**ORIGINAL RESEARCH ARTICLE**

# The impact of COVID-19 on prenatal anxiety in women: A study in Rawalpindi, Pakistan

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## Abstract

The COVID-19 pandemic has significantly impacted individuals with pre-existing mental health conditions, especially pregnant women experiencing anxiety. The impact of COVID-19 on individuals with pre-existing mental health conditions is significant. This study looked at how the pandemic affected women with prenatal anxiety symptoms from lower socioeconomic backgrounds in Rawalpindi, Pakistan. The study was part of an ongoing trial focusing on psychosocial support for prenatal anxiety at a public hospital. It involved 27 women who either had or were receiving the intervention for anxiety. Among them, 13 were in their third trimester of pregnancy, and 14 were in the postnatal period. Data was collected through in-depth interviews and analyzed using framework analysis. The findings showed that during the pandemic, these women experienced higher levels of anxiety. This was linked to financial difficulties, worries about the availability of proper obstetric care, and a lack of trust in healthcare providers. The women also feared for their own and their babies' health and safety, especially due to concerns about contracting COVID-19. The research highlights that effective interventions to manage anxiety could help reduce mental health issues among pregnant women, especially in times of crisis like the COVID-19 pandemic *(Afr J Reprod Health 2025; 29 [5]: 166-178)*

**Keywords:** Pregnancy, lockdown, lockdown, anxiety, Pakistan

## Résumé

La pandémie de COVID-19 a eu un impact significatif sur les personnes souffrant de troubles mentaux préexistants, en particulier les femmes enceintes anxieuses. L'impact de la COVID-19 sur ces personnes est significatif. Cette étude a examiné l'impact de la pandémie sur les femmes présentant des symptômes d'anxiété prénatale issues de milieux socio-économiques défavorisés à Rawalpindi, au Pakistan. Cette étude s'inscrivait dans le cadre d'un essai clinique en cours portant sur le soutien psychosocial pour l'anxiété prénatale dans un hôpital public. Elle a porté sur 27 femmes ayant bénéficié ou bénéficiant d'une intervention pour leur anxiété. Parmi elles, 13 étaient au troisième trimestre de grossesse et 14 en période postnatale. Les données ont été recueillies par le biais d'entretiens approfondis et analysées à l'aide d'une analyse cadre. Les résultats ont montré que pendant la pandémie, ces femmes ont ressenti un niveau d'anxiété plus élevé. Ce phénomène était lié à des difficultés financières, à des inquiétudes quant à la disponibilité de soins obstétricaux appropriés et à un manque de confiance envers les professionnels de santé. Ces femmes craignaient également pour leur santé et leur sécurité, ainsi que pour celles de leur bébé, notamment par crainte de contracter la COVID-19. La recherche souligne que des interventions efficaces pour gérer l'anxiété pourraient contribuer à réduire les problèmes de santé mentale chez les femmes enceintes, notamment en période de crise comme la pandémie de COVID-19. *(Afr J Reprod Health 2025; 29 [5]: 166-178).*

**Mots-clés**: Grossesse, confinement, anxiété, Pakistan

## Introduction

As early as 2019, the World Health Organization (WHO) envisioned COVID-19 as a public threat that needs to be managed urgently.[1] Most attention was placed on the physically impaired caused by the pandemic; however, some studies indicated that it created extreme emotional and psychological trauma among many people.[2-4] In a review of nineteen studies, it was established that a substantial number of individuals had high levels of psychological distress during COVID-19. For some individuals, this distress was tragic to the extent of being classified as a mental health issue.[5]

Vulnerable populations bear horrific consequences in the event of pandemics, including poor people, those suffering from health conditions, and even pregnant women.[6] Research that focused on 2,740 pregnant women in America highlighted that COVID-19 negatively affected their mental health to a great extent. It increased their pregnancy-related anxiety[7]; Studies of this kind were conducted in other countries, for instance, Canada, 8, Iran, 9, and China 10, established that pregnant women had high levels of anxiety during the pandemic period. This indicates that the pandemic of COVID-19 contributed immensely to the increase in anxiety levels among pregnant women across the globe.[11]

Domestic violence, loneliness, and stress related to the reception of prenatal services are among the causes of anxiety and depression in pregnant women. Several pregnant women surveyed also expressed concerns about their health and the health of their infants during the pandemic;[12] Such worries influenced their birth plans.[13] The inability to contract COVID-19 or infect their babies was one of the most stressful challenges faced. There was also concern that care would be unavailable when it was necessary for pregnancy and childbirth.

In Pakistan, the first case of COVID-19 was officially reported in February 2020. [14] It is important to note that the pandemic greatly affected the already weak healthcare and economic systems in Pakistan. The country has reported poorer medical anxiety levels than many other low and middle-income nations before the pandemic. [15] Psychosocial anxiety and stress were especially experienced among pregnant women and new mothers during the pandemic. The absence of healthcare and mental health services exacerbated the suffering and hardship faced by these women.[16]

Despite there being many works that were concerned with the broader consequences of the pandemic, not enough attention was paid to research devoted to how women with anxiety predispositions cope with stress barriers, notably during the later stages of pregnancy and in the postpartum period. This research sought to address that shortcoming by assessing the experiences of expectant women on their anxieties aggravated by Sars-CoV-2 virus infection during the period of pregnancy and early postpartum in Pakistan. The research aimed to comprehend the mental health concerns, issues, and stresses these women went through and try to inform them of the specific challenges that these women went through.

The Transactional Model of Stress and Coping created by Lazarus and Folkman (1984) can shed light on how pregnant women developed anxiety during the COVID-19 pandemic. This model emphasizes the evaluation and coping mechanisms of individuals during times of stress. In the case of pregnant women during the pandemic, the stress factors were high. Among these stressors were the fear of contracting the virus, concern about the health of the unborn children, economic hardships, and difficulty in obtaining medical help. Following the model, people evaluate such conditions when such challenges are confronted first. For these women, such women, the pandemic was perceived as a risk to their health in addition to that of their unborn children. They have a general perception and tendency to view the virus as highly infectious, and therefore, the act of getting exposed to it would cause detrimental effects in addition to the effects on their newborn babies. Such a construct caused large-scale anxiety as it perceived the pandemic as a threat.

In the second part of the Transactional Model, the author explores individuals' subjective side, particularly how individuals manage stress. Concerning the pregnant women, coping mechanisms relied on the resources they had at their disposal. Most women in your study lacked the financial means to access private hospitals and could not go to state clinics overloaded by coronavirus cases. Therefore, they had no choice but to use other untrusted sources of information, such as social networks. Some women, for example, used masks and sanitizers, but their circumstances did not allow them to cope with the challenges effectively. Many people were in a situation where they did not have an option but to monopolize their households, which induced oppressive and alienated feelings. They were also deprived of social interaction with their relatives, whom they usually saw at home, which was a source of stress. Some women even developed a phobia because they were convinced health professionals were going to hurt them or their

babies due to the false information and the psychological effect of the rumors during the outbreak of covid 19. The distrust of professionals and the scarcity of services contributed to these women's ineffective coping with the situation. Although women employed coping strategies, the extreme imbalance of the circumstances and shortage of tools contributed to severe anxiety interfering with their attempts.

This study aims to address one specific gap in the literature, namely the effect of the lockdown sociocultural and health changes on pregnant women and women with anxiety before pregnancy and how those women perceive and cope with stress in such extreme times. Based on the Transactional Model of Stress and Coping, this research seeks to analyze their assessment of COVID-19-related stressors and the response options they exercised concerning the threat that the virus emerged towards their health and general well-being.

# Methods

This study was part of the Happy Mother Healthy Baby (HMHB) randomized controlled trial, which tests the effectiveness of a psychosocial intervention for prenatal anxiety.[17] This qualitative study is part of an ongoing trial assessing psychosocial interventions for prenatal anxiety. Participants were recruited through convenience sampling from the gynecology wards of Holy Family Hospital, Pakistan Institute of Medical Sciences, and Shifa International Hospital. Data was collected systematically in all three sites to control for representational bias. To take part, women needed to be 18 years or older, less than 22 weeks pregnant, living within 20 km of the hospital, able to understand spoken Urdu, and have mild anxiety, as indicated by a score of 8 or higher on the Hospital Anxiety and Depression Scale (HADS).[18] They also needed to be free of depression, as determined by a Structured Clinical Interview for DSM Disorders (SCID). Participants were chosen from the intervention group based on age, education, and number of children, ensuring a diverse sample. The intervention took place between June and September 2020 during the COVID-19 pandemic.

The COVID-19 pandemic reached Pakistan on February 26, 2020, and a partial lockdown was implemented on March 24, 2020. Healthcare services were adjusted to balance emergency, specialty, and outpatient services while following safety protocols.[19] Pakistan's first wave of COVID-19 cases began in late May 2020, peaked in mid-June, and ended in mid-July. During this time, strict measures were enforced, including the closure of outpatient departments and schools, as well as a ban on intercity, inter-district, and interprovincial travel and large gatherings.[20]

### *Data collection*

Data were primarily gathered using telephone interviews with 27 women. Subjects were briefed concerning the aim of the study, and their consent and the right to withdraw were obtained over the phone before any interview. Of the 29 women approached for this study, 27 volunteered, while two did not due to lack of time. An interview guide was developed, pre-tested on two women, and modified subsequently. The following topics guided the interviews: (1) the way the participants perceived the COVID-19 pandemic, (2) the concerns women had mainly regarding bearing a child and a newborn, (3) participants' physical and psychological well-being during COVID-19, and (4) their interactions with health providers during the period of the pandemic. The order in which the interviews were conducted was according to the participants' preferences. Such time intervals were allowed within the conception that confidentiality could not be maintained during the interview. A total of 27 participants were selected using convenience sampling from the gynecological wards of Holy Family Hospital, Pakistan Institute of Medical Sciences, and Shifa International Hospital. Nine participants were drawn from each hospital to balance each site's representation. Recruitment was done during regular prenatal appointments. Midwives spotted eligible women, who were later approached by research staff.

Two trained research assistants, previously acquainted with qualitative interviewing, conducted the interviews. Furthermore, they were provided training in telephone interview

techniques, including rapport building, confidentiality, participant motivation, technical difficulties, and distress cues. The interviewers also bore in mind that an interview should be put on hold if the respondent voiced ideas about self-harm or harm to other persons. They adhered to a standardized risk assessment strategy, the standard questions of which included the frequency of such thoughts, plans to fulfill them, and the availability of means for such acts. Where there was doubt, the interviewers reported to a psychiatrist member of the study's team for guidance on the potential actions to take, including the suggested services. All the interviews were audio-taped and lasted 30 to 45 minutes. Afterward, they were translated into Urdu and examined by the research team.

### *Data analysis*

The data in this research study was collected and analyzed using framework analysis, a method characterized by systematic and transparent data analysis.[20] This procedural method comprises five steps: familiarization, coding, indexing, charting, and mapping and interpretation.[21] Once an interview was transcribed, the data was analyzed in depth on several occasions, looking for core codes, sub-themes, and themes. A thematic framework was constructed, and each sub-theme and theme was indexed and applied to the raw data. The indexed data were then organized into thematic descriptions later in the analysis. These charts' important elements were analyzed to discover links and sequences that proved helpful in data interpretation.

Data were analyzed using Braun and Clarke's (2006) six-phase thematic analysis framework to ensure systematic examination of patterns. This involved (1) transcribing and familiarization with all interviews, (2) generating initial codes, (3) searching for themes, (4) reviewing themes against the dataset, (5) defining/naming themes, and (6) producing the final report. NVivo 12 software facilitated coding organization. Three researchers independently coded a subset of transcripts, achieving 85% inter-coder agreement before resolving discrepancies through discussion. The analysis identified three primary themes: (a) pregnancy-specific anxiety triggers, (b) structural barriers to healthcare access, and (c) evolving social support needs across trimesters. Member checking with five participants enhanced credibility.

In order to enhance the validity of the analysis, each transcript was subjected to independent scrutiny by two researchers. Subsequently, the conclusions were discussed with a senior researcher, and all questions of controversy were settled with the assistance of the primary data and the details of the area. The researchers tried to be honest and included all interpretations in the analysis. This was possible as researchers held regular interactions within the research team, reflecting on the analysis process and arguing about how the data had been understood.

### *Respondents profile*

The sample population consisted of 27 women, 13 of whom were already pregnant and in their third trimester, and 14 had already delivered and entered the postnatal stage. When asked about their age, the respondents were mostly in their twenties or early thirties, which indicates that the age demographic is young. Regarding educational background, schooling was completed for most women with at least an average of five years, demonstrating minimal literacy. Regarding family composition, 21 27 respondents lived in joint families, comprising their children, husbands, and husbands' parents and/or brothers/sisters. Family structure is also often reported in the area, and it is important for social relations and support during pregnancy and after birth. Table 1.

## Results

As the world struggled under the pressure of the COVID-19 pandemic, a family member, a friend, a health professional, a television program, and even an SMS were officers in that battle. Such a spectrum of information helped promote awareness of the pandemic and take preventive measures. Many people reported using things like information on their televisions that provided essential protection measures, and viruses were avoided. On the other hand, others believed these guidelines were contradictory and uncertain, confusing them.

**Table 1:** Respondents characteristics

| Category | Details |
|---|---|
| Total Sample Size | 27 women |
| Pregnancy Status | -13 women in the third trimester of pregnancy \n - 14 women in the postnatal stage |
| Age Group | Mostly in their twenties or early thirties |
| Education Level | Average of at least 5 years of schooling (minimal literacy) |
| Family Structure | - 21 out of 27 living in joint families \n - Joint families include children, husbands, and in-laws |
| Significance | A joint family structure provides social support during pregnancy and postnatal care. |

**Table 2:** Themes and subthemes from qualitative analysis (n=27**)**

| **Main Theme** | **Subtheme** | **% of Participants Reporting (n)** | **Representative Quote** |
|---|---|---|---|
| Sources of COVID-19 Information | Family/friends as sources | 74% (20) | *"People say there are so many stories... bat soup caused the virus."* |
| | Health professionals as sources | 63% (17) | *"Therapists in sessions shared guidelines."* |
| | Media (TV/SMS) as sources | 85% (23) | *"We followed guidelines from television."* |
| Confusion About Guidelines | Contradictory messages | 56% (15) | *"Some say the virus is a hoax; others say it is real."* |
| | Doubts about virus transmission | 41% (11) | *"I heard a girl near my mother's house had the virus."* |
| Behavioral Changes | Adopted preventive measures | 89% (24) | *"We wash hands, wear masks, and stay home."* |
| | Avoided hospitals | 67% (18) | *"I skipped antenatal care to avoid infection."* |
| Emotional Impact | Increased anxiety | 78% (21) | *"Seeing deaths on TV made me think about dying."* |
| | Financial stress | 52% (14) | *"We have no savings; how long can we wait?"* |
| Delivery Concerns | Fear of hospital overcrowding | 63% (17) | *"Where will I deliver if hospitals are full?"* |
| | Distrust in healthcare providers | 37% (10) | *"They inject babies with dangerous drugs."* |
| Lockdown Effects | Social isolation distress | 59% (16) | *"I could not attend weddings or funerals."* |
| | Positive aspects (e.g., family time) | 26% (7) | *"Lockdown, let me focus on prayers and family."* |

There were many different accounts about the virus's transmission method; some people even doubted the existence of the virus and saw no reason why they should not self-isolate.

Even with these mixed messages, the majority rose to the challenge of breaking such bad habits and learned to wash their hands, wear face coverings, and stay at least six feet apart. As the volume of information increased, the number of those who became anxious also rose. For instance, after initial apathy, people became anxious upon starting to receive news of increasing deaths as the figures of daily deaths had been rising quite rapidly, increasing concern for death spread. One more reason that can be speculated for and can explain this phenomenon is that many people, for instance, a large number, would not go for antenatal check-up appointments as they tried to avoid going to the hospital in case of communicable disease transmission. Table 2

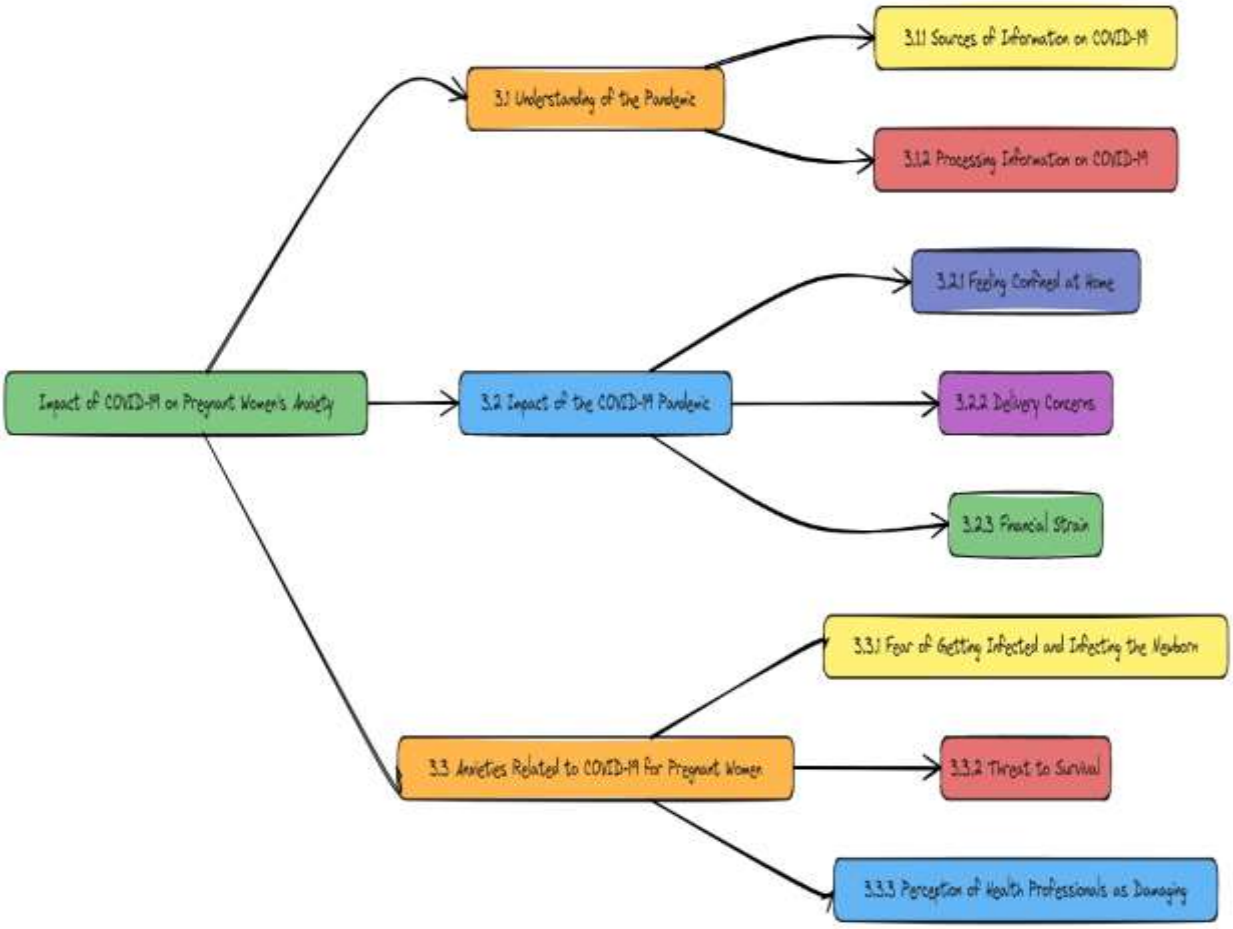


**Figure 1:** Understanding of the pandemic

### *Sources of information on COVID-19*

Most women in the research received COVID-19 information from various sources, such as family members and friends, health providers, television, phone messages, and even the HMHB therapists running the sessions. This awareness assisted them more comprehensively in the management of the pandemic and in taking the proper measures. In the example given, a 34-year-old woman explained how TV information assisted her and her daughter: *'Yes, my daughter and I are healthy because we followed the guidelines, which we heard from the television. I could have contracted the virus if I did not adhere to these guidelines*. Nevertheless, several patients reported feeling perplexed by the material they had received, describing it as paradoxical. A participant, for example, reported that a woman known for eating bat soup was at the center of the stories about the virus's origin. *"People say there are so many stories that I heard about bat soup and a woman eating the bat, which caused the virus."* Such a young woman even had limited reading ability. She claimed: "*There is a girl who lives everywhere around my mother's house who has the virus. Some people say the virus is a hoax, while others claim it is real. This is why we primarily stay indoors"*.

### *Processing information on COVID-19*

Most participants expressed that the mass media campaign assisted them in learning about the spread of the virus and the reasons for adherence to the safety measures. Similarly, in March 2020, the Ministry of Health in Pakistan urged the public in a campaign, "*We have to fight, not be afraid, of the coronavirus." Some respondents reported they*

*were not scared of the virus but were concerned about doing things right*. A young woman in the extended family commented: *"There is no need to be scared. We have to engage it through frequent hand washing, putting on face and hand masks when going out, and hand sanitization after returning"*.

Some participants, on the other hand, reported an increase in anxiety as they comprehended more information about the virus. One woman stated, *'I did not know much about the COVID-19 virus before, so I was not scared. We do not go out much, so I did not hear much. However, now, after watching the television and seeing people die, I am scared*. Other participants reported on such occasions frequently experiencing death-related thoughts. '*When I saw on television such several people dying of COVID-19 and these figures only increased every day, I was thinking about death all the time.'* Several women also said they postponed antenatal care appointments because they were worried about being infected. A participant noted: "*I was told the virus can give you a nasty infection with high fever and cough, and it spreads quickly. So I just decided not to go to the hospital where there are many people, for instance. There are so many patients with coronavirus in the hospitals"*.

### *Impact of the COVID-19 pandemic*

The COVID-19 pandemic brought many complications to the lives of pregnant women, increasing levels of stress and anxiety. There was excessive stress and anxiety due to the fear of contracting the virus, especially since pregnant women were believed to be more at risk. Consequently, many chose to stay home to remain safe, only going to the hospital for check-ups and other formalities. Several pregnant women could not access primary healthcare services during the COVID-19 lockdown due to the closure of hospitals and a shortage of medical care. Some were worried about where they would give birth, as hospitals were filled with COVID-19 patients.

The effects of the pandemic were not only on health; many women were also impacted financially. With job opportunities destroyed and businesses closed, some found obtaining even basic necessities and medical care difficult. This added further pressure, as they were concerned about how they would support and provide for their families.

### *Feeling confined at home*

The COVID-19 pandemic has changed the day-to-day life of a more significant part of women who were most affected by the restrictions placed on their movement in and out of the house. Due to social distancing and lockdown protocols, many women could not perform their routine responsibilities, such as shopping, visiting relatives, or attending functions like weddings and funerals. Such activities were, for most, a healthy diversion from their everyday day-to-day stresses and provided them with emotional comfort, but during the pandemic, all this changed without warning. People faced solitude and anxiety since there were no opportunities to be with friends and relatives or go to any parties or events.

For the case of pregnant women, the worries were even more significant. Public health officials suggested they minimize their mobility because this demographic group's chances of getting COVID-19 were more pronounced. This type of advice further escalated the state of imprisonment in the house, as many felt they had to stay indoors without engaging in normal routines outside the home. The anxiety regarding getting infected by the virus was supported by the belief that pregnant women were at a higher risk of contracting the virus than non-pregnant women, hence the reluctance in women to leave the house.

In contrast, however, some women reported that the lockdown brought tranquillity. Deprived of social engagements, they could concentrate more on household activities, including prayers, reading, and spending time with their nuclear family. For some, the absence of societal demands was an advantageous shift, allowing them to devote time to themselves and their families. On the other hand, for some, being unable to meet with family or participate in regular activities provoked a sense of stress and sadness. Disturbance from the broader family during the time of pregnancy, which is often critical, leads to feelings of emptiness. For some women, the lack of social interaction was one of the barriers to coping.

### *Delivery concerns*

The pandemic posed several difficulties for pregnant women, especially with gynecological services and childbirth preparation. The overwhelming volume of COVID-19 patients in the hospitals resulted in many expecting mothers not being able to avail of the required services. Most women would go to government hospitals for such services. However, the hospitals had become application-specific to COVID-19, so many non-COVID services, including both in-patient and out-patient services, especially delivery services, were barred. This posed a huge problem to many women as they did not know where they would be able to go for delivery.

Apart from the high volume of patients at healthcare facilities, some women also had economic challenges that made it hard to seek private healthcare. With millions of people, including spouses of many people, losing their jobs during the lockdowns, private healthcare, which many people shunned during the lockdown was deemed safe, was much harder to pursue. Many expectant women experienced considerable anxiety and distress as a result of not knowing where they would give birth and who would be available to help them.

This anxiety was further aggravated by reports attesting to the abandoning of women at the hospitals and lack of access to necessary services due to personnel's fatigue and enormous workload. Some women narrated their traumatizing memories of other pregnant women being treated poorly at overcrowded hospitals, which always left them traumatized and terrified. The prospect of giving birth unattended in the absence of infrastructure sent many women into a fierce kind of disquiet, which heightened the already high anxiety associated with pregnancy and delivery.

### *Financial strain*

The stressors arising from the financial distress associated with the COVID-19 pandemic were novel concerns that affected not only a minority but all women during that period. The COVID-19 lockdown affected many businesses, which caused many to lose their sources of income, creating significant financial strain. For expectant mothers, these challenges were heightened as the additional costs of seeking medical attention in the form of antenatal visits, drugs, and giving birth were required. Such expenses were sometimes a source of stress since expenses were, in most situations, not coming in due to income loss.

In some cases, more women were disadvantaged because they could not seek health services in government facilities as COVID-19 cases were prioritized. Hence, they sought private health services, which were costly for many. This scenario compounded the ambiguity of how they would meet their healthcare needs when pregnant and during delivery.

The financial strain had an impact on interpersonal relationships, too. Frustration and despair were voiced, particularly when women's husbands were unemployed and unable to provide for the household. Much of this resulted in arguments within families, especially when women believed their men were not meeting the family's expectations. Some of these problematic aspects of interactions led to the nurture of severe emotional instability, with some women going as far as wishing death on themselves or deserting their families. Also, some women were driven to borrow funds, which again created more anxiety and stress as there was the added burden of repaying the loans in an unstable economic setting.

### *Anxieties related to COVID-19 for pregnant women*

Pregnant women experienced high levels of anxiety during the COVID-19 pandemic due to the fear of being infected and the risk of transmitting the virus to their newborn babies. Many women were afraid of leaving their homes, compounded by the anxiety that family members could go out and contract the virus. One of the women with a newborn baby explained: '*I used to worry very much about somebody bringing the virus into the house.*' Observing how hospitals were overcrowded with COVID-19 patients, the possibility of obtaining basic treatment also unnecessarily heightened their stress levels. Even more so, those living in congested homes were under stress because they could not afford private medical care. Some

suffered from a lack of faith in doctors and other forms of medical assistance; therefore, they feared receiving practical help or that something terrible would happen to them or their babies in the hospitals. In this sense, these kinds of tensions increased the difficulties faced by pregnant women during this critical period.

### *Fear of getting infected and infecting the newborn*

Low-income women living in overcrowded households with several family members had fears of becoming infected with and transmitting COVID-19. They were particularly concerned about their children or other family members going out and returning home with the virus. A woman with a nine-week-old child reported the dread she experienced every time someone left the house. She said, *"I do not do anything outside. I was scared and nervous all the time. I feared that if someone went out, the person would bring the virus home."* Such fears were not unfounded since she was also worried about getting the virus during her pregnancy and passing it on to her infant.

Some women expressed great concern over the thought of falling ill and being unable to look after their newborns or other children. A participant with two children narrated, *"In fact, until now, if one makes me remember this period, I feel very sad. Long back when I was ill, I was 'always' scared that if I got sick, I would not be able to look after my children."* Not all women, however, stated the same attitude. Some believed simple precautions like a mask and hand sanitizer would be adequate. One mother said, *"I am not afraid. I believe that I can protect myself and that nothing that is not within Allah's will will happen."*

### *Threat to survival*

The pandemic also posed economic difficulty to different groups of women. Their spouses were laid off and without income elsewhere, so they were anxious about their economic welfare in such situations. One expectant mother of a fifth child was worried about many things; given their current situation, she stated: *"We are in trouble, and there is not much left in the savings. For how long do you expect to wait? If this closure lasts, we can become hungry."* Many other respondents were also stressed about becoming homeless due to an inability to pay rent. A mother of a four-month-old baby said, *"I am anxious about where we will go if we have to leave everything just because we do not have money to pay the lease."*

### *Perception of health professionals as damaging*

Several women expressed their total mistrust of healthcare, especially government hospitals. They were apprehensive that receiving medical assistance would endanger them or their unborn babies. For instance, one pregnant woman refused to go to a government hospital due to the popular belief that it was likely doctors were going to inject her newborn baby with dangerous drugs forcibly. She said, *"I heard that the people who worked at the hospitals were injecting the babies, and then they were killing them. I think I cannot trust them anymore."* One of the women, who had a baby and was anxious about her delivery, remembers being advised not to go to the government hospital since it was swamped with COVID-19 patients. Such women reasoned that hospitals were places of danger, claiming, *"They will slaughter us with injections if we go there."* This negative attitude towards healthcare providers made some women not seek medical attention at all as they feared that going for treatment would further endanger them

## Discussion

The lockdown also prevented participants from attending essential activities like antenatal checkups, shopping, and socializing with family and friends. Many women felt isolated and unsupported, which worsened their anxiety. Not being able to visit their maternal homes, an important source of support during pregnancy, or attend significant family events made them feel more alone. The feeling of being trapped at home, combined with the loss of outside distractions, increased anxiety.

This study highlights the need for more research to explore how COVID-19-related anxiety affects mental health outcomes during pregnancy

and the postnatal period. It also suggests that interventions need to be adapted to address the unique challenges posed by the pandemic, such as mistrust in healthcare providers and financial barriers to accessing care.

This qualitative study focused on examining the periods within and after pregnancy in women who had anxiety symptoms before the COVID-19 pandemic. The results indicated that women's levels of anxiety increased during the pandemic primarily due to economic hardship, overstretched health systems, and distrust of health professionals. Many women were anxious not only about their health but also about the well-being of their children. Most participants reported feeling anxious about being outdoors and potentially infecting their babies, so they stayed indoors.

The economic consequences of the COVID-19 pandemic were especially grave in the case of Pakistan. Statistics show that even before the pandemic hit, 24.3% of the individuals in the country were poor.[22,23] According to a socioeconomic impact of COVID-19 survey conducted by the Pakistan Institute of Development Economics, around 78% of the respondents faced financial uncertainty, and 64% reported lower earnings in comparison to previous times due to adverse effects of the pandemic.[24, 25] Daily wage workers suffered the most during lockdowns as they could not satisfy even their fundamental necessities. Many households became food insecure due to business closures and mass unemployment. 78% of the respondents in the survey conducted by Sayan et al. reported that their households experienced more food shortages than before the pandemic. These difficulties have been confirmed by our work since poverty or lack of employment are known risk factors for both anxiety and depression, even more so for adults under 40 years of age, which applies to most of the subjects of our research.[26, 27]

Lack of finances made many participants depend on government hospitals' free maternal care services. Unfortunately, these hospitals were inundated with COVID-19 patients at the height of the pandemic, which reduced routine services. Health workers were stretched thin, and patients needing routine care like maternity care felt overlooked. Other low and middle-income countries faced the same pattern of health system shock and subsequent decline in maternity, sexual, and reproductive health care. Studies have also established that the accessibility of medical resources and poor rapport between healthcare providers create anxiety during pregnancy.[28]

Most participants got their information from Facebook and news channels. Although this increased knowledge of the virus and the means of preventing it, constant exposure to news of infections and deaths increased anxiety. This is in line with studies that depict the notion of vicarious trauma and fear during a time of crisis as a product of heavy media consumption. The uniqueness of the COVID-19 pandemic also gave rise to unusual new narratives and conspiracy theories, fuelling anxiety amongst pregnant women. Social media pools in Pakistan reported that some doctors were killing patients to show exaggerated figures of COVID-19 in order to obtain foreign help.

In a poll conducted in Pakistan in October 2020, 55% of the respondents did not believe the virus existed, while 46% believed there were conspiracy theories about the virus. These false beliefs turned many toward healthcare professionals with skepticism. Many subjects in our research expressed fear that the health workers at government hospitals would injure them or their babies, making them reluctant to receive care. The trust deficit and the cost of private maternity care together created a sense of ambiguity in the women about where to give birth.[29]

Pakistan is known to have the highest maternal and child mortality in South Asia. For some already troubled for their own and their babies' well-being, the apprehension and indirect fear of the healthcare systems exacerbated the situation.

Many of the participants' families' daily routines were altered due to COVID-19. Some found it more appropriate to self-isolate due to fear of infection, while others were concerned with the care of sick children. Other women who had schoolchildren were worried that their children would lag behind due to the absence of schools. Other research also documents similar parental psychological distress, complaining of the effects of

the pandemic on parents due to the disruption of routine and school activities.

The lockdown also prevented the respondents from engaging in other essential activities such as doing relationship check-ups, shopping, attending social gatherings, and visiting family and friends. Several women experienced a degree of solitude and lack of support, which aggravated some of their anxieties. The inability to go to their maternal homes, which offered critical support during pregnancy, coupled with not attending key family gatherings, made them feel self-estranged. Anxiety was exacerbated by the dual impression of being confined indoors and the absence of outside stimulation.[30]

The current article emphasizes that there is a recommendation for further research that seeks to assess how anxiety related to COVID-19 influences health-related outcomes among mothers during pregnancy and during the postnatal phase. It also indicates a need for innovative approaches to address the pandemic's impact, including the suspicion of healthcare providers and economic barriers to receiving care

## Conclusion

The COVID-19 pandemic has heightened anxiety disorder symptoms among pregnant women who already complained of these symptoms. Other concerns included potential economic strain, crowded hospitals, and limited confidence in the health sector, which compounded their anxiety about their health and that of their unborn babies. Some women had no options but to make use of strained government hospitals, which led some women to feel neglected.

Widespread misinformation on social media sites made women's distress worse; some women feared abuse by healthcare personnel. Further, being unable to go for check-ups or see family members increased their anxiety, leading many women to feel cut off from the rest of society. This research illustrates the necessity of implementing interventions to improve maternal care during pregnancy and, especially, during crises.

It is possible to moderate anxiety via the availability of unambiguous and accurate data and by building trusting relationships with health professionals. Providing maternal and child health care services in an economically feasible manner and removing barriers to accessing effective services are equally important.

## Recommendation

The COVID-19 pandemic increased anxiety for pregnant women due to financial stress, overcrowded hospitals, and misinformation. Many avoided check-ups, fearing infection, while others felt isolated without family support. These challenges show the need for better crisis care for mothers-to-be.

To help, health systems should provide clear information through trusted channels like community health workers and mobile clinics. Hospitals must create safe spaces for prenatal care during emergencies, and governments should offer affordable mental health support. Simple steps—like phone check-ins and support groups—can reduce isolation. Protecting pregnant women's mental health requires planning now for future crises.

## Authors contributions

Komal Niazi led the conceptualization, methodology, and data collection while drafting the original manuscript. Jianfu Ma provided supervision, conducted formal analysis, and contributed to reviewing and editing the manuscript. Sara Akram was key in the investigation, data analysis, and literature review. Kamran Saddique was responsible for data curation, visualization, and manuscript formatting. All authors reviewed and approved the final version of the manuscript.

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