Impact of Covid-19 Pandemic on Mental Health amongst Pregnant Women

Rubina Tariq[1], Zahida Noreen[2], Aymen Javed[3], Alia Bashir[4]

[1]Associate Professor, Department of Obs & Gynae, SIMS, Lahore, Pakistan.
[2]Assistant Professor, Department of Obs & Gynae, SIMS, Lahore, Pakistan.
[3]Senior Registrar, Department of Obs & Gynae, SIMS, Lahore, Pakistan.
[4]Professor, Department of Obs & Gynae, SIMS, Lahore, Pakistan.

ABSTRACT

Background: To assess the impact of Covid-19 pandemic on mental health of pregnant ladies. **Methods:** An observational cross-sectional survey was carried out in Outpatients Department of Services Hospital, Lahore from 1st April 2020 to 15th April 2020. Five hundred pregnant patients were enrolled in this study. A modified translated questionnaire similar to Generalized Anxiety Disorder (GAD-7) and Patient Health Questionnaire-9 (PHQ-9) was developed as main research tool for interviewing the subjects. The scoring system was used to further classify the anxiety and depression as minimal, mild, moderate and severe in intensity. **Results:** In the study population 80.9% of ladies were < 30 years, 86% belonged to lower socio-economic status and almost 34% women had a family member affected by Corona Virus. Moderate anxiety (GAD-7 score of 11-15) was demonstrated in 242 (48%) pregnant women. Similarly 47% ladies were found to have moderate depression. **Conclusion:** The current pandemic is causing anxiety and depression amongst pregnant population. Fear of contacting infection, financial problems and uncertainty of getting timely maternity services are contributing factors. Managers of health facilities need to provide for these problems.

Keywords: Covid-19 pandemic, mental health, anxiety, depression.

1

INTRODUCTION

Coronavirus disease is a highly contagious disease. The first case of this disease was discovered in Wuhan city of China. Coronavirus are RNA viruses,[1] the symptoms of this disease vary from common cold to Middle East Respiratory syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Mode of transmission of covid-19 via respiratory droplets released by coughing, sneezing,[2] talking, and also by touching the surfaces contaminated with infected droplets as the virus can survive for different periods of time depending on the type of surface and temperature. With the intent to prevent, many countries like Pakistan introduced restrictions including social distancing, self-distancing, self-isolation and closure of social and educational institutes. In Pakistan,[3] the first corona positive case was reported on 26th February 2020. So, on 23rd march 2020 (Order no. 50 (IS-II) 1-1/2004) a complete lockdown was started in the country. On 27th march 2020, it was estimated that there were 13,328 covid-19 cases across the country.[3]

As a major virus outbreak in the 21st century, the coronavirus pandemic has led to unmatched hazard to mental health globally. While this pandemic has psychological impact on pregnant women in the form of anxiety, depression, insomnia, insecurity and stress which has led to deterioration in relationships, marital problems and their kids' future. It also has caused element of financial vulnerability in pregnant women.[4] There is no evidence for transmission of covid-19 from mother to infant during pregnancy. Covid-19 infection does not seem to increase the likelihood for obstetric intervention at birth, with healthy infant born to women with the infection.[5,6] The world health organization (WHO) recommends women with covid-19 to initiate breastfeeding within 1 hour of birth and engage in skin to skin contact and kangaroo mother care, while practicing respiratory hygiene and handwashing before and after touching the baby.[7] The aim of this study is to evaluate the level of anxiety and depression amongst the pregnant women in order to identify the women that may require mental health care.

Aim:

To study of the impact of covid-19 pandemic on mental health of pregnant women, and assess the level of depression and anxiety.

MATERIALS & METHODS

Study Design:

This observational cross-sectional survey was carried out in Obstetrics and Gynecology Outpatient Department of Services Hospital Lahore from1st April 2020 to 15th April 2020.Pregnant women who

Name & Address of Corresponding Author
Dr. Rubina Tariq
Associate Professor,
Department of Obs & Gynae,
Services Institute of Medical Sciences,
Lahore, Pakistan.
Email: drrobinatariq@gmail.com

consented to fill the questionnaire were included, regardless of gestational age.

Ethical Consideration:
The study protocol was approved by the Ethics committee of the department and verbal consent taken from the participants. All preventive measures were taken to prevent the spread of the covid-19 during data collection.

Sample size:
500 Pregnant women were included in this study of any gestational age.

Study Instrument:
A modified validated questionnaire was developed in view of assessment of "Generalized Anxiety Disorder-7(GAD-7)" and "Patient Health Questionnaire-9(PHQ-9)". It was translated in Urdu for patient convenience and questionnaire was assessed by the senior consultants of Unit (Professor, Assistant, Associated Professor and Research Officer). Initially questionnaire was given to 10 medical residents for pilot study and then on the basis of their response, the final questionnaire was developed and given to the participants.

Questionnaire included two sections
Section I: First section included questions regarding the socio-demographic details of the study participants including name, age, address, occupation, income, education, and any covid-19 patient in family.
Section II: 2nd section included the questionnaire which was the modified and translated version of GAD-7 and PHQ-9. GAD-7 is used as a screening tool and measures severity of anxiety. Generalize Anxiety Disorder-7 calculated severity by assigning

scores of 0, 1, 2, 3, to the response categories of 'not at all sure, several days, more than half the days, nearly every day' respectively. Scores were further classified as 0-5 (minimal), 6-10 (mild), 11-15 (moderate) and 16-20 (severe anxiety).
Patient Health Questionnaire (PHQ-9) is used to assess the severity of the depression. It includes 9 items assigning the scores 0, 1, 2, 3 to the response categories of 'not at all sure, several days, more than half the days, nearly every day' respectively. Scores were further classified as 0-9 (minimal), 10-14 (mild), 15-19 (moderate) and 20-27 (severe depression).

Statistical Analysis:
Data was analyzed using SPSS version 22 for windows. Number and percentage were presented for the categorical variables, and mean (+,-) standard deviation (SD) were presented for the continuous variables. The independent t test and analysis of variances were used to determine significance, where applicable.

RESULTS

Table 1: Characteristics of the study population

Variable	Category	Frequency	(%)
Age	20-30	400	80%
	> 30	100	20%
Education	Undergraduate	310	62%
	Graduate	190	38%
Occupation	House Wife	290	58%
	Working Woman	210	42%
Income	< 20K	430	86%
	20K - < 70K	70	14%
Resident	Urban	262	52.4%
	Rural	138	27.6%
Any Family Member Suffered with Corona	Yes	173	34.65
	No	327	65.4%

Table 2: GAD-7 descriptive statistics. N= 500

Question	Answer	N	%
1	Not at all sure	167	33.4
	Several days	98	19.6
	Over half the days	214	42.8
	Nearly every day	21	4.2
2	Not at all sure	113	22.6
	Several days	97	19.4
	Over half the days	204	40.8
	Nearly every day	36	
3	Not at all sure	98	19.6
	Several days	112	22.4
	Over half the days	243	48.6
	Nearly every day	47	9.4
4	Not at all sure	159	31.8
	Several days	96	19.2
	Over half the days	229	45.8
	Nearly every day	16	3.2
5	Not at all sure	151	30.2
	Several days	69	13.8
	Over half the days	257	51.4
	Nearly every day	23	4.6
6	Not at all sure	157	31.4
	Several days	99	19.8
	Over half the days	226	45.2
	Nearly every day	30	6

7	Not at all sure	138	27.6
	Several days	67	13.4
	Over half the days	267	53.4
	Nearly every day	28	5.6

Table 3: Section III: PHQ-9 descriptive statistics.   N= 500

Question	Answer	N	%
1	Not at all sure	161	32.2
	Several days	69	13.8
	Over half the days	254	50.8
	Nearly every day	16	3.2
2	Not at all sure	147	29.4
	Several days	98	19.6
	Over half the days	213	42.6
	Nearly every day	42	8.4
3	Not at all sure	103	20.6
	Several days	93	18.6
	Over half the days	261	52.2
	Nearly every day	45	9
4	Not at all sure	82	16.4
	Several days	127	25.4
	Over half the days	253	50.6
	Nearly every day	38	7.6
5	Not at all sure	149	29.8
	Several days	106	21.2
	Over half the days	228	45.6
	Nearly every day	17	3.4
6	Not at all sure	141	28.2
	Several days	80	16
	Over half the days	239	47.8
	Nearly every day	40	8
7	Not at all sure	143	28.6
	Several days	77	15.4
	Over half the days	263	52.3
	Nearly every day	17	3.2
8	Not at all sure	156	31.8
	Several days	89	17.8
	Over half the days	227	45.4
	Nearly every day	28	5.6
9	Not at all sure	209	41.8
	Several days	106	21.2
	Over half the days	177	35.4
	Nearly every day	8	1.6

Table 4: ?

PHQ-9	Minimal	Mild	Moderate	Severe
	0-9	10-14	15-19	20-27
N	143	94	235	28
%	28.6	18.8	47	5.6
GAD-7	Minimal	Mild	Moderate	Severe
	0-5	06-10	11-15	16-20
N	140	90	242	28
%	28	18	48	5.6

	M	SD	95% Cl
PHQ-9	12.84	5.87	0.515
GAD-7	9.44	4.5	0.395

DISCUSSION

The impact of coronavirus on physical health has received worldwide attention. However, data about the psychological impact of pandemic is still emerging. Pregnant women are a vulnerable group as they are susceptible to various viral infections e.g. SARS.[8] Depression and anxiety is on the rise in the general population, almost 1 in 3 individuals has anxiety and 1 in 5 individuals has depressive symptoms.[9] Prevalence of mental disorders in pregnant women is 10%. Mental health may be affected by various limitations e.g. lockdown, isolation, and lack of social support. Depression and anxiety are likely to increase substance abuse, domestic violence, and child abuse.[10]

Over the last few months, various researches have emerged about studying the psychological impact of covid-19 on pregnant women. Variable psychiatric tools have been used to quantify the anxiety and depression. In this study, we have used GAD-7, PHQ-9 for assessment of anxiety and depression respectively. A total of 500 pregnant women voluntarily participated in this study. Eighty percent of these ladies were less than 30 years of age, 86% had low income, and 62% were undergraduate. Almost 34% women had a family member affected by corona virus.

The study demonstrated that 242(48%) pregnant women had GAD-7 score of 11-15 indicating moderate anxiety. Similarly, 47% of respondents had moderate depression. A similar study from Lahore showed that 39% of participants had some level of depression or anxiety.[11] 61% of respondents had minimal anxiety or depression. While in our study,

minimal psychological impact was seen in 28% population. This difference may be due to the reason that our study was conducted in April 2020, a time period during which many new cases of Covid-19 were coming up. Secondly, majority of population is of low-income group and less educated pre-disposing to uncertainty and fear.

The anxiety level in pregnant women correspond to the prevalence of Covid-19 infection in that country. Saccone et al (2020),[12] from Italy found that 2/3rd of pregnant women had high anxiety levels, 46% of these had anxiety regarding vertical transmission of virus to the fetus.

Similarly, two studies from Canada and Turkey have quoted prevalence of depression of 37% and 35.4% in pregnant individuals, respectively.[13,14] In our study, 18-47% ladies had some degree of depression. The difference might be due to under privileged society.

CONCLUSION

The current pandemic has a negative impact on mental health of pregnant women. Fear of suspension of antenatal care adds to this problem. This calls for promotion of tele-health communication i.e. by phone, video visits or internet can help.

REFERENCES

1. Wuhan Municipal Health Commission. Wuhan Municipal Health Commission's Briefing on the pneumonia Epidemic situation. Available online: http://wjw.wwuhan.gov.cn/front/web/showdetail/2019123108 989
2. Huang C, Wang Y, Li X, Ren L, Zhang l, Zhang Q, Cheung T, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. The Lancet. 2020;395: 497-506: 228-229. Pmid: 32032543
3. View ArticlePubMed/NCBIGoogle Scholar Nation Institute of health, Islamic republic of Pakistan, Covid-19 updates http://covid.gov.pk/stats/Pakistan. Accessed 27 Mar 2020
4. Published in journal: Asian Journal of Psychiatry. Journal homepage: www.elsevier.com/locate/ajp
5. Y.Lu, K. Yin, Management of pregnant women infected with COVID-19, Lanced infect. Dis. (2020)
6. H. Zhu, L. Wang, C. Fang, S. Peng, L. Zhang, G. Chang, et al. Clinical analysis of 10 neonates born to mothers with 2019-ncoV pneumonia, Transl. Pediatr. (1)(2020) 51-60
7. WHO, clinical Management of sever Acute Respiratory Infection (SARI) when COVID-19 Disease is suspected: Interim Guidance V 1.2, World Health Organization Geneva, 2019.
8. Luo Y, Yin K (2020). Management of pregnant women infected with Covid-19. Lancet infectious disease, 20(5),513-54.
9. Huang Y, Zhao N, GAD, depressive symptoms and sleep quality during Covid-19 epidemic, Chine:Psychiatry Res 2020
10. Galea S, Merchant R, Lurie N. the mental health consequences of Covid-19 and physical distancing. JAMA Int. Med. 2020.
11. Ayesha Shahid, Amna Javed, Saba Rehman et al; Evaluation of psychological impact, depression and anxiety among pregnant women during the Covid-19 pandemic in Lahore, Pakistan; Internation J.Gynae & Obs, Sept 2020
12. G Saccone; Psychological impact of Coronavirus disease 2019 in pregnant women, American J.Obs & Gynae, Aug 2020
13. C. Lebel, A. Mackinnon, M. Bagshawe; Elevated depression, anxiety among pregnant individuals during the covid-19 pandemic; 2020
14. F.Durankus, E. Aksu; Effect of covid-19 pandemic on anxiety & depressive symptoms in pregnant women; J.Maternal.NeoMed 2020