



The Relationship between the Fear of Covid-19, Depression, and Spiritual Well-Being in Pregnant Women

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Accepted: 17 October 2021 / Published online: 26 October 2021

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Abstract

The purpose of this study was to explore the relationship between pregnant women's fear of coronavirus (COVID-19), depression, and spiritual well-being. This cross-sectional research was carried out with 336 pregnant women living in a city in the Eastern Anatolia region of Turkey between the 1st of March and 30th of March 2021. For data collection, the scales of the Fear of COVID-19, the Beck Depression Inventory, and the Spiritual Well-being were administered to the participants. The pregnant women's fear of COVID-19 was found to be at a moderate level, their depression was at a mild level, and their spiritual well-being was above the moderate level. It was found that there was a significant negative correlation between the spiritual well-being levels of pregnant women and their fear of COVID-19 and depression. Moreover, it was also found that there was a significant positive correlation between pregnant women's levels of fear of COVID-19 and depression ($p < 0.001$). It is recommended that relevant spiritual care practices can be disseminated and implemented effectively to reduce pregnant women's fear and depression during the pandemic. In addition, when providing care to pregnant women, health professionals can adopt a holistic approach to increase pregnant women's spiritual well-being.

Keywords COVID-19 · Depression · Fear · Pregnant women · Spiritual well-being

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Introduction

It has been stated that the “Coronavirus Disease 2019 (COVID-19)” virus was first identified in China in December 2019. It then spread rapidly all over the world, and the World Health Organization (WHO) characterized COVID-19 as a pandemic on March 11, 2020 (Aktaş et al., 2020). While coronavirus can infect people of all ages, the elderly population, individuals with chronic diseases, and pregnant women can be more easily affected by this virus in terms of speed of infection, easy spread, and mortality (Yılmaz et al., 2020). It was put forward that COVID-19 seen in pregnancy may lead to severe disease, be associated with maternal and neonatal morbidity, and even cause intensive care needs (Keskin et al., 2020). The current COVID-19 pandemic brings unprecedented physical and economic challenges (Peteet, 2020). Both the disease and its effects pose challenges for mental health, such as increased symptoms of panic disorder, anxiety, depression, and post-traumatic stress (Pirutinsky, et al., 2020).

It has been shown that the increasing number of deaths due to COVID-19 and the fact that the virus could not be fully controlled caused people to experience various psychological problems such as fear, panic, or phobia (Arpacı et al., 2020). Pregnancy is a process that makes women vulnerable to viral infections and causes partial suppression in the immune system (Özcan et al., 2020). Because of this situation, it is thought that women during pregnancy may be more afraid of COVID-19.

After the coronavirus was characterized as a pandemic and the measures taken disturbed the harmony of the routine life, researchers showed that other than the physiological effects, the pandemic also had psychological effects such as feeling of a uncertainty, fear of being infected, and feeling of living in an unsafe area (Arpacıoğlu et al., 2021). In addition, panic disorder, anxiety disorder, grief, sense of loss, suicide, and depression are also among the varieties of psychological problems (Hatun et al., 2020). Fear and depression that are related to COVID-19 are among the most common psychological problems in people who go through a pregnancy during the pandemic (Durankuş and & Aksu, 2020; Saccone et al., 2020). Several studies in the literature have examined the relationship between the fear of COVID-19 and depression, and these studies have reported that COVID-19 fear and depression can trigger each other (Bakioğlu et al., 2020; Mahmud et al., 2020; Sakib et al., 2021).

Spirituality and spiritual values have an important place in grappling with mental problems during pregnancy. Spirituality eases the process of coping with mental problems such as depression and loneliness, and existential symptoms such as meaninglessness in life. Spirituality contributes to health promotion and stress reduction (Bostancı Daştan & Buzlu, 2010; Allahbakhshian et al., 2010; Oman et al., 2003). Moreover, spirituality is one of the leading resources for dealing with major life changes and developing a mechanism for coping with traumatic events (Mutmainnah & Afiyanti, 2019; Roman et al., 2020). The fact that the process of pandemics disturbed the routine and functioning of daily life can be considered as a crisis that increases the existing concerns for the fetus and

mother. Thus, it can be said that spiritual care is more important for pregnant women during the pandemic than in the past. Studies that examined the spiritual well-being of pregnant women during the pandemic are limited. It is suggested that the women's perception of this process and how they are affected by it may be related to their spiritual well-being. It is thought that spiritual well-being may also be effective in reducing the problems of fear and depression experienced by pregnant women during the pandemic. No studies have been found that investigated the effects of the spiritual beliefs of pregnant women on the fear of COVID-19 and the level of depression during the process of the pandemic. This study was conducted to determine the levels of fear of COVID-19, depression, and spiritual well-being of pregnant women during the COVID-19 pandemic and to examine the relationship between these variables.

Research Questions

H₁: What is the level of the fear of COVID-19, depression, and spiritual well-being of pregnant women during the COVID-19 pandemic?

H₂: There is a significant relationship between the fear of COVID-19 of pregnant women and their levels of depression.

H₃: There is a significant relationship between the fear of COVID-19 of pregnant women and their levels of spiritual well-being.

H₄: There is a significant relationship between the depression of pregnant women and their levels of spiritual well-being.

Methodology

This cross-sectional study was carried out with pregnant women living in a city in the Eastern Anatolia region of Turkey between the 1st of March and 30th of March 2021. Pregnant women who live in a city in the Eastern Anatolia region of Turkey and who filled the survey form online made up the universe of this study. Snowball sampling method was used, and 336 pregnant women participated in the study. Pregnant women aged 18 and over, who are not visually impaired, are open to communication and cooperation, and who do not have serious mental problems were included in the study. The statements of the participants were taken as the basis when they were included in the study according to these criteria.

Data Collection Tools

For collecting the data, “the Fear of COVID-19 Scale,” “Beck Depression Inventory,” and “the Spiritual Well-Being Scale” were used. Age, family, educational level, number of pregnancies, occupation, income, and presence of chronic disease were investigated in this study.

The Fear of COVID-19 Scale

The original version of the scale was developed by Ahorsu et al. (2020). The translation and adaptation of the scale from English into Turkish were carried out, and the validity and reliability of the adapted version were tested by Bakioğlu et al. (2020). It is a 7-item scale that evaluates the Coronavirus (COVID-19) Fear and the scale has only one dimension. The items in the scale are responded on a five-point Likert-type: “strongly disagree” (1 point), “disagree” (2 points), “not sure” (3 points), “agree” (4 points), and “strongly agree” (5 points). There is no reverse item on the scale. The total score obtained from the items of the scale reflects the level of Coronavirus (COVID-19) fear that is experienced by the individual. The scores that can be obtained from the scale range from 7 to 35. High scores obtained from the scale mean that the individual experiences a high level of COVID-19 fear (Bakioğlu et al., 2020). The original Cronbach’s alpha internal consistency coefficient of the scale is 0.82. In the present study, the Cronbach’s Alpha internal consistency coefficient of the Fear of COVID-19 Scale was found to be 0.89.

Beck Depression Inventory (BDI)

BDI was developed by Beck in 1961. BDI is used to determine the risk of depression and to measure the level of depressive symptoms and their change in severity. The validity and reliability of the scale were tested by Hisli (1989), and the Cronbach alpha value was found to be 0.80. Each item of the BDI determines a behavioral pattern that is specific to depression in the last week and includes 21 self-assessment sentences with four options (0–3). The total score that can be taken from the scale varies between 0 and 63. Those who score 17 and above on the scale are accepted as ‘has depression symptoms.’ The Cronbach alpha value of the scale was calculated as 0.93 in this study. Different levels of depression were defined as minimal depression (0–9 points), mild depression (10–16 points), moderate depression (17–29 points), and severe depression (30–63 points) (Hisli, 1989). In the present study, the Cronbach’s alpha internal consistency coefficient of BDI was found to be 0.93.

The Spiritual Well-Being Scale

The scale is a 5-point Likert-type self-assessment scale that was developed by Ekşi and Kardaş (2017) to measure spiritual well-being. The scale consists of 29 items. The items of the scale are responded between 1 “not applicable to me at all” and 5 “completely applicable to me.” The items numbered 1, 4, 5, 8, 9, 12, 13, 16, 17, 20, 21, 24, 25, 27, and 29 measure the sub-factor of transcendence; the items numbered 2, 6, 10, 14, 18, 22, and 28 measure the sub-factor of harmony with nature; and the items numbered 7, 11, 15, 19, 23, and 26 measure the sub-factor of anomie. To calculate the total score taken from the scale, items in the sub-factor of anomie are scored in reverse. The scores of the items in the sub-factors are obtained by the sum of points of the answers given to the items of that sub-factor; the total

spiritual well-being score is obtained by the sum of the sub-factor scores, and it ranges between 29 and 145 points. Higher scores indicate higher general spiritual well-being (Ekşi & Kardaş, 2017). The original Cronbach's alpha internal consistency coefficient of the scale is 0.82. In the present study, the Cronbach's alpha internal consistency coefficient of the spiritual well-being scale was found to be 0.91.

Procedures

According to the power analysis (post hoc) performed at the end of the study to determine whether the research sample was sufficient, the power of the test was calculated as 78% with an acceptable error of 0.05 and a medium effect size. In this cross-sectional study, no sample was selected, and with the snowball sampling method, 336 pregnant women who voluntarily accepted to participate in the study between 1st of March and 30th of March 2021 were included in the study. The questionnaires were prepared through Google Forms, and the data were collected by sending the link to the pregnant women (via Facebook, WhatsApp, and Telegram). The obtained data were analyzed with the Statistical Package for the Social Sciences 25.0 program. Descriptive features such as number, percentage, mean, and standard deviation were used in the study to analyze the data. The compliance of the data to normal distribution was evaluated with the values of skewness and kurtosis. It was determined that the Fear of COVID-19 Scale (skewness: -, 582, kurtosis: -, 002), Beck Depression Inventory (skewness: 0.800, kurtosis: .400), and the Spiritual Well-Being Scale (skewness: -, 642, kurtosis: .897) show normal distribution. Pearson's correlation analysis was used to examine the relationship between fear of COVID-19, spiritual well-being, and depression. While calculating the correlation strength in this study, the following ranges were taken as a reference: very weak correlation ($r=0-0.25$), weak correlation ($r=0.26-0.49$), moderate correlation ($r=0.50-0.69$), strong correlation ($r=0.70-0.89$), and very strong correlation ($r=0.90-1.0$) (Gürbüz & Şahin, 2014). Approval was obtained from the Muş Alparslan University's Committee of Scientific Research and Publication Ethics for the study (Number: E-10879717-050.01.04-15,708). The participants were informed about the following points regarding this study: the purpose of the study, methodology of the study, the amount of time that they should allocate for the study, participating in the study would not cause any harm, and that participation was completely voluntary. The participants' consent was taken online.

Results

When the distribution of the personal information of the participating pregnant women was analyzed (Table 1), it was found that the age average of the participants was 29.22 ± 5.27 years, 85.4% had a nuclear family, 37.8% were primary school graduates, 34.8% had one pregnancy, 77.1% were housewives, 88.7% did not have any chronic disease, and 62.8% were middle-income people. When results of the Fear of COVID-19, Beck Depression, and the Spiritual Well-Being scales were examined, it was determined that total score average of coronavirus

Table 1 Personal information of the pregnant women

| Variables | Number (n:336) | % |
|---------------------------------------|----------------|------|
| <i>Age</i> | | |
| 18–25 | 87 | 25.9 |
| 26–34 | 193 | 57.4 |
| 35 and above | 56 | 16.7 |
| <i>Family structure</i> | | |
| Nuclear | 287 | 85.4 |
| Extended | 49 | 14.6 |
| <i>Educational level</i> | | |
| Literate | 42 | 12.5 |
| Primary school graduate | 127 | 37.8 |
| High school graduate | 79 | 23.5 |
| University graduate | 88 | 26.2 |
| <i>Number of pregnancy</i> | | |
| 1 | 117 | 34.8 |
| 2 | 86 | 25.6 |
| 3 | 71 | 21.1 |
| 4 and above | 62 | 18.5 |
| <i>Occupation</i> | | |
| Housewife | 259 | 77.1 |
| Civil servant | 22 | 6.5 |
| Teacher | 31 | 9.2 |
| Other | 24 | 7.2 |
| <i>Existence of a chronic disease</i> | | |
| Yes | 38 | 11.3 |
| No | 298 | 88.7 |
| <i>Economic status</i> | | |
| Good | 102 | 30.4 |
| Middle | 211 | 62.8 |
| Bad | 23 | 6.8 |

fear was 21.60 ± 6.35 , depression was 4.18 ± 9.40 , and spiritual well-being was 117.15 ± 15.19 (Table 2).

When the distribution of depression levels of pregnant individuals was examined (Table 3), it was determined that 34.1% experienced minimal depression, 31.7% experienced mild depression, 27.3% experienced moderate depression, and 6.9% experienced severe depression. When the relationship between the pregnant individuals' average scores of the COVID-19 fear, depression, and spiritual well-being was examined, it was found that there was a statistically weak level of significant positive correlation between the COVID-19 fear levels of the participants and their average depression scores ($r=0.416$, $p=0.000$). It was determined that there was a statistically weak level of significant negative correlation between the COVID-19 fear levels of pregnant women and average scores of their spiritual well-being ($r= -0.266$,

Table 2 Distribution of the scores obtained from the scales ($n:336$)

| Scales | Lowest score obtained by pregnant women | Highest score obtained by pregnant women | Min–Max points available from the scale | Average |
|--------------------------------|---|--|---|---------------|
| The Fear of COVID-19 Scale | 7.00 | 35.00 | 7.00–35.00 | 21.60 ± 6.35 |
| Beck Depression Inventory | 0.00 | 60.00 | 0.00–63.00 | 14.18 ± 9.40 |
| The Spiritual Well-Being Scale | 57.00 | 145.00 | 29.00–145.00 | 117.15 ± 15.9 |

Table 3 Distribution of the depression levels of pregnant women ($n:336$)

| | Number (n) | % |
|---------------------|----------------|------|
| Minimal Depression | 157 | 34.1 |
| Mild Depression | 146 | 31.7 |
| Moderate Depression | 126 | 27.3 |
| Severe Depression | 32 | 6.9 |

Table 4 Relationship between pregnant women's average scores of fear of COVID-19, depression, and spiritual well-being ($n:336$)

| Scales | COVID-19 Fear | Depression | Spiritual well-being |
|----------------------|--------------------------|--------------------------|--------------------------|
| COVID-19 fear | 1 | $r=0.416$ $*p=0.000$ | $r=-0.266$ $*p=0.000$ |
| Depression | $r=0.416*$ $p=0.000$ | 1 | $r=-0.460$ $*p=0.000$ |
| Spiritual Well-Being | $r=-0.266$ $*p=0.000$ | $r=-0.460$ $*p=0.000$ | 1 |

$p=0.000$). It was determined that there was a statistically significant weak level of negative correlation between the depression levels and the pregnant women's average scores of the spiritual well-being of ($r=-0.460$, $p=0.000$) Table 4.

Discussion

Pregnancy, which is one of the most important periods of women's lives, is accepted as a stressful and difficult process that women go through. It has been reported by the researchers that mental health problems experienced during this period have harmful consequences on the woman and fetus (Field, 2011; Rees et al., 2019). The process of the pandemic can increase the mental problems that are commonly seen in pregnancy (Fakari & Simbar, 2020; Özcan et al., 2020). The relationship between fear of COVID-19, depression, and the spiritual well-being of pregnant women

during the COVID-19 pandemic was examined in this study. The findings obtained from the study were discussed under the relevant literature.

It was investigated in this study that the level of COVID-19 fear of the women who go through a pregnancy during the pandemic was at a moderate level. In the study conducted by Naghizadeh and Mirghafourvand, it was stated that the COVID-19 fear level of pregnant women was above the moderate level (Naghizadeh & Mirghafourvand, 2021). Reznik et al. reported that the COVID-19 fear levels of the individuals in Russia participating in the study were below the average (Reznik et al., 2020). The reason might be the differences of the population under study, since pregnant women report greater fear and concerns about the bad consequences resulted from COVID-19 to their pregnancy and fetus, due to their particular circumstances. One of the main causes that increase anxiety during the pandemic period is the fear of COVID-19, and one of the most common of which is the fear of infecting others or infecting beloved ones with the disease (Colizzi et al., 2020).

Pregnant individuals experience anxiety and fear due to potential negative obstetric outcomes such as fetal death, fetal abnormalities, and complicated births when there is no pandemic around (Erkaya et al., 2017; Hall et al., 2009). The sudden and unexpected crisis environment caused by the COVID-19 pandemic all over the world may increase the level of stress, anxiety, and fear experienced by pregnant women (Eftati-Daryani et al., 2020; Preis et al., 2020; Saccone et al., 2020). In a study conducted with 205 pregnant individuals during the pandemic process in Iran, it was reported that approximately 50% of the individuals participating in the study experienced anxiety related to the pandemic (Eftati-Daryani et al., 2020). Saccone et al. (2020) conducted a study with 100 pregnant women in Italy, and they reported that more than half of the participating pregnant women evaluated the psychological effects of the pandemic as severe, and two-thirds of the women's anxiety level was above normal. Preis et al. (2020) reported that one-third of American women who were pregnant during the COVID-19 pandemic were highly stressed and anxious due to the outbreak (Preis et al., 2020). These studies support the findings of the research. The results of the present study show that fear of corona during pregnancy could affect the anxiety caused by corona as well as indirectly affecting the mental health during this period by affecting the concerns of pregnancy.

It was determined in this study that approximately one-third of the individuals who were pregnant during the pandemic period experienced mild depression and one-third experienced moderate depression. Ayaz et al. carried out a study in Turkey during the COVID-19 pandemic period, and it was reported that the depression levels of pregnant women are above the moderate level (Ayaz et al., 2020). Maharlouei et al. reported that the depression levels of pregnant women in Iran were above the moderate level (Maharlouei et al., 2021).

When the literature before the period of the pandemic was examined, it was seen that the prevalence of depression and depressive symptoms during pregnancy varied between 12 and 36% (Çalık et al., 2011). Kahyaoglu and Kucukkaya conducted a study in Turkey during the pandemic period, and they stated that the prevalence of depression in pregnant women was 56.3% (Kahyaoglu Süt & Küçükkaya, 2020), while the prevalence of depression in pregnant women before the pandemic was reported to be between 7.8% and 22.3% (Ma et al., 2019; Tuncel & Sut, 2019).

The findings of these studies suggest that there is an increase in the depression rates seen in pregnant women during the pandemic. Durankuş and Aksu (2020) carried out a study in Turkey with pregnant women during the pandemic and indicated that there is an increase in the rate of depression in pregnant women, and these women should be supported in terms of psychosocial aspects. Lebel et al. (2020) carried out a study in Canada with 1987 pregnant women during the pandemic, and they showed that symptoms of anxiety and depression were increasing. Wu et al. (2020) in their study with pregnant women in China emphasized that during the COVID-19 pandemic, the depression rates of pregnant women increased compared to the pre-pandemic period. These results suggest that the pandemic may trigger depressive symptoms in pregnant women (Wu et al., 2020).

In this study, it was found that individuals who were pregnant during the pandemic had above the medium of spiritual well-being. Researchers in Iran conducted a study during the COVID-19 pandemic period, and they indicated that the mental health levels of pregnant women were high (Nodoushan et al., 2020). It is believed in many different cultures throughout history that the process of pregnancy and childbirth enriches the spirituality of women (Abdollahpour & Khosravi, 2018; Callister & Khalaf, 2010). Abdollahpour and Khosravi (2018) reported that pregnant women had high levels of spirituality. Jesse et al. (2007) conducted a study with 130 pregnant women, and 47% of the participating women stated that their spirituality positively affected their pregnancy. The experience of COVID-19 has made us think about the quality of life, health, and well-being. During this time, spiritual care became a vital component of holistic health management, especially in terms of coping and coping with illness (Roman et al., 2020).

These findings show that spiritual well-being is an important concept that positively supports the pregnancy process. A significant relationship was found between pregnant women's levels of COVID-19 fear and depression in this study. Salehi et al. (2020) reported that the fear that individuals experienced during the COVID-19 pandemic were associated with the level of depression (Salehi et al., 2020). Ahorsu et al. (2020) reported that pregnant women's COVID-19 fear was significantly associated with depression and suicidal intentions. A study conducted in China revealed that the pandemic process can increase the depression and anxiety levels of pregnant women, and there was a correlation between depression and anxiety and the pandemic (Wu et al., 2020). These aforementioned studies support the findings of this study. As a result, it is thought that fear of COVID-19 and depression in pregnant women affect each other.

It was found in this study that there was a significant relationship between the spiritual well-being levels of pregnant women and their COVID-19 fear levels and depression levels. Spirituality is an important source of health and mental well-being. In different studies, it has been emphasized that spirituality is important in improving mental health and plays an effective role in reducing anxiety and depression (Koenig, 2009; Koenig, 2010; Koenig, 2018).

In the study conducted by Abdollahpour and Khosravi, it was stated that spirituality reduced the fear of giving birth (Abdollahpour & Khosravi, 2018). In the study conducted by Bilgiç and Bilgin in Turkey before the COVID-19 pandemic, they found that there is a negative significant relationship between the fear of giving birth

and the spiritual well-being of pregnant women. Moreover, it is emphasized that the concept of spiritual well-being can be an important factor in reducing the fear of giving birth among pregnant women (Bilgiç & Bilgin, 2021). Vitorino et al. showed that pregnant women often used spirituality strategies to cope with the stress associated with the psychological, physical, and emotional changes during pregnancy (Vitorino et al., 2018). It was reported in another study that spirituality is effective in reducing the level of depression in pregnant women (Bodaghi et al., 2017). No studies have been found that investigated the effects of the spiritual beliefs of pregnant women on the fear of COVID-19 and depression levels regarding COVID-19 during the pandemic process in Turkey. In line with the findings of this study, it was thought that supporting the spiritual practices of pregnant women during the pandemic and providing them with spiritual care will improve the symptoms of fear and depression. Moreover, it is thought that this study will provide important data for the studies to be carried out on improving the mental well-being of pregnant women, who are a vulnerable group during the pandemic process.

Limitations of the Study

The limitation of this study was that it was not possible to reach pregnant women whose use of technology is limited because the study was conducted online, and the fact that it was not known whether the pregnant women or people they live with were infected with the virus. In addition, the limitations of the study are that snapshot measurements were made cross sectionally within certain dates and that the fear and depression problems of pregnant women were evaluated only with self-report scales.

Conclusion

In this study, it was found that the coronavirus fears of pregnant women were moderate, their depression was mild, and their spiritual well-being level was above the medium level. In addition, it was found that the spiritual well-being of the pregnant women, the fear of COVID-19, and the levels of depression were related to each other. It was determined that as the spiritual well-being of pregnant women increased during the pandemic, there was a decrease in the fear of COVID-19 and depression levels. It is recommended that mass communication that includes spiritual care practices can be used effectively to reduce pregnant women's levels of fear and depression during the pandemic. In addition, while providing care to pregnant women, it can be suggested that health professionals offer a holistic approach with initiatives that will increase pregnant women's spiritual well-being.

Acknowledgements The authors thank the pregnant women who participated in this study.

Author Contribution MD contributed to the design, conducted the searches, screening and data extraction, and contributed to the analysis and write-up of the manuscript. ZÖ, NŞ, and SYE conducted the searches, screening and contributed to write-up of the manuscript.

Funding The author(s) received no financial support for the research, authorship, and/or publication of this article.

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval Approval was obtained from Muş Alparslan University Scientific Research and Publication Ethics Committee for the research (number: E-10879717–050.01.04–15708). Verbal consent to participate in the research was obtained from the individuals by giving information about the purpose of the research, the method, the time they would spare for the research, and by declaring that participating in the research would not do any harm and that the participation was completely voluntary.

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