



Pregnancy with Anxiety and Depression during Covid-19 Pandemic: A single Centre Study

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Abstract

Background: Corona-virus pandemic has become a major health problem worldwide. It evokes mental health disorders affecting the population globally, especially pregnant women and is associated with adverse maternal and fetal outcomes. The aim of the study was to assess anxiety and depression in pregnant women during the Covid-19 pandemic. **Material & Methods:** This was a cross-sectional study conducted at Islami Bank Central Hospital Kakrail, Dhaka, Bangladesh. Pregnant women visiting the gynae& obs 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. **Results:** A total of 152 patients were enrolled and analyzed in this study. Out of the total, 108 (71.05%) of the patients were less than 30 years, 38 (25.00%) were between 31 and 35 years old, and only 6 (3.95%) were older than 35 years. We found that 103(67.76%) of pregnant women had developed mental health disorders during this pandemic and there is a need to reform policies for the care and counseling of pregnant women as they are particularly susceptible. **Conclusions:** This study examined the mental health of pregnant women during the COVID-19 pandemic. The majority of the women thought COVID-19 could affect their pregnancy. Proper screening and diagnosis would bring early treatment to the needy thus preventing complications to both the mother and the newborn.

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

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 appear around 14 days after exposure.^[1] The first case reached Bangladeshi 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 groups 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 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] Depressive and anxiety symptoms are found to occur commonly during pregnancy in Bangladesh, drawing attention to a need to screen for depression and anxiety during antenatal care.^[4] Around one in every five pregnant women in Sindhupalchowk, Nepal had an increased level of anxiety and nearly one in four had an increased level of depression.^[5] The presence of psychiatric disorders during pregnancy imposes a significant burden on women and has the potential to adversely affect obstetric, fetal, and neonatal outcomes.^[6]

Evidence from several studies has established that anxiety and depression during pregnancy are associated with preterm birth and low birth weight.^[7,8,9] A Meta-analysis did in China showed the prevalence of anxiety and depression in pregnant women during the COVID-19 pandemic to be 43% and 32% respectively.^[10] The aim of the study was to assess anxiety and depression in pregnant women during the Covid-19 pandemic.

MATERIAL AND METHODS

This was a cross-sectional study conducted at Islami Bank Central Hospital Kakrail, Dhaka, Bangladesh. Pregnant women visiting the gynae& obs 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. 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. Three domains: Depression, Anxiety, and Sleep Problems were used to assess the psychological impact of the Covid-19 pandemic on the pregnant population. Patients were also asked additional questions about their knowledge of 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 about birth and the baby, such as if they thought a cesarean section was a safer option during the pandemic, and if infected mothers should breastfeed their babies. The data were analyzed 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 the infected, risk of transmission, and fears of miscarriage or early labour were also studied.

RESULTS

This is a cross-selection study, a total of 152 patients were enrolled and analyzed in this study. Out of the total, 108 (71.05%) of the

patients were less than 30 years, 38 (25.00%) were between 31 and 35 years old, and only 6 (3.95%) were older than 35 years (Figure-1). Out of the total participants, almost half i.e., 76 (50.00%) said they had missed clinical appointments for fear of contracting Covid-19. More than half of 109 (71.71%) said Covid-19 had impacted their mental health. A summary of the psychological impact is given in Table-2. 98 (64.47%) said the pandemic made them depressed or anxious. We found that 103(67.76%) of pregnant women had developed mental health disorders during this pandemic and there is a need to reform policies for the care and counseling of pregnant women as they are particularly susceptible in Table-4. And there are 85 (55.92%) of the women believed there was a risk of transmission to the baby should they be infected, however almost half of the women 64 (42.11%) said it was safe for infected mothers to breastfeed. 70 (46.5%) women thought pregnant women were more likely to miscarry or go into labour early if they contracted Covid-19.

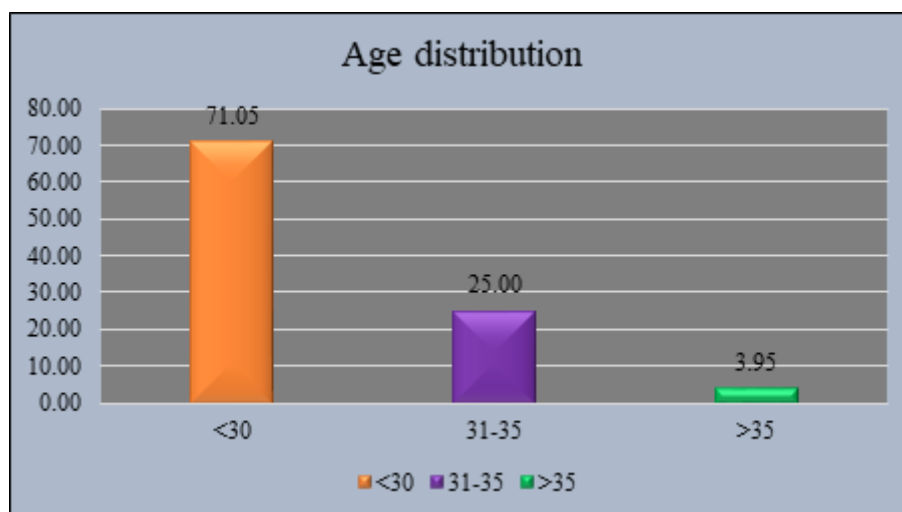


Figure 1: Age distribution of the study population (n=152)

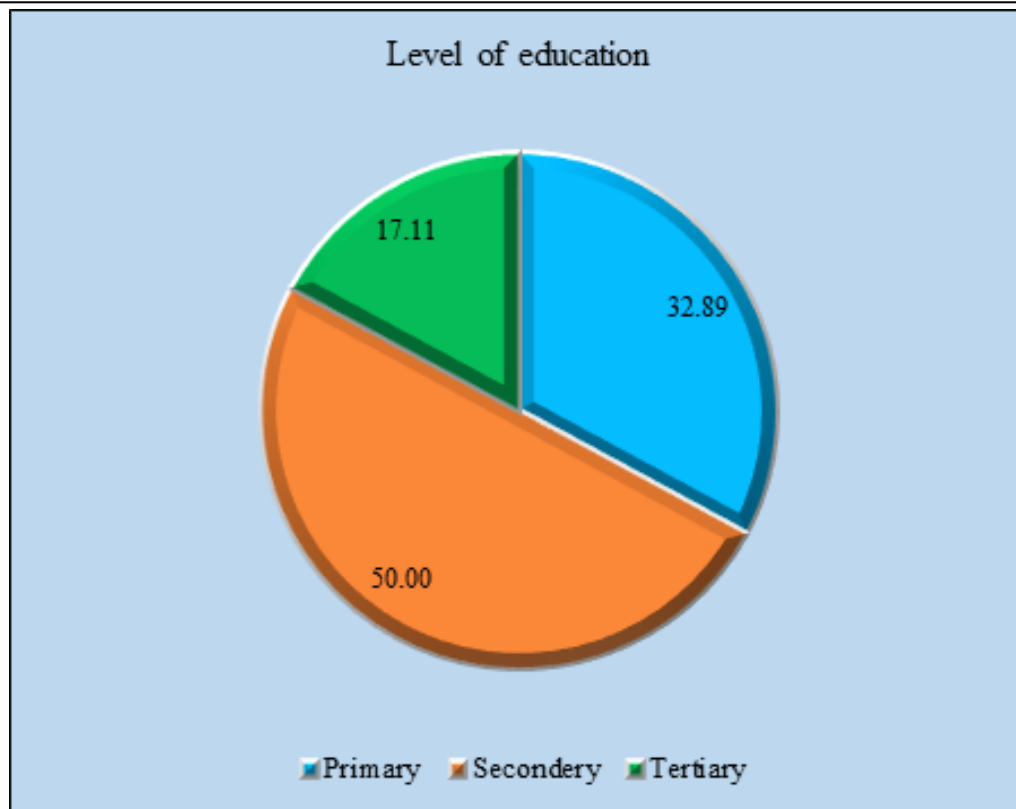


Figure 2: Level of education of the study population (n=152)

Table 1: Working status of the study population (n=152)

Working status	Frequency	Percentage
Housewife	96	63.16
Working status	15	9.87
Unknown	41	26.97

Table 2: Psychological impact of Covid-19 in pregnant women (n=152)

Characteristics	Frequency	Percentage
Little interest or pleasure in doing things? (In the past 2 weeks)		
None	67	44.08
Slight	29	19.08
Mild	35	23.03
Moderate	15	9.87
Severe	6	3.95
Feeling down, depressed, or hopeless? (In the past 2 weeks)		
None	70	46.05
Slight	23	15.13
Mild	35	23.03



Moderate	21	13.82
Severe	3	1.97
Feeling more irritated, grouchy, or angry than usual? (In the past 2 weeks)		
None	73	48.03
Slight	18	11.84
Mild	32	21.05
Moderate	20	13.16
Severe	9	5.92
Feeling nervous, anxious, frightened, worried, or on edge? (In the past 2 weeks)		
None	76	50.00
Slight	15	9.87
Mild	35	23.03
Moderate	20	13.16
Severe	6	3.95
Feeling panic or being frightened? (In the past 2 weeks)		
None	76	50.00
Slight	23	15.13
Mild	32	21.05
Moderate	15	9.87
Severe	6	3.95
Problems with sleep that affected your sleep quality overall? (In the past 2 weeks)		
None	82	53.95
Slight	26	17.11
Mild	32	21.05
Moderate	9	5.92
Severe	3	1.97

Table 3: Comparison between women who checked social media for news and women who reported adverse mental health effects (n=152)

Characteristics	Yes		No		Total
	N	%	N	%	
Do you check for Covid-19 news on social media?	33	30.28	16	37.21	49
Do you think that the COVID- 19 pandemic has affected your mental health?	76	69.72	27	62.79	103
Total	109	100	43	100	152

Table 4: Attitude of Pregnant Women towards Covid-19 (n=152)

Characteristics		Frequency	Percentage
Do you check for Covid-19 news on social media?	Yes	108	71.05
	No	44	28.95
Have you had any Covid-19 swab tests done before for suspected Covid-19?	Yes	38	25.00
	No	114	75.00
Do you know of any family members diagnosed with Covid-19?	Yes	35	23.03
	No	117	76.97
Do you think it is important to come for antenatal check-ups?	Yes	79	51.97
	No	50	32.89
Have you missed any clinical appointments for fear of being infected with Covid-19?	Yes	76	50.00
	No	79	51.97
Do you think you can contract Covid-19 while visiting the hospital?	Yes	102	67.11
	No	50	32.89
If you are diagnosed have COVID-19, do you think there is a risk of transmission of infection to the baby?	Yes	85	55.92
	No	67	44.08
Do you think pregnant women infected with COVID-19 are more likely to miscarry or go into labour early?	Yes	70	46.05
	No	82	53.95
Do you think it is safe for infected women to breastfeed their babies after delivery?	Yes	64	42.11
	No	88	57.89

DISCUSSION

This study found that the mental health of pregnant women was adversely affected due to the Covid-19 pandemic and ensuing lockdown. This is in line with previous studies done in other places.^[11,12] Our study showed a higher percentage of anxiety and depression in Bangladeshi pregnant women compared to a study carried out by Shahid et al., in the early months of the pandemic.^[13] 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 Bangladeshi assessing the mental health of women found that marital status, having children,^[14] and living in a large household,^[15] 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 50(32.89%) 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.^[12] In the context of Bangladeshi, 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 41(26.97%) out of the 152 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.^[16] A randomized controlled trial done on Bangladeshi women comparing a six-week social support program to a single mental health awareness session found a 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.^[17] Although it is not realistic for a low-income country like Bangladeshi 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 affected 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 from a study by Gao et al., which found an association between social

media use and mental health problems.^[18] 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 Bangladeshi, such as in the case of Polio.^[19] 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,^[20] despite low rates (3.2%) of transmission being reported in the third trimester.^[21] 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.^[22] Our study found that Bangladeshi 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.^[23] The Institute of Epidemiology, Disease Control and Research (IEDCR) 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. Pregnant or nursing women should be counseled about these precautions, whether they are suspected of being exposed to the coronavirus or not.

Limitations of the study:

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.

CONCLUSIONS

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