and his colleagues in 2019. In the Turkish adaptation study, the Cronbach's Alpha value was reported as 0.94 (15). In this research, however, the Cronbach's Alpha value was found as 0.965.

Coronavirus Anxiety Scale (CAS): In 2020, to identify potential cases of dysfunctional anxiety associated with the COVID-19 crisis, the Turkish validity and reliability study of the scale developed by Lee et al. was conducted by Biçer et al., with a reported Cronbach's alpha value of 0.832. In this research, the Cronbach's alpha value was found as 0.898. The CAS is in a five-point Likert type and consists of 5 questions and one dimension. In scoring the scale, "never" was scored as 0 points, "rarely" and "less than one or two days" answers 1 point, "a few days" answer 2 points, "more than seven days" 3 points, and "almost every day in the last two weeks" was scored as 4 points. The total score gives the coronavirus anxiety score. The minimum score is 0, and the maximum score is 20. A high score indicates that the experienced level of anxiety in coronavirus is high (16).

Evaluation of the Data

Data were analyzed using a statistical program. Numbers and percentages are presented. Histograms were used to determine conformity to the normal distribution, skewness, and kurtosis values were examined, and Kolmogorov-Smirnov analyses were performed. Mann Whitney U test and Kruskal Wallis tests were employed between certain obstetric characteristics and the total scores of PSRS and CAS. Logistic regression analysis was used to determine whether pregnant women felt safe or not during the epidemic process. Spearman correlation analysis was carried out between the PSRS and CAS and other quantitative variables. $p<0.05$ was accepted as a statistical significance level.

Ethical Aspect of the Study

Ethics committee approvals were received from the Ministry of Health Scientific Research Platform (03.06.2020) and the Clinical Research Ethics Committee of Giresun University (09.11.2020/12). Pregnant women were informed within the scope of

the Declaration of Helsinki principles. When the link was opened, explanations about the study were included on the first page of the questionnaire form. Those who consented to participate in the study were allowed to see the next questions. Approvals were obtained from the researchers who conducted the validity and reliability study of the measurement tools.

Results

The mean age of the participants in the study was 29.31±4.53 (Min-Max: 20-46, Median: 29). Some of the characteristics of pregnant women are presented in Table 1.

Table 1. Some of the Characteristics of the Participants (N = 204)

	Mean±SD	Median	Min.	Max.
Age of marriage	24.54 ± 3.78	25.00	15	37
Years of marriage	4.97 ± 4.45	4.00	0	20
Gestational age	27.58 ± 8.14	28.00	14	41
Number of pregnancies	1.77 ± 0.93	2.00	1	6
Number of miscarriages	0.24 ± 0.57	0.00	0	3
Number of abortions	0.15 ± 0.78	0.00	0	3
Number of surviving children	0.62 ± 0.78	0.00	0	3
Mean of anxiety	5.20 ± 2.97	5.00	0	10
The risk of COVID-19 transmission anxiety perception	6.03 ± 2.93	7.00	0	10

Primary education graduates account for 19.6% of the study, higher education graduates account for 28.8%, and secondary school graduates account for the remaining (28.4%). While 14.7% of participants reported low income, 74.5% stated that their income and expenses were equal. 89.7% claimed to be part of a nuclear family, 6.9% reported that their spouses did not work, and 9.8% stated they lacked health insurance.

80.4% of the pregnant women stated that their pregnancy was planned. While 44.6% of participants identified health staff as their source of information regarding pregnancy, 18.1% identified books, 15.7% identified personal experiences, 13.7% identified the online environment, and 7.8% identified their inner circle as the primary source of information. 11.3% of the participants stated cohabiting with someone in the risk group for COVID-19 (the elderly, children, health personnel). The rate of those who reported that they or one of their cohabitants had been diagnosed COVID-19 is 10.4%. Of the participants 61.8% reported that the process had a negative impact on their mental health, while 34.3% reported that the process had a negative impact on their physical health. In case of a health-related complaint, 57.4% indicated that they would visit a hospital, 21.1% would contact a health hotline, 12.7% would visit a community clinic, 3.9% would seek advice from others who had similar complaints, 3.9% would seek information online, and 1.0% stated that they would wait for the complaint to go away. 46.1% of pregnant women reported consulting coping strategies (music, exercise, hobbies, etcetera.) to deal with the process, 26.0% avoided watching the news, while 27.9% indicated that they did not require any application to cope with the process. 49.0% of pregnant women reported that the pandemic altered their sleep pattern, 45.1% their diet, 55.4% their exercise routines, and 86.3% their interpersonal interactions. 57.8% of pregnant women stated that the pandemic could have negative consequences for their pregnancy.

The mean scores of the scales used in the study are 42.99 ± 24.58 (Min-max: 6-116, median: 40) for PSRS, 2.60±3.26 (Min-max: 0-19, median: 2) for CAS.

As shown in Table 2, future anxiety in pregnant women during the pandemic period is 8.73 times more effective in terms of not finding the precautions taken sufficient, 0.91 times in terms of age, 0.37 times in terms of working, and 0.32 times in terms of having pregnancy-related issues ($p<0.05$).

A positive correlation has been observed between the PSRS scores of the pregnant women, their CAS scores, and their weeks of gestational age, as well as between their CAS scores and gestational age (Table 3).

The distribution of PSRS and CAS scores according to sociodemographic and obstetric characteristics is presented in Table 4.

Table 2. Factors affecting pregnant women's perceptions of their safety (N=204)

Variables	β	p	OR	95% GA
PSRS (Numeric)	-0.009	0.392	0.991	0.969 - 1.012
CAS score (numerical)	0.035	0.651	1.036	0.890 - 1.206
Age (Numeric)	-0.089	0.048	0.915	0.837 - 0.999
Gestational age (numeric)	-0.025	0.355	0.975	0.926 - 1.028
Having complications with pregnancy No Yes	1.135	**0.018**	1.00 0.321	0.125 - 0.824
Having had complications during the previous pregnancy No Yes	-0.195	0.697	1.00 0.323	0.308 - 2.196
Having fears related to childbirth No Yes	-0.823	0.062	1.00 0.439	0.185 - 1.042
Finding the precautions sufficient No Yes	2.167	**0.001**	1.00 8.734	3.762 - 20.280
Having trouble showing up for checkups No Yes	-0.539	0.229	1.00 0.583	0.242 - 1.405
Taking protective health measures No Yes	0.948	0.061	1.00 2.581	0.956 - 6.965
Employment status No Yes	-0.975	**0.022**	1.00 0.377	0.164 - 0.867

Table 3. The relationship between PSRS, CAS scores, and obstetric characteristics of pregnant women (N=204)

		PSRS	CAS	Age	Years of marriage	Gestational age	Number of pregnancies
PSRS	r p	-					
CAS	r p	0.593** **0.001**	-				
Age	r p	-0.083 0.237	-0.040 0.566	-			
Gestational age	r p	0.372 **0.001**	0.268** **0.001**	0.037 0.601	0.031 0.669	-	
Number of pregnancies	r p	-0.010 0.893	0.103 0.149	0.440** **0.001**	0.753** **0.001**	-0.014 0.840	-

Table 4. Distribution of PSRS and CAS scores based on sociodemographic and obstetric characteristics (N=204)

	PSRS score		CAS score	
Sociodemographic and obstetric characteristics	Median (95% CI)	Test and p-value	Median (95% CI)	Test and p-value
Current place of residence Province County Village	 33.00 (32.56-40.33)[a] 52.50 (47.54-58.75)[a,b] 18.50 (10.64-28.35)[b]	 KW= 24.578 **p=0.001**	 1.00 (1.39-2.39)[a] 4.00 (2.91-4.51)[a] -	 KW= 21.905 **p=0.001**
Profession Housewife Worker Civil Servant Self-employed Health care worker Instructor Other	 46.00 (42.19-53.15)[a,b,c] 35.00 (22.42-44.74)[a,d] 44.50 (37.58-53.25)[d,e,f] 13.00 (13.36-37.63)[b,e,g] 42.00 (39.16-59.73)[g,h] 30.00 (21.87-38.59)[d,f,h] 33.00 (22.74-44.71)	 KW= 19.734 **p=0.003**	 3.00 (2.42-3.91) 0.00 (-0.16-3.69) 1.00 (0.72-3.12) 3.00 (1.88-3.94) 2.00 (1.68-4.18) 0.00 (0.40-2.98) 0.00 (-0.11-1.38)	 U= 17.844 **p=0.007**
Gestational age Second Trimester Third Trimester	 32.00 (30.73-40.04) 46.00 (44.28-53.47)	 U= 3458.500 **p=0.001**	 1.00 (1.44-2.67) 2.00 (2.37-3.67)	 U= 4306.000 **p= 0.045**
Pregnancy complications No Yes	 35.00 (36.03-43.34) 52.50 (48.99-64.10)	 U= 1961.000 **p=0.001**	 1.00 (1.90-2.87) 4.00 (2.25-4.72)	 U= 2585.000 **p=0.032**
Having had complications during the previous pregnancy No Yes	 35.00 (36.40-43.79) 55.00 (49.14-63.85)	 U= 1783.500 **p=0.001**	 1.00 (1.89-2.89) 3.50 (2.45-4.65)	 U= 2223.500 **p=0.010**
The fears related to childbirth No Yes	 27.50 (27.54-35.56) 50.00 (48.18-57.36)	 U= 2547.000 **p=0.001**	 0.00 (1.02-2.16) 3.00 (2.79-4.10)	 U= 3189.000 **p=0.001**
Having had problems with the previous childbirth				
No	36.50 (36.78-43.73)	U= 809.000	1.00 (1.84-2.75)	U= 1033.000
Yes	70.00 (57.01-74.25)	**p=0.001**	4.00 (3.35-6.82)	**p=0.001**
Feeling secure				
No	48.00 (47.39-60.05)	U= 2968.500	3.00 (1.29-3.42)	U= 2873.000
Yes	33.00 (33.90-41.35)	**p=0.001**	1.50 (2.13-3.13)	**p=0.001**
Finding the precautions sufficient				
No	46.00 (42.65-52.18)	U= 2968.500	3.00 (2.68-4.13)	U= 3560.500
Yes	32.00 (33.21-42.61)	**p=0.001**	0.00 (1.22-2.20)	**p=0.001**
Fear of experiencing health changes				
No	27.00 (24.68-31.80)	U= 2180.000	0.00 (0.60-1.81)	U= 2510.000
Yes	48.00 (46.89-55.53)	**p=0.001**	3.00 (2.78-3.96)	**p=0.001**
Having trouble showing up for checkups				
No	33.00 (33.19-39.98)	U= 2873.000	0.00 (1.09-1.81)	U= 1916.000
Yes	62.00 (48.58-61.93)	**p=0.001**	4.00 (3.87-5.80)	**p=0.001**
Status of taking protective measures				
No	60.00 (48.25-67.69)	U= 2104.000	4.00 (3.71-6.54)	U= 1599.000
Yes	36.50 (36.02-42.65)	**p=0.001**	1.00 (1.58-2.40)	**p=0.001**
Receiving prenatal education				
No	35.00 (35.23-42.70)	U= 2670.500	1.00 (1.67-2.68)	U= 2415.000
Yes	55.00 (47.01-60.77)	**p=0.001**	4.00 (2.80-4.71)	**p=0.001**

[a-h] It indicates the groups from which the difference originated. KW; Kruskal-Wallis test, U= Mann Whitney Test

**Significant correlation at 0.01 level, Spearman correlation

Discussion

The COVID-19 pandemic is important in terms of emotional reactions pregnant women. Pregnant women in this study stated that they did not feel safe, regarded the precautions taken as insufficient, were concerned about their health deteriorating, claimed their mental health was damaged, and their sleep-nutrition-exercise habits and interpersonal interactions were negatively impacted. Pregnant women reported that they preferred to cope with the process through coping strategies (music, exercise, hobbies etc.). While one in every two pregnant women believed the pandemic would have a negative impact on their pregnancy, only four in every five pregnant women reported taking health precautions. According to another study conducted in Turkiye, 95.8% of pregnant women adhered to isolation guidelines during pregnancy follow-up (17). On the other hand, it was reported that staying at home and maintaining social distance was important in limiting the spread of COVID-19 and that unemployment, poverty, and increased interaction significantly affected pregnant women's everyday lives and increased stress (18). Usually, during pregnancy, the thought that something might go wrong, with the influence of hormones, was anxiety-inducing for pregnant women. During the pandemic process, on the other hand, pregnant women may have been affected by all aspects of the pandemic due to fear of infecting the infant, the thought of being in a risk group, the unpredictable nature of the pandemic, fear, and the impact of restrictions (curfew, inability to access health services etc.) (19, 20). Anxiety, depression, and stress are all serious issues during pregnancy (21). They are related to side effects such as preeclampsia, nausea, vomiting, preterm childbirth, low birth weight, and a low APGAR score (22). During the pandemic, different aspects of pregnancy should be focused on, and pregnant women should receive psychological support (19).

It was determined that people living in the district and housewives had high PSRS and CAS scores. Similarly, Kahyaoglu Sut & Kucukkaya (17) stated that the risk of anxiety is higher in unemployed, pregnant women. Moreover, many countries have postponed non-emergency operations due to the pandemic, outpatient and in vitro fertilization services were disrupted, pandemic services were concentrated in hospitals, pregnant women were transferred to other hospitals due to the closure of childbirth rooms, and breastfeeding counseling and postpartum care were impacted (23).

In this study, the PSRS and CAS levels were high in pregnant women in the third trimester; a positive correlation was detected between the gestational age and the stress and anxiety score. Similarly, Saadati et al. (24) reported that pregnant women in the second and third trimesters were concerned about the consequences of the disease. However, the average health anxiety scores were significantly higher in those in the third trimester. Medina-Jimenez et al. (25) determined a significant increase in stress levels in the last trimester of pregnancy compared to the first trimester. Demir & Kılıç (20) determined that as the gestational age increased, the anxiety levels also increased significantly. Taubman-Ben-Ari et al. (26) reported that as gestational age increased, anxiety related to childbirth increased. Contrary to the findings of this study, there are also studies indicating that anxiety experienced in the first trimester is higher than in the later stages of pregnancy (3, 4). This remained a limitation of the study since the scale used was applied only to pregnant women in the last trimester. It is thought that the reason why pregnant women's scores are significantly higher in their last trimester is due to the uncertainty of the pandemic, the impending childbirth, the prohibition of direct contact with family members during childbirth, the possibility of various restrictions, and the uncertainties associated with the hospital process.

Anxiety and stress levels were high in participants who experienced difficulties during pregnancy, had difficulties with previous pregnancies and deliveries, and had a fear of childbirth. Another study determined that those who had problems during their pregnancy perceived prenatal stress more (27). During pregnancy, women may experience increased stress and anxiety associated with adverse obstetric outcomes. Stress and anxiety levels may increase during infectious disease outbreaks (4). Due to the pandemic's global expansion and impact in Turkiye, pregnant women at risk experienced increased anxiety, distress, and fear as they worried about the safety of themselves and the fetus (12). Beyond sociodemographic, obstetric, and other health-related factors, the stress associated with childbirth preparation and concerns about COVID-19 infection to self and infant may have increased women's risk of experiencing moderate or severe anxiety during the pandemic (18). According to Taubman-Ben-Ari et al. (26), pregnant women experience anxiety and psychological distress due to various factors, including the health of the fetus or family members, the risk of being infected, and concern over childbirth. Akgor et al. (22) determined that the participant's primary source of concern and distress was the fear of contracting COVID 19 during childbirth.

The present study determined that those who found the measures taken inadequate experienced more stress and anxiety. Restriction, disruption of normal routines, and decreased social and physical contact led to distress and dissatisfaction during a pandemic. It is acknowledged that receiving insufficient information about the purpose of quarantine and the measures to be taken makes people feel worse as a stress factor (28).

Anxiety and stress levels were higher in those who expressed difficulty about showing up for pregnancy checkups, concern about their health changing, and lack of safety. Pregnant women may be hesitant to go to health institutions or hospitals during an epidemic,

as they perceive them to be in risky environments (24). Ifdil et al. (29) stated that pregnant women were worried about visiting health care facilities for fear of contracting COVID-19. Kahyaoglu Sut & Kucukkaya (17) reported that 68% felt uneasy about visiting the hospital/doctor for pregnancy follow-ups due to fear of COVID-19. The anxiety and depression scores of pregnant women who were uneasy and did not show up for checkups were significantly higher. Another study revealed that the participants' primary concern was COVID-19 transmission from the hospital during follow-up and childbirth (22). It has been determined that pregnant women experience fear due to the risk of infection and postpone their prenatal examinations or prefer safer centers (12). Stress increase considerably higher in women concerned about themselves and their unborn child. The literature reported that excessive stress and anxiety might have a detrimental effect on pregnancy outcomes, the infant's well-being, and stress can result in inadequate care, obstetric complications, immune suppression, adverse health effects, and developmental, behavioral and mental problems in infants. For these reasons, recognition of prenatal stress is significant for pregnant women and infants (30). Although prenatal follow-up and non-follow-up are thought to minimize the risk of infection, they may result in more significant complications during pregnancy. The arrangements to be made should take into account the maternal and fetal health benefits.

Among the participants, those who received training about pregnancy had high PSRS and CAS scores. This situation is believed to be caused by a combination of factors, including awareness of the importance of prenatal care and the risks that may occur when care is not received as well as knowing the effects of stress during pregnancy.

In the analysis conducted on the effect of being pregnant during a pandemic on future anxiety, it was found that age, experiencing difficulties during pregnancy, believing that the measures taken were sufficient, and working independently of one another were all effective in experiencing future anxiety. The increase in anxiety among those who experience difficulties during their pregnancy may be due to the uncertainties about the future and the extent to which the infant will be affected by the problem, the uncertainty regarding the epidemic, and the economic difficulties that are encountered by working pregnant women, media news reporting that the virus is more effective in older age, the effects of the pandemic still being seen despite the precautions taken on pregnant women that think the precautions are adequate, whether much stricter precautions are necessary, and whether pandemic will continue during and after childbirth. According to the studies, pregnant women's anxiety increased throughout the pandemic; they expressed concern for their unborn children, relatives, and health and showed health anxiety (31).

Conclusion

This study determined how pregnant women were impacted by the epidemic process, which could have been caused by various factors. Among these factors, being in the last trimester, having trouble showing up for checkups, experiencing complications during pregnancy, health concerns, finding the measures insufficient, feeling unsafe, pregnancy stress, and COVID-19 anxiety were significant.

The findings may be helpful in terms of identifying pregnant women at high risk of adverse effects, providing them psychological assistance, and preventing some complications associated with prenatal stress. In addition, nurses and midwives providing care services should be aware of the increased risk due to the effects of the COVID-19 pandemic. When the pandemic is mixed with the usual stress of pregnancy, pregnant women have an increased need for advice and counseling. While the pandemic impacts people of all ages on a variety of levels, it can also affect the mother's and newborn's health during pregnancy, childbirth, and the postpartum period. Adopting precautionary measures, managing childbirth successfully, maintaining high-quality prenatal, childbirth, and postpartum care are important in improving mother and infant health during the pandemic.

Authorship Contribution Statement

CE, CY: Conceptualization, methodology, investigation, writing, review, editing.

All authors have read and approved the final manuscript.

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