

# Psychological Impact of COVID-19 Pandemic on Pregnant Women

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## Abstract

**Objectives:** To ascertain the prevalence of stress and anxiety disorders within pregnant women during the Pandemic of COVID-19.

**Methodology:** This Cross sectional study was carried out at AL-Aleem Medical College, Lahore attached with Gulab Devi Educational Complex, over a period of three months from September 2020 to November 2020. After approval from Institutional Ethical Committee. Non probability convenience sampling technique was used, a total of 100 willing pregnant women fulfilling the inclusion criteria were included in this study. The Data was collected by handing over "The 7- item Generalized Anxiety Disorder Scale (GAD-7)" Performa and then analyzed using SPSS version 20.

**Results:** The prevalence of stress and anxiety disorders in gravid women in this study was 97%. Out of 100 women's major chunk, 55% was between 26-35 years of age, 32% were between 15-25 years, the mean age of women was 25.58 years. The majority of women 56% were multigravida, 23% were grand multipara and only 21% were primigravida. Seven percent presented in 1st trimester (1-13 weeks), 26% in 2nd trimester (14-26 weeks), and majority 67% in third trimester of pregnancy. Seventy two percent of women were matric pass and 28% were up to bachelor. About 93% women had knowhow regarding COVID-19 through social media, friends, and family.

**Conclusion:** This study foreground the high level of stress and anxiety disorders amid Pakistani gravid women during COVID-19 Pandemic. To reduce this stress special preventive strategies and its implementation are needed at the community level.

**Keywords:** Anxiety Pregnant women, Psychological stress, Depression.

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## Introduction

In January 2020, World Health Organization announced the eruption of a current communicable Coronavirus disease named (COVID-19), and it has globally spread rapidly causing infectious pneumonia. In March 2020, according to WHO assessment COVID-19 would be a pandemic problem in future.<sup>1,2</sup> China is the First country who reported COVID-19 patient and according to China's National Health Commission report 49824 COVID-19 patients are confirmed.<sup>3</sup> The Government of China, Health care provider team and Public are facing great pressure because of huge scale infectious disease.<sup>4</sup> In Pakistan COVID-19 virus was reported first time on 26 February 2020, when report of the student confirmed positive of COVID-19 in Karachi when he came back from Iran.<sup>5</sup> From 18 March 2020 onward

COVID-19 positive patients had been registered in all provinces including Islamabad.<sup>6</sup> COVID-19 a new disease has affected the attitude and behaviors of persons throughout the world and is responsible for different types of anxiety disorders.<sup>7</sup> Pregnant women are considered to be the captious part of the population against COVID-19 because of hazard of vertical transmission. The prenatal, natal, and postnatal anxiety regarding highly contagious disease COVID-19 may affect the women adversely and different types of abnormal behaviors were reported in pregnant women<sup>8,9</sup> Quarantine, lockdown, fear of getting COVID infection and death has been responsible for psychological disturbances in general population and especially in pregnant women.<sup>8</sup> Previously in Severe

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Acute Respiratory Syndrome (SARS) and H1N1 eruption, various types of stress, anxiety and depression had been observed in pregnant women and this is supported by different studies.<sup>10, 11</sup> All pregnant women are very much concerned about their pregnancy and its outcome because of different circulating rumors on social Medias. In spite of increasing COVID-19 patients in Lahore including pregnant women hardly any data is available to find out attitude and behavior changes in pregnant women during pandemic. The purpose of our study was to ascertain the prevalence of stress and anxiety disorders within pregnant women during Pandemic of COVID-19 at Gulab Devi Educational Complex and to provide appropriate suggestions to deal with the psychological.

## Methodology

A Cross sectional study was conducted at AL-Aleem Medical College, Lahore attached with Gulab Devi Educational Complex, over a period of three months from September 2020 to November 2020 after approval from the Institutional Ethical Committee. Non probability convenience sampling technique was used, a total of 100 willing pregnant women coming for antenatal visits or delivery were included in this study. The Data was collected by handing over “The 7- item Generalized Anxiety Disorder Scale (GAD-7)”, Performa that consist of 7 questions in simple English Language internationally used to assess the stress and disorders after informed consent. The purpose of the study, the importance of anxiety disorders and how to fill the Performa was explained in first 5 minutes. The filled Performa’s were then collected after 4-5 minutes. Demographic data regarding age, parity, duration of pregnancy, educational status, socioeconomic class, information regarding COVID-19 were included in the Performa. Generalized Anxiety Disorder Scale (GAD-7) is the most popular instrument for the detection and screening of Anxiety Disorders, now a days it is used for screening, diagnosis, and the assessment of anxiety disorders, social phobias, post traumatic and post pandemic disorders.<sup>12</sup> “The 7-item Generalized Anxiety Disorder (GAD-7; range 0-21) was used to assess the severity of symptoms of anxiety”.<sup>13</sup>

The scores are taken as normal (0-4), mild anxiety (5-9), moderate anxiety (10-14), and severe anxiety/depression (15-21).

The data was entered, rechecked by an expert one for confirmation of correct entry and then analyzed using

SPSS version 20. Descriptive Statistics was used to check the prevalence and percentage of all quantitative variables, the response rate was 100 percent.

## Results

A total of 100 women were enrolled in the study during their routine antenatal visit. Table I highlight the demographic data of the participants. Out of 100 women major chunk 55% was between 26-35 years of age, 32% were between 15-25 years, the mean age of women was 25.58 years. Majority of women 56% were multigravida, 23% were grand multipara and only 21% were primigravida. Seven percent presented in 1st trimester (1-13 weeks), 26% in 2nd trimester (14-26 weeks) and majority 67% in 3rd trimester of pregnancy. Seventy two percent of women were matric pass and 28% were up to bachelor. About 93% women had knowhow regarding COVID-19 through social media, friends and family. The prevalence of stress and anxiety disorders in gravid women in this study was 97%.

Age Years	No of Women	Percentage
15 – 25	32	32
26 – 35	55	55
>35	13	13
Parity		
Primigravida	21	21
Multigravida	56	56
Grand Multi > 5	23	23
Duration of Pregnancy		
First Trimester	7	7
Second Trimester	26	26
Third Trimester	67	67
Educational Status		
Up to Matric	72	72
Bachelor/Above	28	28
Knowledge of COVID-19		
Yes	93	93
No	07	07

Prevalence of stress and anxiety disorders are shown in Table II

GAD-7 Score	Score Interpretation	No of Women	Percentage
0 - 4	Normal person	3	3
5 - 9	Mild Anxiety	36	36
10 - 14	Moderate Anxiety	57	57
15 - 21	Severe Anxiety	4	4

Table III highlight the prevalence of stress and anxiety disorders in women in relation to the duration of pregnancy.

**Table III: Prevalence of Stress & Anxiety Disorders according to duration of Pregnancy (n=100)**

Duration of Preg. Weeks	Score 0 – 4 Normal	Score 5 – 9 Mild Anxiety	Score 10 -14 Moderate Anxiety	Score 15-21 Severe Anxiety	No of Women	%
0 - 13		2	5		7	7
14 - 28	1	9	14	2	26	26
29 – 40	2	25	38	2	67	67

## Discussion

World Health Organization “define Health as a state of Physical, Mental, and social wellbeing and not merely the absence of disease or infirmity”.<sup>14</sup> The health of pregnant women is mainly dependent on the surroundings e.g. home, society, workplace and town. Various National and International studies had reported different types of psychological disorders in the general population and especially in pregnant women during Pandemic (SARS), (MERS), (HINI) influenza, & Ebola outbreaks.<sup>9, 10, 11, 15, 16</sup> There is an urgent need to find out social and psychological factors responsible for pregnant women’s behavior during Pandemic period to reduced morbidities.<sup>17</sup> In our study the mean age of the woman was 25.58 years. The 56% of the women were multigravida, 67% of women presented in last trimester of pregnancy these findings are tallying with another study.<sup>18</sup> Educational status play an important role in reducing stress level during any sort of outbreak by counselling and training the women. In the study 72% of pregnant women were only matric pass this is consistent with other studies.<sup>18</sup> Social media play an important role in communicating and educating people in society, friends and family are also responsible to some extent, in our study 93% of the women had knowhow regarding COVID-19 through social media and this is similar with other studies.<sup>18</sup> The prevalence of Stress and Anxiety disorders in gravid women in this study was 97% that is quite high, reason could be because of lack of awareness among health care providers along with improper infrastructure for delivery and neonatal care in COVID-19 Pandemic.

Development of stress and anxiety disorders during outbreak mainly depend upon the mental health, duration of pregnancy and living conditions of the women, mild anxiety was observed in 36%, moderate anxiety was found in 57% of women and severe in only 4% of women, these findings are consistent with other studies.<sup>18, 19, 20</sup> There is hardly any data available in literature that would highlight the stress and anxiety disorders observed in relations to trimester of pregnancy, this study would act as a platform for future longitudinal and cross sectional studies. In our study

the prevalence of psychological and Generalized Anxiety Disorders in relation to trimester of pregnancy are observed as a maximum of 67% in last trimester of pregnancy, In the First trimester only 7% of the women had anxiety but in second trimester 26% of women had stress and anxiety disorders, reasons may be with advancing pregnancy affection towards their neonates go on increasing and due to uncertainty in surroundings anxiety and stress enhanced. The results of our study highlight the maximum stress and anxiety disorders observed in last trimester (between 29-40 weeks) of pregnancy reasons being women are more anxious about transmission of disease to their offspring’s. Preventive measures like lock down, social distancing, personal protective measures, isolation and quarantines are essential for spreading the infectious disease, especially in pregnant women.<sup>21</sup> Counselling the pregnant women during antenatal, natal and postnatal period are need of the day. In order to reduce the psychological impact of COVID-19 in pregnant women special preventive policies and its implementation are needed at a community level.

Effective Leadership, Training of health care providers and provisions of Personal Protective Equipment’s especially to Lady Health Visitors, and Traditional Birth Attendants are top priorities of society and local government.<sup>22, 23</sup>

**Limitation of the Study:** As the study is conducted only in one teaching hospital so results of this study could not be generalized but this data would help for generation of further researches.

## Conclusion

This study foreground the high level of stress and anxiety disorders within Pakistani gravid women during COVID-19 Pandemic. To reduce this stress special preventive strategies and its implementation are needed at the community level. Effective Leadership, Training of health care providers and provisions of Personal Protective Equipment’s especially to Lady Health Visitors, and Traditional Birth Attendants are top priorities of society and local government.

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