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DOI:
10.4103/pjog.pjog_14_22

Fears, perceptions, and concerns on COVID-19 of term pregnant women in a tertiary hospital: A cross-sectional study

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Abstract:

INTRODUCTION: The emergence of the COVID-19 pandemic has left the vulnerable members of the society at risk, most especially pregnant women. This event has caused anxieties on their pregnancy journey. Their main concerns are the effects and transmissibility of the infection to them and to their unborn child. COVID-19 significantly affects their mental health status.

OBJECTIVES: The purpose of this study is to determine the fears, perceptions, and common concerns of pregnant women during COVID-19 in a tertiary hospital in Manila.

MATERIALS AND METHODS: This is a prospective, cross-sectional study design that uses a pretested and validated questionnaire, which directly asks about the fears, perceptions, and common concerns on COVID-19 among pregnant women. The survey proper was conducted among singleton, term pregnant women aged 18 year old and above.

RESULTS: The analysis included 313 respondents with a mean (\pm standard deviation) age of 31 ± 6 years. The three most common fears relayed by the pregnant women were (1) losing their babies if they get COVID-19 (67.41%); (2) dying if they get the infection (58.79%); and (3) getting a positive test result for COVID-19 (54.95%). Most of these patients (99.04%) were aware of the changes on their prenatal consultation and health care services. Majority of the participants (53.35%) raised their concerns on the *in utero* transmission of the virus and nosocomial COVID infection on their newborn from the hospital personnel (42.81%).

CONCLUSIONS: This study showed that fear is a common emotion among pregnant women. With the emergence of the COVID-19 pandemic, it exacerbated their fears and raised concerns on the harmful effects that may bring on their well-being and on their unborn child. This pandemic had caused a significant impact on their mental health.

Keywords:

COVID-19 pandemic, mental health, pregnant

Introduction

Last March 11, 2020, the World Health Organization has declared a pandemic outbreak of COVID-19 caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV 2) coronavirus. Various research projects have focused predominantly on its impact on maternal

and fetal outcomes but have neglected maternal mental health needs. It was mentioned in a study that approximately 10%–20% of pregnant women suffered from mental health problems.^[1] In another study, depression and anxiety were the most common mental health issues among pregnant women.^[2]

The Philippines is one of the front runners among Southeast Asian countries in the

*Finalist, 2021 PHILIPPINE OBSTETRICAL AND GYNECOLOGICAL SOCIETY (Foundation), INC., Annual Residents' Research Paper Contest, October 20, 2021, Online Platform: ZOOM Webinar.

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How to cite this article: Ching CM, Borbe MM. Fears, perceptions, and concerns on COVID-19 of term pregnant women in a tertiary hospital: A cross-sectional study. *Philipp J Obstet Gynecol* 2022;46:55-62.

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Submitted: 15-Apr-2022

Revised: 15-Apr-2022

Accepted: 15-Apr-2022

Published: 05-Jul-2022

number of SARS-CoV 2 cases.^[3] As of July 31, 2021, confirmed cases have ballooned to 1,588,965 with 27,889 deaths. The Philippine government has quickly implemented quarantine protocols since March 2020 to mitigate the problem; this has resulted in decline in the number of new cases per day. However with the rise of SARS-CoV 2 mutated strains such as the more contagious and virulent Delta variant, Filipinos' fears heightened due to the disruptive effects of these new strains in their daily lives. The pandemic has adversely affected not only the economy, education, employment, income, recreational activities, and transportation but also the delivery of proper medical services to patients. Because of this, many pregnant women have lost accessibility to prenatal care. This is compounded by: temporary closure of the outpatient clinics, financial impairment due to income loss, transportation shortage, and dread of contracting the virus. The reported harmful effects caused by the virus have raised their concerns on how these would influence not only their health but also on their unborn child.

Currently, there have yet established local data with regard to fears, concerns, and perceptions of pregnant women on COVID-19. Most published studies are drawn from the Western and few Southeast Asian countries. This has prompted the author to conduct a similar study in our local setting. The study will be useful in raising the importance of mental health among pregnant women, who are considered one of the vulnerable members of the society in this pandemic. Pregnant women who show high or significant fear will be properly counseled and referred appropriately.

Objectives of the study

General objectives

To determine the fears, perceptions, and common concerns of term pregnant women during the COVID-19 pandemic:

Specific objectives

To determine the fears of term pregnant women towards:

- Testing positive in COVID-19 polymerase chain reaction (PCR) test
- Development of COVID-19 symptoms
- Hospital exposure during prenatal consultation
- Additional expenses if the disease is acquired
- Discrimination from other family members and community if the disease is acquired
- Dying from the disease
- Losing the baby if the disease is acquired.

To determine the perceptions of term pregnant women toward:

- Prenatal checkups in a hospital setting
- Safety protocols inside and outside the house
- Hospital protocols and expenses upon admission.

To determine the concerns of term pregnant women towards:

- Unemployment
- Transmission of the disease to other family members
- Transmission of the disease to the fetus
- Limitations in hospital visits by family members
- Safety of breastfeeding postpartum
- Safety of the infant from infection after delivery
- The baby acquiring the disease from hospital personnel
- The baby being swabbed if the mother is COVID positive.

Materials and Methods

Study design and setting

This is a cross-sectional survey of term pregnant women ages 18 years old and above in the outpatient clinics of a tertiary hospital in Manila conducted from April 1, 2021, to June 30, 2021. This obtained full ethical and technical review board approval prior to the conduct of the survey.

Study subject and target population

This study included singleton, term pregnant women of a tertiary hospital in Manila from April 1, 2021, to June 30, 2021. Written informed consent was obtained from all participants. Patient information and data gathered were kept strictly confidential and assessed by the primary investigator.

Inclusion and exclusion criteria

We aimed to recruit patients who were pregnant at least 37 weeks age of gestation, 18 years old and above, of singleton pregnancy, and seeking prenatal care at either the charity or pay divisions of a tertiary hospital in Manila. We excluded patients who were symptomatic or with a previous COVID-19 infection, or with a history of anxiety and similar psychiatric illnesses, or in pain.

Survey development and validity

The initial list of questions corresponding to the constructs of fears, perceptions, and concerns on COVID-19 was generated through a literature review of studies that covered these constructs. The questionnaire was designed to be self-administered by the patients, with multiple-choice/Likert scale items and open-ended questions. The English version of the questionnaire was forward translated to Filipino and back translated to English. The back translation was compared to the original version and synthesis was done. The translation process was performed by a team of a Filipino professor, social scientist, and a clinician. Content validity was tested with a panel of obstetrics and gynecologists. An item with an item-level content validity index (I-CVI) of at least 0.8 was accepted. Face validity was assessed by presenting the revised survey to 10 pregnant women.

Patients were asked the following questions for each item: “Did you have any difficulty understanding this question?” “Are the responses difficult to understand?” “Is the question relevant to you?” The survey tool was revised accordingly. Questionnaires were pretested before final deployment.

Survey proper

Pregnant women who fulfilled the inclusion criteria were invited to participate in the survey during their routine prenatal checkups and some upon admission. If they consented to answer the survey, a paper-based self-administered questionnaire was given. There were no incentives given to the participating respondents.

Sample size and statistical analysis

A minimum of 213 term pregnant respondents were required, assuming that 60.3% of pregnant women feared that their baby was at risk for COVID-19 infection, at a 5% alpha level of significance and precision of 10%.^[4] Descriptive statistics such as frequency and percentage were used for categorical variables. Shapiro–Wilk test was used to determine the normality distribution of continuous variables. Continuous quantitative data that met normality assumptions were summarized using mean and standard deviation (SD), While those that do not were described using median and range. All valid data were included in the analysis. Missing variables were neither replaced nor estimated. STATA 15.0 (StataCorp LLC, USA) was used for data analysis.

Results

There were a total of 317 participants in the study. Four were excluded because one of them was a preterm at 35 weeks, one was positive for the COVID reverse transcription-PCR test, and the other two were <18 years old. The analysis included 313 respondents with a mean (\pm SD) age of 31 ± 6 years [Table 1]. Majority were married (60%), with one or two prior pregnancies (71%), college graduate (90%), employed (78%), and with monthly income above P30,000 (43%). Among those who had been pregnant, 99 (53%) underwent vaginal delivery, while two (1%) had a miscarriage. Existing maternal comorbidities were diabetes (6%), hypertension (5%), cardiac disease (0.6%), and psychiatric disorder (0.3%). The women had a median of 8 (range 0–12) prenatal visits.

Fears of respondents are listed in Table 2. While the result showed that most respondents continued watching the news about COVID-19 (38.98%) and had no sleeping difficulties while thinking of contracting the infection (39.3%), most of them showed negative reactions to the pandemic: heart racing when someone close to them got the infection, (45.05%), strongly worried if they

Table 1: Characteristics of term pregnant women (n=313)

	Mean \pm SD; median (range); frequency (%)
Age (years)	30.63 \pm 5.64
18-25	65 (20.77)
26-30	100 (31.95)
31-35	89 (28.43)
36-40	43 (13.74)
>40	16 (5.11)
Gravidity	
1	127 (40.58)
2	95 (30.35)
3	57 (18.21)
4	21 (6.71)
5	10 (3.19)
6	3 (0.96)
Marital status	
Single	121 (38.66)
Married	188 (60.06)
Divorced	4 (1.28)
Educational attainment	
No formal education	0 (0)
Elementary	0 (0)
High school	30 (9.58)
College	283 (90.42)
Employment	
Unemployed	39 (12.46)
Employed	245 (78.27)
Self-employed	29 (9.27)
Monthly income (PHP)	
<10,000	31 (9.9)
10,000-20,000	80 (25.56)
20,000-30,000	67 (21.41)
>30,000	135 (43.13)
Comorbidities	
Hypertension	17 (5.43)
Diabetes	18 (5.75)
Thyroid disorder	0 (0)
Multiple pregnancy	0 (0)
Cardiac disease	2 (0.64)
Psychiatric disorder	1 (0.32)
With family history of psychiatric illness	0 (0)
Mode of previous delivery (n=186)	
Cesarean delivery	85 (45.70)
Vaginal delivery	99 (53.23)
MC	2 (1.08)
Number of prenatal consultations	8 (0-12)

MC: Menstrual cycle, SD: Standard deviation

tested positive (54.95%), extremely bothered when they developed the symptoms (50.16%), severely bothered with the additional expenses of getting admitted for COVID-19 (53.67%), very worried of discrimination if they tested positive (43.77%), deeply concerned of losing their lives if they get the infection (58.79%), and greatly concerned of losing their babies if they get the infection (67.41%). The respondents gave mixed reactions on the hesitancy to

Table 2: Fears on COVID-19 of term pregnant women (n=313)

	Frequency (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. I refrain from watching news about COVID-19	40 (12.78)	122 (38.98)	43 (13.74)	82 (26.2)	26 (8.31)
2. I have difficulty in sleeping thinking of acquiring COVID-19	30 (9.58)	123 (39.3)	57 (18.21)	86 (27.48)	17 (5.43)
3. My heart races when someone close to me (ex., family, friends) gets infected with COVID-19	7 (2.24)	34 (10.86)	24 (7.67)	141 (45.05)	107 (34.19)
4. I am worried if I tested positive for COVID-19	9 (2.88)	13 (4.15)	12 (3.83)	107 (34.19)	172 (54.95)
5. I am bothered if I experience COVID-19 symptoms	9 (2.88)	14 (4.47)	11 (3.51)	122 (38.98)	157 (50.16)
6. I am hesitant to go to the hospital for prenatal consult due to risk of exposure	30 (9.58)	90 (28.75)	50 (15.97)	94 (30.03)	49 (15.65)
7. I am bothered of the additional expenses when admitted for COVID-19	9 (2.88)	10 (3.19)	17 (5.43)	109 (34.82)	168 (53.67)
8. I am worried of discrimination if I tested positive for COVID-19	10 (3.19)	26 (8.31)	32 (10.22)	108 (34.5)	137 (43.77)
9. I am concerned of losing my life if I get COVID-19	8 (2.56)	15 (4.79)	23 (7.35)	83 (26.52)	184 (58.79)
10. I am concerned of losing my baby if I get COVID-19	6 (1.92)	7 (2.24)	11 (3.51)	78 (24.92)	211 (67.41)

go to the hospital for prenatal consults due to the risk of exposure (30.03% agreed vs. 28.75% disagreed).

Perceptions on COVID-19 are listed in Table 3. Most respondents were aware that prenatal consultations require scheduling (99.04%), prenatal consultations can be done online (74.44%), they need to undergo COVID PCR testing before admission (98.72%), there will be additional expenses if they test positive for the disease (79.87%), they need to use proper protective equipment every time they go out of the house (98.4%), they need to take a bath after going to the hospital (98.72%), there is a proper handwashing technique (99.68%), they can acquire the disease if they do not follow quarantine protocols (98.4%), there are travel restrictions, especially for pregnant women (98.72%), and proper nutrition can strengthen their immune system against infection (100%).

Concerns on COVID-19 are listed in Table 4. Most respondents relayed concerns about the inability to travel freely during the pandemic (49.84%), food shortage (40.26%), and not having visitors while admitted (42.49%). However, majority expressed extreme concern on the following aspects: transmission of infection to their baby if they are positive for COVID-19 (53.35%), their baby acquiring the disease from hospital personnel (42.82%), and swabbing of their baby if ever they are positive (44.41%). Many respondents showed a varied intensity of concern (strongly agree vs. agree) on the following areas: unemployment (34.82% vs. 31.95%), transmission of the disease to their family members (42.17% vs. 37.38%), unable to breastfeed their newborn (34.82% vs. 36.74%), and contracting the disease from family members (41.85% vs. 40.58%).

The plan of analysis used in each item included in the questionnaire is the Item-level content validity index (I-CVI), which is computed as the proportion of experts who rates that the item is highly relevant over the total

number of experts. Those items with an I-CVI of ≥ 0.80 were included in the survey proper [Table 5]. During face validity, one respondent had difficulty in answering certain questions, particularly fears on COVID-19 item 5, and concerns on COVID-19 item 3 [Table 6]. After giving a thorough explanation to respondents who had difficulty in answering some of the questions, they completely understood them.

Discussion

Fear is a common emotion experienced by women during pregnancy due to the concerns on pain during labor, feeling out of control, and parenting. With the advent of the COVID-19 pandemic, this fear heightens because they dread of the possible harmful effects of COVID-19 on their pregnancy and to their unborn child. Pregnant women are susceptible to infections due to the physiologic changes associated with their condition, and these indirectly affect their mental health.^[5] Many women experienced insomnia and sleep-related problems during pregnancy in this pandemic.^[6] In another study, it is found that about 39.3% disagreed that they have sleeping difficulty while thinking of acquiring COVID-19.

In this study, it was shown that pregnant women developed fears and expressed concerns mostly on their well-being and possible undesirable perinatal outcomes of COVID-19 on their unborn child. This was also influenced by the negative attitudes of family and friends toward public health measures and the lack of knowledge related to COVID-19 and its effect on pregnancy.^[7] With the government's implementation of lockdown to ensure the health and safety of the community, pregnant women were restricted to travel or go out of their homes which created feelings of isolation and loneliness,^[8] lost physical connections and conventional social interactions, and developed a fear of death.^[9] About 49.84% of pregnant women in this study

Table 3: Perceptions on COVID-19 of term pregnant women (n=313)

	Frequency (%)		
	False	True	Don't know
1. I am aware that prenatal consultations will require scheduling	2 (0.64)	310 (99.04)	1 (0.32)
2. I am aware that prenatal consultations can alternatively be done online	52 (16.61)	233 (74.44)	28 (8.95)
3. I am aware that I need to undergo COVID PCR testing before admission	3 (0.96)	309 (98.72)	1 (0.32)
4. I am aware of the additional expenses if I test positive for the disease	14 (4.47)	250 (79.87)	49 (15.65)
5. I am aware of the use of proper protective equipment every time I go out of the house	2 (0.64)	308 (98.4)	3 (0.96)
6. I am aware that I need to take a bath after going to the hospital	2 (0.64)	309 (98.72)	2 (0.64)
7. I am aware of the proper handwashing technique	1 (0.32)	312 (99.68)	0 (0)
8. I am aware that I can acquire the disease if I do not follow quarantine protocols	3 (0.96)	308 (98.4)	2 (0.64)
9. I am aware that there are travel restrictions, especially for pregnant women	1 (0.32)	309 (98.72)	3 (0.96)
10. I am aware of having the proper nutrition to strengthen my immune system against the infection	0 (0)	313 (100)	0 (0)

PCR: Polymerase chain reaction

Table 4: Concerns on COVID-19 of term pregnant women (n=313)

	Frequency (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Inability to travel freely during COVID-19	11 (3.51)	33 (10.54)	38 (12.14)	156 (49.84)	75 (23.96)
2. Food shortage during COVID-19 pandemic	13 (4.15)	67 (21.41)	43 (13.74)	126 (40.26)	64 (20.45)
3. Me or my husband being unemployed	25 (7.99)	50 (15.97)	29 (9.27)	100 (31.95)	109 (34.82)
4. Transmitting the disease to my family members	20 (6.39)	29 (9.27)	15 (4.79)	117 (37.38)	132 (42.17)
5. Not having visitors while admitted	9 (2.88)	40 (12.78)	39 (12.46)	133 (42.49)	92 (29.39)
6. Not able to breastfeed my baby	21 (6.71)	42 (13.42)	26 (8.31)	115 (36.74)	109 (34.82)
7. Transmitting the infection to my baby if ever I am positive	19 (6.07)	10 (3.19)	16 (5.11)	101 (32.27)	167 (53.35)
8. My baby acquiring the disease from a hospital personnel	22 (7.03)	16 (5.11)	32 (10.22)	109 (34.82)	134 (42.81)
9. My baby acquiring the disease from other family members	26 (8.31)	11 (3.51)	18 (5.75)	127 (40.58)	131 (41.85)
10. My baby being swabbed if I test positive	13 (4.15)	18 (5.75)	26 (8.31)	117 (37.38)	139 (44.41)

also raised the same concern on travel restrictions and 58.79% showed fear of death.

In terms of their prenatal consultation, majority were aware of the changes such as appointment scheduling (99.04%) and online consultation services (74.44%). One study documented that 12% of the pregnant women avoided hospital visits due to concern of contracting COVID-19,^[10] compared to our study, which showed 30.03%. This is supported by another study which stated that 20% of infections among patients and 90% of infections among health workers were hospital-acquired transmissions.^[11]

It is discovered that pregnant woman's anxiety rate intensified during the current pandemic at 63%–68% and mostly occurred during their third trimester.^[12] Other factors that contributed to anxiety and stress among pregnant women were inadequate resources, poor employment conditions, stressful family and household responsibilities, challenges in intimate relationships, and pregnancy complications.^[13] In this study, it was shown that only 34.82% of the participants were concerned on their employment status, but 53.67% of them conveyed fear of the additional expenses when admitted for COVID-19. Psychiatric disorders in pregnancy are exacerbated by their health problems, unfavorable

pregnancy care, stressful life events, and complicated pregnancies.^[14] With the increased percentage of fears and concerns documented in this study, it proved that pregnant women are at considerable risk of having mental health issues.

Several studies stated that pregnant women fear that COVID-19 could cause fetal structural anomalies (47%), fetal growth restrictions (65%), and preterm birth (51%).^[15] On the other hand, other articles stated that there has yet a convincing study to prove that the infection can be transmitted in-utero; however, there was an increased incidence of preterm birth and cesarean section.^[16] Despite these existing studies, 67.41% feared of losing their babies if they get COVID-19 and 53.35% relayed concern that they might transmit the infection to their baby if they were COVID positive. Moreover, this study showed that 71.56% of the participants were concerned on their inability to breastfeed their child, compared to another study where 74.7% showed concern on the safety of breastfeeding among COVID-19-positive mothers and the associated risk of viral transmission to their newborns.^[7]

Several observational studies had assessed the psychological impact of COVID-19 in the general population. To date, there are no local studies that evaluate the fears, perceptions, and concerns among

Table 5: Content validity assessment by nine subject experts

	Item relevance rating				I-CVI*	Decision
	Not relevant	Somewhat relevant	Quite relevant	Highly relevant		
Fears on COVID-19						
1. I refrain from watching news about COVID-19	0 (0)	2 (13.33)	4 (26.67)	9 (60)	0.87	Accepted
2. I have difficulty in sleeping thinking of acquiring COVID-19	0 (0)	2 (13.33)	3 (20)	10 (66.67)	0.87	Accepted
3. My heart races when someone close to me (ex., family, friends) gets infected with COVID-19	0 (0)	1 (6.67)	3 (20)	11 (73.33)	0.93	Accepted
4. I am worried if I tested positive for COVID-19	0 (0)	0 (0)	0 (0)	15 (100)	1.00	Accepted
5. I am bothered if I experience COVID-19 symptoms	0 (0)	0 (0)	1 (6.67)	14 (93.33)	1.00	Accepted
6. I am hesitant to go to the hospital for prenatal consult due to risk of exposure	0 (0)	0 (0)	4 (26.67)	11 (73.33)	1.00	Accepted
7. I am bothered of the additional expenses when admitted for COVID-19	0 (0)	2 (13.33)	3 (20)	10 (66.67)	0.87	Accepted
8. I am worried of discrimination if I tested positive for COVID-19	0 (0)	1 (6.67)	3 (20)	11 (73.33)	0.93	Accepted
9. I am concerned of losing my life if I get COVID-19	0 (0)	2 (13.33)	0 (0)	13 (86.67)	0.87	Accepted
10. I am concerned of losing my baby if I get COVID-19	0 (0)	0 (0)	1 (6.67)	14 (93.33)	1.00	Accepted
Perceptions on COVID 19						
1. I am aware that prenatal consultations will require scheduling	0 (0)	0 (0)	1 (6.67)	14 (93.33)	1.00	Accepted
2. I am aware that prenatal consultations can alternatively be done online	0 (0)	0 (0)	2 (13.33)	13 (86.67)	1.00	Accepted
3. I am aware that I need to undergo COVID PCR testing prior to admission	0 (0)	0 (0)	0 (0)	15 (100)	1.00	Accepted
4. I am aware of the additional expenses if I test positive for the disease	0 (0)	0 (0)	0 (0)	15 (100)	1.00	Accepted
5. I am aware of the use of proper protective equipment every time I go out of the house	0 (0)	0 (0)	0 (0)	15 (100)	1.00	Accepted
6. I am aware that I need to take a bath after going to the hospital	0 (0)	1 (6.67)	1 (6.67)	13 (86.67)	0.93	Accepted
7. I am aware of the proper hand washing technique	0 (0)	0 (0)	0 (0)	15 (100)	1.00	Accepted
8. I am aware that I can acquire the disease if I do not follow quarantine protocols	0 (0)	0 (0)	2 (13.33)	13 (86.67)	1.00	Accepted
9. I am aware that there are travel restrictions, especially for pregnant women	0 (0)	0 (0)	1 (6.67)	14 (93.33)	1.00	Accepted
10. I am aware of having the proper nutrition to strengthen my immune system against the infection	0 (0)	0 (0)	0 (0)	15 (100)	1.00	Accepted
Concerns on COVID-19						
1. Inability to travel freely during COVID-19	0 (0)	0 (0)	4 (26.67)	11 (73.33)	1.00	Accepted
2. Food shortage during COVID-19 pandemic	0 (0)	2 (13.33)	4 (26.67)	9 (60)	0.87	Accepted
3. Me or my husband being unemployed	1 (6.67)	1 (6.67)	3 (20)	10 (66.67)	0.87	Accepted
4. Transmitting the disease to my family members	0 (0)	0 (0)	2 (13.33)	13 (86.67)	1.00	Accepted
5. Not having visitors while admitted	0 (0)	2 (13.33)	2 (13.33)	11 (73.33)	0.87	Accepted
6. Not able to breastfeed my baby	0 (0)	0 (0)	2 (13.33)	13 (86.67)	1.00	Accepted
7. Transmitting the infection to my baby if ever I am positive	0 (0)	0 (0)	1 (6.67)	14 (93.33)	1.00	Accepted
8. My baby acquiring the disease from a hospital personnel	0 (0)	0 (0)	1 (6.67)	14 (93.33)	1.00	Accepted
9. My baby acquiring the disease from other family members	0 (0)	0 (0)	1 (6.67)	14 (93.33)	1.00	Accepted
10. My baby being swabbed if I test positive	0 (0)	0 (0)	1 (6.67)	14 (93.33)	1.00	Accepted

I-CVI: Item-level content validity index, PCR: Polymerase chain reaction

pregnant women on COVID-19. With this study, obstetricians and general clinicians can easily identify pregnant women who are psychologically distressed, and they can be promptly referred to professionals for mental health consultation. Proper health education and counseling can allay their fears and concerns. Correction of wrong perceptions is necessary to avoid the progression of their mental state to anxiety and

depression that can impact their pregnancy and fetal outcomes.

Limitations of the study and recommendations

The limitations of this study are it employed a small sample size and was done in a short period. Moreover, this was done during the second wave of COVID-19, where people had adjusted with the pandemic situation.

Table 6: Face validity assessment by 10 term pregnant patients

	Frequency (%)		Comments
	Item is difficult	Item is important	
Fears on COVID-19			
1. I refrain from watching news about COVID-19	0 (0)	10 (100)	Getting to know about COVID-19 is important
2. I have difficulty in sleeping thinking of acquiring COVID-19	0 (0)	10 (100)	
3. My heart races when someone close to me (ex., family, friends) gets infected with COVID-19	0 (0)	10 (100)	
4. I am worried if I tested positive for COVID-19	0 (0)	10 (100)	
5. I am bothered if I experience COVID-19 symptoms	1 (10)	9 (90)	
6. I am hesitant to go to the hospital for prenatal consult due to the risk of exposure	0 (0)	10 (100)	
7. I am bothered of the additional expenses when admitted for COVID-19	0 (0)	10 (100)	
8. I am worried of discrimination if I tested positive for COVID-19	0 (0)	10 (100)	
9. I am concerned of losing my life if I get COVID-19	0 (0)	10 (100)	
10. I am concerned of losing my baby if I get COVID-19	0 (0)	10 (100)	
Perceptions on COVID 19			
1. I am aware that prenatal consultations will require scheduling	0 (0)	10 (100)	Getting to know about COVID-19 is important
2. I am aware that prenatal consultations can alternatively be done online	0 (0)	10 (100)	
3. I am aware that I need to undergo COVID PCR testing before admission	0 (0)	10 (100)	
4. I am aware of the additional expenses if I test positive for the disease	0 (0)	10 (100)	
5. I am aware of the use of proper protective equipment every time I go out of the house	0 (0)	10 (100)	
6. I am aware that I need to take a bath after going to the hospital	0 (0)	10 (100)	
7. I am aware of the proper hand washing technique	0 (0)	10 (100)	
8. I am aware that I can acquire the disease if I do not follow quarantine protocols	0 (0)	10 (100)	
9. I am aware that there are travel restrictions especially for pregnant women	0 (0)	10 (100)	
10. I am aware of having the proper nutrition to strengthen my immune system against the infection	0 (0)	10 (100)	
Concerns on COVID-19			
1. Inability to travel freely during COVID-19	0 (0)	10 (100)	Getting to know about COVID-19 is important
2. Food shortage during COVID-19 pandemic	0 (0)	10 (100)	
3. Me or my husband being unemployed	1 (10)	9 (90)	
4. Transmitting the disease to my family members	0 (0)	10 (100)	
5. Not having visitors while admitted	0 (0)	10 (100)	
6. Not able to breastfeed my baby	0 (0)	10 (100)	
7. Transmitting the infection to my baby if ever I am positive	0 (0)	10 (100)	
8. My baby acquiring the disease from a hospital personnel	0 (0)	10 (100)	
9. My baby acquiring the disease from other family members	0 (0)	10 (100)	
10. My baby being swabbed if I test positive	0 (0)	10 (100)	

PCR: Polymerase chain reaction

Even though it was shown in some studies that patients in the third trimester were more likely to develop fear, it is recommended that pregnant women should be assessed as early as the first trimester to address early the possible fears and concerns that they might encounter during their pregnancy journey and to prevent adverse perinatal outcomes. For future researches, it is recommended to have a scoring system in assessing the severity of fear (mild, moderate, and severe) to address immediately those who are highly affected by COVID-19 psychologically.

Conclusions

This study showed that fear is a common emotion among pregnant women. With the emergence of the COVID-19 pandemic, it exacerbated their fears and raised concerns

on its harmful effect on their well-being and their unborn child. This pandemic causes a significant impact on women's mental health.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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