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The experiences of pregnant women during the COVID-19 pandemic in Turkey: A qualitative study



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ABSTRACT

Background: Due to spread and impact of COVID-19 in the world and Turkey lead to fear, stress and anxiety in individuals. This trend is increasing more especially in pregnant women at risk as they are concerned about the safety of themselves and the fetus.

Aim: In our study, concerns, problems and attitudes of pregnant women related to diseases in the pandemic process will be determined by detailed discussions based on their individual experience, and by increasing the awareness of midwives and nurses about what pregnant women experience in this process.

Methods: Content analysis is used as qualitative study pattern. Due to the social isolation rules during the coronavirus pandemic, interviews with pregnant women were planned to be held via mobile phone. The study was completed with 15 pregnant women.

Results: As a result of the content analysis of the interviews, 3 main themes and 11 sub-themes were identified. The identified themes were as following: (1) not understanding the seriousness and fear of the unknown, (2) coronavirus pandemic and disruption of the routine prenatal care (3) disrupted routines and social lives. Each theme was necessarily discussed separately.

Conclusion: The results of the study show that coronavirus pandemic has a significant potential for creating anxiety, adversity and fear, which has a negative emotional effect on pregnant people. It will be useful to provide awareness for midwives and nurses not only about the physical health of pregnant women, but also their mental health, and to cooperate with mental health experts if necessary.

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Problem or issue

COVID-19 is a novel viral infection. Little is known about pregnant women's problems, concerns and experiences about this disease.

What is already known

Due to spread and impact of COVID-19 in the world and Turkey lead to fear, stress and anxiety in individuals. This trend is increasing more especially in pregnant women at risk as they are concerned about the safety of themselves and the fetus. There are no studies examining concerns,

problems and experiences of pregnant women related to COVID-19 in the pandemic process.

What this paper adds

The results of the study show that coronavirus pandemic has a significant potential for creating anxiety, adversity and fear, which has a negative emotional effect on pregnant people. Conditions that have a negative impact on pregnant women include worrying about their own health and their baby's health, deterioration in the expectation of prenatal care, inability to access reliable information and reduced daily routines and social interactions.

1. Introduction

Coronavirus Disease (COVID-19) is a new disease that has shown a rapid increase in terms of cases and deaths since its first identification in December 2019. Its rapid spread, fatal nature and

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lack of treatment increase the effect of the disease [1]. In February 2020, the World Health Organization (WHO) described the disease as COVID-19, the causative virus as “severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)” and declared it a pandemic [2].

Data on COVID-19 infection and its complications during pregnancy is limited [3,4]. However, pregnant women may be considered a risky population for COVID-19 infection due to other highly pathogenic coronavirus-related diseases (SARS and MERS) [5] and the effects on pregnancy [3,4]. On the other hand, the outbreak of coronavirus has caused stress and anxiety for pregnant women in different parts of the world. Anxiety and stress during pregnancy are known to be associated with side effects such as preeclampsia, depression, nausea and vomiting during pregnancy, premature birth, low birth weight and low APGAR score [6–8].

The first COVID-19 case in Turkey was detected on March 11, 2020. After the detection of the first COVID-19 case in Turkey, measures have been taken such as closing of schools, considering pregnant women, individuals with chronic disease and personnel aged 60 years and older working in public institutions to be on administrative leave, remote work by employees, ensuring flexible work, restriction of intercity travel, turning all health institutions in Turkey into pandemic hospitals, acceptance and free treatment of all patients presenting with coronavirus complaints, not leaving the house unless mandatory, and, in some cases, curfew. Increased number of patients, suspicious cases and increased number of provinces affected by the disease, and fear of the unknown due to insufficient understanding of the disease and acquiring misinformation lead to fear, stress and anxiety in individuals [9,10]. Due to its spread and impact in the world and Turkey, this trend is increasing more especially in pregnant women at risk as they are concerned about the safety of themselves and the fetus. Therefore, pregnant women and families need support and care of midwives and nurses, especially during this process, and determination of what health personnel can do to support pregnant women in this process has become important. We aim to understand the experiences of pregnant women during the COVID-19 pandemic. In our study, concerns, problems and attitudes of pregnant women related to diseases in this process will be determined by detailed discussions based on their individual experience, and by increasing the awareness of midwives and nurses. This study will be an important source of what midwives and nurses can do to support this process.

2. Methods

2.1. Qualitative approach

In our study, content analysis is used as qualitative study pattern. Content analysis dealt with the objective, systematic and quantitative description of the manifest and latent content of communication [11]. Conducting the study and reporting the results comply with the Standards for Reporting Qualitative Research (SRQR) for reporting qualitative studies.

2.2. Sample

The sample of the study consists of primiparous and multiparous pregnant women over the age of 18 who speak Turkish, who have not been diagnosed with COVID-19 and are residents of Turkey. In order to get more detailed information about the case investigated in the study, it was attempted to provide diversity in terms of various socio-demographic characteristics (age, working status, family type), province where they live, and gestational week during the inclusion of participants in the study (Table 1).

2.3. Sampling strategy

In order to determine what the pregnant women were experiencing in different provinces of Turkey during the pandemic and as it was not suitable to meet face-to-face with pregnant women for a long time due to the social isolation rules during the coronavirus pandemic, interviews with pregnant women were planned to be held via mobile phone. Pregnant women to be interviewed were accessed by snowball sampling method. The first interview began with a pregnant woman from the researchers' surrounding whom they did not know themselves. Then a simple question “Who do you suggest we talk to about this?” [12] was asked to the first pregnant woman interviewed, and the study group was created by reaching other pregnant women in the study. In qualitative studies, “saturation” is an important guide in deciding the sample size [13]. It was decided that the number of samples was sufficient if the information given by the participants was repeated and the same expressions were often used again by the participants. The study was completed with 15 pregnant women. The data collection and analysis phase of the study, which will make a significant contribution to the pandemic process, was completed within 2 weeks after the approval of the ethical committee.

Table 1
Socio-demographic characteristics of the participants.

Participant number	Age	Education level	Occupational Status ^a	Family structure	Week of Pregnancy	Parity
1	26	High school	Not working	Nuclear	24	Primiparous
2	27	University	Working	Extended	33	Primiparous ^b
3	25	University	Not working	Nuclear	34	Primiparous
4	26	High school	Working	Nuclear	20	Primiparous
5	29	University	Working	Nuclear	18	Multiparous
6	29	High school	Not working	Nuclear	15	Primiparous ^b
7	26	High school	Not working	Extended	12	Primiparous ^b
8	26	University	Working	Extended	12	Primiparous
9	28	University	Working	Nuclear	37	Primiparous
10	20	Primary school	Not working	Nuclear	31	Primiparous ^b
11	26	Primary school	Not working	Nuclear	9	Multiparous ^b
12	33	University	Working	Extended	33	Primiparous
13	26	High school	Not working	Nuclear	17	Primiparous
14	28	Primary school	Not working	Nuclear	16	Multiparous
15	28	University	Working	Nuclear	16	Primiparous

^a None of the pregnant women were actively working due to the pandemic.

^b Those who experienced abortion in their first pregnancy.

2.4. Setting

Turkey is composed of different provinces, with populations ranging from millions to thousands. In order to determine what the pregnant women were experiencing in different provinces of Turkey during the pandemic, participants were selected from provinces with different population ranging of Turkey.

In Turkey, hospitals where pregnant women receive health services include state hospitals, university hospitals, private branch hospitals (gynecology and obstetrics, pediatric diseases, oncology), private hospitals, public clinics and family health centers (primary health care delivery). Public hospitals, university hospitals, private branch hospitals and family health centers provide free care for individuals based on their social security, while private hospitals and private clinics provide care for a certain fee. It was decided that all hospitals would provide free services to patients diagnosed with COVID-19 based on the government decision made during the pandemic.

2.5. Data collection methods

The data was collected through a semi-structured questionnaire. The semi-structured questionnaire consisted of open-ended questions in accordance with the structure of the study. The questionnaire had 4 sections. The introduction section consisted of socio-demographic questions that would initiate communication with the pregnant women and questions that would facilitate the transition to the main topic. The second part included questions that determined the knowledge and attitude of the pregnant woman regarding the coronavirus pandemic (when did you first hear about the coronavirus pandemic?, what did you think/feel when the first case of coronavirus appeared in Turkey?, do you know whether the coronavirus has an effect on pregnant women?, where do you get this information from?), the third section included questions about the coronavirus pandemic and pregnancy follow-up (did you regularly go to pregnancy follow-up during the coronavirus pandemic?, was there any changes in your follow-up during this period?, how does your doctor, midwife/nurse guide you in the process?), and the last chapter included questions about the effect of the coronavirus pandemic about the pregnant person's individual, family, social life (measures taken to protect against the pandemic, whether there are individuals at home who are working or going out, support received from family members). Before starting the study, the understandability of the prepared questionnaire was tested with two participants who had similar characteristics to the sample group. After the first participant found by the researchers, other participants were reached. The phone number and name of the other participant suggested by the first participant were communicated to the researchers by message. All the participants interviewed were informed in advance by the participant who suggested them. The participant was informed about the study by the researchers again and reminded that phone calls would be recorded. Participants were informed about moving to a convenient environment where they could have the conversation quietly and comfortably so as not to be affected by the environment during the interview. The calls were made by teleconferencing via telephone. Telephone models of all the proposed participants were suitable for the teleconferencing system. Participants and two other researchers participated in the meeting. When one of the researchers conducted the interview, the second one recorded their observations (participants' responses during the conversation, tone of voice, important notes about the interview, etc.). The interviews lasted about 35–40 min.

2.6. Data analysis

Data analysis began as soon as the data collection was completed. The analysis of each interview was conducted within one week from the date of its occurrence. Data analysis of transcripts was based on Graneheim and Lundman's techniques of extracting themes from qualitative data [11]:

(1) First, the entire interviews were read by the researchers several times to get an idea of the overall content of the text. (2) The text within each content was divided into units of meaning. Each semantic unit consisted of many words, sentences or paragraphs, containing factors linked to each other with its content and context. (3) The condensed meaning units were abstracted and labelled with codes. All encodings were checked by the researchers for the second time against the original transcripts. (4) Codes were interpreted and compared with their differences and similarities and 11 sub-themes were created. (5) Finally, 3 main themes that combine the content of sub-themes were determined. (6) For the descriptive analysis, the remarkable statements of the interviewees were quoted on the basis of the study questions and the themes created within the context of the conceptual framework.

The scientific rigor of the study was confirmed by each researchers by independent data analysis, and a final consensus was reached on all themes. Also, the inability to obtain new themes was an important determinant in determining data saturation. During telephone conversations with participants, participants were not addressed by their names to increase the reliability of the data and thus were able to express their views without any worries or fears. Quotations of descriptive analysis were made on the basis of remarkable statements of interviewees, study questions and themes created in the context of the conceptual framework. For confidentiality of participants in the study, "P1, P2, . . . P10." were used in direct quotations for pregnant women.

2.7. Ethical statement

Approval for the study was obtained from the Turkish Ministry of Health COVID-19 Scientific Research Evaluation Commission, and ethics committee approval was obtained from Eskişehir Osmangazi University Social and Humanities Ethics Committee. General information was given to the participants about the purpose of the study and that the interviews would be recorded. As written consent could not be obtained, audio recording was started at the beginning of the interview, informed consent form was read verbally, and the participants were asked to approve the form. All raw data was stored in password-protected computer files, along with copied conversation data.

3. Results

As a result of the content analysis of the interviews, 3 main themes and 11 sub-themes were identified. The identified themes were as following: (1) not understanding the seriousness and fear of the unknown, (2) coronavirus pandemic and disruption of the routine prenatal care (3) disrupted routines and social lives. Each theme was necessarily discussed separately.

3.1. Not understanding the seriousness and fear of the unknown

Participants said they heard about the coronavirus pandemic when it first appeared in China and did not think it would affect Turkey. The evaluation of the attitudes and information of pregnant women regarding the pandemic showed that participants did not "take it too seriously" until it came to Turkey, experienced great "anxiety" when it came to Turkey, could not

access “sufficient information”, and the information they received were not satisfying.

3.1.1. Understand the seriousness of the coronavirus

Participants heard about the coronavirus pandemic when it first appeared in China, and many did not think it would spread to Turkey.

‘I heard about the outbreak in China on TV in December, I never thought it would spread to our country . . . ’ (P15)

‘When I heard about the first case in China, I had just learned about my pregnancy; of course I didn’t think it would spread here.’ (P5)

It was known that the first case in Turkey was in Istanbul, Turkey’s largest province. Two of the participants did not understand the seriousness of the situation even when the first case appeared in Turkey, did not take it seriously and thought that the virus would not spread to the region where they lived, but understood the seriousness of the situation once their own acquaintances were infected.

‘When the Corona virus pandemic started and was first detected in Istanbul, I thought it would not spread to our location . . . But then our relative got infected and I started taking it more seriously.’ (P2)

‘ . . . I thought it would not spread to our location, but I hear that it already did, our distant relative passed away . . . I didn’t think you could get infected so easily’ (P7).

3.1.2. Anxiety and fear

When the first case of coronavirus occurred in Turkey and its spread continued, the pregnant women experienced “anxiety” and “fear”.

‘We were so scared whether we heard it on social media or on television and talking to friends, you know, everyone was spreading all this hearsay nonsense information . . . ’ (P14)

‘I was worried, of course, but I didn’t think there’d be so much increase in cases’. (P15)

The most important reason why the participants experienced fear and anxiety was that they were pregnant:

‘I could not help being anxious at first; I thought if I were affected, my baby would be affected.’ (P1)

‘Well, at first, I was worried because I mean, it’s spreading, and I was worried as I was pregnant.’ (P6)

‘Well, at first, I was worried because I mean, it’s spreading, and I was worried as I was pregnant.’ (P13)

3.1.3. Insufficient source of information

The most important sources of information of pregnant women during this process were internet and television. Specifically, pregnant women who could not attend controls for pregnancy monitoring were receiving information via internet and television when they could not reach their doctor, midwife and nurse. Pregnant women who had access to information through their own learning thought that their knowledge was not enough.

‘I learned it by myself; I don’t think it’s enough as we need more information.’ (P1)

‘ . . . no, I learned this information by myself as I couldn’t go to the hospital due to this disease, and I didn’t get any information.’ (P6)

Some of the pregnant women who were not able to reach sufficient sources of information on this topic argued that this was normal as it was a new virus.

‘ . . . but there’s probably a lot of research going on right now, so there’s no full information.’ (P9)

‘Not enough. But I also understand why it’s not enough. We are just in the beginning of the process; there cannot be more statistical research.’ (P4)

Pregnant women in the study generally had the knowledge that “pregnant women were affected by the virus like other people” and that the virus “was not transmitted to the infant”. However, news and experience about cases they heard were more important than the research on this subject.

‘Various scientists or doctors are talking about it all the time and saying that the virus acts on pregnant women like normal people, but even a simple flu affects pregnant women very much . . . ’ (P3)

‘First of all, they said pregnant women were not very affected, but I think pregnant women are affected as they have a different immune system; it is obvious that they will be affected.’ (P5)

‘It did not transmit to babies, they made a research about it, but I saw it in the news that the mother was affected, the baby was born prematurely but not infected.’ (P12)

3.2. Coronavirus pandemic and disruption of routine prenatal care

Pre-natal care services such as medical checks, screening and training for pregnant women in Turkey are often provided through face-to-face appointments (average 14 follow-ups during pregnancy). In order to reduce the risk of infection due to the pandemic in Turkey, national policies have proposed that non-mandatory hospital appointments be removed and replaced with remote support as much as possible. Examinations of some of the participants were reorganized by their physicians due to the pandemic, and some pregnant women did not attend controls as they were “afraid” or could not contact the medical staff who would guide them. One of the highlights in the interviews was that pregnant women who had to attend controls in the process preferred hospitals where they felt safe. While pregnant woman “who was informed by her doctor, midwife/nurse” felt more comfortable in this process, managing the process was easier for pregnant woman living in “small provinces”.

3.2.1. Postponement of pregnancy follow-ups

During the interviews, pregnant women were warned by their doctors not to go to the hospital unless there were mandatory examinations, tests or any difficulties.

‘I’m always worried about my baby, I want to see him/her, but the doctor asked me not to visit unless I had a problem with the virus.’ (P7)

‘I cannot go [to the hospital] right now, but I contact my doctor by phone, and s/he asked me not to come unless I had a problem’ (P8)

‘I used to visit [the hospital] regularly before, like, once in every three weeks, and now the last time I went, my doctor told me not to come as s/he accepted patients with COVID. I have an examination, so I will go to the hospital only for it.’ (P10)

3.2.2. Not attending pregnancy follow-ups

Some of the pregnant women interviewed postponed their control upon the recommendations of their physicians, while some pregnant women did not attend pregnancy controls at their own discretion. These pregnant women often made such a decision as they could not contact any medical staff or they were afraid of getting infected with the virus.

‘I don’t have a particular doctor yet I was in the process of research, so I put it on hold now as this pandemic started, so I’ll take care of it later.’ (P1)

'I never went [to the hospital] after the pandemic started, so when I called the hospital, I couldn't reach my doctor, I couldn't ask what to do, so I never went there' (P3)

'I actually had a planned sugar loading test. The doctor said that I should have it, but I didn't do it . . . I am afraid of going to the hospital and being infected by a contaminated surface.' (P11)

3.2.3. Choosing safe health centers

In Turkey, hospitals where pregnant women receive health services include state hospitals, university hospitals, private branch hospitals (gynecology and obstetrics, pediatric diseases, oncology), private hospitals, public clinics and family health centers (primary health care delivery). Public hospitals, university hospitals, private branch hospitals and family health centers provide free care for individuals based on their social security, while private hospitals and private clinics provide care for a certain fee. It was decided that all hospitals would provide free services to patients diagnosed with COVID-19 based on the government decision made during the pandemic. For this reason, some pregnant women changed their hospitals and preferred to go to hospitals that served only pregnant women during the pandemic process.

'I want to change the hospital where I go all the time. I will probably just go to gynecology and obstetrics departments. Hospitals with only gynecology and obstetrics departments are safer.' (P1)

'I'm not thinking about going to the hospital right now, but when I complete my fourth month, I'm planning to go to a private clinic, you know, to see a doctor who conduct private examinations.' (P12)

Family Health Centers are primary health institutions, and they also follow up pregnant women. Individuals are registered in the nearest family health center where they live, and they are assigned a family physician. There is a midwife or nurse along with the family doctor. Vaccinations, weight, blood pressure follow-up, some blood tests and the prescription of supplements such as iron and vitamins for pregnant women can be carried out by family health centers. Pregnant women who did not go to hospitals during this period were close to their homes, so they also preferred to go to these centers.

'I did not have a regular hospital yet, I was in the process of research, so I put it on hold right now, so I'm going to the family health center where I had my vaccinations.' (P1)

' . . . so I couldn't go to the public hospital, and then I just applied to the family health center, I was not living here then. I have a new midwife. I called her and talked to her. They check my weight and my blood pressure at the family health center. I only go there as it is next to my house' (P3)

3.2.4. Support of health personnel

During the pandemic, pregnant women who easily contacted their doctors, midwives and nurses and received telephone or online support stated that they felt more comfortable.

'My doctor directs me nicely. I was very worried. S/he made me feel comfortable. I can reach my doctor every time I call.' (P4)

'My doctor directs me beautifully. I was very worried. He relieved me so my doctor . . . I can reach every time I call ' (P9)

'I was very nervous on the way to the hospital, and when I went, I talked to my doctor and my nurse. They told me that I should relax and the gynecology department was in a different building, so I feel a little more comfortable now.' (P15)

3.2.5. The comfort of living in small provinces

Turkey is composed of different provinces, with populations ranging from millions to thousands. During interviews with

pregnant women, it was noted that it was easier for pregnant women living in small provinces to access health personnel and health services during the pandemic process:

'We live in a small province like a small town. As there are not many people and number of pregnant women are not too high, it is easy for nurses and doctors to follow' (P9)

In cities such as Istanbul, the situation was more difficult: *I mean, the midwife who I regularly see doesn't call me to ask me why I don't do the tests and don't go to the controls. And they are probably following patients with corona at home. So they won't have time for all of us . . . But my sister, for example, was pregnant, gave birth in a small place, they called her from the family health center. (P14)*

3.3. Disrupted routines and social lives

The coronavirus pandemic also affected the daily lives and social relations of pregnant women. Pregnant women stated that "their daily routine had changed" in this process and were separated from their spouses or families due to "social isolation". During this period, pregnant women had a difficult period and developed a variety of methods to 'deal with their worries and anxiety".

3.3.1. Change of daily routines

Some of the routine daily activities for these women were blocked or changed due to the pandemic process. Especially during pregnancy, they could not perform their daily walking activities, which they think are important for their health, as they could not go out:

'What's pushing me is that I'm home all the time, my body is still inactive. I couldn't walk or anything, but now I can't, and I have increased pain in my legs due to immobility. (P13)

'Yeah, it's kind of challenging to stay home, so for example, I was going for a walk, but now I can't, I'm always home. ' (P10)

Due to the fear of infection with the virus, their cleaning routines at home increased:

' . . . I get tired cleaning every day, I'm always in the detergent. I mean, I was a housewife. I was doing it, but it doubled. I didn't wipe the doors every day. I wonder if it was worth it or something. ' (P14)

"My spouse go out as he works, so I clean the house regularly . . . All I do is to do the dishes and laundry." (P10)

3.3.2. Social disruption and isolation

During the pandemic process, pregnant women whose partners were actively working were separated from their spouses due to the risk of infection with the virus, or they obeyed the rule of social distance with their spouses while at home.

'My husband doesn't come home because of the virus. He stays there for 15 days. He stays here for 15 days. When he comes home, he immediately takes a shower and wash his face and even tells us to stay away from him.' (P11)

'Of course we have to protect ourselves, so when he (talking about the spouse) comes in contact with people all day, it's not too close between us, there is distance as the virus is transmitted by breath.' (P2)

Family support is important in pregnancy and postpartum process in Turkey, and usually the mother of the pregnant woman

lives with her in this process and helps her to make the process more comfortable. However, due to the pandemic, the families of many pregnant women were unable to live with them due to national measures such as travel restrictions, the ban of going out of for people over the age of 65, and the process was more difficult for these pregnant women.

'To be home alone during the day, I would normally go to my family, but I mean, in the process, everyone is staying at home . . . and no one can come to our place because of the virus, you know, because of my pregnancy. I'm on my own.' (P1)

'My family would visit me as they live close, and I normally go every three or four weeks, it has been almost two and a half and three months since I went, which affects me.' (P15)

'I am alone now, and there will be no one at birth. My mother would support me but she stayed there in Istanbul, and the bus service was stopped.' (P9)

3.3.3. Strategies for coping with anxiety

The majority of pregnant women expressed that they acquired different hobbies at home and preferred to look at the positive aspects of the process in order to cope with the anxiety and worries due to the pandemic process.

'I try to relax myself, I read a book, trying to distract myself with other things, and then it goes away.' (P15)

'I started thinking about more positive aspects, I pray, I realized that there were people in need of help, and I felt a little better when I tried to help them.' (P5)

Some of the pregnant women said they refused to watch the news in order to avoid pandemic process.

'I've been watching it a lot at first, frankly, but I've stopped watching the news for a month, I am just looking at the daily number of cases, or check if the Minister of Health makes a statement, otherwise I'm not watching the news.' (P8)

'I'm not watching the news, I get stressed out because everyone says something. I listen only to the statements of the Minister of Health, so I like his explanations, you know, it's promising.' (P14)

4. Discussion

The interviewed pregnant women described how the coronavirus pandemic changed the processes of pregnancy and their lives unexpectedly. They expressed anxiety and fears about the health of their babies, themselves and their families. Due to doubts and confusion about the risks that may occur regarding their health and health of their babies during the pandemic period, the course of pandemic and pregnancy and the effect on the birth process, they may experience feelings of uncertainty [14]. Pandemics are characterized by uncertainty for everyone, especially in pregnant women [14,15], and it is known that uncertainty increases fear and anxiety [16]. The lack of advice from healthcare professionals about what to do during pregnancy and conflicting and rapidly changing messages in the media further increase this uncertainty in pregnant women [17]. The interviewed pregnant women stated that they often received information from television and social media as they could not reach the health staff, that there were conflicting information about the topic, that they avoided watching the news as these conflicting information created concern, and that they paid attention to government statements. This results has provided us with some evidence that the media is perceived as unreliable, and therefore official information directly from healthcare providers and government is more preferred by pregnant women.

The pregnant women who participated in the study reported that they experienced deterioration in their expectation of prenatal care, they did not even go to their mandatory appointments as they were afraid, and this caused them to change their prenatal care centers. Similarly, in many countries, including England and Japan, prenatal care procedures have been changed due to pandemic. Prenatal care services are postponed except for mandatory situations, while in some countries, pregnant women are asked only to come to birth [18,19]. These decisions affect pregnant women's choices and fears about their pregnancy and childbirth care [20,21], and again, it is known that the lack of control over these decisions or weakness can be traumatic and can increase the risk of perinatal anxiety and depression [22]. This means that many pregnant women need increased support and assurance by health professionals during pregnancy, childbirth and postpartum period [21]. In addition, there may be changes such as employees serving pregnant women also working in other units during the pandemic and limitations in the number of staff as a result of change in work plan [18,23]. This raises the need to be clear about guidance for healthcare professionals, what routine visits can be done over the phone or completely canceled, and also how to provide proper care without exposing healthy pregnant women to the disease.

In the pandemic process, daily routines, social life and leisure activities of pregnant women can change due to social distance and self-isolation practices [22]. Due to the pandemic process, some their daily routine activities of the interviewed pregnant women at home and outside were blocked or changed. While pregnant women were not able to perform their daily walking activities, which they thought was important for their health, as they could not go out, their cleaning routines at home were increased due to fear of infection with the virus. Due to "the doubling of their health responsibilities" as pregnant women think of the health of both themselves and their babies [24], personal protection measures such as hygiene practices they use to avoid infection may increase [22,25]. Although such measures are recommended, there are studies reporting that some pregnant women may increase these practices due to high stress and anxiety against the risk of virus transmission, and being extreme may have negative outcomes for mental [26,27].

Travel restrictions within the scope of national measures taken due to pandemic and the inability of participants to meet their families due to social distance resulted in loneliness and reduced social interactions, causing pregnant women to experience a difficult process. It is known that social support is necessary to increase resilience in times of crisis and poor social support is associated with negative psychological consequences such as feeling lonely quarantine in pandemics [22]. It is shown in the literature that support from the pregnant woman's partner, mother, other family members and peers in the perinatal period is important in reducing stress, improving coping skills, preventing depression and adapting to new roles as a mother during pregnancy and after childbirth [28].

5. Limitations

In order for participants to feel safe, it is important that the names of participants are not known to the investigators. However, it was necessary to learn the names of the participants in order to reach the participants through snowball sampling method, although the participants were not addressed by the name during the interviews. Visual clues were not observed as the study was conducted through a telephone call.

While the study only involves a small number of women in one region/country, the strength is that the experiences of these women may be shared by women in other countries and the

information may be relevant globally for midwives and other health care professionals working with childbearing women and their families.

6. Conclusion

The results of the study show that coronavirus pandemic has a significant potential for creating anxiety, adversity and fear, which has a negative emotional effect on pregnant women. Conditions that have a negative impact on pregnant women include worrying about their own health and their baby's health, deterioration in the expectation of prenatal care, inability to access reliable information and reduced daily routines and social interactions. In this study, it was determined that pregnant women experienced fear, especially due to the risk of infection with the virus and postponed prenatal examinations or preferred safer centers. Transferring maternity clinics to a different center and special staff only serving pregnant women can be the solution. It is also important that health personnel provide information and support to pregnant women with non-face-to-face appointments as pregnant women need safe information and support in this process. It will be useful to provide awareness for midwives and nurses not only about the physical health of pregnant women, but also their mental health, and to cooperate with mental health experts if necessary. Also, these women are at increased risk of postpartum depression and it is not known whether they will be able to access health services after their pregnancy if the pandemic conditions persist. Therefore, further research is required to follow up the postnatal experiences of women who were pregnant and birthed during a pandemic.

We have found that the lack of social support in pregnant women increases anxiety. Promoting communication by phone or the Internet during physical isolation and support from others with similar experiences can be especially useful for relieving stress during pregnancy.

Author agreement

- that the article is the author(s) original work.
- the article has not received prior publication and is not under consideration for publication elsewhere.
- that all authors have seen and approved the manuscript being submitted.
- the author(s) abide by the copyright terms and conditions of Elsevier and the Australian College of Midwives.

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Ethical statement

Approval for the study was obtained from the Turkish Ministry of Health COVID-19 Scientific Research Evaluation Commission, and ethics committee approval was obtained from Eskişehir Osmangazi University Social and Humanities Ethics Committee (E 47.391). General information was given to the participants about the purpose of the study and that the interviews would be recorded. As written consent could not be obtained, audio recording was started at the beginning of the interview, informed consent form was read verbally, and the participants were asked to approve the form. All raw data was stored in password-protected computer files, along with copied conversation data.

Conflict of interest

None declared.

CRedit authorship contribution statement

Berrak Mizrak Sahin: Conceptualization, Methodology, Data curation, Formal analysis, Investigation, Writing - original draft, Supervision. **Esra Nur Kabakci:** Conceptualization, Investigation, Methodology, Data curation, Writing - review & editing.

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