

COVID-19 Pandemic and Maternal Perspectives

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Abstract

Aim

Coronavirus (COVID-19) pandemic has affected perinatal women worldwide. Our study aimed to describe the opinions of perinatal women about COVID-19 related knowledge, attitude, and practices.

Methods

Pregnant and Postnatal women (n=223) were included and those who did not consent, and less than 16 weeks' gestation, were excluded. SPSS version 26 was used for descriptive statistics.

Results

Most of the women had good knowledge about COVID 19 regarding its nature, transmission, & symptoms. Their information sources were news (139/206=67.5%) and the internet (85/206=41%). Women understood the uncertainty around its effect on pregnancy; as it is a novel infection. A substantial number of women were concerned (130/206=63%), upset by social isolation (86/206=42%), negatively impacted by the visitor restrictions in hospital (154/206=75%), and faced COVID-19 related reduced household finances (97/206=47%). Most of them used hand washing (201/206=98%) & social distancing (191/206=93%) as preventive measures. They reported compromised contact with General Physician (GP) service as compared to the hospital service (85/206=41% Vs 31/206=15% respectively) during the pandemic.

Conclusions

The main challenges of the COVID-19 pandemic for perinatal women are the jeopardized GP & hospital services & psychological distress. It is imperative to incorporate telemedicine & virtual visits to tackle the burden of the COVID-19 pandemic. Perinatal women, are particularly vulnerable to the psychological impacts of the COVID-19 pandemic & societal lockdown, thus necessitating holistic interventions.

Keywords: Maternal, COVID-19 pandemic, Psychological impact, GP service, Hospital service.

Introduction

International researchers have been updating us about different aspects of COVID-19 in pregnancy e.g. foeto-maternal transmission of COVID-19¹ and an increased risk of premature birth in infected pregnant women.² The pandemic has put an unprecedented burden on maternity and labour wards. The healthcare system has a constant threat of collapse in case of an outbreak.³ Moreover, it also affects the mental health of healthcare workers.⁴

The COVID-19 pandemic has potentially deleterious effects on healthy pregnant women, both directly and indirectly by targeting their physical, social, and psychological well-being. Fear of the unknown, COVID-19 induced social isolation and, financial constraints are the prominent challenges for the obstetric population during this pandemic.

Our study aimed to hear the voices of pregnant and postnatal women as consumers of the health care services during the COVID-19 pandemic. Its objective was to survey the maternal knowledge, attitudes, practices, and concerns regarding the COVID-19 pandemic.

Methods

This study was a cross-sectional knowledge, attitudes, practices, (KAP) survey study over two months, conducted in the Department of Obstetrics and Gynaecology of a General Hospital of Ireland between 15th May 2020 to 15th July 2020. All of the study participants gave written consent after we explained the objectives of the survey and reassured them about the anonymity of data.

The study participants included antenatal and postnatal women, presenting to the antenatal outpatient department, day-care assessment unit, emergency department, or admitted in the maternity ward. The sampling method was convenience sampling. Women who did not consent or complete their questionnaires and those with a gestation of less than 16 weeks were excluded.

The study tool was a hard copy questionnaire, designed after discussing it with a team of obstetricians, patients, and midwives. It aimed to yield representative data variables. "Survey Monkey" tool⁵ was used to make the questionnaire. Data outcome variables included questions regarding the demographic characteristics of the women, their views on how Coronavirus was transmitted, common symptoms, effects of COVID -19 on the pregnancy, and what preventive measures, they were practicing. It also explored their views on their experience/contact with their GP and Hospital services during the COVID -19 pandemic, and the effects of the pandemic on their psychological well-being and financial constraints they suffered due to the pandemic. The questionnaire tool was revised after a pilot of 20. The hard copy questionnaires were completed by the study participants and we aimed to cover 10% of the target population.

Data was recorded on IBM SPSS Statistics version 26 as variables reflecting study protocol. Basic numerical tests were used for descriptive analysis to generate results.

Mean \pm SD was calculated for the quantitative data e.g. gestation (weeks). Frequency and percentages were calculated for nominal as well as qualitative variables using IBM SPSS Statistics version 26.

Results

Among the women who were offered to participate, eleven did not consent to be included in the study, giving a sample size of 223 in a General hospital in Ireland with 1300 births yearly (17% of the target population). The incomplete questionnaires (n=17) were excluded from the study for further analysis (88% response rate).

Most (192) of the study participants were antenatal (93%) with a small number (n=14) of postnatal women (7%) and none of them had COVID-19 infection.

Table 1 [\[view\]](#) shows the different demographic characteristics and basic information of the study population. Among the study population, 153/206 (74.3%) of the women were currently employed. The gestational age ranged from 16 to 42 weeks with a mean of 30.54 \pm 6.93 weeks.

The women's responses to the questions related to various aspects of the Coronavirus, its effects on pregnancy, and their attitudes, are enlisted in Table 1. Most of the women (172/206=83.5%) stated that it was a viral infection transmitted by the respiratory secretions of the infected person, and touching objects of the infected person (118/206=57.3%). News (139/206=67.5%) was the most frequent source of information followed by the Internet (85/206=41.2%). Verbal communication and internet searches were used by 89/206 (43.2%) of women. Cough, fever, and shortness of breath were reported as the commonest COVID-19 symptoms by the study population. There was uncertainty among most women about the effects of COVID-19 on pregnant women e.g. susceptibility, proneness for serious complications, and recovery. The same is also true regarding its effects on the foetus such as miscarriage, impaired development, prematurity, and transmission.

A substantial number of women (130/206=63%) showed a concern for themselves, their baby, or their family and reduced household finances related to COVID-19 infection (97/206=47%). Most of the women (185/206=90%) did not feel anxious when attended by health care professionals wearing personal protection. Regarding their practices, women used hand washing and social distancing as preventive measures (201/206=98% & 191/206=93% respectively) (Table 1). More women reported that their contact with their GP service was compromised as compared to hospital services (85/206=41% Vs 31/206=15%) (Table 1), with few of them using masks (79/206=38%). The majority of the women (186/206=90%) responded that they should contact their GP via telephone to take advice if they suspected a COVID-19 infection.

Discussion

The COVID-19 pandemic has impacted health care services. Many studies have focused on various aspects of COVID-19 in pregnancy among infected women^{6,7} all over the world. Our study reflects and adds to the existing data, by surveying the perspectives of healthy pregnant and postnatal women regarding COVID-19 and health services.

Most of the women in our study were multiparous, Irish, and employed, and 5.8% (12/206) of women were from Black, Asian, and Minority Ethnic (BAME) backgrounds. Most of the study participants were antenatal (192/206, 93%); firstly, as a result of convenience sampling and secondly, because the number of antenatal women attending the clinic was more than that of the postnatal patients. Most of them were of the age group 20-34 years and in the second trimester of pregnancy. Women's knowledge regarding its cause and mode of spread was good. This study emphasized the importance of news and internet as sources of information over GPs & midwives (67.5% & 41.2% Vs 29.6% & 31.5%). Interestingly, patients reported that the source of information to be obstetric doctors in only 32/206=15.5% of cases. This could be explained by time constraints, increased workload on doctors due to peer COVID-19 infection, focussed attention on obstetric complications of pregnancy and given that most women were antenatal; they might have been in contact with their GP more often than obstetric doctors. Among study participants, 29.6% and 31.5% sourced information from GP and midwife respectively – while still very low, at least 30% approximately, sourced information from a healthcare professional. These findings express the constraints imposed by COVID-19 on our healthcare system as well as uncertainty around novel COVID-19 infection.

The importance of verbal communication and internet resources as a type of communication can't be overemphasized. These results advocate for the use of free telephone helplines for antenatal and postnatal ladies and providing evidence-based information available online.

The women in our study group correctly identified cough, and fever as the commonest symptoms among the pregnant population which is also supported by the PregCov-19 review.⁸ Due to rapidly evolving evidence, the uncertainties expressed by women regarding COVID-19 susceptibility, developing serious complications, effects on the foetus are understandable. Previously it was thought that COVID-19 was not transmissible to foetuses^{9,10} and pregnant women were at high risk of infection.^{10,11} Emerging evidence suggests possible but uncommon transmission¹² and good recovery in most pregnant women.^{13,14} Moreover, COVID-19 is associated with preterm delivery.¹⁰

Perinatal women make a vulnerable group for the psychological impacts of COVID-19 and societal lockdown. Many women (130/206=63.1%) in our study showed concern for themselves, baby, or their families about COVID-19 infection. Among the women who expressed being affected by the visitor restriction hospital policy (154/206=75%), 52% (80/206) reported being anxious. Moreover, 42% (86/206) of women were upset by COVID-19 induced social isolation, and 47 % (97/206) faced reduced household finances related to COVID-19 infection.

Few studies have reported that the COVID-19 pandemic is related to a lack of support from a partner during labour and family and friends after delivery¹⁵ and an increase in the prevalence of perinatal anxiety and depression.^{16,17} Matthew Pierce, et al,¹⁸ found that being young, a woman, and living with children, especially preschool-age children, were associated with mental distress under pandemic conditions. They also stated that mental health deterioration is associated with pre-existing health inequalities, such as gender, age, and low income. Moreover, a study by Ryo Kato and Mtohiro Okada¹⁹ explains that financial support reduces suicidal rates. Hence, COVID-19 induced social isolation, jeopardized health services and financial deprivation are potential compounding factors for perinatal mental health issues, and this should be addressed systematically with comprehensive efforts.

Findings from the women's responses in the survey related to Maternal psychological distress, compounding factors, their potential sequelae, and the suggestions by the authors to address these issues are illustrated in Figure 1. Because of temporal changes in mental health status, we emphasize the importance of performing mental health checks more frequently, including at OPD & hospital visits, and based on preliminary triage, referral and pathway of care need to be devised and implemented for high-risk women.

The best prevention to protect patients and careers is social distancing¹⁰ and maintaining basic personal hygiene.²⁰ The majority of our study participants used hand washing and social distancing to prevent COVID-19 infection and only 38% (79/206) of women used masks; these statistics are likely to be different now as it is recommended to wear a face mask in all health care settings. More women reported that their contact with their GP service was compromised as compared to hospital services (41.3% Vs 15%). This explains the increased deterioration of GP services compared to hospital services during the pandemic. Few recent studies have also shown a sizeable decrease in antenatal and postnatal appointments, changes in screening methods for pregnancies with diabetes and growth restriction^{21,22} and refused/delayed perinatal mental health services.²³ The effects of these unintended changes in healthcare pathways are not clear yet and need further research. At this point, the importance of telemedicine and virtual visits in selective cases can't be overemphasized to combat strains on healthcare systems in a smart way. On the other hand, the majority of the women in our study showed dependence on their GP for expert advice (90%), thus reinforcing the consumer preference and importance of the GP system in our healthcare system.

Albeit our study did not focus specifically on pregnant health care workers, they face unique stresses during this pandemic, namely increased workload, COVID-19 hospital breakouts, cross-infection risk, inability for cocooning and need to look after infected sick patients, thus posing mental distress. The current recommendation of the Royal College of Obstetricians and Gynaecologists is that women less than 28 weeks can look after infected patients if they use personal protection measures and are more than 28 weeks pregnant.¹ Thus, the decision for healthcare pregnant women to continue work in these hostile conditions needs to be individualized and there is a need for further research in this particular area.

Regarding the limitations of our study, it was a single centred study with a small sample size and the sampling method was convenience, thus sampling bias can't be out ruled. In this quantitative survey study, all the questions were closed-ended, thus there could be a small possibility of response bias. The anonymization of data and making survey questions simpler, neutral, and easier helped us to eliminate it. The study could have added important information if women were asked about the impact of the COVID-19 on domestic abuse. Although we had a considerable representation (5.8%) of women of BAME background, we were unable to highlight the views and concerns of perinatal women with language barriers in this study; this leaves the necessity for studying addressing the views, concerns, and needs related to the COVID-19 pandemic of this subgroup of perinatal women in the future.

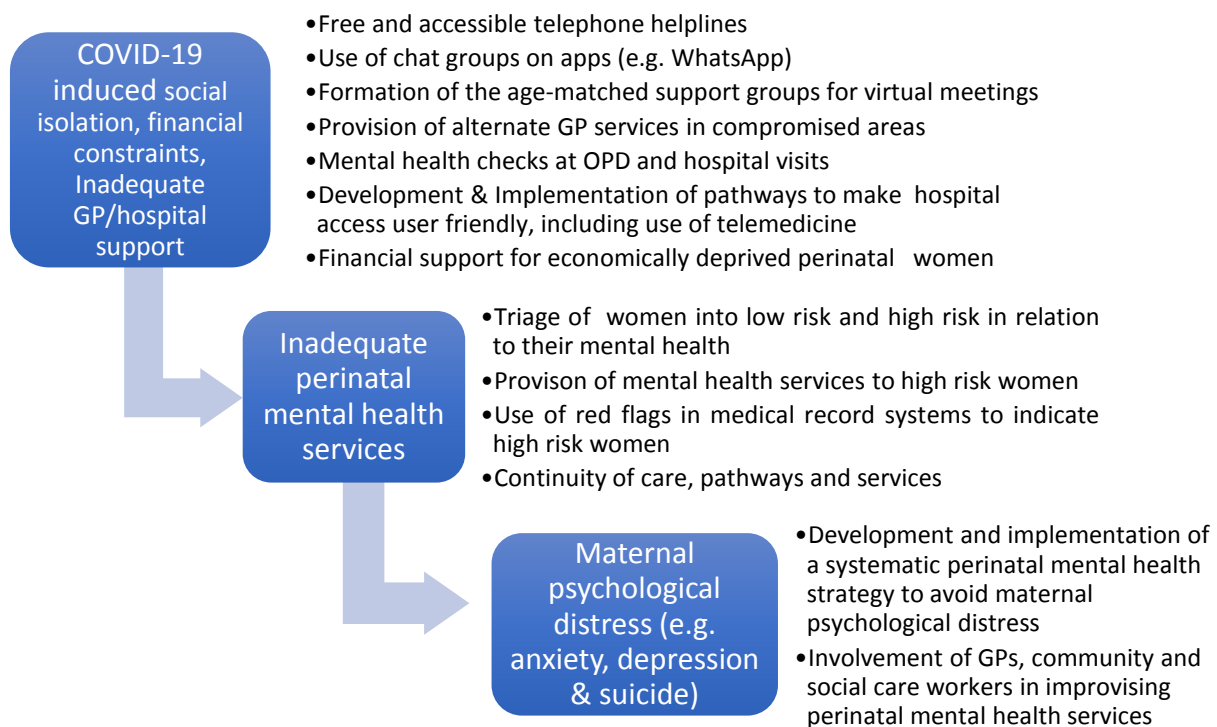


Figure 1: Findings from the women's responses in the survey; Maternal psychological distress, compounding factors and their potential sequelae, and the suggestions by the authors to address these issues during the COVID-19 pandemic.

The direct and indirect implications of the COVID-19 pandemic on perinatal women, healthcare staff, and services could continue to unfold over the coming decades. The main challenges of the COVID-19 pandemic for perinatal women are the jeopardized GP and hospital services and psychological distress. It is imperative to incorporate telemedicine and virtual visits to tackle the burden of the COVID-19 pandemic and maintain the safety of perinatal women and health care staff.

We suggest the development of free telephone helplines, and chat groups for perinatal women and providing evidence-based web pages and platforms for them to search. Perinatal women are particularly vulnerable to the psychological impacts of the COVID-19 pandemic and societal lockdown, thus it's important to streamline perinatal mental health services to cater to the needs of women at risk of psychological sequelae with holistic interventions. Mental health impacts and financial constraints are intertwined; thus, we advocate financial support for financially deprived, at-risk women. Pregnant health care staff and women of BAME background also face unique challenges, with increased mental distress, necessitating future research in this area.

Declaration of Conflicts of Interest:

We did not seek financial help at any time at any stage of this study. The authors declare that there is no conflict of interest.

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