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Original Article

Factor analysis of Pregnant Women's Concerns Scale of Contracting COVID-19 questionnaire

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ABSTRACT

Introduction: The global pandemic caused by the emergence of COVID-19 resulted in increased anxiety, notably among pregnant women. Uncertainties linked to the increased concerns due to virus and this led to realizion of emphasing the necessity for tools to evaluate the fear contracting it. This study aims to create a Scale for Pregnant Women's Concerns of being Contracted to COVID.

Methods: A preliminary 5 point Likert-type scale comprising 29 items was distributed among 285 pregnant women. The statistical analysis conducted on the responses from 285 invidividuals that contracted COVID-19. The scale's validity and reliability were assessed through exploratory and confirmatory factor analysis, also the outcome of computation Cronbach's alpha coefficients taken into assesment.

Results: According to the factors analysis the scale components consisting 12 items, and 2 factors explained 51.81% of the overall variation. The Cronbach's alpha internal consistency coefficient was determined to be 0.828. The Pregnant Women's Concerns Scale for Contracting COVID-19 is a valid scale for Turkish pregnant women.

Conclusion: Psychosocial characteristics of pregnant women affect their concerns of contracting COVID-19. It is recommended to apply this scale to sample groups from different cultures. This scale is a valid and reliable instrument for evaluating pregnant women's apprehensions regarding COVID-19 infection. Implementing this scale within prenatal health services will aid in identifying and addressing COVID-19 related concerns among individuals at an early stage pregnancy.

Keywords: COVID-19 concern; pregnancy; reliability; scale development; validity

INTRODUCTION

COVID-19 is the name of the novel coronavirus that causes viral pneumonia and first appeared on December 31, 2019, in Wuhan, China. The COVID-19 pandemic was caused by a new kind of coronavirus that spreads quickly to many countries worldwide affected (Zhao et al., 2020). COVID-19 caused a pandemic, and resulting death of many people. In addition, the pandemic has seriously affected the psychosocial health of individuals and increased their anxiety levels (World Health Organization, 2021; Zhao et al., 2020). During this period, one of the groups whose psychosocial health was most affected was pregnant women (Güler & Hatırnaz, 2020; Wu et al., 2020). During the pandemic, pregnant women's level of anxiety of COVID-19 has been increased. There is a requirement to create a measurement instrument to evaluate the anxiety level of pregnant women about contracting COVID-19.

COVID-19 infection has been linked to significant problems in both the mother and the fetus (Barton, Saade & Sibai, 2020; Wu et al., 2020). Pregnant women were admitted to the intensive care unit (ICU) at high incidence rate due to the COVID-19 infection. Maternal mortality rates varied from 0.4% to 2%, and this rate was 70% greater than non-pregnant women. Li et al. (2020) reported that pneumonia developed in 16 in 34 pregnant women with a COVID-19 diagnosis; Chen et al. (2020) reported that influenza developed in every 9 pregnant women with a COVID-19 diagnosis, gestational hypertension in 1 pregnant woman, and preeclampsia in one pregnant woman (Chen et al., 2020; Li et al., 2020). Regarding pregnancy outcomes, 5 pregnant women were reported to have fetal distres, while seven had early membrane ruptures (Chen et al., 2020). This situation has prompted concerns about contracting COVID-19 in pregnant women.

A variety of factors can trigger a concern during pregnancy. One of these risk factors is the concern of the contracting the COVID-19 virus. Saccone et al. (2020) Their study with 100 pregnant women in Italy stated that 2 in 3 every women feel more anxious than normal, while 7 had early membrane ruptures (Saccone et al. 2020). A multicenter study comparing pregnant women before and after the COVID-19 epidemic in China reported that pregnant women had a higher level of anxiety after the COVID-19 pandemic (Wu et al.,

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2020). While Mizrak Şahin and Kabakçı (2020) claimed that the coronavirus pandemic produced anxiety and panic in pregnant women (Mizrak Şahin & Kabakçı, 2020); Demir and Kılıç (2020) claimed that pregnant women's anxiety levels increased (Demir & Kilic, 2020). Durankuş and Aksu reported that the COVID-19 pandemic critically affected increased anxiety in pregnant women (Durankuş & Aksu, 2020). Güler and Hatırnaz (2020) found that pregnant women who were for delivery after the COVID-19 pandemic had higher levels of anxiety compared to those who were before the quarantine (Güler & Hatırnaz, 2020). Anxiety during pregnancy has been associated with increased pregnancy complications (Saccone et al., 2020).

During the COVID-19 pandemic, it is critical to keep a close eye on pregnant women's physical and psychosocial health and assess their anxiety levels. Several psychometric instruments have been developed to assess pregnant women's COVID-19 fear and worries. These are "Cambridge Anxiety Scale-Cambridge Worry Scale" (Green et al., 2003), "Coronavirus Anxiety Scale (COAS)-Coronavirus Anxiety Scale" (Lee, 2020); "Coronavirus 19 Phobia Scale" (Arpaci et al., 2020); "COVID-19 Fear Scale" (Ladikli et al., 2020); the "Coronavirus Anxiety Scale" (Biçer et al., 2020). Most of these scales were intended to assess COVID-19 anxiety level and fear.

However, there is no measurement tool can ben found to assess anxiety level of pregnant woman in Turkey. Thanks to the its psychometric funtionality of maesurement tool, the scale is predicted to fill a gap in the literature in evaluation the anxiety level of pregnant women with concerns contracting coronavirus. The "Pregnant Women's Concerns Scale of Contracting COVID-19-PWCSCC" was developed in this study. The developed scale will guide the evaluation of the prenatal COVID-19 concerns of pregnant women and the preparation of the contents of the counselling services of nurses and midwives. Although, the prevalence and transmission of COVID-19 have decreased worldwide, humanity may again encounter a new subspecies of the coronavirus family that causes severe and acute diseases. It is being known risky and vulnerable groups are more affected by the COVID-19 epidemic comparing to other segments of society, and they experience the fear and anxiety of contracting the disease more intensely. This developed scale will contribute to the literature on this front.

METHODS

Design and Setting

The primary objective of this research is to create the "Pregnant Women's Concerns Scale of Contracting COVID-19 (PWCSCC)" and assess its psychometric properties among pregnant women in Turkey. A comprehensive methodological approach was employed to achieve this goal, involving various stages of scale development. The study was conducted from February 15th to August 28th of 2021, encompassing conventional scale development procedures such as item generation, content and face validity assessment, and the factor structure and reliability evaluation (Kyiazos & Stalikas, 2018). The scale development process included three main stages: (a) item analysis, (b) examination of reliability and factorial validity to determine psychometric qualities, (c) assessment of construct validity by investigating relationships with other constructs (Kyiazos & Stalikas, 2018; Tezbaşaran, 2008). These stages encompassed the design, pilot, and final scale implementation, ensuing a thorough and systematic approach to scale development.

Instruments

Initiation of Scale Item Formation and Data Collection Instrument Preparation: The formulation of the scale commenced with a meticulous review of existing literature. Examination of previously developed scales on the topic was conducted, and insights from the literature were integrated into generating the item pool (Saccone et al., 2020; World Health Organization, 2021; Zhao et al., 2020). Creation of the Item Pool: The Pregnant Women's Concerns Scale of Contracting COVID-19 was established with a preliminary pool of 34 items, informed by relevant literature. Specific dimensions and labels were not predetermined at the initial stage of constructing the scale. A total of 6 professionals, including one statistician, one gynecological nurse, and four midwifery experts (academicians), were consulted for input and feedback on the draft scale. Items conveying similar meanings or not aligned with the scale's objectives were eliminated through this consultation process. Following these discussions, it was collectively agreed upon to refine the draft scale to comprise 29 items based on the recommendations from the participating academicians. Clarity for Pregnant Women: The wording of scale items was carefully crafted to ensure comprehensibility by pregnant women. Each item in the scale was structured using a 5-point Likert-type scoring system: (1) Strongly Disagree, (2) Disagree, (3) Undecided, (4) Agree, (5) Strongly Agree (Watson & Thompson, 2006). This approach aimed to provide a clear and accessible response framework for the participants.

Procedure

Sample Selection for implementation of the Preliminary Scale was conducted within a prominent hospital in Istanbul, Turkey, from February 15th to August 28t of 2021. The selection of this hospital was decided upon its status as the most favored healthcare facility among pregnant women seeking medical care.

The study included 285 voluntary pregnant women who were primiparous or multiparous, aged between 18 and 45 years, with singleton pregnancies ranging from 5 to 42 weeks. Additionally, participants were required to express their consent to participate in the study. The exclusion criteria were individuals who are unable to communicate in Turkish, or in vulnerable conditions, and the people who had contracted COVID-19 were excluded from the study. Typically, a sample size ranging from 5 to 10 times the number of items in the scale is considered a desirable size (Kyiazos & Stalikas, 2018). This study included 285 pregnant women in the prenatal stage, meeting the prescribed sample size criteria, given the scale's 29 items.

Data Collection Procedure: The researcher visited the hospital for 2 work days every week for data collection. Pregnant women were approached and invited to participate in the study during these visits. The researcher provided them with the scale form for completion. Subsequently, the participating individuals independently read the scale items and marked their responses on the questionnaire.

Implementation

In line with scale development literature, it is recommended to assess the scale model through an experimental approach with a comparable sample (Cronbach & Shavelson, 2004;

Lipovetsky, 2017). Following establishing linguistic and content validity, adjustments were made to the data collection tools. A pre-implementation phase involving 20 pregnant women was conducted to evaluate face validity. The 29-item draft form was tested as part of this evaluation process.

Data collection: The participants' "Descriptive Information Form" and the Researchers established an item pool of 29 items following the literature when constructing the "Pregnant Women's Concerns Scale of Contracting COVID-19" were the data collection instruments. The sample size was determined using relative criteria such as item and component counts. In general, a sample size ranging from 5 to 10 times the number of items in the scale is considered adequate (Kyiazos & Stalikas, 2018; Louangrath & Sutanapong, 2018). Two hundred eighty-five women completed the printed forms throughout the collection period of 5 month data (February 15 to August 28, 2021). After the examinations, the data of 285 of them were analyzed statistically. The findings were used to evaluate the validity and reliability of the scale.

Data Analysis

The dependability of the scale was evaluated through Cronbach's alpha reliability coefficient and item-total score correlations. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were employed to establish construct validity. These analyses were used to determine and confirm the scale's construct validity (Tavakol & Dennick, 2011; Boateng et al., 2018).

Ethical Considerations

During the developmental phase of the "Pregnant Women's Concerns Scale of Contracting COVID-19," the pertinent forms were distributed via email to six experts for their evaluation, and feedback was obtained. Ethical approval for the study was granted by the hospital's Ethics Committee (Decision No. 147, Decision Date: 04.02.2021). Before commencing the research, which adhered to the principles of the Helsinki Declaration, written authorization was secured from the hospital where the investigation was carried out. Informed consent was obtained from all participants involved in the study

RESULTS

Participant characteristics

For exploratory factor analysis, it is required to include at least five participants per item (Kyiazos & Stalikas, 2018).

Table 1. Descriptive Characteristics of the Participants

Charactersitics	n	%
Woman's age (years)		
18-35	274	96.1
≥ 36	4	13%
Mean (min-max)	27.79±3.98 (20.0-43.0)	
Education level		
Primary education	21	7.4
Secondary school	26	9.1
High school	109	38.2
University	129	45.3
Women's work status		
Not working	125	43.9
Working	160	56.1
Income status		
Income > outgoings	67	23.5
Income = outgoings	197	69.1
Income < outgoings	21	7.4
Pregnancy number		
First pregnancy	137	48.1
≥ 2 pregnancy	148	51.9
Pregnancy week		
5-20	29	10.2
21-37	210	73.7
≥ 38	46	16.1
Mean (min-max)	32.08±6.91 (5.0-41.0)	
Planning status of pregnancy		
Planned	253	88.7
Unplanned	23	8.1
Treatment	9	3.2

Table 2. Factor Characteristics and Scale Items of the PWCSCC

Item No.	Scale item	1st	2nd	Item to total correlations
Factor 1: Concerns of Contracting COVID-19				
1(25)	I worry about permanent damage to my body if I contract the coronavirus (Covid-19).	0.813		0.602
2(24)	I avoid being in close proximity to people because of the fear of contracting the coronavirus (Covid-19).	0.806		0.483
3(26)	I worry that coughing and sneezing people around me increase my risk of contracting the coronavirus (Covid-19).	0.759		0.544
4(22)	I avoid participating in social activities (friends, family gatherings) for fear of contracting the coronavirus (Covid-19).	0.743		0.493
5(27)	If I catch the coronavirus (Covid-19), I worry about not being able to be treated like other people because of my pregnancy.	0.574		0.426
6(29)	I worry about being quarantined if I catch the coronavirus (Covid-19).	0.510		0.407
Factor 2: Concerns of COVID-19 Risks				
7(7)	I worry that having an extended family structure increases my risk of contracting the coronavirus (Covid-19).		0.713	0.375
8(12)	I worry that my spouse, family/acquaintances will increase my risk of contracting/contaminating the coronavirus (Covid-19).		0.713	0.527
9(14)	I worry that the people I live with do not follow virus protection instructions, increasing my risk of contracting coronavirus (Covid-19).		0.706	0.600
10(15)	I worry about my increased risk of respiratory failure if I catch the coronavirus (Covid-19) during my pregnancy.		0.684	0.366
11(10)	I worry that social-cultural attitudes (hugging, shaking hands) increase my risk of contracting coronavirus (Covid-19).		0.652	0.544
12(9)	I am worried that the conditions of access to health services (public transport) increase my risk of contracting the coronavirus (Covid-19).		0.579	0.542

Since there were 29 items in the draft scale, the scale has been aimed to reach 290 women. In the study, the data from 285 pregnant women was analyzed. The mean age of the participants was 27.79±3.98 (20.0-43.0). Among the pregnant women, 3.9% were over 36, 45.3% were university graduates, and 56.1% were working. It was determined that 48.1% of the participants were having their first pregnancy. Table 1 shows the distribution of the participants' descriptive features.

Validity and Reliability

Items with item-total correlation values below 0.350 were systematically removed from the study. Starting with the item possessing the lowest item-total correlation coefficient and progressively eliminating items with insufficient correlation values, 17 items were excluded from the scale. These exclusions were prompted by item-total correlation values falling below 0.35. The remaining items on the scale exhibited item-total correlation coefficients spanning from 0.366 to 0.602. These correlation values also contribute to assessing the scale's internal consistency (Boateng et al., 2018; Lipovetsky, 2017; Tezbaşaran, 2008; Watson & Thompson, 2006).

Validity: Pregnant Women's Anxiety Scale of Contracting Coronavirus (COVID-19) was designed based on literature, and it was examined for content validity and construct validity (Boateng et al., 2018; Hayton, Allen, & Scarpello, 2004).

Content validity: The content validity of the "Pregnant Women's Concerns Scale of Contracting COVID-19" was investigated using Kendall's W test, and an agreement rate was discovered among the expert opinions (Kendall's Wa Scale Form = 0.226, df=33, p=0.084). The experts' opinions were examined using the Davis (1992) technique, and the Content Validity Index (I-CVI) score was found to be 0.91 (Davis, 1992).

Construct validity: The Pregnant Women's Concerns Scale of Contracting COVID-19 structure was explained and confirmed using explanatory and confirmatory factor analyses.

Explanatory factor analysis: Factor analysis is one of the strategies for determining construct validity. The construct validity of the Pregnant Women's Concerns of Contracting COVID-19 Draft Scale was determined using an exploratory factor analysis (EFA) consisting of 29 items. Before the EFA, the Kaiser–Mayer–Olkin (KMO) test and Bartlett's sphericity test were used. The KMO coefficient was calculated to be 0.815 in this investigation. The results of Bartlett's sphericity test revealed substantial and strong correlations among the variables, indicating that these data were eligible for factor analysis (X^2=1180.019, p=0.000).

Principal component analysis and Varimax rotation techniques were employed to explore the underlying constructs. The exploratory factor analysis yielded two factors with eigenvalues exceeding one, collectively explaining 51.810% of the total variance (Boateng et al., 2018; Hayton, Allen & Scarpello, 2004; Taber, 2018). An object with significant factor loads in two or more factors is an overlapping item in a multi-factor structure, and it must be removed from the scale

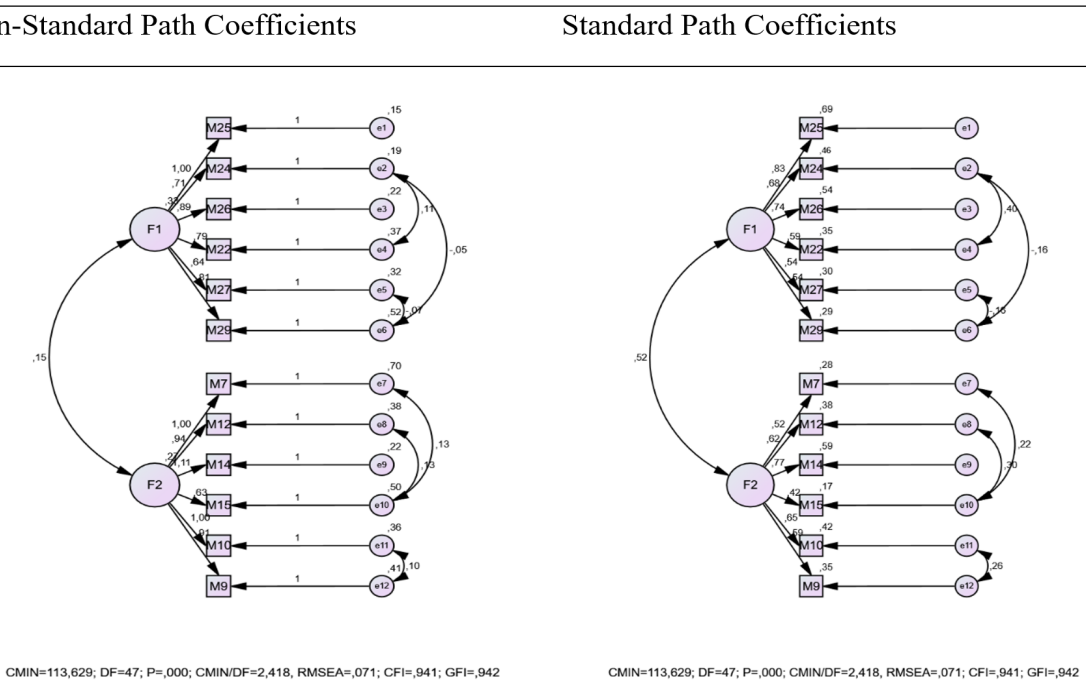

Figure 1. Path Diagram

(Tavakol & Dennick, 2011; Wong, Ong & Kuek, 2012). The item elimination process began with the matrix's ranking, and 17 items that demonstrated overlapping conditions were chosen to be deleted (Hayton, Allen & Scarpello, 2004; Watkins, 2018). As a result, 12 items remained on the scale, forming a two-factor structure.

The initial factor contributed to 36.197% of the variance in the Pregnant Women's Anxiety Scale of Contracting Coronavirus (COVID-19), while the second factor elucidated 15.613%. As illustrated in Table 2, the factor loadings spanned from 0.510 to 0.813. These substantial factor loadings provide insight into the structure of the developed scale.

Factor 1: This factor includes items 1, 2, 3, 4, 5, and 6. These items had something to do with women COVID-19 contracting concerns. As a result, the component was given the name "Concern of Contracting COVID-19."

Factor 2: This factor included items 7, 8, 9, 11, and 12. These items had to do with a woman's increased COVID-19 risk. As a result, the component was given the name "Concerns of COVID-19 Risks."

A confirmatory factor analysis was conducted on the twelve-item scale following the exploratory factor analysis. The fit criteria values of the model (CMIN=113.629, DF=47, p=0.001, CMIN/DF=2.418, RMSEA=0.071, CFI=0.941, GFI=0.942) were consistent with the literature (Devlieger & Rosseel, 2017), indicating a strong fit. All path coefficients of items within both factors were statistically significant in the confirmatory factor analysis. Upon examination of standardized path coefficients, item 1 (β0=0.828) they were emerged as the most influential item for factor 1, while item 9 held the greatest influence for factor 2 (β0=0.771) (Fig. 1).

Reliability: Scale reliability pertains to the extent to which the scale consistently measures the intended construct. This emphasis on consistency reflects stability and contributes to its validity. The reliability test is one of the validity criteria for a scale (Heale & Twycross, 2015; Lipovetsky, 2017).

The researchers assessed Internal reliability using Cronbach's alpha coefficient for the 12-item "Pregnant Women's Concerns Scale of Contracting COVID-19" developed. The scale demonstrated a Cronbach's alpha value of 0.828, indicating high reliability, homogeneity within the group, consistency among items, and scale authenticity (Cronbach & Shavelson, 2004).

The "Pregnant Women's Concerns Scale of Contracting COVID-19" consists of 12 items categorized into two factors, each category comprising six. The scale employs a 5-point Likert scale, with potential total scores ranging from 12 to 60. In this study, the scale's mean total score was 49.61±5.42 (minimum: 26, maximum: 60). Furthermore, the mean score for the first factor was 24.65±3.06 (minimum: 12, maximum: 30), while the mean score for the second factor was 24.95±3.40 (minimum: 14, maximum: 30). These scores suggest a increased anxiety level among pregnant women regarding the risk of contracting the coronavirus (COVID-19).

DISCUSSION

A scale was developed in this study to assess pregnant women's anxiety about contracting coronavirus. Pregnant Women's Concerns Scale of Contracting COVID-19 is the first tool devised exclusively to assess pregnant women's anxiety about coronavirus contraction. The items on the scale were created to evaluate the concern of pregnant women about Contracting the coronavirus. Pregnant women may experience varied levels of concerns and anxiety depending upon contracting coronavirus. Stress, concern, and fear may negatively affect the pregnancy of women (Barton Saade & Sibai, 2020; Güler & Hatırnaz, 2020; Wu et al., 2020). This negative effect may lead to an increase in pregnancy-related complications.

In this study, the researchers developed a scale to assess pregnant women's anxiety of coronavirus contraction One of the most significant qualities of the scale is its reliability with measurement consistency. The scale is regarded as reliable if the measurements are completed so that any potential disparities in the participants' replies are eliminated

(Lipovetsky, 2017; Louangrath & Sutanapong, 2018).

This study assessed the scale's construct validity through factor analysis. Principal component analysis and Varimax rotation methods were employed to explore the underlying constructs. The exploratory factor analysis unveiled two factors with eigenvalues exceeding 1, collectively accounting for 51.810% of the total variance. This outcome highlights the ability of the factors to explain a significant portion of the observed variation within the scale's items (Boateng et al., 2018; Hayton, Allen & Scarpello, 2004; Taber, 2018).

Within a multi-factor structure, items exhibiting high factor loadings in multiple factors are referred as overlapped items and must be eliminated from the scale. If the discrepancy between an item's factor loadings across various factors is less than 0.10, it should be removed (Tavakol & Dennick, 2011; Wong, Ong & Kuek, 2012). In each iteration, items that didn't consistently belong to a single factor with overlapping loadings, and those below a factor loading of 0.40 were deleted from the scale (17 items) (Hayton, Allen & Scarpello, 2004; Watkins, 2018). Carpenter (2018) suggests that in extensive scale development studies, explained variance should ideally exceed 0.40 (Carpenter, 2018). In this investigation, the explained variance of 51.810% could be considered satisfactory.

The developed scale was discovered to have 12 items and two factors. The items were named "Concerns of Contracting COVID-19" and "Concerns of COVID-19 Risks" respectively. Following the literature, a f actor loading is considered acceptable if it equals or exceeds 0.30. Factor loadings are typically categorized as perfect (≥0.71), very good (0.63), good (0.55), acceptable (0.45), and weak (0.32) (Straussi & Smith, 2009). Including items with factor loadings surpassing 0.45 is widely advocated as a reliable criterion for selecting items (Hayton, Allen & Scarpello, 2004; Watkins, 2018). The scale's total mean score is 49.61±5.42 (min: 26, max: 60). This shows that the participants' anxiety about contracting coronavirus is reflected in the score. Lower scores indicate low anxiety about contracting the coronavirus, while higher scores indicate higher anxiety about Contracting the coronavirus.

The internal consistency of the developed scale was assessed using Cronbach's alpha value. This coefficient evaluates the degree of consistency among the scale items. For this particular scale, the calculated Cronbach's alpha reliability coefficient was high (0.828). The results of the validity and reliability analyses confirm that the Pregnant Women's Concerns Scale of Contracting COVID-19 is a valid and reliable measurement tool.

The scale's items have been linked to "Concerns of Contracting COVID-19" and "Concerns of COVID-19 Risks." Nurses and midwives must be able to recognize the anxiety and fears of pregnant women during the prenatal period and provide counselling to them. Complications related to anxiety during pregnancy can be prevented by reducing the anxiety of pregnant women about Contracting COVID-19.

Although pregnant women in Turkey take precautions to avoid contracting the coronavirus, they will become infected inevitably (Louangrath & Sutanapong, 2018). This scale, created to assess Turkish pregnant women's coronavirus anxiety level, can also be used by pregnant women from other cultures. The scale's widespread use, as well as its adaptation to many languages and cultures will make a significant contribution to the literature.

Scoring of the scale: The scale comprises 12 items organized into two factors, utilizing a 5-point Likert scale (6 items for each factor). The factors are denoted as "Concerns of Contracting COVID-19" and "Concern of COVID-19 Risks" correspondingly. Consequently, the minimum achievable scores for the first and second factors are six each, while the maximum attainable scores are 30 for both. The overall scale yields scores ranging from a minimum of 12 to a maximum of 60. A higher score signifies increased concerns among pregnant women regarding COVID-19. All items on the scale are positively scored; no items with reverse scoring.

Proposed instrument use: The newly created "Pregnant Women's Concerns Scale of Contracting COVID-19" can answer two questions that researchers are interested in: (a) What is the country's degree of concern about contracting coronavirus among pregnant women? (b) What factors influence women's concern about contracting the coronavirus? Use of the "PWCSCC" scale: Health researchers can use the PWCSCC scale to identify pregnant women's concerns about contracting COVID-19 from the onset (diagnosis) of pregnancy to the end.

It was discovered that none of the items on the researchers' (12-item) scale were rated in reverse. The study's findings are confined to the characteristics measured by the PWCSCC. Research of its validity and reliability in other cultures should be conducted since this scale was created in Turkey Because the pregnant women in the study also received care from other hospitals and healthcare institutions, the scale's test-retest reliability could not be determined.

CONCLUSION

The "Pregnant Women's Concerns Scale of Contracting COVID-19" a scale developed to reveal pregnant women's anxiety about contracting COVID-19 in Turkey, has been confirmed to be a valid and trustworthy tool through analysis. By defining women's concerns and fears contracting COVID-19, the scale will provide data for better midwifery and nursing care. This scale can also measure women's anxiety in other parts of the world regarding contracting COVID-19. In conclusion, since there is no existance of similar scale in the literature, the scale is expected to contribute to future studies and research.

The Pregnant Women's Concerns Scale of Contracting COVID-19 (PWCSCC) has demonstrated its validity and reliability as a valuable tool for measuringlevels of concerns related to COVID-19 among pregnant women in society. This scale not only allows for a comprehensive assessment of COVID-19 concerns but also enables a detailed understanding of the specific cases of each woman. By utilizing the PWCSCC, healthcare professionals can accurately pinpoint COVID-19-related concerns among pregnant women undergoing antenatal care by facilitating targeted and appropriate intervention planning. It is strongly recommended that the scale to be utilized in clinical investigations in addition to other studies in order to assess the PWCSCC among pregnant women and guide effective interventions.

Declaration of Interest

The authors declare that there are no conflict of interest.

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Data Availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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