Risk Factors among Pregnant Women during Covid-19: A Study to Deal Stressors

Maj. Sara Saif
Maj in Pakistan Army (Psychologist)sarasaifgrewal@gmail.com
Ms. Saira Javed
Lecturer Clinical Psychology, Department of Psychology, National University of Medical Sciences
saira.javedbhati@gmail.com
Brig (Dr) Shoaib Kiani
Chief Psychologist, Personnel Administration Directorate, GHQ Rawalpindi, Punjab, Pakistan
kianishoaib@yahoo.com
Prof. Dr. Shazia Khalid
Head NUMS Department of Psychology, Department of Psychology, National University of Medical Sciences,
saira.javedbhati@gmail.com

KEYWORDS

Challenges
Risk Factors
COVID-19
Intervention Plan
Pregnant
Females.

ABSTRACT

After Thematic Analysis, certain challenges experienced by Pregnant Females during Covid-19 were unable to see doctor, undefined mood swings, Anxiety/Depression, miss regular appointments, lack of empathy from medical staff, non-availability of previous doctor, screening of covid-19 before appointment, family restrictions due to covid, obsessed about future of child. On the other hand, some risk factors were also faced by pregnant women during pandemic like fear of contamination from me to family, close interaction with kids, trust issues with new doctor, family members outside exposure, office interaction, other helping hands, fear of infection to unborn child and breast feeding. This study reveals that there are high risk factors and challenges among pregnant women who tested positive for COVID – 19. Fear of corona along with other factors increased prevalence of depression, anxiety, mood swings and irritability. Based on the result of this study, it is necessary to pay more attention to the mental health of pregnant women during such pandemic.

Introduction

The highly contagious COVID-19 pandemic may make people more vulnerable to anxiety and sadness. Pregnant women require extra care as a specific population. Globally, COVID-19 is spreading quickly, and the disease's death rate is rising daily. Pregnant women are one of the vulnerable groups in the community that is most exposed to psychological harm during pandemics, which are known to occur frequently.

Corona pandemic is expected to cause significant mental stress to pregnant women since a lot of inadequate information and conspiracy theories such as administration of poisonous injections are circulating on social media. This, coupled with restricted access to mental health services, social distancing, long stay at home, absence of emotional support and conflicting reports about disease transmission to fetuses have aggravated situation.

*Corresponding Author Maj. Sara Saif
Maj in Pakistan Army (Psychologist)
Email Address: sarasaifgrewal@gmail.com

The virus's unknown nature, together with the paucity of knowledge regarding its risk factors, reproduction, transmission, mortality, and effects on pregnancy and the developing fetus may be dangerous for a person's emotional as well as physical health. Psychological consequences such as stress, worry, and sadness may result from it.

Numerous psychological variables can have a harmful influence on a pregnant woman, her fetus, and the unborn child, making pregnancy a delicate time in a woman's life. Pregnant women may have negative psychological consequences from COVID-19 because it is a relatively new condition about which little is known.

Pregnancy has been found to increase anxiety and depression by roughly 10%, according to numerous research which, given the circumstances and living environment, is significant particularly throughout the pregnancy's second and third trimesters.

According to a study, pregnant women who suffer from anxiety or depression during the COVID-19 pandemic likely to be more concerned about the domestic epidemic. Since they felt they had not prepared enough protective materials, they believed that the outbreak had a significant influence on their life. Furthermore, the majority of depressed pregnant women believed that their family members were somewhat concerned for them.

Increased medical monitoring is also necessary during pregnancy, although it is challenging to provide during a pandemic. The study's findings suggested that pregnant women may experience anxiety related to their inability to obtain expert medical care. Additionally, when visiting medical institutions, pregnant women may feel uneasy about their potential for exposure to the corona virus.

Another study determined frequency of psychological symptoms like depression, anxiety, stress and perceptions of transmission to baby in pregnant patients during COVID-19 pandemic. Out of 310 total pregnant women, 184 (61.32%) had depression, 228 (76%) anxiety and 88 (29.3%) had stress with insomnia in 223 (74.33%) patients. 273 (88.06%) participants had perception of transmission of disease to babies and 214 (69.03%) expected bad outcome for newborn.

During the COVID-19 outbreak, 205 pregnant Iranian women who were receiving care from Tabriz health centers participated in a study that evaluated sadness, stress, anxiety, and the factors that predicted these symptoms in these women. The findings showed that symptoms of anxiety, stress, and depression ranged in severity from light to extremely severe, affecting 32.7, 32.7, and 43.9% of the individuals, respectively. The variables that predicted depressive symptoms included education level, spouse's employment, and marital life happiness. The number of pregnancies, spouse support, education level, and marital life satisfaction were the variables that predicted anxiety symptoms, while the number of pregnancies, household income sufficiency, spouse support, and marital life satisfaction were the variables that predicted stress symptoms.

According to a Canadian study, stress, worry, and depression were more common among pregnant women than they were before to the COVID-19 outbreak. Pregnant women may have psychological consequences from the COVID-19 pandemic. They demonstrated that during the COVID-19 epidemic, pregnant women's symptoms of anxiety and despair rose. Most of the time, stress, anxiety, and depression are not identified or addressed when a woman is pregnant. On the other hand, by recognizing pregnant women who exhibit signs of anxiety and depression and their risk factors, it is feasible to improve the health of both mothers and babies.

According to a Chinese study on the psychological effects of the corona virus epidemic in pregnant women, 28.8% of respondents experienced moderate to severe levels of worry and anxiety, and 53.8% of respondents assessed the outbreak's psychological effects as moderate or severe. Out of the 100 women who were enrolled throughout the study period, 17, 35, and 48 were

in the first, second, and third trimesters of their pregnancies, respectively. None of the women who were enrolled had a history of mental illnesses or postpartum depression from a previous pregnancy. Pregnant women's psychological responses to the COVID-19 pandemic were generally moderate, with a mean score of 36.9 on the Impact of Event Scale-Revised.

A survey conducted on 310 pregnant women in total found that 184 (64.33%) had symptoms of depression, 228 (76%), of anxiety, 88 (29.3%) had symptoms of stress, and 223 (74.3%) had symptoms of insomnia. The majority of the insomnia group (53.81%) was composed of people who were between the ages of 18 and 25. Those with lower socioeconomic class experienced statistically significant insomnia, with 119 (53.36%) against 33 (37.93%) in the non-insomnia group, according to a comparison between the insomnia and non-insomnia groups.

Rationale

In the light of the discussions above it is vital that we conduct research in this regard - promoting and highlighting the challenges, opportunities, and methodology for the scientific community of Pakistan during this testing time of Covid 19. The COVID-19 outbreak poses significant risk to pregnant women, including their mental health. This study investigates the risk factors and challenges which pregnant women faced during the COVID-19 pandemic. It is also aimed to propose an intervention plan to deal with the psychological effects during the pandemic situation.

Methodology

Sample size of 40 pregnant females was taken from Punjab by using snowball and purposive sampling technique. Data was collected online (Google Forms) by using semi-structured questionnaire. Inclusion criteria was recovered Covid-19 patients (symptomatic only). Data was collected after obtaining informed consent from the participants. A demographic detail of every participant was obtained through a bio-data form. After data collection, Descriptive Analysis and Thematic Analysis were done to obtain outcomes of the study.

Results

The sample was based on female (n = 40) with age range 20-35 years who belonged to Punjab, Pakistan. Table 1 shows the demographic characteristics of the sample.

Table 1

Demographic Characteristics of Sample (N = 40)

Demographics	f	%
Age		
20-25	8	20
26-30	20	50
31-35	12	30
No. of Pregnancies		
1st	10	25
2nd	12	30
3rd	14	45
Trimester		
1st	8	20
2nd	14	35
3rd	18	45
Job Status		

Working	16	40
Non- working	24	60

Thematic analysis was carried out. Main themes of the study are challenges and risk factors faced by pregnant women due to COIVD-19 and benefits achieved by researchers due to COVID-19. Table 2 shows the themes of challenges and risk factors.

Table 2

Challenges and Risk Factors faced by Pregnant women due to COVID-19 (N = 40)

Themes (Challenges)	Themes (Risk Factors)
Unable to see doctor	Fear of contamination from myself to family
Miss regular appointments	Close interaction with kids
Screening of COVID – 19 before appointment	Trust issues with new Doctor
Undefined mood swings	Family members outside exposure
Anxiety / depression	Office interaction
Lack of empathy from medical staff	Other helping hands
Non availability / accessibility of previous Doctor	Fear of infection to unborn child
Family restrictions due to COVID-19	Breast feeding
Abscessed about future of child	

Discussion

Pregnant women's psychological status was found to be influenced by age, number of pregnancies, number of trimesters, and working status, according to the demographic's descriptive analysis. These findings are consistent with a different study that found women between the ages of 18 and 30 had a higher risk of psychiatric issues than women over the age of 30. Consistent with the current study's findings, a lower educational attainment was also linked to a higher prevalence of anxiety and depression. Higher educated individuals are probably more conscious of the need for self-defense and are more likely to actively seek out pertinent data and knowledge about the epidemic through a variety of channels. As a result, they prepare psychologically beforehand and have a weaker cognitive bias toward pandemic diseases. The findings showed that the likelihood of anxiety or depression decreased with increasing gestational age, which may be related to early pregnancy's morning sickness and lack of prior pregnancy experience. Furthermore, the fetus is in a critical period of organ development during the early stages of pregnancy, and the mother's immune system is extremely sensitive. As gestational age and the number of production inspections rise, the chances of mental illness in the middle and third trimesters may progressively decrease.

Because they have additional responsibilities to take care of their family members and other children, pregnant mothers also confront unique problems. However, the requirement for maternity services to provide ongoing care raises the risk of viral infection in this demographic.

Results of the study were obtained after 40 participants underwent thematic analysis. The results showed the difficulties that pregnant women faced, including not being able to see a doctor, erratic mood swings, anxiety and depression, missing routine appointments, medical staff's lack of empathy, the inability to find a previous doctor, the need to screen for COVID-19 before an appointment, limitations on their ability to raise their families, and an obsession with their unborn child.

Anxiety and life satisfaction have a direct inverse relationship, according to the quality of life model of depression and related diseases. A person may thus progressively feel less hopeful

and happy in life if they have always had a low emotional state. The results of this study demonstrated that pregnant women who suffered from anxiety or depression tended to be more concerned during the COVID-19 pandemic. Women who were expecting and had signs of worry or despair required mental health therapy. For this reason, psychological assistance is crucial for mentally ill pregnant women.

Low birth weight and premature birth have been linked to high levels of pregnancy-related anxiety. Prolonged depression during pregnancy may also increase the chance of unfavorable birth outcomes, such as low birth weight, early delivery, and delayed development. These negative results show how important it is to do a thorough mental health evaluation in order to identify pregnant women who are experiencing anxiety or depression throughout the pandemic. One may have more anxiety over ones family's health during this trying period. Consider your mental well-being. While taking efforts to lower your chance of contracting the COVID-19 virus, reach out to family and friends for support. The following risk factors were identified following a thematic analysis: close contact with children, fear of infection from me to my family, distrust difficulties with a new doctor, family members' outside exposure, office interaction, other helping hands, fear of infection to unborn child, and breastfeeding. Current researches reveal that there isn't any proof of the virus secretes itself in the breast milk of an infected mother. Eight female breast milk specimens were studied in China, and the results indicate that no viruses were found in the samples. However, because of droplet infection during breastfeeding, there is a chance that the disease would spread from the infected moms. UNICEF advises mothers to use protective gear, such as masks and shields, when breastfeeding their children. To prevent infection, babies are, however, kept apart from infected moms for two weeks in the majority of facilities. A mother can express her baby's breast milk.

A major issue for global public health is the spread of infectious diseases brought on by new coronaviruses. Pregnant women are a high-risk population in this pandemic. Little is known about the impact of COVID-19 on expectant mothers and their unborn children. Every day, there are more and more cases.

The purpose of this study was to improve knowledge of COVID-19 by providing evidence-based information about the effects of coronavirus on pregnancy. The data collected is arranged according to five primary themes: clinical COVID-19 symptoms during pregnancy, risk of vertical transmission, breastfeeding-related concerns, prenatal and labor care, and preventative measures. Pregnant women who have coronavirus infection exhibit the same clinical symptoms as the general population. There's not much data to support a vertical transmission risk. All pregnant women, whether or whether they are suspected of being infected, have a right to the best prenatal and labor care, which must be provided in accordance with established protocols. Breastfeeding is recommended, either with complete protection against droplet infection transmission or with manual milk expression. Vaginal birth is a safe delivery method, and expectant mothers should adopt public health preventive measures to avoid contracting the virus (Sohail, & Dar, 2020).

Implications/Recommendations of Study

Pregnant women should learn infection prevention techniques from their healthcare professionals since they are more vulnerable to infections because of physiological changes. The literature suggests that pregnant women should heed the same precautions as non-pregnant people to prevent contracting the virus. These precautions include frequent hand washing, hand hygiene, being careful when coughing and sneezing, avoiding contact with people who have fever and dry cough, avoiding needless public transportation use as much as possible, working from home if at all possible, avoiding both large and small gatherings in public spaces and restaurants as infections

spread easily in closed spaces where people gather, and staying in touch with friends and family via social media, phone, and internet When contacting your general practitioner or other important services, try to use phone or internet services. Besides this there are some recommendations for the better mental and physical health of pregnant women as follows:

- A wide range of print , electronic and social media campaign be launched to improve awareness of targeted populace
- Concerned quarters in respective hospitals to establish Emergency Crisis Centers (circulate special brochures / emergency call Numbers)
- Designated ambulance service be detailed for conveyance of patients from residence to hospitals (segregate regular patients from Covid -19 infected)
- Trained psychologists be earmarked to exercise parallel counseling of infected patients alongside medical specialists (especially during pre/post natal mood swings & for follow up sessions)
- Free medical camps alongside mobile first aid service be established for common masses to provide timely support
- Provision of virtual training group to reduce anxiety caused by corona virus and pregnancy concerns

Intervention Plan

A proposed intervention approach aims to address the pressures faced by pregnant women in the context of the epidemic. Donald Meichenbaum, a psychologist, created Stress Inoculation Training (SIT), a form of cognitive-behavioral therapy, to assist people manage stress (1980). The basic idea behind SIT is that by subjecting participants to escalating perceived stress levels, they practice using various coping mechanisms and, in the end, build up a tolerance or immunity to a certain stimulus.

Stress Exposure Training is one SIT adaptation (SET). Driskell and Johnston's original proposal, SET, adopts a marginally different strategy. Its overall framework is comparable to the cognitive behavioral method developed by Meichenbaum. It is divided into three analogous phases:

1. Information provision – This section offers details on the stress reaction in humans, the kinds of environments participants can anticipate, and other prepared material.
2. Skills acquisition – The goal of this phase is to enhance and develop cognitive, technical, and behavioral skills.
3. Application and practice – During this phase, skills are practiced in environments that are similar to the operational setting and progressively increase in stress level.

SET differs from other approaches because it adopts a proactive stance. It gets people without psychiatric disorders ready for things like stressful events and possible stressors. This modified version can be used through tele counseling during the COVID-19 pandemic.

Conclusion

During the COVID-19 pandemic, pregnant women are more likely to experience anxiety and sadness. Age, cultural level, and pregnancy trimester all have an impact on their psychological state. The development of the fetus greatly depends on a healthy psychological state throughout pregnancy. Consequently, we ought to focus more on the psychological state of expectant mothers during the COVID-19 pandemic. It is critical to give pregnant women with mental illnesses timely psychological care and to boost their self-esteem as capable mothers.

Bibliography

Ahmad, Monica, and Laura Vismara. "The Psychological Impact of COVID-19 Pandemic on Women's Mental Health during Pregnancy: A Rapid Evidence Review." International Journal of

Environmental Research and Public Health 18, no. 13 (July 2021): 7112. doi:10.3390/ijerph18137112.

Bennett, Heather A., Adrienne Einarson, Anna Taddio, Gideon Koren, and Thomas R. Einarson. "Prevalence of Depression during Pregnancy: Systematic Review." Obstetrics & Gynecology 103, no. 4 (April 2004): 698-709. doi:10.1097/01.AOG.0000116689.75396.5f.

Chen, S., J. Zhuang, Q. Chen, and X. Tan. "Psychological Investigation on Pregnant Women during the Outbreak of COVID-19." Preprint. Research Square, June 2, 2020. https://doi.org/10.21203/rs.3.rs-28455/v1.

Chen, Shaoqi, Jiamian Zhuang, Qingzi Chen, and Xue-Rui Tan. "Psychological Investigation on Pregnant Women during the Outbreak of COVID-19." Preprint. Shantou University, August 2020. doi:10.21203/rs.3.rs-34763/v1.

Chen, Shaoqi, Jiamian Zhuang, Qingzi Chen, and Xue-Rui Tan. "Psychological Investigation on Pregnant Women during the Outbreak of COVID-19." Preprint. Shantou University, August 2020. doi:10.21203/rs.3.rs-34763/v1. CC BY 4.0 License.

Durankuş, Ferit, and Erson Aksu. "Effects of the COVID-19 Pandemic on Anxiety and Depressive Symptoms in Pregnant Women: A Preliminary Study." Journal of Maternal-Fetal & Neonatal Medicine 35, no. 2 (January 2022): 205-211. doi:10.1080/14767058.2020.1763946.

Frisch, Michael B. "Evidence-Based Well-Being/Positive Psychology Assessment and Intervention with Quality of Life Therapy and Coaching and the Quality of Life Inventory (QOLI)." In Social Indicators Research 114, no. 2 (November 2013). doi:10.1007/s11205-012-0140-7.

Kajdy, A., S. Feduniw, U. Ajdacka, J. Modzelewski, B. Baranowska, D. Sys, and H. Jasiak. "Risk Factors for Anxiety and Depression among Pregnant Women during the COVID-19 Pandemic: A Web-Based Cross-Sectional Survey." Medicine 99, no. 30 (2020).

Lee, Dominic T.S., Daljit Sahota, Tse N. Leung, Alexander S.K. Yip, Fiona F.Y. Lee, and Tony K.H. Chung. "Psychological Responses of Pregnant Women to an Infectious Outbreak: A Case-Control Study of the 2003 SARS Outbreak in Hong Kong." Journal of Psychosomatic Research 61, no. 5 (November 2006): 707-713.

Li, Sijia, Yilin Wang, Jia Xue, Nan Zhao, and Tingshao Zhu. "The Impact of COVID-19 Epidemic Declaration on Psychological Consequences: A Study on Active Weibo Users." International Journal of Environmental Research and Public Health 17, no. 6 (March 19, 2020): 2032. doi:10.3390/ijerph17062032.

Poon, Liona C., Huixia Yang, Anil Kapur, Nir Melamed, Blami Dao, Hema Divakar, H. David McIntyre, Anne B. Kihara, Diogo Ayres-de-Campos, Enrico M. Ferrazzi, Gian Carlo Di Renzo, and Moshe Hod. "Global Interim Guidance on Coronavirus Disease 2019 (COVID-19) during Pregnancy and Puerperium from FIGO and Allied Partners: Information for Healthcare Professionals." International Journal of Gynaecology and Obstetrics 149, no. 3 (June 2020): 273-286. doi:10.1002/ijgo.13156.

Rasmussen, Sonja A., John C. Smulian, John A. Lednicky, Tony S. Wen, and Denise J. Jamieson. "Coronavirus Disease 2019 (COVID-19) and Pregnancy: What Obstetricians Need to Know." American Journal of Obstetrics & Gynecology, March 2020. PMID: 32105680. PMCID: PMC7093856. doi:10.1016/j.ajog.2020.02.017.

Rasul, S., A. Bowen, and N. Muhajarine. "Factors that Moderate or Mediate Pregnancy Complications in Women with Anxiety and Depression." Journal of Preg Child Health 4 (2017): 360–366.

Serafim, Joab Lins, José Vinício de Andrada Oliveira Zeferino, Lílian Karine Machado De Souza, Isadora Maria Campos Barbosa, Paloma Luna Maranhão Conrado, Pauliana Valéria Machado Galvão, George Conrado, and Valda Lucia Moreira Luna. "Impacts of the COVID-19 Pandemic on the Mental Health of Pregnant Women." Contribuciones a las Ciencias Sociales 16, no. 7 (July 2023): 5516-5529. doi:10.55905/revconv.16n.7-020.

Sharififard, Fatemeh, Hamid Asayesh, Mahsa Haji Mohammad Hosseini, and Mohammadreza Sepahvandi. "Motivation, Self-Efficacy, Stress, and Academic Performance Correlation with Academic

Burnout among Nursing Students." Journal of Nursing and Midwifery Sciences 7, no. 2 (January 2020): 88. doi:10.4103/JNMS.JNMS_30_19.

Sohail, S., and L. R. Dar. "Pandemic of COVID-19 and Pregnancy." Biomedica 36 (2020).

Stumpfe, Florian M., Adriana Titzmann, Michael O. Schneider, Patrick Stelzl, Sven Kehl, Peter A. Fasching, Matthias W. Beckmann, and Armin Ensser. "SARS-CoV-2 Infection in Pregnancy - A Review of the Current Literature and Possible Impact on Maternal and Neonatal Outcome." Geburtshilfe und Frauenheilkunde 80, no. 4 (April 2020): 380-390. doi:10.1055/a-1134-5951.

Vigod, Simone N., Claire A. Wilson, and Louise M. Howard. "Depression in Pregnancy." BMJ (March 24, 2016): i1547. doi:10.1136/bmj.i1547.

Wasim, Tayyiba, Mustafa Wasim, Gul e Raana, Natasha Bushra, Javeria Mushtaq, and Humaira Zulfiqar Saifi. "Impact of COVID-19 on Mental Health of Pregnant Women Attending Tertiary Care Hospital." Esculapio Journal of SIMS 16, no. 1 (2020): Volume 16, Supplement 01, special COVID-19 issue. doi:10.51273/esc20.716sp1-covid-2.

Zhukov, H., Wei, L., and Niu, P. (2020).