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The effect of pregnant Women's family sense of coherence on the fear of COVID-19

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Abstract

This work aims to define the impact of pregnant women's family sense of coherence on the fear of COVID-19. The population of this correlational descriptive working comprised a total of 1118 pregnant women recorded to family health centers in a city center of an eastern province of Turkey. Its sample consisted of 320 pregnant women. The data were collected using the Google form between the dates of November 2020 and May 2021. A personal information form, the Fear of COVID-19 Scale, and the Family Sense of Coherence Scale were used to collect the data. The descriptive statistics (mean, percentage, and standard deviation) were used in analyzing the data, and t-test, analysis of variance, correlation, and regression analysis were used for the independent groups. The mean age of the participants was 28.40±4.70. The study found a negative and weak correlation between the pregnant women's fear of COVID-19 and family sense of coherence ($r=-0.179$; $p<0.01$, Table 3). It also discovered that family sense of coherence explained the fear of COVID-19 at a rate of 3% ($\beta=-0.179$; $p<0.01$). The study found that pregnant women's family sense of coherence had a positive effect on against reducing fear of COVID-19.

Keywords: COVID-19, pregnant women, fear, family, coherence

Introduction

Pregnancy, besides being an experience through which women have physiological changes, is a complex and multifaceted period that imposes an important burden on women's bodies from a psychological aspect [1]. Prenatal changes expose pregnant women to the risk of anxiety and depression in general [2]. Anxiety and depression experienced in pregnancy may negatively affect adverse maternal health conditions such as stressful life, marital discord, lack of social standing, and low socioeconomic level. These negative conditions create a heavy burden to mothers and fathers, thus negatively affecting both family and community [3]. Adding the COVID-19 pandemic process to these negative life conditions experienced around the world during pregnancy makes the pregnancy more challenging. Due to the pandemic, many people confront serious physical [4]. In particular, pregnant women are at risk in terms of any kind of ailments and are known to be more sensitive against infections. Decreased pulmonary capacity during pregnancy and immunosuppression have made pregnant women more vulnerable to COVID-19 infection [5]. The measures taken

during the pandemic created concerns for pregnant women such as establishing less communication with family and friends fear that she or her spouse may lose their job, financial uncertainty due to the pandemic, fear of losing her spouse or baby, not getting enough help in child care, not getting sufficient support in child care, and loss of family order. [6]. The women in the prenatal period particularly may face such problems as anxiety, depression, fear of losing the fetus, and damage to the family structure due to the present COVID-19 pandemic. The fear, anxiety, and all kinds of psychological and biological effects experienced by the pregnant women during the pandemic particularly are important to maintain the unity of the family members with mutual love and respect, without disrupting the bond and integrity of family members. Thus, the study aimed to determine the impact of pregnant women's family sense of coherence on the fear of COVID-19.

Materials and Methods

This correlational descriptive study was conducted in the family health stations (FHC) in a city station of an eastern province of Turkey between the dates of November 2020 and May 2021. Its population consisted of 1118 pregnant women registered to FHCs in the regions of the mentioned province with a population of at least 3000 people. The power analysis determined the sample size to comprise at least 287 pregnant women with an error margin of 5% and an ability to represent the universe at a rate of 95%.

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The publicly available statistical software, Open Epi, was for the calculation of the sample size. The count of pregnant women to be taken from each FHC was defined by the cluster weighting process and those who were registered to FHC were listed and selected using random sampling. The study was finalized with 320 pregnant women including those aged 18 years and above and Turkish literate. Those who had a mental illness and used psychiatric medication were not included.

Data Collection Tools: The datum were aggregated using a personal knowledge form, the Fear of COVID-19 Scale (FCV-19S), and the Family Sense of Coherency Scale (FSOC-S).

Personal Information Form: The form created by the researcher through literature review consists of 10 questions including certain sociodemographic and obstetric attributes of pregnant women [7,8,9].

The Fear of COVID-19 Scale (FCV-19S): This was improved by Ahorsu et al. and was adapted to Turkish and its availability and credibility study was carried out by Satıcı et al. [10-11]. Its adaptable age scale is extensive, and it can be used for university students and adults. All items of the scale consisting of seven questions are scored positive. The scale uses a five-score Likert scale between 1 and 5 points (from 1=I strongly disagree to 5=I strongly agree). There is no reverse-coded item. The obtainable scores from the scale are between 7 and 35. A higher score indicates higher fear of COVID-19. The Cronbach's alpha value of its Turkish validity and reliability was found to be $\alpha=.82$. This value was $\alpha=.85$ in this study.

The Family Sense of Coherence Scale - Short Form (FSOC-S-S): This scale was developed as 26 items by Antonovsky and Sourani (1988) and its 12-item short form was developed by Sagy (1998) [12,13]. It is a seven-point Likert kind measure scored between 1 and 7. A higher score from the scale indicates a higher family sense of coherence. The scale was adapted to Turkish and its validity reliability study was conducted by Çeçen A.R. (2007). A higher

score from the scale indicates a higher family sense of coherence. The Cronbach's alpha value of its Turkish availability and credibility was found to be .80 [14]. This value was .68 in this study.

Data Collection and Evaluation

The data were collected using Google forms between November 2020 and May 2021 by collecting contact numbers of pregnant women registered to FHC. They were analyzed using SPSS 22.0 software. The restrictive statistics (number, percentage, mean and standard deviation) were used in analyzing the data, and t-test, analysis of variance, correlation, and regression analysis were used for the independent groups. The results were at a 95% confidence interval and $p<0.05$ error margin.

Ethical Consideration

The author received ethical approval from the Health Sciences Non-Invasive Clinical Research Ethics Committee of İnönü University (decision no: 2020/1201) to carry out the study. No institutional permission was obtained due to the pandemic. Thus, permission was obtained from the ministry of health as the study was being conducted during the pandemic and the data would be collected using Google forms (2020-10-11T00_21_29). Furthermore, the pregnant women were informed of the research and those who agreed were included in the study.

Results

In the study, no important distinction was established among the total average point of the participants from the FCV-19S and the FSOC-S according to their age groups ($p>0.05$). While there was no important distinction among the participants' education level and the FCV-19S ($p>0.05$), there was a significant difference between the FSOC-S and the total mean score ($p<0.05$). An important difference was established between the FSOC-S and their education level, education level of the spouse, and family structure ($p<0.05$) (Table 1).

Table 1. Comparison of pregnant women's total scale scores from the FSOC-S and the FCV-19S based on their sociodemographic attributes (n=320)

Variables	n	FCV-19S Mean $\pm$ SD	FSOC-S Mean $\pm$ SD
Age			
18-35	281	20.65 $\pm$ 6.94	57.81 $\pm$ 10.11
36 and above	39	22.48 $\pm$ 6.06	56.15 $\pm$ 10.64
Test and p value		t=-1.564 p=.119	t=0.955 p=.340
Education Level			
Literate-Primary School	108	21.21 $\pm$ 6.72	55.79 $\pm$ 9.52
High School-University	212	20.71 $\pm$ 6.93	58.53 $\pm$ 10.38
Test and p value		t=0.617 p=.538	t=-2.294 p=.022*
Education Level of the Spouse			
Literate-Primary School	46	19.69 $\pm$ 7.01	54.32 $\pm$ 9.74
High School-University	274	21.08 $\pm$ 6.82	58.16 $\pm$ 10.15
Test and p value		t=-1.268 p=.206	t=-2.385 p=.018*
Economic Status			
Income<Expense	50	21.68 $\pm$ 7.60	55.08 $\pm$ 9.35
Income=Expense	207	20.83 $\pm$ 6.73	58.15 $\pm$ 9.90
Income>Expense	63	20.41 $\pm$ 6.70	57.82 $\pm$ 11.46
Test and p value		t=0.490 p=.613*	t=1.872 p=.156*
Family Structure			
Nuclear family	280	21.03 $\pm$ 6.96	58.14 $\pm$ 10.12
Extended family	40	19.80 $\pm$ 6.04	53.90 $\pm$ 9.89
Test and p value		t=1.066 p=.287	t=2.487 p=.013*
Duration of Marriage (Year)			
0-5 years	219	20.81 $\pm$ 7.00	57.51 $\pm$ 10.19
6-10 years	67	20.50 $\pm$ 6.96	58.01 $\pm$ 10.93
11 years and more	34	22.05 $\pm$ 5.66	57.44 $\pm$ 8.64
Test and p value		F=0.610 p=.544	F=0.067 p=.936
Age (Mean$\pm$SD) 28.40$\pm$4.70			

*p<0.05

Table 2 demonstrates that there is an important correlation in the number of pregnancies, living children, chronic disease between both scales ($p>0.05$). An important distinction was found among the scales by the trimester status ($p<0.05$). The post hoc analysis showed the important distinction to stem from the 1st-trimester group (Table 2).

Table 3 shows the correlation between the mean scores between

the scale FSOC-S and FCV-19S. The study found a negative and weak correlation between the fright of COVID-19 and family sense of coherence ($r:-0.179$; $p<0.01$, Table 3).

Table 4 shows the regression analysis results for COVID-19 fear of pregnant women and family sense of coherency. Thus, the family sense of coherence explained the fear of COVID-19 at a rate of 3% ($\beta=-0.179$; $p<0.01$, Table 4).

Table 2. Comparison of pregnant women's total scale scores from the FSOC-S and the FCV-19S based on their obstetric attributes (n=320)

Variables	n	FCV-19S Mean $\pm$ SD	FSOC-S Mean $\pm$ SD
Number of Pregnancies			
First pregnancy	151	20.94 $\pm$ 6.94	58.11 $\pm$ 9.85
2-3 times of pregnancy	130	20.53 $\pm$ 6.97	57.40 $\pm$ 10.69
4 times and more pregnancy	39	21.76 $\pm$ 6.21	56.35 $\pm$ 9.74
Test and p value		F=0.494 p=.610	F=0.510 p=.601
Living children			
Yes	170	21.05 $\pm$ 6.76	56.88 $\pm$ 10.54
No	150	20.68 $\pm$ 6.97	58.44 $\pm$ 9.71
Test and p value		t=0.492 p=.623	t=-1.368 p=.172
Trimester			
1st trimester	87	18.89 $\pm$ 6.21	60.37 $\pm$ 9.18
2nd trimester	122	21.73 $\pm$ 6.65	56.45 $\pm$ 10.21
3rd trimester	111	21.49 $\pm$ 7.30	56.72 $\pm$ 10.54
Test and p value		F=5.169 p=.006	F=4.536 p=.011
Chronic disease			
Yes	33	22.39 $\pm$ 7.30	59.30 $\pm$ 11.69
No	287	20.70 $\pm$ 6.79	57.41 $\pm$ 9.90
Test and p value		t=1.339 p=.181	t=1.008 p=.314

*p<0.05

Table 3. Correlation between the fear of COVID-19 and the family sense of coherence (n=320)

The Scales	The Fear of COVID-19	The Family Sense of Coherence
The Fear of COVID-19	1	
The Family Sense of Coherence	-0.179** 0.001	1

**p<0.01

Table 4. The effect of pregnant women's family sense of coherence on the fear of COVID-19 (n=320)

Dependent variable	Variable	Beta ^b	F	d.f. (df1, df2)	p-value	R ²	t
The Family Sense of Coherence	The fear of COVID-19	-0.179	10.511	1 318	0.001	0.032	-3.242

Discussion

The coronavirus pandemic has negatively affected both Turkey and all other countries around the world [15,16]. Mothers and babies are in the high-risk group during the pandemic [17]. As the pandemic that threatens life has also negative impacts on the cognitive health of the community besides its physiological effects, it inevitably affects the mental health of pregnant women [18]. Non-routine changes during the pandemic, fast-changing conflictive comments in the media, lack of confidence in the health system, and sensational news can cause horror in the entire population and pregnant women [19]. However, pregnant women whose social support mechanisms are reduced inevitably have a healthy family sense of coherence in terms of both their and the neonate's health due to the pandemic. This study investigated the effect of the pregnant women's family sense of coherence on the horror of COVID-19.

The study findings indicate that their fears are not affected by certain demographic variables (Table 1). The groups had no significantly different scores from the fear of COVID-19 according to age, education level, spouse's education level, and family structure (Table 1). In consideration of the factors affecting the fear of COVID-19, besides socio-demographic characteristics, other factors such as the presence of more chronic diseases, the fear of being infected or transmitting the virus to others, the thought of losing their relatives, and the conviction of being in an unsafe area are stated to trigger the fear of COVID-19 [20].

There was a significant difference between the education grade of pregnant women and their spouses and the total mean scores from the FSOC-S (Table 1). This may be related to the educational background of the family, the family sense of coherence, and the level of fulfillment of responsibilities. An increase in the education level of the family increases the family's sense of

coherence accordingly. This may be related to the consciousness of educated individuals regarding fulfilling their responsibilities. Therefore, the family with a strong structure and bond can manage and overcome stressful events more easily, benefit opportunities more, and contribute to the family sense of coherence with strong communication and a stronger and permanent family structure and bond, thus increasing the quality of life [21,22].

A significant difference was determined between the FSOC-S mean score and having a nuclear family (Table 1). Problems such as sharing responsibilities in the family or the change of priorities in the extended family, the lack of women's influence on the decisions taken may damage the family sense of coherence [23]. This finding is supported by other studies from the literature.

There was no significant difference in the FCV-19S score concerning obstetric attributes of pregnant women such as the number of pregnancies, living children, and chronic disease. However, the presence of chronic disease is the most important factor that triggers the fear of COVID-19 in the literature [24,25]. Dissimilarity of the study result with the literature can be attributed to women's pregnancy-related symptoms and focus on the baby's health.

While the FCV-19S score was significant, the significant difference was detected to derive from the 1st-trimester group according to the trimester group (Table 2). Many factors may drive pregnant women to have more fear in the first trimester. Based on the findings from our study, the reason why the level of fear is high in the first trimester which covers the three months of pregnancy can be explained by the fact that most complaints such as nausea, vomiting, excessive or bitter salivation, nasal congestion, and fatigue are almost identical to the signs of COVID-19 in this period [26]. Another finding is that the FSOC-S was found to be significant according to the trimester variable. This may stem from the fact that pregnant women's relationships with their spouses begin to change after the first weeks of pregnancy and have more stable communication towards the final weeks of pregnancy [27].

The study found a negative and weak correlation between the fear of COVID-19 and family sense of coherence (Table 3). As the family sense of coherence increases in pregnant women, their fear of COVID-19 decreases. Reducing the fear factor in pregnant women has benefits in terms of mother's and neonate's health, an adaptation of women to the pregnancy and parenting role, parents providing care to the baby together, making a confident environment for the baby, establishing communication with the baby, finding out recent roles, improving family sensibility, and dealing with issues connected to the baby [28]. However, studies have reported that domestic violence against women and divorce have increased with social isolation measures and quarantine during the pandemic [29]. A study reported that domestic violence scaled up to three times more than the previous year, and 90% of the cases were linked to the COVID-19 pandemic [30]. The study of Aşkın et al. made recommendations to evaluate the negative aspects such as domestic violence and to take steps to protect women, children, and the elderly who are at risk, besides individual consequences and devastating effects of the pandemic [31]. The family structure and bond are critical for promoting the mother's and neonate's health. However, the advanced analysis shows that the family sense of coherence explains the fear of

COVID-19 though at a low level (3%).

Results and Suggestions

The pregnant women's family structure and bond protect the fear of COVID-19. Health care professionals can discuss the family's sense of coherence too while protecting the fear of COVID-19. In particular, they are advised to behave more attentively towards pregnant women who have a weak family sense of coherence during the pandemic. It is recommended that health professionals provide training and consultancy services on strengthening intra-familial communication in pregnant women who are going through extraordinary processes such as the pandemic.

Conclusion

No conflict of interest was declared by the author(s) concerning the research, authorship, and/or publication of this article.

Conflict of interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

The authors declare that they have received no financial support for the study.

Ethical approval

Ethical approval was obtained from İnönü University Scientific Research and Publication Ethics Board (decision no: 2020/2021) to carry out the study. No institutional permission was obtained due to the pandemic. Thus, permission was obtained from the ministry of health as the study was being conducted during the pandemic and the data would be collected using Google forms (2020/1201). Furthermore, the pregnant women were informed of the research and those who agreed were included in the study.

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