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Breastfeeding experiences of COVID-19 survivor multipara mothers during pre- and post-COVID-19: a comparative phenomenological study

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Abstract

Aim This study aims to explore the experiences faced by survivor of COVID-19 multipara Jordanian breastfeeding mothers.

Method This study employed a qualitative phenomenological design to explore the breastfeeding experiences of COVID-19 survivor multipara mothers in Jordan during the post-COVID-19 period. Participants were recruited using purposive sampling through social media platforms, community postings, and word of mouth. Data collection occurred between January and March 2024 via guideline interviews conducted during the early postpartum period. A total of 20 multiparous breastfeeding women were interviewed until data saturation was reached. Thematic and content analysis was applied to transcribed interview data using NVivo software, with themes identified through iterative coding and consensus among researchers to ensure reliability and depth of insight.

Results The study identified five themes: breastfeeding experience during the post-COVID-19 period compared to pre-COVID, breastfeeding women's thoughts about vaccination effects on their milk, types of barriers/challenges women experienced while breastfeeding during the post-COVID period compared to pre-COVID-19, receiving any education regarding breastfeeding during the post-COVID-19 period, and suggestions to improve the breastfeeding experience compared to pre-COVID-19.

Conclusion This study offers valuable insights into the breastfeeding experiences of multipara mothers in Jordan who survived COVID-19 and continued to breastfeed during the post-pandemic period. The findings highlight a range of physical, psychological, and social challenges that these mothers faced, including changes in milk supply, concerns about vaccination, emotional distress, and limited support systems. Despite these obstacles, many mothers demonstrated resilience and a strong desire to continue breastfeeding.

Clinical trial number Not applicable.

Keywords Breastfeeding, Experience, Vaccination, Pre-post COVID

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Introduction

Exclusive breastfeeding is the optimal form of nourishment for infants, providing a solid basis for their growth and development. Recommended by the World Health Organization (WHO), this practice recommends feeding newborns solely breast milk for the first six months, and continuing until the child reaches two years of age [1–3]. However, the advent of the COVID-19 pandemic has potentially disrupted this recommendation. Jordan, like many other nations, grappled with the impact of post-COVID-19 period [4]. The period from March 2020 to February 2021 witnessed a significant rise in COVID-19 cases within the country, potentially influencing breastfeeding practices [5].

Breastfeeding holds numerous well-documented advantages for both infants and mothers [2, 6, 7]. It reduces the risk of certain cancers for mothers and bolsters the immune system and cognitive development for infants [1, 8, 9]. Hence, supporting breastfeeding is crucial. However, various personal and environmental factors can influence breastfeeding, including psychosocial variables such as support systems, financial considerations, and cultural and religious beliefs of COVID-19 infection [10]. Data shows that mothers with the COVID-19 virus were advised to avoid breastfeeding practice. The emergence of this novel coronavirus pandemic has brought in a new environmental factor which may influence infant feeding given the increased marketing of formula during emergencies [11].

The trial of COVID-19 vaccination did not include a sample of breastfeeding women, leading to limited data on the safety and effectiveness of COVID-19 vaccination in breastfeeding mothers and their infants [12, 13]. Various studies have indicated that a significant percentage of lactating women who received mRNA COVID-19 vaccines experienced side effects such as fatigue, headache, fever, chills, and localized pain or swelling at the injection site [14]. The Drug and Breastfeeding Database did not conclusively confirm the safety of COVID-19 vaccines for lactating women [15]. Additionally, anecdotal evidence has suggested occurrences of mastitis and reduced milk supply following vaccination [15, 16].

These uncertainties fueled vaccine hesitancy among lactating women, making it challenging for clinicians to provide informed guidance on the risks and benefits of COVID-19 vaccination [17, 18]. Nonetheless, vaccinating lactating women is crucial for their protection against COVID-19, and continuing breastfeeding post-vaccination can transmit protective antibodies to their infants, offering passive immunity [19].

The World Health Organization recommends that women should continue breastfeeding even when they are infected with the Covid 19 virus [18]. Unfortunately, global studies have shown that the advice given to

COVID-positive mothers often discourages breastfeeding in cases of suspected or confirmed infection. Additionally, differing opinions exist regarding the safety of direct breastfeeding by mothers who were previously infected [20]. This uncertainty adds another layer of complexity to breastfeeding decisions during post-COVID-19 period. In the Kingdom of Jordan, although breastfeeding initiation rates have historically been high, the increased prevalence of cesarean deliveries among COVID-19 positive mothers poses challenges to breastfeeding practices [21, 22].

Research indicates a decline in exclusive breastfeeding rates among women who gave birth during the post-COVID-19 period, with stress, isolation, and anxiety cited as contributing factors [23]. Concerns about the COVID-19 vaccination led some mothers to delay initiation or discontinue breastfeeding, highlighting the importance of education and awareness about breastfeeding [21]. However, some mothers actively sought support to continue breastfeeding despite the challenges.

Despite the existing literature on breastfeeding women with COVID-19, there remains a gap in understanding the specific experiences of breastfeeding mothers during post-COVID-19 period, especially in Jordan. Thus, this study aims to explore the experiences faced by survivors of COVID-19 multipara Jordanian breastfeeding mothers.

Method

Study design

The study employed a phenomenological design that used guideline interview, employing thematic and content analysis to gain insights into the breastfeeding experiences prior to, and after infection with COVID-19, and behaviors of Jordanians during the post-COVID-19 pandemic. Researchers continuously reflected on the evolving nature of post-COVID-19 period, and remained vigilant about personal biases and preconceptions.

Settings

The location was determined based on the participants preferences.

Data collection

Sessions were conducted during the early postpartum period, to explore Post-COVID-19 period's impact on the experiences of breastfeeding mothers. Data collection occurred from January 2024 to March 2024. Purposive sampling was used. The inclusion criteria is multipara mothers who have recovered from Covid 19 and experienced breastfeeding before and after Covid 19. Recruitment efforts targeted women in Jordan, and some participants were referred through word of mouth. An initial sample size of 20 participants was targeted, but

recruitment continued until saturation was achieved due to the evolving pandemic situation. Limited demographic information (age, marital status, and parity) was collected. Consent was obtained before each session from each participant. Interviews were audio-recorded and transcribed manually.

Interview guide questions

The following semi-structured questions were used to guide in-depth interviews with breastfeeding mothers who had at least two breastfeeding experiences—one prior to the COVID-19 pandemic and one during or after the pandemic:

1. Can you describe in detail your breastfeeding experience during the post-COVID-19 period, and how it compares to your previous experience before the pandemic?
2. What types of barriers or challenges did you encounter while breastfeeding during the post-COVID-19 period, and how do these compare to those faced prior to the pandemic?
3. Do you believe that receiving the COVID-19 vaccine has negatively affected your breast milk or breastfeeding experience? If yes, please elaborate.
4. Did you receive any form of education or professional guidance related to breastfeeding after contracting COVID-19? If so, what was the nature and content of that guidance?
5. Based on your experience, what recommendations would you offer to improve breastfeeding support and education for mothers in the post-COVID-19 context, compared to before the pandemic?

Data analysis

The authors developed an initial coding scheme based on relevant literature. Themes were identified through iterative coding and comparison, ensuring they were grounded in the data and aligned with the research questions. Content categories were predefined based on literature and refined during the analysis process to maintain consistency and reliability [24]. Final themes were determined through consensus between team leaders (Sawsan Abuhammad) and imported into NVivo for evaluation. Participants were offered the opportunity to review transcripts, although no one chose to do so.

Ethics approval

The study was approved by Hashemite University (25/2/2023/2024) on 24th December 2023. Informed Consent was received from each participant in the study.

Results

Demographics characteristics

The data were collected from 20 breastfeeding women. All of them were multipara who had experience of breastfeeding pre-COVID-19 and post-COVID-19 era.

Themes

The study identified five themes; Breastfeeding experience during the post-COVID-19 period compared to pre-COVID, Breastfeeding women thoughts about vaccination effects on their milk, Types of barriers/challenges women were experienced while breastfeeding during the post-COVID period - compared to pre-COVID-19, Receiving any education regarding breastfeeding during post-COVID-19 period, and Suggestions to improve the breastfeeding experience compared to pre-COVID-19. See Graph 1.

Breastfeeding experience during the post-COVID-19 period as compared to pre-COVID

All women agreed that their breastfeeding experience during the post-COVID-19 period was markedly different from that before the pandemic. For instance, RA shared:

Before Corona, it wasn't the same. My body felt different — thank God — but now, with my daughter, she doesn't breastfeed well, and my milk supply doesn't feel as good as it was before.

Similarly, AA, a mother of seven, reflected: “Honestly, I've never used formula before. But after Corona, things changed. My baby was never satisfied, and she kept crying constantly. In the past, I used to breastfeed my children for up to two years, but now it's different.” WA echoed the heightened physical strain post-pandemic, saying: “Honestly, I was tired with my previous children, but this experience has been even more exhausting. My chest felt painful and strained.” SA emphasized the psychological toll of the pandemic, which led to early weaning: “Of course, Corona had an impact. It affected my mental state, and I couldn't continue breastfeeding. I used to breastfeed my older children for at least a year, because I loved it. But this time, I couldn't continue.”

Breastfeeding women's thoughts about vaccination effects on their milk

Many women agreed that vaccination affected their milk and breastfeeding experience. For example, after asking women what was the effect of COVID-19 vaccination on your breastfeeding? RM mentioned “I noticed a difference with this baby — there was a lot more milk compared to my previous experiences. It felt different this time. With my earlier births, I didn't have as much milk as I do now”. AA

said, “Frankly, I’m not sure whether it’s due to COVID-19 or something else. Before the pandemic, my children used to get enough milk. But now, I feel like my milk supply isn’t sufficient — I don’t produce enough. So, I really don’t know if it’s related to COVID or not”. WA reported “I feel extremely anxious about this experience in a way that doesn’t feel normal, and I don’t know why. I’m constantly nervous and always angry, and I can’t understand what’s happening to me.”

The barriers/challenges women experienced while breastfeeding during the post-COVID-19 as compared to pre-COVID-19 period

Many women reported experiencing many challenges while breastfeeding their children during the post-COVID-19 era. For example, SA said “No, it wasn’t normal. There weren’t many physical challenges, but I couldn’t continue breastfeeding her because my psychological state wasn’t stable. I was emotionally exhausted. For example, I own a shop, and during the COVID-19 pandemic, our stores were shut down and our livelihood was cut off. All of this affected my mental state deeply. I just couldn’t continue breastfeeding her, and I was afraid I’d be unfair to her. I felt that with my mental state, I wouldn’t even be able to produce milk properly”. WS said “I had cracks; they were very painful. I used creams, and they eventually healed, but it took time.” Another participant (AS) shared a more complex experience involving latch difficulties and emotional distress: “There was a lot of distress in this experience. The baby didn’t know how to latch unless I expressed the milk first. I don’t like formula, so he relied heavily on breastfeeding. I felt a big difference this time. Every fifteen minutes he was breastfeeding, but he was never fully satisfied.”

Receiving any education regarding breastfeeding during post-COVID-19 period

Many women mentioned that they received education during post-COVID-19 era. For example RA said “The breastfeeding counselor at the hospital visited us and explained everything about nutrition and diet. She answered all our questions. For example, I asked about things related to breastfeeding, and she helped me a lot — especially regarding food and how the body can still produce milk even if I’m not eating enough, because it uses stored fat.”. Also, AA reported “Breastfeeding was generally normal, but I don’t know — maybe age plays a role. As you get older, you stop feeling the presence of milk, or perhaps the desire to breastfeed decreases”. Another participant (AY) emphasized the impact of hospital education:

At the hospital, they came by and explained how to tell if your milk is sufficient or not. They told us never to use formula — to stay natural and continue breastfeeding.

Suggestions to improve the breastfeeding experience compared to pre-COVID-19

Many of women had many suggestions to improve breastfeeding experience. For example, RR shared: “The most important thing overall is to increase awareness, because it plays a key role. There could be seminars and lectures. Also, our health centers would never give us something harmful, so people trust our Arab providers”. SA expressed concern about generational changes in breastfeeding attitudes: “All mothers grew up breastfeeding, but especially in the new generation, many mothers lack the ability to breastfeed. Everyone is always on their phones now, so if we send them videos, they might watch and learn about the many benefits of breastfeeding. Just like they give free diaper samples, there should be incentives and motivation for breastfeeding mothers so they see the benefits too”. AM highlighted social pressure and common misconceptions: “Most women around me use bottles, and they’re surprised when I say I’m still breastfeeding — I’ve breastfed for two years since the first day. The biggest thing we need is more awareness. People say things like ‘I don’t have enough milk’ or ‘it will ruin my breast shape.’ All of that is misinformation. We need to make it clear that breastfeeding reduces breast cancer risk and boosts a child’s immunity. My children are strong, even their nerves and intelligence, God willing, and we also advise women to eat healthy.”

Discussion

This study aimed to explore the experiences faced by survivors of COVID-19 multipara Jordanian breastfeeding mothers. Twenty mothers participated in the study, leading to the identification of main themes through data analysis.

Many themes emerged from the data analysis. The first theme encapsulated the breastfeeding experience. Our study found that many participants had a negative experience towards breastfeeding during post-COVID-19 era. In comparison, Brown and Shenker’s online survey revealed that the COVID-19 pandemic had varied effects on breastfeeding experiences. For some, it brought positive outcomes such as increased time at home, reduced social pressure, and fewer visitors (41.8%) [25]. Conversely, a study found that others experienced negative effects like decreased support, concerns about breastfeeding safety, and feelings of isolation [23]. Those who found the breastfeeding experience during the pandemic challenging were less inclined to consider discontinuing breastfeeding.

Our study found that many breastfeeding mothers experienced challenges during post-COVID-19 era compared to previous experiences. Similarly, a study conducted in the COVID-19 period suggested that not only did the pandemic affect breastfeeding experiences, but

subsequent lockdown measures also played a significant role in shaping this experience to a negative way [26]. Many breastfeeding mothers perceived negative impacts due to factors such as confinement at home, lack of familial support, cancellation of support group meetings, inability to access healthcare facilities, and increased focus on breastfeeding [26]. However, some women found positive aspects, such as spending more time with older children, reduced hospital visits, and increased focus on breastfeeding [27]. Compared to non-breastfeeding women, those breastfeeding tended to perceive the overall impact of the pandemic more positively. An Australian survey by Hull et al. [28] utilized open-ended questions to assess mental health outcomes, particularly among mothers, during the pandemic. Of the 340 participants, 336 were mothers. The study identified 292 reported concerns related to breastfeeding, including insufficient milk supply, painful breastfeeding, and infant formula supplementation. While COVID-19 wasn't always the direct cause of these issues, the authors noted its influence in shaping both the problems and how they were addressed.

Our study found that women worried about the impact of COVID-19 infection and its vaccine on their children, and the transmission through breastfeeding. There is conflicting data regarding the impact of COVID-19 mRNA vaccines on milk supply. A study of over 4,400 lactating women who received COVID-19 vaccines found that 4% experienced a temporary increase in milk production [29]. The study showed a temporary decrease in milk supply in 6% of recipients shortly after vaccination, consistent with findings from other studies which reported similar decreases in 6–8% of recipients [13, 30]. However, the milk returned to normal within few days of COVID-19 vaccination. Some studies also noted transient changes in milk color. Information regarding booster doses indicate that concerns related to breastfeeding might not be as prevalent. A subsequent study involving more than 10,000 breastfeeding individuals revealed that 96.1% experienced no breastfeeding difficulties post-vaccination. Only 1.21% reported issues with their breastfed infants, while 3.52% noted a decrease in milk production [31]. Though there have been temporary effects on milk supply or infant behavior following maternal vaccination, the absence of significant adverse effects in either the mother or the infant across multiple studies is reassuring.

Our study found that many breastfeeding women recommended further education and support of breastfeeding women. Despite having international recommendations on breastfeeding practices, their implementation varies significantly across countries and hospitals. A study that surveyed 378 healthcare providers in 47 countries, 93.5% of hospitals have altered their

birthing practices due to the pandemic [32]. Factors like conflicting initial guidelines, concerns about the infant's health, hospital activity restructuring, space limitations, staff relocation to COVID-19 wards, and healthcare worker exhaustion collectively led to ignoring of breastfeeding and related practices worldwide [33]. Despite mothers' continued willingness to breastfeed before and after delivery, and the ongoing recommendations supporting breastfeeding, the pandemic has had a negative impact on maternal care and breastfeeding services. Additionally, a discernible negative effect on breastfeeding behavior was observed. Surveys conducted among mothers in various Western countries indicated that despite their initial intention to breastfeed, many opted not to breastfeed, reduced breastfeeding frequency after initiation, or ceased breastfeeding or pumping altogether due to COVID-19, with proportions ranging from 8% in Germany to 21% in France [34].

Limitations

The findings of this study may not be applicable to cultures outside of Jordan. Future research should consider the clinical practice experiences of breastfeeding mothers in various contexts, identifying the specific sociocultural and institutional factors that influence these experiences. Moreover, our study utilized social media for recruitment, which may have targeted a different subset of participants compared to studies conducted in primary healthcare centers.

Conclusion

This study offers valuable insights into the breastfeeding experiences of multipara mothers in Jordan who survived COVID-19 and continued to breastfeed during the post-pandemic period. The findings highlight a range of physical, psychological, and social challenges that these mothers faced, including changes in milk supply, concerns about vaccination, emotional distress, and limited support systems. Despite these obstacles, many mothers demonstrated resilience and a strong desire to continue breastfeeding. Importantly, the study underscores the need for enhanced education, consistent guidance, and targeted interventions to support breastfeeding during health crises. The concerns raised by mothers—especially around vaccine safety, mental health, and misinformation—indicate critical areas for future research and healthcare planning.

Author contributions

Sawsan Abuhammad 1,2, Rowaida Almaaitah 3, Zelal Kharaba 4, Shaher Hamaideh 5, Hossam Alhawtmeh, Heba Hijazi 6,7, Nabeel Al Yateem1, Vidya Seshan 1, Muhammad Arsu Subu, Amat Alkhaleq Mehrass 8 wrote the main manuscript text. Zelal Kharaba 4, Shaher Hamaideh5 Did table. All authors reviewed the manuscript.

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Data availability

Data will be available upon reasonable request from corresponding author.

Declarations

Ethics approval and consent to participate

This study received from Hashemite University and this with "in accordance with the Declaration of Helsinki.

Consent for publication

"Not applicable"

Competing interests

The authors declare no competing interests.

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