Original Article

Development of Anxiety Symptoms in Obstetric Patients During Current Covid 19 Crisis

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Abstract

Objective: To assess the development of anxiety symptoms in obstetric patients during the current COVID-19 crisis.
Methodology: This descriptive cross-sectional investigation was executed at the Obstetrics and Gynecology Department of Fauji Foundation Hospital, Rawalpindi, from March 2020 to August 2020. Total of 300 pregnant women attending in antenatal clinics was selected through a purposive sampling technique. Employing the criteria defined in the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5), an 8-item self-administered questionnaire was created. This instrument utilized a 2-point Likert scale (1=agree, 2=disagree) to gauge the presence of COVID-19-induced anxiety among pregnant women. The study's inclusion criteria stipulated women with a sole viable fetus confirmed via ultrasonography and a documented history of at least two antenatal visits. Recordings encompassed the frequencies of outcome variables in conjunction with pertinent demographic attributes, encompassing age, gestational age, parity, and education status.
Results: The study comprised 300 pregnant women (n=300). The women presented a mean age of 31.71±5.26 years, a mean parity of 3.18±3.5, and an average gravidity of 2.18±1.74, accompanied by a mean gestational age of 29.4±7.57 weeks. Findings highlight that nearly half of the participants encountered anxiety symptoms, embracing challenges in concentrating on daily routines (56%), harboring apprehensions of COVID-19 transmission to themselves and their families (56%), grappling with escalated muscle fatigue (51%), experiencing sleep disturbances (50%), contending with perturbing ruminations and restlessness (47%), and demonstrating instances of aggressive behavior (37%).
Conclusion: The outcomes of our study indicate the development of anxiety symptoms among pregnant women attributed to the COVID-19 pandemic. The most frequent symptoms were difficulty in concentrating on routine daily work and the fear of acquiring COVID-19 by themselves as well as by their families.
Keywords: Anxiety, COVID-19, Pandemic.

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Introduction

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which first appeared in 2019, is the cause of the novel coronavirus disease (COVID-19), a highly contagious viral infection.[1] This pathogen poses a substantial threat to global public health.[2] The earliest instances of COVID-19 were documented in December 2019 within patients from Wuhan, China, who presented symptoms like to pneumonia, subsequently marking the first human cases of the disease.3 The disease spread from China to other countries of the world and the World Health Organization declared it a global health emergency and pandemic on 11th March 2020.[4] The number of patients and deaths are continuing to increase and novel virus (SARS-CoV-2) affected 213 countries of the world till date.2 The first case of COVID-19 in Pakistan was reported on 26 February

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2020 and the first death was reported on 18 March 2020.[5] Currently, Pakistan is the second most affected country of south Asia after India. By 15 July 2020, the total number of confirmed cases was 253,600 with 170,650 recoveries and 5,320 deaths in the country.[6] Initially, the mode of transmission was thought to be direct exposure to animals in a local market.[7] Later on investigations revealed that person to person transmission also occurred.[8]

The existing global pandemic certainly has an impact on the mental health of people worldwide, as is obvious from the events of the past. For example, the outbreak of SARS (Severe Acute Respiratory Syndrome) in 2003 resulted in post-traumatic stress disorders, anxiety, panic attacks, and even suicides.[9] Currently, researchers are studying the impact of COVID-19 on the mental health of the general population. It is predicted that COVID-19 crises will increase boredom, loneliness, fear, domestic violence, child abuse, and uncertainty about employment. Feelings of isolation, anxiety, and social stigma are further increased by quarantine. A person with pre-existing psychiatric disorders and those who are vulnerable to psychiatric illnesses are particularly at increased risk.[10]

One vulnerable group affected mentally by the pandemic are pregnant women.[9,10] Psychiatric disorders are common during pregnancy, with 4 to 12% of the patients suffering from depression and 22% experiencing anxiety during pregnancy.[11,12] Pregnant women are at an increased risk of infection complications due to decreased immunity during pregnancy and fear of the virus's effect on the baby.[13] One of the nations impacted by the COVID-19 pandemic is Pakistan. The present study aims to determine the presence of anxiety symptoms in obstetric patients during the COVID-19 crisis.

Methodology

From March 2020 to September 2020, a descriptive cross-sectional study was carried out at the Obstetrics and Gynecology Department of the Fauji Foundation Hospital in Rawalpindi. An 8-item self-administered questionnaire on a 2-point Likert scale (1=agree, 2=disagree) was created to evaluate anxiety related to the COVID-19 pandemic among pregnant women using DSM-5 criteria (The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition). The study included 300 pregnant women who visited prenatal clinics using the non-probability purposive sampling method. The sample size was calculated using the WHO sample size calculator using a 5% level of significance, a confidence interval of 95%, the Power of the test equal to 80%, and an anticipated population proportion equal to 25% so the sample size was calculated to be 300 women. All women attending antenatal clinics, having a single alive fetus (confirmed on ultrasonography) and a history of at least two antenatal visits were included in the study. Patients with a history of psychiatric diseases and systemic illnesses like uncontrolled Diabetes Mellitus, cardiac or hepatic disease (diagnosed based on history, examination, and assessed by medical record), intrauterine fetal death, fetal anomaly e.g. anencephaly, meningomyelocele and multiple pregnancies (confirmed on ultrasonography) were excluded from the study.

A questionnaire and informed consent were drafted in English and Urdu. Permission was obtained from the hospital's ethical committee. History, examination, and ultrasonography were done for the confirmation of inclusion criteria. After taking informed consent, baseline data, including age, gestational age, parity, and level of education, was noted. Study participants were invited to complete the questionnaire during their regular antenatal visits to the clinics. Participants were ensured that confidentiality would be maintained.

The data analysis was conducted using Statistical Package for the Social Sciences (SPSS) version 21. For continuous variables, means along with their corresponding standard deviations (SD) were computed. Categorical variables were assessed in terms of proportions and frequencies of study items. The outcomes were succinctly displayed through tables and figures.

Results

A total of 300 (n=300) pregnant women participated in the study. The mean age of the women was 31.71±5.26, mean parity was 3.18 ±3.5 and mean gravidity was 2.18±1.74 with the mean gestational age of 29.4±7.57 (Table. I)

Table I: Descriptive statistics of demographic information.

Demographic Variables	Mean/ SD
Age (Years)	31.71±5.26
Gestational Age (Weeks)	29.4±7.57
Gravidity	2.18±1.74
Parity	3.18 ±3.5

Around 7% of the women were illiterate, 23% of the women received primary education, 43% received secondary education, 17 % and 8% did graduation and masters respectively while 2% did M.Phil. (Figure 1).

More than half of the pregnant women (56%) were having a fear that COVID-19 would infect them and their families and they felt difficulty in concentrating on their daily routine activities. Almost half of the women experienced increased muscle fatigue (51%) and sleep problems during the COVID-19 pandemic (50%). Some women felt that they experienced upsetting thoughts, restlessness (47%) and aggressive behaviour (37%). Around 40% of the women denied any previous medical condition or substance abuse to be the cause of their symptoms. About 45% of the women were experiencing these symptoms for a month or more. (Table II)

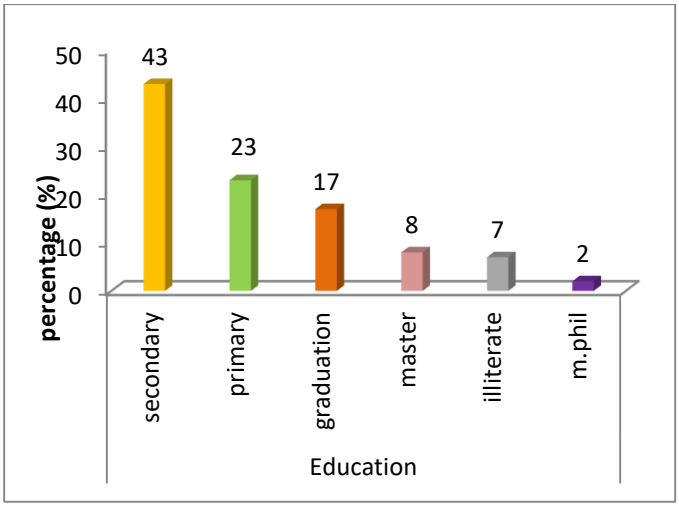

Figure 1. Level of education of study participants (n=100)

Table II: Analysis of questionnaire regarding anxiety among obstetric patients during current COVID-19 crisis

Items	Yes	No
Do you experience upsetting thoughts and restlessness?	141 (47.0%)	159 (53.0%)
Are you experiencing irritable and aggressive behaviour?	111 (37.0%)	189 (63.0%)
Do you suffer from sleep problems?	150 (50.0%)	150 (50.0%)
Do you have such a feeling that covid-19 will infect you and your family?	168 (56.0%)	132 (44.0%)
Do you feel difficulty in concentrating on daily routine activities?	168 (56.0%)	132 (44.0%)
Do you experience increased muscle fatigue?	153(51.0%)	147 (49.0%)
Do you have symptoms lasting for more than a month?	135 (45.0%)	165 (55.0%)

Discussion

The COVID-19 pandemic stands as the most terrible threat to global health in the present century, profoundly impacting nearly every nation across the globe.[14] As a result, researchers have been driven to investigate the morbidity and mortality implications associated with this ongoing crisis. The consequences of this worldwide pandemic on the mental well-being of susceptible groups, including pregnant women, are unavoidable. While current research and interventions highlight infection prevention and treatment, it is imperative to offer psychological support to the general public to overcome the prevailing pandemic-induced apprehension.

Pregnancy and delivery management was considered as one of the issues that required prompt attention. To prevent and treat pregnant women during the COVID-19 pandemic, the Royal College of Obstetricians and Gynecologists and the American College of Obstetricians and Gynecologists issued guidelines.[15, 16]

During these circumstances, it is not surprising that a higher number of pregnant women in our population had pressing negative psychological responses. The major finding in our study participants was difficulty in concentration on daily routine activities (56%). Similar results were found in health care workers in Taiwan during the SARS pandemic where the predominant manifestation was found to be poor concentration.[17] Research show that anxiety leads to a wide spectrum of symptoms including altered cognition and difficulty with concentrating on routine activities.[18]

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Our survey found that more than half of pregnant women (56%) showed concern regarding acquiring infection by self and family members. In another study, 67% of the women perceived that COVID-19 can affect their pregnancies through vertical transmission to the fetus and newborn baby during breastfeeding (83%).[19] In another study conducted in China, 10% of the general population had a phobia of acquiring the infection during the COVID-19 pandemic.[20] This fear is due to the nature of the outbreak plus the flow of information through social media.

Study participants also reported increased muscle fatigue, sleep problems, upsetting thoughts, restlessness, and aggressive behaviour. It was observed that the change in the mental state led to the extent that the patient developed aggressive behaviour. Anxiety during pregnancy has been related to numerous complications. These include psychiatric comorbidity, social withdrawal, miscarriages, hyperemesis gravidarum, fetal loss, preterm delivery or early neonatal loss.[21]

Studies show that pregnancy complications are more common among women who are less educated and are in their first pregnancies.[2,21] Our findings suggest that the highest number of women (23%) were in the group who received primary education only, and women experiencing first pregnancy were found to have increased levels of anxiety and agitated behaviour. It has been found that anxiety related to the prevailing pandemic and fear of childbirth in nulliparous women can have more adverse effects on the perinatal mental health of mother and baby as compared to multiparous women.[21] Another study showed female literacy was 49%.2

The investigation of outcomes related to coronavirus infections during pregnancy was analyzed by Dashraath P. et al. Upon pooling the data, it was observed that the case fatality rates for COVID-19, SARS, and MERS were 0%, 18%, and 25%, respectively; in the latter 2 disease syndromes, progressive respiratory failure and severe sepsis were the most frequent causes. This is not surprising, given the predisposition to superimposed bacterial infections due to direct mucosal injury, dysregulation of immune responses, and alterations to the respiratory microbiome after viral pneumonia.[22]

Postnatal maternal deterioration is still possible, requiring ongoing care. Miscarriage (2%), intrauterine growth restriction (IUGR; 10%), and preterm birth (39%) are among the fetal consequences of COVID-19. The most common symptom of COVID-19.22 is fever, with a median temperature of 38.1-39.0^{o}C.[22]

Limitations and future recommendations

This study has certain limitations. The study was conducted on small sample size and a single centre. This study only determines anxiety in pregnant women during the COVID-19 pandemic. The questionnaire was not pilot tested in the local context.

Keeping in view the result of our study it is recommended that obstetricians must provide perinatal mental health support and educate pregnant women regarding breastfeeding during their visits to antenatal clinics. Psychological counselling of these women should be done keeping in mind their education level, to avoid complications associated with anxiety due to the COVID-19 crisis in the pregnant population. Moreover, the study should be conducted at multiple centres and a large sample to explore the effect of COVID-19 on the mental health of pregnant women.

Conclusion

The study suggests the effect of the COVID-19 pandemic on the development of anxiety in pregnant women in our setup. Our findings show that the most frequent anxiety symptoms among obstetrics patients are lack of concentration on daily routine activity and fear of acquiring infections for themselves and their families.

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