

Araştırma Makalesi/ Research Article

## Thoughts and Emotions of Pregnant Women in the Period of COVID-19 in Türkiye: A Qualitative Study

### Türkiye'de COVID-19 Döneminde Gebelerin Düşünce ve Duyguları: Nitel Bir Araştırma

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#### ABSTRACT

**Objective:** This phenomenological study was performed to thoroughly examine the experiences of healthy pregnant women during COVID-19.

**Method:** The sample consisted of 20 pregnant women who were older than 18 years, could use remote access applications such as video conferencing applications, had no communication problems and voluntarily agreed to participate. Each interview lasted approximately 45 minutes. A semi-structured interview form was used to collect information about the sociodemographic and obstetric characteristics of pregnant women and their feelings and thoughts about pregnancy during the pandemic process.

**Results:** The pregnant women were found to experience intense sorrow, stress, and fear. The uncertainty regarding the diagnosis, treatment of the disease and when the pandemic would end concerned all pregnant women. The results indicated that the support of partners, family and friends had a key role in coping with the intense concerns and fears that were experienced.

**Conclusion:** Most pregnant women stated that they paid great importance to the measures they took against COVID-19 and that these measures adversely affected their mental health and the mental health of their families.

**Keywords:** Anxiety, COVID-19, emotion, pandemic, pregnancy

#### ÖZ

**Amaç:** Bu fenomenolojik çalışma, sağlıklı gebe kadınların COVID-19 sürecindeki deneyimlerini derinlemesine incelemek amacıyla yapıldı.

**Yöntem:** Örneklemi, 18 yaşından büyük, video konferans uygulamaları gibi uzaktan erişim uygulamalarını kullanabilen, iletişim sorunu olmayan ve gönüllü olarak katılmayı kabul eden 20 gebe oluşturdu. Her görüşme yaklaşık 45 dakika sürdü. Pandemi sürecinde gebelerin sosyodemografik, obstetrik özellikleri ile gebelikle ilgili duygu ve düşünceleri hakkında bilgi toplamak için yarı yapılandırılmış görüşme formu kullanıldı.

**Bulgular:** Gebelerin yoğun üzüntü, stres, korku yaşadıkları saptandı. Hastalığın teşhisi, tedavisi ve pandeminin ne zaman sona ereceğine dair belirsizlik tüm gebeleri endişelendirdi. Sonuçlar, yaşanan yoğun endişe ve korkularla baş etmede eş, aile ve arkadaş desteğinin kilit rol oynadığını gösterdi.

**Sonuç:** Gebelerin çoğu COVID-19'a karşı aldıkları önlemlere büyük önem verdiklerini ve bu önlemlerin kendilerinin ve ailelerinin ruh sağlığını olumsuz etkilediğini belirtmişlerdir.

**Anahtar Kelimeler:** Kaygı, COVID-19, duygu, pandemi, gebelik

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## Introduction

The World Health Organization (WHO) defined the novel coronavirus disease - 2019 (COVID-19) caused by the virus called SARS-CoV-2 as a pandemic in March 2020 (WHO, 2020). Pregnant women are considered a group under high risk of infections as their immune system is suppressed, but there are no scientific data indicating that pregnant women are more susceptible to COVID-19 (ACOG, 2019). There are also no indications that COVID-19 causes intrauterine infection and forms congenital infections, yet it is still difficult to make a decisive judgment here as the number of cases is limited. The Royal College of Obstetricians and Gynecologists (RCOG) reported that COVID-19 infection was not more severe for pregnant women compared to non-pregnant women, which is different in comparison to previously experienced coronavirus and influenza epidemics (RCOG, 2020; WHO, 2020). Based on the physiological changes in the immune and cardiopulmonary systems, respiratory infections create the risk of developing a more severe disease for pregnant women. Pregnant women constituted 1% of patients infected with the H1N1 virus, an influenza A sub-type virus, and they also constituted 5% of all deaths arising from H1N1 (Siston et al., 2010). Moreover, both SARS-CoV-2 and MERS-CoV infections may result in severe complications during the pregnancy period, such as endotracheal intubation, hospitalization in an intensive care unit, renal failure and death (Alfaraj et al., 2019; Wong et al., 2004)

Pandemics cause social anxiety, fear and concerns (Jiloha, 2020). The prevalence of anxiety disorders in developed and developing countries varies between 10 and 25%, while the prevalence of perinatal depression was reported as 12% (Glover, 2014; Martini et al., 2015). Accordingly, the anxiety and stress of pregnant women will increase with the pandemic, which may adversely affect maternal and fetal health and cause pregnant women to make wrong and destructive decisions and have unsuitable and harmful experiences regarding the process of pregnancy and delivery. Therefore, determining the concerns of pregnant women and providing the psychosocial support they need during an epidemic or pandemic is critical in regard to maternal and fetal health (Palladino et al., 2011; Woody et al., 2017). In this study, the researchers aimed to comprehensively examine the stress, concerns and fear experienced by pregnant women during the COVID-19 pandemic. The research questions were determined as follows for this purpose:

- What are the thoughts and feelings of healthy pregnant women about pregnancy during the pandemic period?
- What are the situations that affect the thoughts and feelings of pregnant women positively and/or negatively?
- How do pregnant women deal with negative thoughts and feelings?

## Method

### Research design

The purpose and research questions of a study are among the most important factors that determine which research design should be used. For this reason, a phenomenological study design, as a qualitative research approach, was used for the purpose and research questions of the study. Phenomenological research aims to reveal our experiences and the meaning we attribute to these experiences in our world by focusing on phenomena that we are aware of in daily life but do not have an in-depth and detailed understanding. Regarding interpretive phenomenology that aims to reveal the meanings hidden in human relationships and experiences, Spiegelberg (1976) stated that individuals' experiences and perceptions are affected by environmental conditions (Spiegelberg, 1976). In this study, it was aimed to explain the experiences of pregnant women who were having a normal, healthy pregnancy process in conditions changing with the emergence of the COVID-19 pandemic. With this phenomenon, which was aimed to be explained by the researchers, healthcare professionals will gain an important resource for a better understanding of the care needs of pregnant women during the COVID-19 pandemic.

The data were collected in the period between 11 and 25 June 2020. The Turkish Ministry of Health declared the daily number of cases as 987 out of 49,190 tests for 11 June 2020 while it was 1,458 cases out of 52,303 tests for 26 June 2020. The purposive sampling method was used to include participants, and efforts were made to create the maximum variety. The sample consisted of 20 pregnant women who were older than 18 years, could use remote access applications such as videoconferencing applications (e.g., Zoom, Cisco Meeting, Webex Meeting, BEIP, Facetime), had no communication problems and voluntarily agreed to participate.

Data were collected using a videoconferencing application and through in-depth interviews. Each interview lasted approximately 45 minutes.

Additionally, a semi-structured interview form was used to collect information on the pregnant women's certain sociodemographic characteristics such as their age, number of previous pregnancies and number of previous deliveries, obstetric characteristics, and thoughts and feelings regarding pregnancy during the pandemic. Güclü reported that the success of phenomenological research questions depends on the extent to which the questions touch lived experiences distinct from theoretical explanations (Güclü, 2014). The semi-structured interview form included the following four open-ended questions: "Could you please explain your thoughts and feelings regarding pregnancy during the pandemic? What are the factors that positively or adversely influence these thoughts or feelings? How do you cope with these thoughts and feelings? What do you think about regular follow-ups at the hospital and your delivery plan?" The data collected from the interviews were transformed into written documents 24 hours within the interview. In the meantime, the pregnant women's statements were recorded verbatim. Ethical approval was obtained from the ----- was voluntary and confidential, and written informed consent was obtained prior to participation in the study.

#### Data analysis

The quantitative data on the participants' sociodemographic characteristics were analyzed using the licensed IBM SPSS (Statistical Package for the Social Sciences) Statistics version 21 software. The qualitative data were coded, and relevant feelings/emotions and statements were categorized using the content analysis method. The results obtained from the interviews were read by the researchers several times, and the statements and concepts were turned into themes after the interview text was analyzed.

#### Results

The mean age of the participants was  $29.05 \pm 3.30$  years (min= 22 – max= 35), while their mean gestational week was  $27.78 \pm 9.51$  (min= 10 – max= 39). Most of the pregnant women (75%, n= 15) had a bachelor's or a higher degree, and 52.6% (n= 10) defined their income level as moderate (Table 1). Of the pregnant women, 65% (n=13) stated that they went to private hospitals for antenatal follow-ups with the belief that these hospitals were cleaner and

more organized, there were fewer hospitals close to them, these hospitals had an agreement with their medical insurance company, and the public hospitals near them could be serving as pandemic hospitals.

**Table 1.** Data related to socio-demographic characteristics of pregnant women

	Mean	Sd.	Min-max
<b>Average age</b>	31.45	5.71	22-35
<b>Gestational week</b>	27.78	9.51	10-39
<b>Gravida</b>	1.78	1.08	1-4
<b>Parity</b>	0.47	0.67	0-2
<b>Living child</b>	0.36	0.59	0-2
	Groups	n	%
<b>Educational level, years</b>	8	1	5.3
	12	3	15.8
	$\geq 16$	16	80
<b>Economic status</b>	Income>high	8	42.1
	Income=expenses	10	52.6
	Income<expenses	1	5.3

*Sd: Standart Deviation*

Six themes as emotions, thoughts, reactions, positive-negative factors with impacts, measures and coping were formed, and six sub-themes related to these themes were created later. These themes and sub-themes are presented in Table 2.

The results indicated that the pregnant women, particularly those who previously had pregnancy loss (65%, n=13), were undergoing their first pregnancy (5.3%, n=1) and had no children (65%, n=13), had intense fear and concerns during the pandemic period. One of the pregnant women coded as H. explained her emotions as follows:

"I had suffered from two miscarriages after giving birth to my daughter, and the causes of these failures are yet to be known... I suffered deeply... Then, I was thinking that everything was okay, but this pandemic broke out... I cannot stay strong if something happens to my baby."

**Table 2.** Research themes and sub-themes

Emotions/ Opinion	Reactions	Positive factors	Negative factors	Coping	Measures
<b>Fear</b> <b>Anxiety</b> <b>Anger</b> <b>Bad luck</b> <b>Unhappiness</b> <b>Hope</b>	Cry Act cautiously Checking constantly Failure to calm down Don't think you are sick or will be Difficulty falling asleep See nightmares Muscle pains Difficulty breathing Flushing	Husband and family support Social and friend support Phone and video chat with family / friends Share your concerns Living in a small city Spending the process in a small city on a family moment/vacation Home office work Being young	Infection news to pregnant / newborn Uncertainty about the effect of the pregnancy process on the disease Suspicion about the sterilization of the operating room / delivery room Health workers suspected of being carriers Spouse / self-study Death news Increased number of cases The probability of experiencing the second wave Having children / old people at home Failure to follow the rules Antenatal follow-up disruption Failure to perform diagnostic and screening tests Negative statements of doctors / persons Written in social media and online groups	To pray Meditation and yoga To exercise Spending time with their children Positive thinking	Washing hands Using cologne, antiseptic solution, disinfectant in hand and surface cleaning Stay at home Take care of personal hygiene Using protective equipment (mask, visor, gloves, etc.) Not using public transportation Going to a private hospital

The pregnant women felt fear, anxiety, sorrow, anger, concerns and desperation. The expectation of a higher risk of infection in larger urban areas reduced the fears and concerns of pregnant women who lived in smaller cities (30%, n=6) and migrated from larger urban areas to small residential locations (20%, n=4). Additionally, another factor that relieved pregnant women was the reports indicating that young people and women could have a milder course of the disease. Another pregnant woman coded S. reported her emotions as follows:

“I was scared at first but then I found out that younger people could undergo this pandemic more mildly... Anyway, I live in a village.”

The uncertainty regarding the diagnostic process and treatment of the disease and when the disease would end increased the pregnant women’s (55%, n=11) concerns. The risk of getting infected for the mothers or babies and the thoughts of losing their baby due to the disease significantly increased the pregnant women’s concerns and fears. The pregnant women stated that they often cried as they could not

cope with these negative emotions, they had tension consequently, they felt ill with the belief that they were ill or would be ill soon, they had problems in falling asleep, and they had nightmares (60%, n=12). The pregnant woman coded M. explained her feelings as follows:

“I have problems in falling asleep... I always have nightmares... I cannot sleep or have peace...”

Another pregnant woman coded as M.A. said, “I cry for no reason... I cannot stop myself... I find myself panting.”

Another pregnant woman coded as N. reported the following:

“I constantly have nausea, feeling like I have fever... I measure my body temperature at least two or three times a day.”

The pregnant women who were to give birth soon (55%, n=11) had the highest number of concerns in terms of how the delivery would happen, how they would breastfeed and how they would attend the postnatal care of their babies. The pregnant woman coded as A. reflected her concerns as follows:

“What makes me concerned most is breastfeeding... I do not know whether this disease is transmitted through breastmilk... I wish I could have tests before breastfeeding...”

Some pregnant women (25%, n=5) stated that the idea of spreading COVID-19 to the family and friends concerned them extensively, and they explained this feeling as follows:

“We feel that the circle is tightening.”

Support from partners/family and friends was found to have a key role in coping with the intense concerns and fears experienced by the pregnant women during the pandemic period (100%, n=20). Additionally, other factors that positively affected the pregnant women’s coping skills included talking about their concerns, getting the latest information, knowing that their beloved ones were safe and praying. Some pregnant women (55%, n= 11) aimed to console themselves with the belief that the infection would lose its impact after some time or after the weather temperature rose and that everything would not be as terrifying as the current situation in the near future.

Most pregnant women (60%, n=12) stated that they went too far with their precautions, and such extreme measures adversely affected their mental health and that of their families. The following statement from the pregnant woman coded as C. reflected the issue clearly:

“... I wipe the doors and all packages coming from the outside using bleach. My hands have wounds... I constantly urge my husband to wash his hands... We are having arguments owing to these measures these days.... I know my precautions are extreme, but I cannot help...”

Some pregnant women stated that they had problems in breathing and suffered from fever from time to time.

All pregnant women closely monitored the information on the media and news to prevent any risks related to infection. Additionally, they often had conversations with people whose knowledge was trustworthy for the pregnant women, and they applied protective measures which included washing hands frequently, cleaning the hands and furniture using an antiseptic solution, ventilating or washing anything coming from the outside, and washing the mouth or nose using saltwater.

Most pregnant women (90%, n=18) delayed their follow-ups for at least once during the pandemic period. They reported that they particularly could not take the oral glucose check test (25%, n=5) and screening tests (20%, n=4). The pregnant women

who were in the third trimester of their pregnancy (55%, n= 11) stated that they preferred the cesarean section delivery method as the delivery was shorter in this procedure, the operating room would be cleaner than their houses, and their doctors supported their ideas (n=5). The pregnant women also noted that they would not accept any visitors, and they would perform their self-cleaning activities other than those performed by the cleaners. The most interesting result regarding the delivery-related preferences of some participants was their plans of delivery at home (10%, n= 2).

The following pregnant women with their names coded as initials explained their delivery-related preferences and thoughts on antenatal follow-ups as follows: E.:

“If this disease were not present, I would undergo normal delivery and have the full experience of motherhood. ...but my doctor considers cesarean section as a better option as the operation room is sterile... I will therefore undergo this procedure...”

A.: “We will also clean the room a night before the delivery. We will not accept any visitors! It will be difficult because people in Turkish culture are inclined to hugging and visiting, but I think they will understand.”

Z.: “I am planning to deliver at home. I gained some information about it and learned that it is quite expensive.”

## Discussion

In this study, researchers phenomenologically examined the stress, concerns and fears experienced by healthy pregnant women in Turkey during the COVID-19 pandemic. A study conducted with 1947 participants in a Chinese sub-provincial city called Wuhan where COVID-19 was identified for the first time revealed that 24.5% of the pregnant women had major concerns, and 90% felt vulnerable against the virus (Liu et al. 2020). A study in the relevant literature reported the incidence of anxiety incidence among pregnant women during the pandemic as 14.3% (Yue et al., 2020). Additionally, a study conducted in Canada demonstrated that 68% of pregnant women displayed anxiety symptoms during the pandemic, while 37% showed depressive symptoms. Most pregnant women included in different studies have stated that they felt lonely and vulnerable against the virus in this period (Liu et al., 2020; Yue et al., 2020). Many factors that increased pregnant women’s stress and concerns have been determined by several researchers in the pandemic period. Jewish and Arab pregnant women were

found to have numerous concerns regarding COVID-19. These pregnant women's concerns were related to public areas most (87.5%), followed by the possible infection for other family members (71.7%), using public transportation vehicles (70%), fetal health (70%), missing their regular pregnancy follow-ups (68.7%) and being infected during delivery (55.4%), whereas 35.4% of the pregnant women were at risk of depression (Durankus and Aksu, 2020). Another study discovered that 83.3% of pregnant women had various concerns for their relatives who were at an advanced age, while 63.4% were concerned for their babies (Corbett et al., 2020). Low socio-economic status, inadequacy of social support and physical activities, an unhealthy diet, insufficient sleep, being aged younger than 35 years, low body mass index, full-time employment and inability to maintain the recommended two-meter social distance at home and workplace were among the relevant factors (Wu et al., 2020). Liu et al. reported that pregnant women with moderate income levels had less stress and anxiety in comparison to pregnant women with low and high levels of income Liu et al., 2020). The same study also indicated that pregnant women's age, educational status, profession and number of previous pregnancies did not significantly affect their concerns during the pandemic period (Yue et al., 2020). A previous study noted that nulliparity increased pregnant women's concerns and fears during the COVID-19 pandemic (Hoyer et al., 2020).. The same study also reported that the emotions mentioned by the pregnant women most frequently during the pandemic were fear, concerns and anxiety in a descending order. The differences between the rates of experiencing these emotions reported in different studies may have arisen from the variety of the data collection tools used. Parity, risks regarding cases of COVID-19 in the places where the pregnant women were living and home-office working styles had an impact on the women's anxiety, stress and fears in this study, which was compatible with other results reported in the literature.

It has been reported in literature that a good partner/domestic support reduced pregnant women's stress, fears and anxiety during the COVID-19 pandemic (Lebel et al., 2020; Liu et al., 2020), and there are studies indicating that social support had no significant impact on the emotions of pregnant women in this period (Hoyer et al., 2020). The pregnant women who were included in this study stated that they had less stress, concerns and

fears when they received support from their partners, families and friends and when they had a conversation or video chat with their families or friends and shared their concerns with them.

Pregnant women use different ways to cope with negative emotions such as stress, anxiety or fear during the pandemic period. Most pregnant women abstained from using public transportation vehicles while some avoided being in crowded places, and they prioritized their decisions regarding the selection of the hospital where the delivery would be performed (Lebel et al., 2020). Another study observed that most pregnant women took three or more protective measurements (84.7%), wore masks after leaving home (97.4%), preferred staying at home unless otherwise necessary (76.3%) and washed their hands frequently (88.3%) (Yue et al., 2020). A study conducted in Ireland reported that 70.4% of pregnant women stayed away from crowded environments (Corbett et al., 2020). Researchers reported that 70% of pregnant women demanded online counseling in regard to their delivery-related plans (Liu et al., 2020). The pregnant women in this study stated that they paid particular importance to their personal hygiene and cleanliness of their house, and they avoided using public transportation vehicles.

Obtaining information from reliable sources is important for pregnant women for them to feel safe and have fewer negative feelings. A relevant study reported that only 7% of pregnant women received information from healthcare staff in this pandemic period (Mappa et al., 2020), while the study by Corbett et al. revealed that 80.3% of pregnant women obtained their information from television (Corbett et al., 2020). The pregnant women in this study noted that they often got information from the media and news. The results of this study suggested that some pregnant women aimed to cope with their negative emotions with the belief that the virus in question would not be as effective after the weather temperature started to increase.

Deliberately missing regular follow-ups to avoid getting infected with COVID-19, having difficulties in determining the hospital and type of delivery and undergoing certain processes such as breastfeeding or caring for one's baby may increase the anxiety levels of pregnant women (Fakari and Simbar, 2020). It was determined that 89% of pregnant women delayed their prenatal care appointments as they feared that they might get infected while on their way to the medical center or while receiving healthcare services (Lebel et al., 2020). In this study,

90% of the pregnant women were found to have missed at least one regular health follow-up appointment. Prenatal care and follow-up delayed based on fears related to COVID-19 are believed to cause anxiety and fears among pregnant women in relation to their babies. Anxiety and fears during the pregnancy period result in postpartum depression, increase in nausea and vomiting, preeclampsia risks, negative affection between the mother and the baby, a delivery process requiring additional interventions, premature delivery, and congenital malformations (Hoyer et al, 2020). Pregnant women may change their delivery plans upon the concerns that they might be exposed to COVID-19 while accessing the medical institution or during the delivery process or early puerperal period (Premkumar et al., 2020). Pregnant women may plan to undergo a cesarean section operation that will take a shorter time according to their expectations even if they do not have any indications for it. Nevertheless, some pregnant women still plan to have vaginal delivery at their homes (Davis-Floyd et al., 2020). A study conducted in the United States reported that 45.2% of pregnant women changed their delivery plans during the pandemic, and 5.1% decided to deliver at home Gildner and Thayer, 2020). The Centers for Disease Control and Prevention (CDC) reported that the rate of cesarean section was 31.7%, and 25.6% of healthy pregnant women voluntarily underwent cesarean section without any indications (CDC, 2019). The Turkey Demographic and Health Survey (TDHS) found that 52.0% of deliveries were performed with the cesarean section method in Turkey (TDHS, 2018). Moreover, the same survey reported that 38% of cesarean section deliveries were planned before the onset of labor-related pain (TDHS, 2018). WHO recommends that cesarean section be preferred when a medical need arises, and the rate of cesarean section should be 10-15% among all deliveries (WHO, 2015). It is clear that the rate of cesarean section is high in proportion medical obligations or optional reasons, when the topic is reviewed without regard to the pandemic. Studies conducted thus far have reported no data indicating that COVID-19 is transmitted from mothers to babies during vaginal deliveries. Pregnant women's concerns and fears that have increased during the pandemic may boost elective cesarean section rates, which is concerning.

Some pregnant women in this study revealed that they decided to have delivery at home. An extensive risk assessment should be performed for these pregnant women. The coordination of the medical

team, ability to reach the hospital quickly in case of an emergency and the expertise of professionals who will perform the delivery process at home are the focal points in this regard.

### Conclusion and Recommendations

This study found that pregnant women, particularly those who previously suffered from pregnancy loss, got pregnant for the first time and had no children, experienced intense fears and concerns during the pandemic. The COVID-19 infection caused pregnant women to miss their antenatal checks and to prefer cesarean section. Determining the women under major risks is important for suggesting early psychological interventions and preventing certain complications regarding pregnancy stress.

### Limitations

The results of this study are valid solely for this sample and thus cannot be generalized. As the data were collected through remote access applications such as videoconferencing applications, pregnant women who could not use or did not have access to these applications could not be included.

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**Author Contributions:** Idea/Concept: BY, MK, NHŞ; Design/Consulting: BY, MK, NHŞ; Data collection: BY, MK; Analysis/Comment: BY, MK, NHŞ; Source Search: BY, MK, NHŞ

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### What did the study add to the literature?

- This research, which was conducted with pregnant women living in Turkey, revealed that pregnant women experience intense fear and anxiety during the pandemic process.
  - This study revealed that the pregnancies in the risky pregnancy category should be followed carefully and stress reduction interventions should be planned in the COVID-19 pandemic.
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