Health Care Providers' Knowledge, Attitude and Perception of Breastfeeding and Breastfeeding Support in Gombe State

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ABSTRACT

Background: *Optimal breastfeeding remains a leading cost-effective childhood survival intervention; however, significant gaps continue to exist in the healthcare providers' knowledge, attitude and practices. This cross-sectional study evaluated the knowledge, attitude and practices of healthcare providers towards breastfeeding support in Gombe, Northeast Nigeria.*

Methods: *The study recruited 125 healthcare providers working in secondary and tertiary health facilities over 7 months. A structured, validated and semi-structured questionnaire was deployed to collect data using purposive sampling method. Data was analysed with SPSS version 26*

Results: *A total of 110 (88.0%) and 115 (92.0%) had knowledge of early initiation of breastfeeding and common breastfeeding problems while gaps exist in the specialised knowledge as only 25 (20.0%) of the respondents knew that mothers with breast cancer can use the unaffected breast. Most respondents (82.4%) had a positive attitude towards baby-friendly hospital initiative, however, the implementation was inconsistent in the respondents' facilities. The use of breast pump machine and skin-to-skin care was poor among the respondents, 48 (38.4%) and 49 (39.2%), respectively.*

Conclusion: *The study concludes that regular and advanced training in breastfeeding support, especially in areas of practical breastfeeding techniques, is highly significant in achieving optimal breastfeeding.*

INTRODUCTION

Breastfeeding remains a leading and the most effective public health intervention for promoting child survival and improving maternal health.[1] Early commencement of breastfeeding within one hour of birth, exclusive breastfeeding for six months, and complementary foods in addition to continued breastfeeding for a minimum of two years are strongly recommended by the World Health Organisation (WHO) and United Nations International Children's Emergency Fund (UNICEF).[2] This Joint recommendation, termed optimal breastfeeding, has been shown to be significantly associated with a reduction in overall neonatal and infant morbidity and mortality, especially diarrhoea and pneumonia-related mortality, where the reduction rate is up to 50%.[1,3]

Despite these widely confirmed and established benefits, suboptimal adherence to global best guidelines on breastfeeding continues to be reported. This is evident in the 2023 breastfeeding scorecard by UNICEF, which reported that less than 50% of newborns are breastfed within the first hour of birth and for the first 6 months of life worldwide.[2]. Although the trend in Sub-Saharan Africa, where Nigeria is located, shows some similarities with the global trend, country-dependent wide variability continues to exist with early initiation of breastfeeding being as low as 16% in Chad and as high as 93% in Eritrea.[4]. The trend in Nigeria, the continent's largest country, with a population of over 200 million people, has been discouraging. The UNICEF, in a press release on the 1st of August 2025, during the breastfeeding week, has shown that the National Demographic Health Survey (NDHS) report (2023-2024) in Nigeria reported a progressive decline in ~~the~~ optimal breastfeeding rate in Nigeria. It stated that although over 90% of mothers now breastfeed, which is impressive, the previously reported early commencement of breastfeeding within the first hour of birth, which was 42% by the NDHS in 2018, has now decreased to 36% while the rate of exclusive breastfeeding has remained stagnant at 29%. Furthermore, only 23% of babies are now breastfed up to the recommended 2 years of age.[5,6] Additionally, only 12 out of 36 states have been shown to have paid maternity leave up to 6 months.[5,6] In addition, the paternity leave remains grossly underdeveloped legally and in practice because Nigeria's Labour Act contains no statutory right to paternity leave. These trends lend credence to the inadequate breastfeeding support the mothers receive from home, workplaces, and especially healthcare facilities.

Indeed, health professionals have a significant influence on the disposition of mothers to breastfeeding practices. It is generally believed that the most reliable information about breastfeeding lies with the healthcare providers, who also usually double as the first contact of mothers.[7] It has been shown that the quality and the level of the support and information given by health professionals to mothers play a vital role in how early and for how long a mother breastfeeds.[8] There are, however, reports that many healthcare providers either lack adequate knowledge or refuse to use the knowledge acquired from the well-

established breastfeeding guidelines.[9,10] This knowledge gap and unhealthy preference for personal experience may have thus contributed to the inability to achieve optimal breastfeeding in sub-Saharan Africa. This is because breastfeeding knowledge and education have been reported to be the two most critical determinants of healthcare providers' breastfeeding support, as they influence the effectiveness of the counselling about the breastfeeding techniques and challenges by the mothers.[11] In addition to these key determinants, a study has shown that knowledge and education, and other factors such as work environment, availability of written breastfeeding policies in the hospital, duration at work, age and gender of a health professional have been identified as determinants of breastfeeding support needed for optimal breastfeeding.[12]

In Nigeria, these challenges continue to exist despite the adoption of the WHO/UNICEF Baby-Friendly Hospital Initiative (BFHI), which is generally associated with successful breastfeeding. This is still due to the inconsistent implementation of the BFHI as a result of a complex mix of community-related, mother-associated, and particularly provider-related factors.[9,10,13,14] This poor implementation of BFHI in addition to gaps in providers' knowledge and support, may be the main reasons hindering the achievement of optimal breastfeeding.

Gombe state, located in the north east of Nigeria, where this study was domiciled, has been facing multiple negative community-related factors, such as poverty worsened by recent Boko Haram insurgency, poorly-equipped health facilities, and sociocultural behaviours that may affect optimal breastfeeding. There is every likelihood that refocusing attention on the provider-related factors to identify the gaps hindering optimal breastfeeding will inform hospital policies and ultimately national strategies aimed at upscaling the breastfeeding rates and reducing the scourge of neonatal and under-five mortality, especially in developing countries. This study was, thus, aimed at evaluating the healthcare providers' knowledge and perception on breastfeeding and breastfeeding support offered to the mothers.

METHODOLOGY

Study design

This was a cross-sectional study conducted between 7th August 2022 to 10th February 2023 in Gombe Local Government Area (LGA) Gombe State.

Study Site

The research was part of a national study conducted across the 6 geopolitical zones aimed at evaluating the breastfeeding support among the healthcare professionals. The study was conducted in both secondary (State Specialist Hospital Gombe) and tertiary (Federal Teaching Hospital Gombe) health facilities in Gombe LGA The respondents comprised doctors, nurses, midwives, health assistants, and hospital attendants. These hospitals were selected because they provide direct care to breastfeeding mothers. The respondents were selected using a purposive sampling method. However, there were site-specific technical and logistic problems with recruiting the health care providers working in state specialist hospital, accounting for the low recruitment.

Participants

The respondents were healthcare workers who offer direct health services to breastfeeding mothers. This included healthcare workers working in the department of Obstetrics and Gynecology,

and the department of Paediatrics. To ensure accurate information and insights about the support given to the mothers, only those who had direct interaction with the breastfeeding mothers were included in this study.

Sample size calculation

As the study is a part of a larger study, the sample size (125) was drawn from the national study that was conducted across the 6 geopolitical zones of Nigeria. Hence, it was not recalculated but rather based on the methodology of the larger study.

Data Collection

A structured questionnaire developed and validated during the national study was used for data collection. The tool was designed to evaluate healthcare professionals' knowledge and practices. The items in the questionnaire tested knowledge of breastfeeding guidelines, evaluated the support breastfeeding mothers receive, policies of each institution regarding breastfeeding, and healthcare provider-related factors.

Data analysis

Data was analyzed using SPSS version 26. Descriptive statistics were described using frequencies, percentages. Chi-square tests were used to evaluate the association between independent variables such as gender, years of experience, and level of breastfeeding support and breastfeeding knowledge. The dependent variables (e.g., knowledge about breastfeeding practices) that were categorized into multiple options answers were later recoded into binary options (correct & incorrect) or Yes and No answers.A structured questionnaire was designed to evaluate the knowledge healthcare providers knowledge and practices. The responses to many items on the questionnaire were measured using a Likert scale that ranged from strongly agree to strongly disagree. This was used to assess the attitudes and practices of breastfeeding

Ethical Clearance

Ethical approval was obtained from the National Research Ethics Committee in Federal Capital territory, Abuja and the research ethics committee in Federal Teaching Hospital, Gombe. Informed consent was also obtained from the respondents. The respondents were assured of confidentiality and that the study was voluntary.

RESULT

A total of 125 participants were analyzed in the study. There were 69 female and 56 males with male to female ration of 1.2: 1. The mean age of the respondents was 32.57±7.17 years. Majority (122; 97.6%) of the respondents had tertiary education. Majority (120; 96.0%) worked in the tertiary health facilities while few (5; 4.0%) worked in the secondary health facility. Most (69;55.2%) of the respondents were medical doctors, followed by nurses (51; 40.8%), then community health extension workers (2;1.6%), while the others (hospital health assistant dietician and others) were (1; 0.8%) each. Majority (122;97.6%) of the respondents worked in public sector. In terms of years of experience, most (80;64%) respondents had been working for less than 10 years, followed by 11-20 years of experience which accounted for (37;29.6%). This was followed by 21-30 years of experience (6;4,8%). Only few (2;1.6%) of the respondents have work experience greater than 30 years, Table 1.

Table 1: Sociodemographic Characteristics of study participants

Variable	Frequency N = 125	Percentage(%)
Gender		
Female	69	55.2
Male	56	44.8
Mean Age (year)		
Female	32.21±6.52	
Male	32.86±7.69	
Education level		
Tertiary	122	97.6
Secondary	3	2.4
Health Facility		
Tertiary	120	96.0
Secondary	5	4.0
Occupation		
Medical Doctors	69	55.2
Nurses	51	40.8
CHEW	2	1.6
Hospital wards	1	0.8
Dieticians	1	0.8
porter	1	0.8
Facility sector		97.6
Public	122	2.4
Private	3	
Years of experience (years)		
<10	80	64.0
11-20	37	29.6
21-30	6	4.8
>30	2	1.6

In facilities where the responds worked, paediatricians were present in 88.8% (n=111), while lactation consultant specialist, breastfeeding champions, and breastfeeding support group were present in 34.4%(43), 32.8%(41), and 33.6%(42) facilities respectively. Breastfeeding video was absent in all the facilities while (n=106) respondents wished to join breastfeeding support group. The facilities that provided skin-to-skin care support, supported mothers with expressing the breast milk, and supported mothers in the use of breast pump were 38.4%(48), 33.6%(42,) and 39.2%(49) respectively. **Table 2**

Table 2: Statistics of Breastfeeding-related Health care workers at the studied centres and the services provided

Variable	Yes n (%)	No n (%)
Lactation consultant specialist	43 (34.4)	82(65.6)
Breastfeeding champions	41(32.8)	84(67.2)
Breastfeeding support provided		
Breastfeeding Peer Support Group	42(33.6)	83(66.4)
Breastfeeding video	0(0.0)	125(100.0))
Willingness to join BF support groups	106(84.8)	19(15.2)
Provided Skin-to-Skin care	48(38.4)	77(61.6)
Help in Expressing Breastmilk	42(33.6)	83(66.4)
Help in using the Breast Pump	49(39.2)	76(60.8)

Whereas more than two-third (88; 70.4%) of the participants knew the definition of exclusive breastfeeding, four-fifth (110; 88.0%) knew it should be initiated in the 1st 1hour of life. Majority of the participants (115; 92.0%) correctly had the knowledge about the need to know how to treat common breastfeeding problems. Whereas most respondents knew that the Maternal HIV (109; 87.2%) and maternal Hepatitis B Virus (HBV) status (101; 80.8%) do not prevent breastfeeding, only a few participants (25; 20.0%) correctly knew that mothers with breast cancer can breastfeed using the unaffected breast. A total of 45.6% (n=57) knew that infants should be breastfed 8-12 times in a day while 11.2% (n=14) and 24% (n=30) knew what latching onto the breast and correct positioning means in breastfeeding, Table 3

Table 3: Knowledge of Respondents about key aspects of breastfeeding

Breastfeeding knowledge	correct	Percentage (%)	Incorrect/ Uncertain	Percentage (%)
EBF definition	88.0	70.4	37.0	29.6
Initiating BF ≤1hour of birth	110.0	88.0	15.0	12.0
HCPs need to learn common BF problems	115	92.0	10	8.0
Maternal health condition and BF				
HIV mother Breastfeeding	109	87.2	16	12.8
Hepatitis positive mother and breastfeeding	101	80.8	24	19.2
Breast cancer in mothers and breastfeeding	25	20.0	100	80
Correct BFHI steps	52	41.6	73	58.6
Breastfeeding practices and techniques				
Duration of Breastfeeding on one breast	74	59.2	51	40.8
Number of Breastfeeding per day	14	11.2	111	88.8
Breastfeeding position	30	24	95	76.0
Latching on the breast	14	11.2	111	88.8
Sign of breastmilk sucking	30	24.0	95	76.0

*HCP= health care provider; *BM= Breast milk, EBF-Exclusive Breast feeding, BFHI-Baby-friendly Hospital Initiative, HIV-Human Immunodeficiency Virus

Majority of the respondents (103; 82.4%) strongly agreed that BFHI has many advantages to the family, community, and the hospital. A total of 71.2% (n=89) correctly agreed that breastfeeding support enhances exclusive breastfeeding for 6 months. About one-third (40; 32.0%) of the Health Care Workers believed implementing BFHI is a burden while (76; 60.8%) disagreed. A total of 116 (92.8%) respondents agreed that if the breastfeeding mother develops a problem, inadequate support will cause her to stop breastfeeding. Majority (72; 57.6%) had the knowledge that use of dummies/pacifiers is not BFHI. Although 96.0% (n=119) of the respondents were aware that BFHI include education on complimentary feeding at 6 months, only 64.8% (n=81) were aware that early supplement may result in insufficient breast milk supply, **Table 4.**

Table 4: Health care providers' attitude, perception and knowledge about BFHI

Variables	Strongly agree (%)	Agree (%)	Disagree (%)	Strongly disagree (%)	I don't know (%)	Total (%)
BFHI has advantages to the mother, family & community	103(82.4)	21(16.8)	1(0.8)	0(0.0)	0(0.0)	100
BFHI is a burden to HCP	11(8.8)	29(23.2)	40(32.0)	36(28.8)	9(7.2)	100
Inadequate BF support causes mothers to stop BF	51(40.8)	65(52.0)	5(4.0)	2(1.6)	2(1.6)	100
Education on complementary feeding at 6 months is a good BF support	71(56.8)	48(38.4)	3(2.4)	1(0.8)	2(1.6)	100
Early supplement causes insufficient BM supply	32(25.6)	49(39.2)	17(13.6)	16(12.8)	11(8.8)	100

BM= breastmilk; BF = Breastfeeding; BFHI = Baby-friendly hospital initiative; HCP = healthcare provider

Education related to general breastfeeding and specific education about the benefits were always given to the mothers by 64.8% (n=81) and 70.4% (n=88) of the respondents, respectively. Education related to breast pumping, non-nutritive sucking by preterm babies, the benefit of buccal colostrum, and skin-to-skin Kangaroo Mother care were always given by 28.8%(n=36), 26.4% (n=33), 42.4% (n=53), and 52.8% (n=66) of the respondents, respectively, while breastfeeding education to family gathering was always done in 28.0% (n=35),**Table 5**

Table 5: Educational breastfeeding support given to mothers by respondents

Variables	Always n(%)	Often n(%)	Occasionally n(%)	Not sure n(%)	Never n(%)
Education related to breastfeeding	81(64.8)	35(28.0)	7(5.6)	2(1.6)	0(0.0)
Education related to the benefits of breastfeeding	88(70.4)	28(22.4)	1(0.8)	7(5.6)	1(0.8)
Education related to breast pumping	36(28.8)	29(23.2)	42(33.6)	10(8.0)	8(6.4)
Education re lated to non - nutritive sucking by preterm babies	33(26.4)	34(27.2)	18(14.4)	20(16.0)	20 (16.0)
Education related to the benefits of buccal colostrum	53(42.4)	30(24.0)	16(12.8)	14(11.2)	12(9.6)
Education related to skin -skin Kangaroo Mother care	66(52.8)	39(31.2)	16(12.8)	3(2.4)	1(0.8)

DISCUSSION

In this study, the majority of the respondents had tertiary education. This may be because most of the respondents who have direct access to breastfeeding mothers in the hospital settings are medical doctors. Most of the respondents worked in the public sector. This is characteristic of the employment status of most doctors in African countries.[15] This is unconnected to the perception of job security, flexibility of work schedule, and guarantee of pension scheme upon retirement or resignation. Most of the respondents were females. This may be because breastfeeding is practically and theoretically centred around females who most often are saddled with the responsibilities of decision-making in breastfeeding and thus are naturally more attracted to breastfeeding-related research.[16] This is similar to the finding by *Mbadugha et al,* who documented low male involvement in maternity care.[16] Although most of the respondents' centres have few breastfeeding-related specialists, support groups, and promotional materials such as videos, it is interesting that a high number of respondents were willing to join the breastfeeding support group. This shows that despite low on-site breastfeeding resources, the demand is still high for informal, low-cost, and social support groups. This underscores the significance of support groups in prolonging the exclusivity and duration of breastfeeding.[17] The breastfeeding support offered to the breastfeeding mothers at the centres of the respondents were generally sub-optimal compared to other studies. This may be related to inadequate availability of formal and informal breastfeeding support materials and group as documented in the current study. This further signals the critical need for peer or support breastfeeding groups and materials in and outside the health facilities.[17]

A mixed pattern of knowledge about breastfeeding was demonstrated amongst health care providers in this study. Although most HCPs demonstrated good general knowledge about the definition of breastfeeding and the WHO-recommended time of initiation after birth, significant knowledge gaps exist in the practical competencies and practical approaches to special clinical conditions. Although most HCPs demonstrated high knowledge that maternal HIV and HBV infection are not contraindications to breastfeeding, in line with the recommendation by the WHO, the knowledge about using the unaffected breast for breastfeeding among the mothers with breast cancer was very poor among the HCPs. These findings agree with the WHO recommendation, which advises that, given the low risk of HIV transmission via breastmilk and given the high benefit of breastmilk to the infant, HIV-positive mothers who are regular on antiretroviral should be encouraged to practise exclusive breastfeeding for 6 months.[18] The finding in the index study is similar to that from *Bassey et al* in Uyo, southern Nigeria where more than 90% of the HPCs demonstrated good knowledge in HIV positive mothers breastfeeding their babies.[19] This contrasts with the study by Hennop *et al* where more than half of the paediatricians and the obstetricians responded that breastfeeding should never be recommended for mothers living with HIV.[20] The reason for this might be because more than half of the HCPs in *Hennop et al* were documented to be unaware of the WHO guidelines advocating breastfeeding for HIV positive mothers. The correct knowledge on HBV-positive mother being eligible to breastfeed their infants provided the children had prophylaxis for the virus at birth also agrees with various recommendations from different guidelines and studies.[21,22] The finding in the current study is similar to Bayan et al in Jordan, a study about HBV positive mothers whose respondents were

female gynaecologists.[23] The current study however does not agree with Alao *et al* study that demonstrated poor knowledge among the health care workers.[24] The reason for this difference may be because Alao's study was a multicentered study with inclusion of both HCW working in the rural and urban setting, with the rural setting predominating the urban setting.

Majority of the HCPs could not list the steps of the Baby-Friendly Hospital Initiative (BFHI). The poor knowledge about the steps amongst HCPs has been reported by *Hennop at al* where less than half of the HCPs were able to mention the first step. [20] This is also similar to the study by *Abdul et al* who also reported a suboptimal knowledge of BFHI attributable to lack of training.[25] This is however different from the findings by *Gwanya et al* where about four-fifth of health workers had good knowledge of BFHI. [26] This reason for this was the perception of the HCP as the majority of them did not consider BFHI as a burden.[26] The other reason for this disparity was that most of the respondents had undergone training on breastfeeding. This underscores the impact of training and perception of HCP on achieving optimal breastfeeding.

The knowledge about breastfeeding position and correct latching (widely opened mouth with flanged lips, in addition to placing of the chin on the breast and reassuring audible swallowing) was poor among the HCPs in this study. This suggests the critical need for hands-on skills training and retraining beyond didactic instruction to achieve optimal breastfeeding. This agrees with the report by *Green at al* in Port Harcourt, Nigeria, in 2022, who showed that only a quarter of the healthcare providers demonstrated good knowledge of breastfeeding position.[27] This finding of the current study is also similar to *Bhatia et al* in India, who demonstrated that the knowledge is generally poor among the doctors.[28] *Bhatia et al*, however demonstrated that the nurses had good knowledge about the breastfeeding position and latching as three-fourths of the nurses showed remarkable knowledge. This underscores the influence of gender and hands-on skills on position and latching. Thus, the poor knowledge demonstrated in the current study may be explained by high number of paediatricians recruited in this study.[29] The knowledge of the healthcare providers about the signs of breastmilk sucking was generally poor in this study. This finding amongst the healthcare workers is particularly troubling because established breastfeeding assessment tools like *LATCH* and *BBAT* have mentioned that observable sucking indicators, such as rhythmic sucking, audible swallowing, all of which are signs of breast milk sucking, are significant predictors of a successful breastfeeding.[30] This finding in this study is, however, not surprising as most of the respondents were medical doctors who usually deal with more difficult clinical conditions and thus leave the nurses and other health professionals to deal with issues like breastfeeding counselling.[31]

In this study, the healthcare providers demonstrated good knowledge about BFHI. The reason for this might be that most of the respondents are paediatricians, whose theoretical bases about BFHI are expectedly strong. This is similar to the finding by *Frezer et al* in Ethiopia who reported that about three-quarters of the healthcare providers demonstrated good knowledge of BFHI and at least two-thirds showed a positive attitude towards it.[29] This is also similar to Indiphile *et al* in South Africa who reported good knowledge of and positive attitude towards BFHI.[32] Abdul et al in Ogun State, Nigeria, however reported a poor knowledge of BFHI among health workers. The reason for this contrast might be because the respondents were mainly community health

workers and nurses, with the exclusion of paediatricians, unlike what obtains in the current study.[25] This is because paediatricians have more extensive formal training in infant nutrition, stronger exposures to scientific and clinical guidelines, and limited exposure to day-to-day operational burdens.

Concerning the educational support provided to breastfeeding mothers in this study, healthcare providers demonstrated encouraging interaction with the mothers in areas of general and basic breastfeeding education, particularly in the benefits of breastmilk and the practice of skin-to-skin kangaroo mother care. This reflects the adherence of the healthcare providers in this study to the core components of BFHI, particularly items 3, 4, and 5, which centre on providing antenatal and postnatal breastfeeding education, helping mothers towards early initiation and maintenance of breastfeeding respectively.[33] This study, however, revealed gaps in areas of specialised breastfeeding education, such as breast pumping, non-nutritive sucking by preterm babies and the benefits of buccal colostrum, which are also currently significant integral components of BFHI targeted at improving the outcome of the vulnerable populations.[33,34] The fact that only a few of the respondents consistently provided education on breast pumping may indicate the lack of specialized training, inadequate availability of breast pumps, or poor knowledge on the benefits of breastfeeding. Similarly, the inconsistencies in the provision of education in areas of non-nutritive sucking and buccal colostrum, aimed at preparing the premature babies for direct oral feeding and boosting their immunity, suggest inadequate implementation of BFHI in high dependency neonatal units and in vulnerable neonatal populations, predisposing them to poor outcome.[34,36] These findings are consistent with the reports by *Hendey et al* in Egypt and Guo *et al* in China.[37,38] This thus means that although BFHI is implemented by healthcare providers, the implementation is selective, partial, and superficial in favour of the less technically demanding practices while neglecting the advanced and complex breastfeeding supports necessary for the survival of the vulnerable neonatal population.

Conclusion

Although the healthcare providers have commendable general breastfeeding knowledge and positive attitudes towards practising BFHI, significant gaps exist in specialized breastfeeding knowledge, practical breastfeeding skills for premature babies, and breastfeeding in mothers with special conditions.

Limitations of the study

The cross-sectional study design precludes establishing a causal relationship between the respondents' knowledge and support rendered to mothers. The self-administration of the questionnaire may lead to recall bias, which may cause over or underestimation of the respondents' knowledge.

Conflict of interest: none to declare

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