



## **Effect of COVID-19 Pandemic Lockdown on Breastfeeding Practice Among Nursing Mothers in Rural Communities of The Federal Capital Territory, Nigeria: Implication for Future Support**

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### **ABSTRACT**

The importance of breastfeeding to infants and nursing mothers cannot be overemphasised. Adequate nutrition during infancy is required to ensure growth, health, and development of children to achieve their maximum potential while nursing mothers require quality medical and social support. However, the COVID-19 pandemic and subsequent lockdown led to changes in breastfeeding support available to nursing mothers, especially in rural areas. This study examines the effects of the COVID-19 pandemic lockdown on breastfeeding practice among nursing mothers in rural communities of the Federal Capital Territory (FCT), Nigeria. The study employed the qualitative approach of In-Depth-Interviews (IDI) to obtain information from nursing mothers. Respondents were recruited from nursing mothers attending postnatal clinics at Kobi Primary Health Centre, Abuja. Descriptive statistics of frequency count and percentage were used to analyse the participants' demographics, while qualitative data was sorted, transcribed and analysed in reference to the study objectives. The findings of the study revealed adequate knowledge of exclusive breastfeeding, although a large proportion of the respondents did not practice it. This low practice of exclusive breastfeeding was linked to cultural belief, ignorance, and the conviction that breastmilk alone cannot sustain infants, due to the low volume production of breastmilk. In addition, respondents described the negative effects of the COVID-19 pandemic lockdown on their breastfeeding experience, including challenges like lack of medical and social support, food shortage, and stress emanating from caring for many children. The findings are therefore important to understand how the practice of exclusive breastfeeding can be improved, and how to better support breastfeeding mothers in the event of a future pandemic.

**Keywords:** COVID-19 pandemic, lockdown, breastfeeding, nursing mothers, rural communities

### **INTRODUCTION**

The importance of breastfeeding to infants and nursing mothers has long been recognized and documented. Breastfeeding is an essential human activity that promotes infant and maternal health (United Nations Children Fund (UNICEF), 2018; World Health Organisation (WHO), 2017; The National Women's Health Information Centre, 2015). Breast milk contains all essential nutrients that ensure the child's health, growth, and development. It also contains various antioxidants including vitamin C and vitamin E that protect babies against infectious diseases and reduce oxidative damage to various body tissues. In addition, adequately breastfed children perform better on intelligence tests, are less likely to be overweight or obese, and are less prone to diabetes later in life (Kalantari, Haghghian & Roudsari, 2013; Alimoradi, Javadi, Barikani, Kalantari & Ahmadi, 2014, WHO, 2017).

Similarly, mothers who properly breastfeed their babies are less likely to suffer from hypertension, breast and ovarian cancers, while increased breastfeeding duration decreases the risk of developing cardiovascular diseases later in life (Agunbiade & Ogunleye, 2012; Natland, Nilsen, Midthjell, Andersen & Forsmo, 2012; Lupton, Chiu, Lujic, Hennessy & Lind, 2013).

Due to the importance of breastfeeding, the WHO and UNICEF recommend that infants start breastfeeding within one hour of life and should be exclusively breastfed for the first six months; after which they should be exposed to adequate and safe complementary foods, in addition to continued breastfeeding for up to two years of age or beyond (WHO, 2017; UNICEF, 2018). Exclusive breastfeeding is a practice whereby the infants receive only breast milk without mixing it with water or other liquids such as tea, baby formula, herbal preparations or food in the first six months of life, with the exception of vitamins, mineral supplements or medicines (WHO, 2017). When breast milk alone can no longer supply infants with the required energy and nutrients for proper growth and development, solid foods should be introduced appropriately. This process is known as complementary feeding (Motee & Jeewon, 2014). The WHO noted that in addition to breast milk, complementary foods should be introduced after 6 months of age. Initially, infants should receive complementary foods 2–3 times a day between 6–8 months, and increase to 3–4 times daily between 9–11 months and 12–24 months. This is due to the immaturity of the gastrointestinal tract, renal system, and the neuro-physiological status of the infant (WHO, 2019).

Despite the multisectoral effort to achieve universal breastfeeding coverage, exclusive breastfeeding uptake is still low especially in developing countries like Nigeria. The National Demographic and Health Survey 2018 revealed that the early initiation rate of breastfeeding in Nigeria is 42%, showing that less than 50% of infants are breastfed within one hour of birth. It was further reported that the exclusive breastfeeding rate in Nigeria is 29%, indicating that only a mere percentage of infants aged 0-6 months are exclusively breastfed. Based on the available literature, several factors can influence the practice of early initiation and exclusive breastfeeding. These include maternal education, antenatal and postnatal care, level of income, husbands' education, breast problems such as sore nipples, mother's perceptions of producing inadequate milk, societal issues such as employment, length of maternity leave, availability of infant formula, level of knowledge, among others (Agunbiade & Ogunleye, 2012; Motee & Jeewon, 2014; Balogun, Okpalugo, Ogunyemi & Sekoni 2017; Egenti, Adamu, Chineke & Adogu, 2018).

The COVID-19 pandemic and subsequent lockdown strategy have globally impacted almost every aspect of life. Since the beginning of the pandemic, about 300 million cases have been recorded with over five million deaths globally (WHO, 2022; Worldometer, 2022). As a result, all affected countries announced mitigation measures such as mandatory physical distancing and use of face masks in public spaces, as well as recommended hand washing, and even lockdown of households to limit the spread of the virus. On Feb 27, 2020, Nigeria recorded her first case of COVID-19 through an Italian citizen, who arrived in Lagos from Europe. A few days later, another patient who was discovered to have been in contact with the first patient was identified in the neighbouring state, Ogun (Burke & Rourke, 2020). Since then, the situation has worsened, with more cases occurring regardless of measures initiated by the government to combat the spread of the virus. On March 30, 2020, the Federal Government of Nigeria enforced an initial 2-week lockdown in two (Lagos and Ogun States) of the 36 states and the Federal Capital Territory (FCT), and on April 13 of the same year, the lockdown was extended till June. The major characteristics of the lockdown featured a temporary shutdown of some public places, travel restrictions, and limited visitations from one household to another (Mbah, 2020).

The lockdown also affected nursing mothers, especially the new parents, due to changes in medical and social support from hospitals, friends and family. Nursing mothers require quality support including the promotion of immediate postnatal skin-to-skin contact and to initiate breastfeeding as soon as possible after birth. However, this standard care support, including regular postnatal visits was adversely affected by the pandemic lockdown, especially in rural areas of affected states. In addition, the fear in communities where the infection was widespread, coupled with physical distancing requirements, further reduced family support and contact for a majority of nursing mothers (Brown & Shenker, 2020).

At the time of writing this paper, there is a dearth of published literature on the effect of COVID-19 lockdown on breastfeeding practices in Nigeria. Hence, this study examines the effect of the COVID-19 pandemic lockdown on breastfeeding practices among nursing mothers in rural communities of FCT, Nigeria. An understanding of the effect will inform future policy development and practice to support nursing mothers, especially in rural areas, in the event of a future pandemic.

## METHODOLOGY

**Study setting and period:** The study was conducted in Kobi Primary Healthcare Centre (PHC), Kobi, Garki District of Abuja, and FCT. The Kobi PHC is the only government-owned health facility serving Kobi, Kurumduma, and other surrounding communities. There is a mix of ethnic groups residing in the study area, but of dominance are the Gbagyis; other groups include Koro, Ganagana, Gwandara, Hausa/Fulani, Igbo, and Yoruba, while Christianity and Islam are the main religions practised by residents. The study was conducted during World Breastfeeding Week, in August 2020.

**Study design:** This study employed an institutional-based cross-sectional design, using a qualitative approach of In-Depth-Interview (IDI) to obtain data from nursing mothers receiving postnatal and immunization services at Kobi PHC during the 2020 World Breastfeeding Week.

**Sample recruitment and selection:** The inclusion criteria were nursing mothers attending postnatal and routine immunisation services at Kobi PHC. Participants were recruited through a Breastfeeding Workshop organized by Preston Development Foundation (PDF) for nursing mothers attending postnatal and routine immunisation services at Kobi PHC. All nursing mothers that participated in the workshop were recruited for the study.

**Study tool:** A semi-structured IDI guide developed by Preston Associates for International Development was used for data collection. The tool was validated by experts in Development Research. The IDI guide included items on demographic data (maternal age, education, infant age, age at first birth, parity) of participants; knowledge and practice of exclusive breastfeeding; and the effect of COVID-19 lockdown on breastfeeding practice.

**Data collection:** Preston Associates for International Development used the developed IDI guide to collect data from nursing mothers who met the inclusion criteria as a participant, for the study. Study participants were intimated of the aim and objectives of the study, and were advised to feel free to withdraw at any time during the interview. Thereafter, informed consent was obtained from the study participants. The IDI outline was administered to each participant within an average of 30 minutes, and field notes were taken during each interview. All the participants were asked the same questions, and probing questions were used to explore additional information relevant to the study objectives.

**Data analysis:** Demographic information of participants was analysed using descriptive statistics of frequency count and percentage, while qualitative data was sorted, transcribed and analysed – this was achieved by converting the data into notes, and subsequently into an excel sheet. The responses were reviewed in reference to the objectives. The interview was pre-coded and the participants' responses were transcribed and analysed according to the pre-codes.

**RESULTS***Socio-demographic Characteristics of the Participants***Table 1: Participants' Demographic background.**

Variable	Group	Frequency	Percentage (%)
<b>Maternal Age</b>	16 – 20 years	9	24.3
	21 – 25 years	13	35.2
	26 – 30 years	7	18.9
	31 – 35 years	4	10.8
	36 – 40 years	3	8.1
	≥ 41 years	1	2.7
<b>Total</b>		<b>37</b>	<b>100</b>
<b>Education</b>	No School	5	13.5
	Primary	14	37.9
	Secondary	17	45.9
	Tertiary	1	2.7
<b>Total</b>		<b>37</b>	<b>100</b>
<b>Parity</b>	First baby	6	16.2
	Second baby	12	32.4
	Third baby or more	19	51.4
<b>Total</b>		<b>37</b>	<b>100</b>
<b>Age at First Birth</b>	16 – 20 years	19	51.4
	21 – 25 years	11	29.7
	26 – 30 years	7	18.9
<b>Total</b>		<b>37</b>	<b>100</b>

A total of 37 nursing mothers participated in the study with a mean age of 25.2 years. Of the total participants, 24.3% were aged less than or equal to 20 years while 2.7% of the respondent were above 40 years. Forty-five percent of participants attended secondary school while 13.5% had no formal education. For birth parity, 51.4% of the participants were multipara nursing (third baby or more) mothers while 16.2% were primiparous (first child) nursing mothers. Slightly more than half (51.4%) of the respondents had their first baby before the age of 20, while 18.9% had their first baby between 26 and 30.

***Knowledge of exclusive breastfeeding***

The study indicates that nearly all the respondents had knowledge of exclusive breastfeeding in accordance with the aforementioned WHO definition. In addition, all the respondents unanimously agreed that breast milk is the first thing a baby should receive after birth. According to one of the respondents:

*“The nurses always tell us during antenatal clinic days to feed our baby with only breast milk, even without water, for the first six months before introducing other foods”*

A further analysis of the data revealed that a majority of the participants attended antenatal clinics, and 83.8% of them were nursing their second or more baby. This resulted in increased knowledge of exclusive breastfeeding among the participants.

***Importance of exclusive breastfeeding***

Participants were further asked about the importance of exclusive breastfeeding, and responses indicated that the participants had knowledge of the impact of exclusive breastfeeding on both infants and mothers alike. Some of the responses included: exclusive breastfeeding promotes healthy growth and development for infants; it improves infants' immunity and protects them against common childhood illnesses such as diarrhoea, respiratory infections and pneumonia; it improves infant brain

development; it improves child to mother bond; and it accelerates the shedding of pregnancy weight for nursing mothers.

### **Practice of exclusive breastfeeding**

Despite having adequate knowledge of excluding breastfeeding, a majority of the respondents did not practice it. To understand the tendency towards early complementary feeding of babies as opposed to the principle of exclusive breastfeeding, nursing mothers who did not practice exclusive breastfeeding were further probed. Findings revealed that cultural belief is a major factor that contributes to the low uptake of exclusive breastfeeding. According to the participants, their family cultural practice encourages nursing mothers to start complementing their infants' feeding with solid foods, in order to raise strong and healthy children.

Other notable reasons that explain the low practice of exclusive breastfeeding include:

- Ignorance, especially among the uneducated and primiparous (first child) nursing mothers; for example, a respondent stated that: *"I could not practice exclusive breastfeeding for my first child because I didn't have the understanding. However, I will practice it for my next child"*.
- Erroneous belief that breastfeeding cannot satisfy infants especially when they are thirsty or sick, for which the mothers perceived that the infants would need water and herbs;
- Lack or low volume production of breastmilk, especially if the mother is not properly fed or sick.

### **Effect of COVID-19 pandemic lockdown on breastfeeding experience**

The nursing mothers were also asked whether the COVID-19 pandemic lockdown had any effect on their breastfeeding practice, and a majority of the participants noted that they were negatively affected by the lockdown, while only a few reported having experienced a neutral effect. A further analysis associated maternal demographics with the level of effect the COVID-19 lockdown had on nursing mothers' breastfeeding practice. For example, mothers whose husbands were laid off during the lockdown; and multiparous mothers, whose children were not in school due to the lockdown effects, and who also gave birth during the lockdown were more likely to describe the effect of the lockdown on breastfeeding practice as negative. On the other hand, primiparous (first child) nursing mothers', whose husbands' earning capacity was not affected by the lockdown and were home to provide support, were more likely to describe the effect of the lockdown on breastfeeding practice as positive or neutral.

Furthermore, the analysis of the effect of the COVID-19 lockdown on nursing mothers' breastfeeding experience was split into four sub-themes: lack of medical support, lack of social support, inadequate feeding as a result of food shortage, and stress from caring for many children at home.

- a) **Lack of medical support:** The most common disadvantage of the COVID-19 lockdown was a lack of access to medical support experienced by nursing mothers who had difficulties. According to them, clinics were not open during the lockdown period, and there was no alternative provision of medical support, especially in cases related to breastfeeding difficulties. As a result, some reported to have turned to self-medication for themselves and their children. One of the respondents noted:

*"It was hard to get medical support during the lockdown, as people at the hospital usually send us back home without attending to us, even in cases of emergency. Hence I usually take any drug available whenever I or my baby is sick. – A 23 year old nursing mother"*.

- b) **Lack of social support:** Lack of social support such as information and care received from friends, families, and community members were some of the negative effects of the COVID-19 lockdown highlighted by the nursing mothers. In addition to the lack of social support experienced by the nursing mothers, a lack of emotional support was also noted as a side effect of the COVID-19 lockdown. For instance, the restriction of house visits by caring and supportive friends and relatives often had the nursing mothers feeling lonely and isolated.
- c) **Food shortage:** Many participants explained that they were not well fed during the pandemic, which affected their breastfeeding level. They stated that due to the lockdown, food items

were scarce and expensive; and even when it was available, there was no money to buy them because they, as well as their husbands, could not go to work. Moreover, they stated the palliatives distributed by the government and Civil Society Organisations (CSOs) did not reach their communities.

- d) ***Stress from caring for many children:*** Nursing mothers who had many children complained that due to the lockdown, their children were home and this distracted them and affected their ability to establish effective breastfeeding with their infants. They further added that if they had the support of relatives, the case would be different, however, that was not the case, as the lockdown restricted house visits.

## DISCUSSION

This study examined the effect of the COVID-19 pandemic lockdown on the breastfeeding practice of nursing mothers in rural communities of FCT, Nigeria. The findings of the study revealed that nursing mothers had knowledge of exclusive breastfeeding, and this could be attributed to knowledge and experience previously gained during antenatal care, especially the multipara (third baby or more) nursing mothers. Therefore, the importance of antenatal and early postpartum education cannot be overemphasized because it helps to improve maternal knowledge and attitude toward exclusive breastfeeding practice. The findings of this study are similar to Ihudiebube-Splendor *et al* (2019) who reported an inadequate knowledge of exclusive breastfeeding among primiparous nursing mothers, as opposed to multipara nursing mothers, who had prior information and experience of breastfeeding. Agu and Agu (2011) and Osibogun, Olufunlayo and Oyibo (2018) also reported similar findings in the South-West and South-East of Nigeria respectively.

The results further indicated that a majority of the study respondents did not practice exclusive breastfeeding despite being aware of its importance. This is a negative correlation, given that most of the participants were multipara nursing mothers, who attended antenatal clinics and had knowledge of exclusive breastfeeding and its importance. Normally, one would think that the participants' knowledge of exclusive breastfeeding, parity, visits, and exposure during antenatal clinics would improve the practice of exclusive breastfeeding. This hypothesis was, however, not revealed in the study. Although maternal knowledge of exclusive breastfeeding is important, the goal is, however, to put the knowledge into practice, to achieve the desired result. The finding on the low practice of exclusive breastfeeding is consistent with a similar study in the rural suburbs of FCT by Egenti, Adamu, Chineke and Adogu (2018). However, the finding of the study negates the report of a study in South-Western Nigeria by Balogun, Okpalugo, Ogunyemi and Sekoni (2017), where more than 75% of the rural respondents practised exclusive breastfeeding compared to less than 30% of the urban respondents.

The outcome of the study also showed different effects, mostly negative, of the COVID-19 pandemic lockdown on breastfeeding practice. It is obvious that nursing mothers who had many children whose schools were on lockdown, and those who could not access medical, social, and emotional support due to the COVID-19 lockdown experienced more difficulty. This was a common issue during the lockdown, as citizens, especially nursing mothers, could not access individual and group antenatal health services. Even when appointments were feasible, health professionals often felt uncomfortable rendering services due to the prevalence of the COVID-19 virus. The study findings relate to Brown and Shenker (2020) who reported different effects of lockdown on breastfeeding experience among nursing mothers in the United Kingdom.

The importance of medical and social support in the practice of exclusive breastfeeding cannot be overemphasized (Brown, Raynor & Lee, 2011). It is clear that some women who stopped breastfeeding or could not practice exclusive breastfeeding were affected by the lack of medical and social support during the COVID-19 lockdown. This finding is similar to Brown and Shenker (2020) and Ingram *et al* (2020). The study also revealed that inadequate feeding as a result of food shortage during the lockdown affected the breastfeeding practice of nursing mothers. It was recognized all over the country that the COVID-19 pandemic, accompanied by the lockdown strategy affected the food supply chain, due to movement restrictions and the closure of borders. This problem increased the risk of food security and poor nutrition of a majority of the citizens, especially the vulnerable ones including pregnant and nursing mothers (United Nations, 2020). Although some nursing mothers

stated that the lockdown did not affect their breastfeeding practice, what is clear from the findings is that participants who found the experience positive or neutral were likely to be more privileged, and had access to food and social amenities which made life easier for them and their families during the COVID-19 pandemic lockdown.

Finally, the findings of the study revealed that stress from caring for many children affected participants' breastfeeding experience. This was a common situation among multipara nursing mothers who had to care for other children that were supposed to be in school during the day but were not due to the lockdown. Effective breastfeeding requires an enabling environment coupled with adequate rest, food and other support. Although breastfeeding is said to lower stress, levels of stress in breastfeeding women can, however, lead to a difficult let-down reflex and decrease breast milk supply, resulting in breastfeeding difficulties. In addition, too much stress is associated with early weaning (Murray & Agi, 2020). It is however likely that primiparous mothers, those who are more privileged, and those who had access to medical and social support during the lockdown found breastfeeding to be a positive experience.

This study had some limitations, for instance using nursing mothers who were attending postnatal and routine immunisation services as the sample for the study deprived other nursing mothers who did not attend postnatal services in the target PHC. It is possible that the excluded nursing mothers were either more affected or differently affected by COVID-19, and were less likely to possess adequate knowledge of excluding breastfeeding and its practice. Therefore, future research should employ a community-based sample recruitment strategy. Also, the study focused on using the in-depth interview qualitative research method to collect data from a small sample in a rural area of the FCT. This did not allow the research to compare the effects of the COVID-19 pandemic lockdown among nursing mothers in urban areas of the FCT. Hence, future studies should explore using a mixed method and employing bigger samples, to compare the knowledge and practice of breastfeeding, as well as the effects of the COVID-19 lockdown on breastfeeding practice.

## CONCLUSION

The findings of this study revealed that although nursing mothers knew about exclusive breastfeeding, its practice among the study respondents was low. The COVID-19 pandemic lockdown had negative effects on participants' breastfeeding practice, and this was linked to the socio-demographic characteristics of the nursing mothers. The findings of this study are important for policymakers and breastfeeding support groups to develop policies and strategies and to make provisions for nursing mothers, especially those in rural areas who might experience similar events in the future. Meanwhile, it is of great importance to ensure medical and social support services for nursing mothers especially those in rural areas and the underserved population. This will aid the mitigation of the barriers that many nursing mothers and infants face during pandemics. Additionally, although awareness of exclusive breastfeeding has increased, it is yet to translate into increased practice among nursing mothers in rural areas; hence there is a need for continuous breastfeeding enlightenment and education, coupled with breastfeeding support interventions among nursing mothers in rural areas, so as to achieve the universal coverage target of exclusive breastfeeding.

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