The Psychobehavioral Responses of Pregnant Women towards the COVID-19 Pandemic

Sulaiman S and Azman A*

University Malaya Medical Center, Malaysia

*Corresponding author: Aqwa Azman, University Malaya Medical Center, Malaysia, Email: aznor.aqwa@ummc.edu.my

Abstract

Psychological distress during pregnancy can have adverse effects on both maternal and fetal wellbeing. It is a well-known fact that it increases risk of preterm deliveries and low birth weight babies. The objective of this study is to determine the psychological responses of pregnant women towards the COVID-19 outbreak, by assessing the degree of stress, anxiety, and depression among these pregnant women. This study is a cross-sectional study, utilizing a five-part questionnaire exploring patients' sociodemographic background, level of knowledge and psychological impact of the COVID-19 pandemic utilizing the Depression Anxiety Stress Scale (DASS-21). In addition, the study also aims to evaluate the rate of vaccination among pregnant women attending antenatal care in our center. Respondents are recruited from the Antenatal Clinic, Patient Assessment Center (PAC), and maternity wards of the University Malaya Medical Center, Malaysia. The result shows that the percentage of pregnant mothers with significant psychological distress is low at 1%, further scrutiny showed that the level of anxiety as a result of the COVID-19 pandemic is substantial, whereby half of them reported an abnormal score, 5.4 % and 7.9 % of them reported to be having severe and extremely severe levels of anxiety respectively. Risk factors for anxiety include higher education level, being a first time mothers and having significant complications in the current pregnancy. Good stress management, family support and vaccination may have resulted in a lower degree of stress among pregnant women; however the level of anxiety is significantly higher. The result should help maternity care providers to strategize and implement appropriate screening and interventions to prevent significant deterioration in maternal mental health which subsequently could translate into poor pregnancy and fetal related outcomes.

Keywords: Psychobehavioral response; Pregnancy; Covid-19; Pandemic; Vaccination; Stress

Abbreviations: DASS-21: Depression Anxiety Stress Scale; PAC: Patient Assessment Center; O&G: Obstetrics and Gynecology; SPSS: Statistical Package for the Social Sciences Software.

Introduction

COVID-19 has become a global pandemic since its initial outbreak in December 2019, the emergence of the virus and a cast of variants such as the Delta and Omicron variant with different virulence has resulted in profound concern and a myriad of emotional responses from the society, in particular interest pregnant women [1-5]. Substantial evidence from past studies proved that pandemic functioned as a major stressor, especially in terms of anxiety and economic difficulties exacerbated by self-isolation policies. Anxiety during pregnancy can have adverse effects on both maternal and fetal well-being; it is a well-known fact that it increases

risk of preterm deliveries and low birth weight babies. This may result in unnecessary morbidity to the neonates birthed during the pandemic [5-8].

Objective

The objective of this study is to determine the psychological responses of pregnant women towards the COVID-19 outbreak, by assessing the degree of stress, anxiety, and depression among these pregnant women [9-12], with subsequent intent to modify obstetric care and to strategize interventions addressing the psychological ailments that arises as sequelae of this pandemic.

Methods

This study is a cross-sectional study, utilizing a five-part questionnaire exploring patients' sociodemographic background, level of knowledge and psychological impact of the COVID-19 pandemic utilizing the Depression Anxiety Stress Scale (DASS-21). Respondents are recruited from the Antenatal Clinic, Patient Assessment Center (PAC), and maternity wards of the Obstetrics and Gynecology (O&G) Department of University Malaya Medical Center, Kuala Lumpur, Malaysia; the hospital is major tertiary referral center for various obstetrics and gynecological problems in Malaysia. All women above 13 weeks of gestation during the study period with a singleton pregnancy are recruited, while those in advanced labor, or respiratory symptoms, diagnosed to have intrauterine death, preexisting psychiatric illness, suspected or confirmed to have COVID19 were excluded from the study. Data collection is currently ongoing and we have conducted analysis for the collected data of 251 respondents (out of actual sample size of n = 500). Datas were analyzed using the latest version of Statistical Package for the Social Sciences Software (SPSS).

Preliminary Result

The result showed that, among the participants, the majority of them are not in psychological distress (99 %), and only 1% of the respondents have abnormal levels of psychological distress ranging from mild, moderate to severe. Further scrutiny revealed that in the stress category, almost one fourth of the study population had abnormal stress levels. A marked level of anxiety was seen among pregnant women in our center, whereby half of them reported an abnormal score, 5.4 % and 7.9 % of them reported to be having severe and extremely severe levels of anxiety respectively. As part of the DASS-21 scoring, depression was also analyzed. The majority of pregnant women have a normal mood in their current pregnancy despite being challenged with the uncertainties of the pandemic, a small percentage of women (3%) reported having a severe depressive mood and greater.

Further analysis was done to evaluate the relationship between patients' characteristic to levels of stress, anxiety and depression. Higher education level is associated with a higher percentage of abnormal scores for depression (P=0.03). In addition, first pregnancy is also associated with a higher percentage of abnormal stress score (P=0.015) Meanwhile, the presence of significant complications in pregnancy is associated with a higher score for all 3 categories, i.e. stress (P=0.02), anxiety (P=0.033) and depression (P=0.02). The study also found that almost all of the pregnant women (99%) attending antenatal care at our center had received vaccination against COVID-19.

Conclusion

On a final note, even though the overall percentage of pregnant mothers with significant psychological distress is low at 1%, further scrutiny showed that the level of anxiety as a result of the COVID-19 pandemic is substantial. Risk factors for anxiety include higher education level, being a first time mothers and having significant complications in the current pregnancy [13-16]. The results should help maternity care providers to strategize and implement appropriate screening and interventions to prevent significant deterioration in maternal mental health which subsequently could translate into poor pregnancy and fetal related outcomes [17].

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