

Anxiety and Depression among Pakistani Pregnant Women during Corona-Virus Pandemic

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Abstract

Corona-virus pandemic has become a major health problem worldwide. It evokes mental health disorders affecting population globally especially the pregnant women and associated with adverse maternal and fetal outcomes. Therefore, we aimed to assess anxiety and depression among pregnant women during this lethal outbreak of corona-virus. We conducted a cross-sectional study at Hamdard University Hospital, Karachi from October 2020 to February 2021. A total of 120 pregnant women were included in this study. Psychological Impact was assessed using questions from DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure for Adults and data was analysed using the software IBM SPSS Statistics 26. We found that more than half (67.5%) of pregnant women had developed mental health disorders during this pandemic and there is a need to reform policies for the care and counselling of pregnant women as they are particularly susceptible.

Keywords: Corona-virus pandemic, mental health problem, depression, pregnant women.

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INTRODUCTION

Coronavirus, or Covid-19, is highly infectious and spreads through respiratory droplets and person to person contact. It was first identified in Wuhan, China in December 2019, and because of the rapid spread of the virus, it was declared a pandemic by the World Health Organization on 11th March 2020. The symptoms include fever, cough, and loss of taste and smell which begin to appear around 14 days after exposure [1]. The first case reached Pakistan on 26th February 2020. Due to the uncertainty and the lack of treatment options, as well as lockdowns, social isolation, and the drastic change in daily life, Covid-19 has had major effects on the mental health of individuals.

One of the most affected group is pregnant women. There is little information available on how covid-19 affects pregnancy and childbirth. Some of the fears of pregnant women include potential vertical transmission and associated fetal abnormalities, the

effects of the virus on the long-term health of the mother and child, as well as access to proper healthcare during lockdown restrictions.

Depression or anxiety during pregnancy is associated with adverse outcomes, especially preterm birth, and low birth weight of the baby [2]. Healthcare professionals need to take into account the mental health of their patients in order to make proper management plans during their pregnancy. In times of a global health crisis, knowledge about maternal mental health is increasingly important to influence the attitude of healthcare providers and public health strategy.

Most studies conducted on Covid-19 focus on decreasing mortality and managing the illness, however, comprehensive research on the psychological effects of the global pandemic is limited, especially when it comes to pregnant women. A review conducted by Kotlar *et al.*, in January 2021 found that psychological distress among pregnant women during Covid-19 was likely, but more evidence was needed

[3]. Therefore, there was a need to carry out a study assessing anxiety and depression in pregnant women during the Covid-19 pandemic.

Study Design

This was a cross-sectional study conducted at Hamdard University Hospital, Karachi from October 2020 to December 2020. Hamdard University Hospital is a tertiary care hospital that sees patients from all over Pakistan. Pregnant women visiting the gynae outpatient department, and women who had recently delivered in the gynae ward (in the past 15 days) were included in the study and asked to fill out a questionnaire. Patients who had depression or any other mental health issue were excluded from the study. Ethical approval was taken from the institutional review board before administering the questionnaire.

Questionnaire

The questionnaire asked about the patient's age, gestational age, level of education and occupation. Written consent was taken from all patients who participated in the study. Psychological Impact was assessed using questions from DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure for Adults and measured using a Likert Scale with scores from 0 to 4, with 0 indicating none and 4 indicating Severe. Three domains: Depression, Anxiety and Sleep Problems were used to assess the psychological impact of the Covid-19 pandemic in the pregnant population. Patients were also asked additional questions about their knowledge about Covid-19 and their habits during the pandemic. Questions included if they checked social media for information about Covid-19, if they missed any antenatal appointments because of fear of getting the virus, and if they feared pregnant women were at a risk of miscarriage, or early labour upon contracting the virus. Questions also asked about their knowledge of Covid-19 pertaining to birth and the baby, such as if they thought a caesarean section was a safer option during the pandemic, and if infected mothers should

breastfeed their babies. Questionnaires were handed out in both English and Urdu.

Statistical Analysis

The data was analysed using the software IBM SPSS Statistics 26. Frequency and percentage were used to compare the data. Variables of interest were rates of depression, sleep problems, and changes in appetite, as well as demographic information such as level of education, occupation, and the age of the patients. Variables such as checking social media for information, and missed antenatal appointments. Data relating to perception about breastfeeding while infected, risk of transmission, fears of miscarriage or early labour was also studied.

RESULTS

A total of 120 patients filled out the questionnaire. Out of the total, 86 (71.7%) of the patients were less than 30 years, 29 (24.2%) were between 31 and 35 years old, and only 5 (4.2%) were older than 35 years. 29 (24.2%) had Covid-19 testing done before. Out of the total participants, almost half i.e., 59 (49.2%) said they had missed clinical appointments for fear of contracting Covid-19. More than half (67.5%) said Covid-19 had impacted their mental health. The summary of the psychological impact is given in Table 1. 77 (64.2%) said the pandemic made them depressed or anxious. Lack of appetite and disturbance in sleep patterns was found as well (51.7% and 53.3% respectively) Table 2. 86 (71.7%) reported checking for news about the pandemic on social media Table 3. 66 (55%) of the women believed there was a risk of transmission to the baby should they be infected, however almost half of the women (42.5%) said it was safe for infected mothers to breastfeed. 55 (45.8%) women thought pregnant women were more likely to miscarry or go into labour early if they contracted Covid-19.

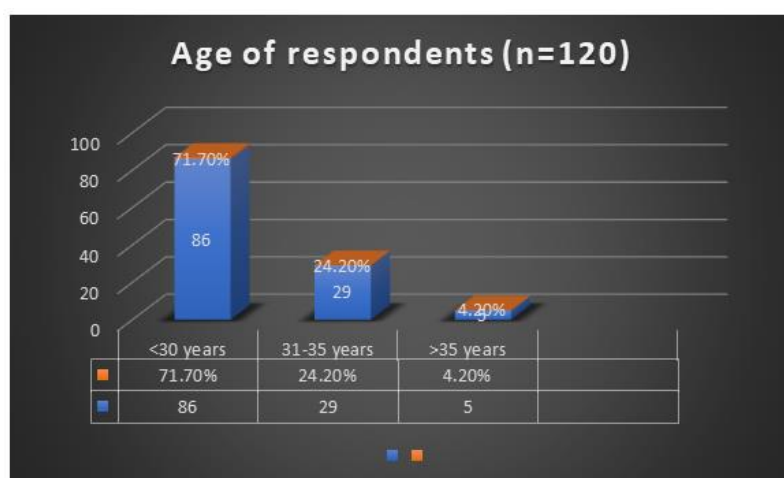


Fig 1: Age of respondents (n=120)

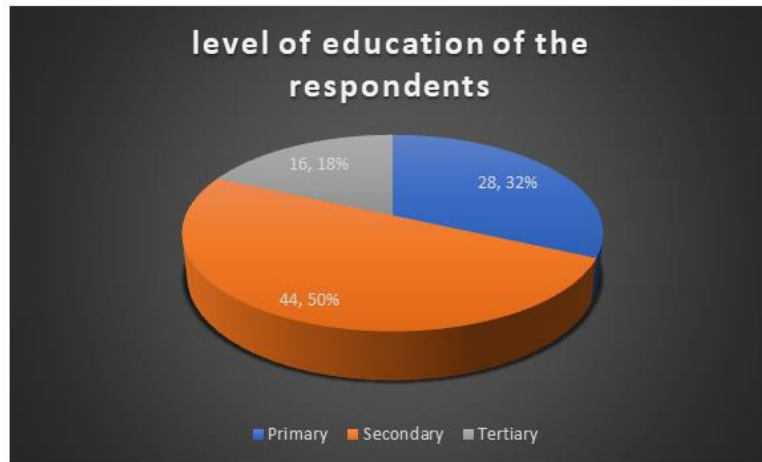


Fig 2: Level of education of the respondents

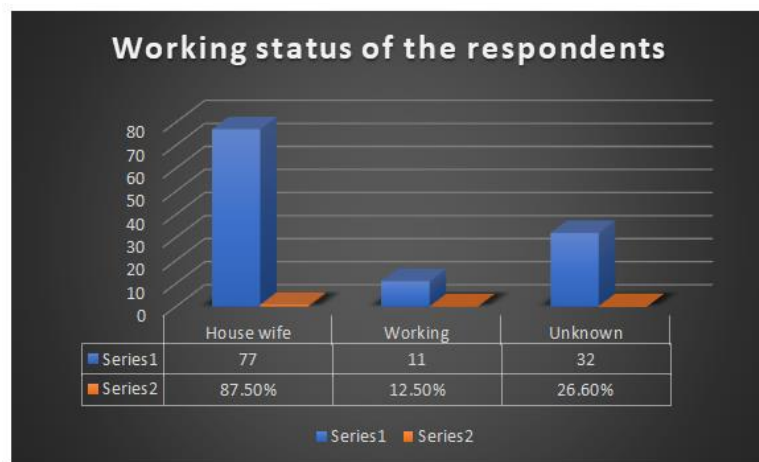


Fig 3: Working status of the respondents

Table 1: Psychological Impact of Covid-19 in Pregnant Women (n=120)

		Frequency	Percentage
Little interest or pleasure in doing things? (In the past 2 weeks)	None	52	43.3%
	Slight	23	19.2%
	Mild	28	23.3%
	Moderate	13	10.8%
	Severe	4	3.3%
Feeling down, depressed, or hopeless? (In the past 2 weeks)	None	56	46.7%
	Slight	19	15.8%
	Mild	28	23.3%
	Moderate	16	13.3%
	Severe	1	0.8%
Feeling more irritated, grouchy, or angry than usual? (In the past 2 weeks)	None	57	47.5%
	Slight	15	12.5%
	Mild	25	20.8%
	Moderate	16	13.3%
	Severe	7	5.8%
Feeling nervous, anxious, frightened, worried, or on edge? (In the past 2 weeks)	None	60	50.0%
	Slight	13	10.8%
	Mild	27	22.5%
	Moderate	16	13.3%
	Severe	4	3.3%
Feeling panic or being frightened? (In the past 2 weeks)	None	59	49.2%
	Slight	18	15.0%

Problems with sleep that affected your sleep quality over all? (In the past 2 weeks)	Mild	26	21.7%
	Moderate	13	10.8%
	Severe	4	3.3%
	None	64	53.3%
	Slight	20	16.7%
	Mild	26	21.7%
	Moderate	8	6.7%
	Severe	2	1.7%

Table 2: Comparison between women who checked social media for news and women who reported adverse mental health effects (n=120)

		Do you check for Covid-19 news on social media?		Total
		Yes	No	
Do you think that the COVID-19 pandemic has affected your mental health?	Yes	60	21	81
	No	26	13	39
Total		86	34	120

Table 3: Attitude of Pregnant Women towards Covid-19 (n=210)

	Frequency	Percentage	
Do you check for Covid-19 news on social media?	Yes	86	71.7%
	No	34	28.3%
Have you had any Covid-19 swab test done before for suspected Covid-19?	Yes	29	24.2%
	No	91	75.8%
Do you know of any family members diagnosed with Covid-19?	Yes	29	24.2%
	No	91	75.8%
Do you think it is important to come for antenatal check-ups?	Yes	62	60.8%
	No	40	39.2%
Have you missed any clinical appointments for fear of being infected with Covid-19?	Yes	59	49.2%
	No	61	50.8%
Do you think you can contract Covid-19 while visiting the hospital?	Yes	80	66.7%
	No	40	33.3%
If you are diagnosed have COVID-19, do you think there is risk of transmission of infection to the baby?	Yes	66	55.0%
	No	54	45.0%
Do you think pregnant women infected with COVID-19 are more likely to miscarry or go into labour early?	Yes	55	45.8%
	No	65	54.2%
Do you think it is safe for infected women to breast feed their baby after delivery?	Yes	51	42.5%
	No	69	57.5%

DISCUSSION

Our study found that the mental health of pregnant women was adversely affected due to the Covid-19 pandemic and ensuring lockdown. This is in line with previous studies done in other places [4, 5]. Our study showed a higher percentage of anxiety and depression in Pakistani pregnant women compared to a study carried out by Shahid *et al.*, in the early months of the pandemic [6]. This might suggest a trend in increased rates of mental health issues as the pandemic goes on. However, the sample sizes of these studies differ so they cannot be accurately compared.

Studies done in Pakistan assessing the mental health of women found that marital status, having children [7], and living in a large household [8] were factors associated with increased levels of anxiety and depression. Similar to these studies, our data also found a higher number of housewives, with only 11 women

saying they were working and only 16 women saying they had education up to a tertiary (college) level (Table 2). Sut *et al.*, found the risk of depression in women with less than nine years of education was 2.76 times higher [5]. In the context of Pakistan, this could be due to less awareness of mental health and fewer resources available to women with lower education levels, a decreased ability to self-advocate, and more compliance with traditional norms, which might not be promoting conversations about mental health, especially in the face of a new, widespread crisis like the Covid-19 pandemic. It should be noted that 32 out of the 120 women choose not to answer questions about their education and occupation.

A study by Xue Yang *et al.*, suggests that pregnant women with less social support, pregnancy experience or access to healthcare experienced more mental health issues [9]. A randomized controlled trial

done on Pakistani women comparing a six-week social support program to a single mental health awareness session found significant change in resilience in the six-week intervention group. The study also reported that even the control group attending a single session reported a slight improvement in resilience [10]. Although it is not realistic for a low-income country like Pakistan to incorporate large scale mental health awareness programs as part of the policy against Covid-19, doctors and health care workers who come in contact with patients, especially pregnant women who are at an increased risk of mental health issues, should be trained to counsel them effectively and point them towards useful resources to improve mental health.

Almost half of the patients reported missing a clinical appointment due to fear of contracting the virus. This is slightly concerning and highlights the need for alternative ways for doctors to follow-up on their patients, such as online consultations, during times of crisis. However, a tertiary care hospital like Hamdard receives patients from all over Karachi and Baluchistan, and even Afghanistan and Iran. Not all of these patients have access to proper internet services, or an understanding of the language (usually English) needed to work out how to access online clinics.

We were able to compare the number of women who used social media for information about Covid-19 and those who said the pandemic had an effect on their mental health. Our study found a link between the use of social media for news and poor mental health (Table 3). The results are in accordance with a study by Gao *et al.*, which found an association between social media use and mental health problems [11]. Social media and messaging applications have had a major impact on people's lives during this pandemic, especially as a source of information. This has led to the spread of misleading and unscientific claims being read and shared amongst the population. Constant exposure to unclear, alarming news serves to increase anxiety levels in people. Misinformation creates barriers in the way of healthcare and only contributes to distrust between the healthcare system and the patient. As we wait for the Covid-19 vaccine to be made available to the general population, there is an urgent need for a public awareness campaign to spread accurate, validated information about the benefits of the Covid vaccine. Reluctance around vaccines is a problem in Pakistan, such as in the case of Polio [12].

Multiple studies from around the world have been done showing that one of the biggest concerns of pregnant women is vertical transmission of Covid-19 [13], despite low rates (3.2%) of transmission being reported in the third trimester [14]. However, a meta-analysis by Dubey *et al.*, found that adverse outcomes in pregnancy such as caesarean sections, preterm births, low birth weight or other adverse outcomes were associated with women infected with Covid-19 [15].

Our study found that Pakistani pregnant women had some information about pregnant women being more at risk for these outcomes.

However, despite guidelines stating that it is safe for Covid-Positive women to breastfeed their baby with proper precautions [16], 69 (57.5%) of the Pakistani pregnant women thought it was unsafe. The Centers for Disease Control and Prevention (CDC) has listed precautions for pregnant women which include social distancing, disinfecting surfaces, proper hand washing before handling the baby, and wearing a mask while breastfeeding if the mother is Covid-Positive [17]. Pregnant or nursing women should be counselled about these precautions, whether they are suspected of being exposed to the coronavirus or not.

The limitations of these studies include small sample size and a single centre design. The lack of a control population (i.e., non-pregnant women) meant that the levels of anxiety and depression could not be compared.

CONCLUSION

Our study found that pregnant women did experience increased levels of anxiety and depression. They were found to have some level of knowledge about the effects of coronavirus; however, doctors still need to provide proper guidance about the special precautions patients need to take during pregnancy and the nursing period. There is a need to reform policies for the care and counselling of pregnant women when it comes to their mental health, as they are particularly susceptible. These policies need to be made not just for the current pandemic, but for all future global or national crises.

Conflict of interest: None.

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