

Research Article

Breastfeeding Knowledge and Attitudes amongst Health Workers in a Health Care Facility in South-South Nigeria: the Need for Middle Level Health Manpower Development

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Abstract This cross-sectional study was designed to assess the knowledge and attitudes of health workers in South-South Nigeria using a semi-structured, self-administered questionnaire completed by 36 respondents. Majority (69.4%) of participants were community health officers/community health extension workers (CHO/CHEW). Findings indicate that human milk was acceptable to 97.2% of participating health workers. All participants approved of exclusive breastfeeding and giving colostrum to newborns. However, 8.3% identified < 4 months as the recommended length of exclusive breastfeeding duration, 8.3% specified > 6 months and 83.3% indicated 4–6 months. Only 36.1% knew that breastfeeding should last for a period of 2 years and beyond. One third of the respondents could not name more than two components of breast milk and 75.1% failed to identify more than three advantages of breastfeeding. Disturbingly, mental retardation (11.1%), diarrheal disease (2.8%) and failure to thrive (16.7%) were some of the disadvantages of breastfeeding identified. This study illustrates substantial and unacceptable knowledge gaps among frontline cadres of health workers. Immediate training and continuing medical education of health workers aimed at bridging these gaps, will help improve newborn health.

Keywords breastfeeding; knowledge; health workers; newborn health; Nigeria

1 Introduction

Childhood nutrition is essential for healthy growth and development into adult life [12]. Human milk is recognized worldwide as the ideal nutrient for the human newborn child [4]. It is highly nutritious providing all the necessary elements needed for infant health during the first six months of life and thereafter [4,8,12]. Breastfeeding is beneficial both for the child and mother. It is cheap, clean, accessible, and safe. It promotes newborn immunity and enhances child survival [4,8]. Furthermore, human milk contains

antibodies that help protect infants from common childhood illnesses—such as diarrhea and pneumonia, the two primary causes of child mortality worldwide [2]. Breastfeeding has also been shown to promote protection against pregnancy, development of breast cancer and mother-infant bonding, amongst other benefits [8,15].

Beyond the immediate benefits for children, breastfeeding contributes to a lifetime of good health. It has been demonstrated that adults who were breastfed as infants have better blood pressure and cholesterol profiles, in addition to lower weights and incidence of type-2 diabetes [17]. There is evidence that people who were breastfed perform better on intelligence tests [2]. Exclusive breastfeeding (EBF) is defined as the intake of breast milk by an infant from its mother or wet nurse, or expressed milk with no addition of any liquids or solids apart from drops or syrups consisting of vitamins and mineral supplements or medicine, and nothing else [15]. Facilitation of EBF is one of the cardinal components of the baby friendly hospital initiative (BFHI) [15].

The World Health Organization (WHO) strongly recommends EBF for the first six months of life. At six months, other foods should complement breastfeeding, with breastfeeding continuing for up to two years and beyond. In addition, breastfeeding should begin within an hour of birth; offered to the infant “on demand,” and as often as the child wants day and night; bottles or pacifiers should be avoided [2]. Efforts towards promoting the practice of breastfeeding led to the 1990 Innocenti Declaration which states that “all governments should create an environment enabling women to practice EBF for the first 6 months of life” [15]. Provision of crèches, human milk banks, and rooming-in facilities are some structural initiatives that have been introduced to protect, promote, and support breastfeeding practices [4,8,15]. In Nigeria, the 2008 National Demographic Health Survey (NDHS) reported that

nearly all children (97%) born in the five years preceding the survey were breastfed. However, less than half of infants (38%) were put to the breast within one hour of birth and only 68% started breastfeeding within the first day. The timing and initiation of breastfeeding varied with background characteristics such as education, location/zone, and assistance at delivery. The survey also showed that prelacteal feeding is widely practiced in Nigeria. More than half (56%) of last born children received a prelacteal feed [7].

Despite the many benefits of breastfeeding, it has been shown that numerous factors hinder its optimal practice. Some of these barriers include mother's employment, unfriendly hospital practices, advertisement of breast milk substitutes, ignorance, family pressures, and mother's ill-health, among other factors [4, 12, 13, 15]. Additionally, in the past few decades, HIV infection became a major challenge for breastfeeding counseling. However, the World Health Organization (WHO) issued guidelines to help health workers with infant feeding counseling in the context of HIV. Current guidelines advocate that mothers should exclusively breastfeed their infants for the first six months of life, introducing appropriate complementary foods thereafter, and continue breastfeeding for the first 12 months of life. Furthermore, guidelines indicate that prophylactic antiretroviral (ARV) drugs during the breastfeeding period greatly reduce the risk of HIV transmission from mother to infant [1, 16]. In the light of current WHO recommendations, breastfeeding has received a boost that will renew its practice particularly among HIV infected women in low resource countries like Nigeria.

The knowledge and the attitudes of medical and paramedical personnel working in urban and rural health centers can greatly affect breastfeeding practice [12]. Non-supportive attitudes of health workers have been reported, where nurses were shown to be inflexible and provide little breastfeeding assistance while working with mothers and their infants [3]. Breastfeeding mothers have voiced complaints of not being adequately informed by nurses about the superiority of breast milk and the health advantages of breastfeeding. One mother stated "they just asked if I wanted to bottle or breastfeed and did not tell me about the benefits of breastfeeding" [14].

Most studies conducted in Nigeria on breastfeeding are in tertiary health centers, located in urban communities. Thus, the paucity of studies that focus on the assessment of breastfeeding knowledge and attitudes of health workers in Nigerian secondary health care facilities was the impetus for this study.

2 Methods

This cross-sectional study was carried out at the Holy Family Joint Hospital Ikom, cross River State, Nigeria. Ikom is a semi urban settlement in Ikom Local Government

Area of the State. The inhabitants are mainly traders, farmers, and civil servants. The social amenities in the locality include power supply, partly tarred road network, private/government owned schools, and numerous private health facilities. The hospital where this study was carried out is a faith-based facility which provides health care service in the central district of the state, as well as neighboring Cameroon. It was built and inaugurated in 1956 by Bishop Thomas Megettrik. Currently, the lack of adequate professional staff has affected patronage of the facility. The health facility has a total number of 48 professional health workers (3 non-specialist doctors, 15 nurse/midwives, and 30 CHO/CHEW).

A convenience sample of 36 health workers, who consented verbally, were recruited to participate in the study. Ethical consent was received from the management of the health facility. Each participant completed a semi-structure, self-administered questionnaire. This questionnaire was personally developed by the researchers and pre-tested at a sister health facility within the same region. The English language questionnaire was well understood by participants, all of whom had post secondary education. The questionnaire is composed of two sections: Section A which has 7 questions focused on bio-data of respondents including, age, gender, marital status, cadre, tribe, address, and religion. The 9 questions in Section B focus on the respondent's knowledge of breastfeeding, such as preferred infant milk type, breast milk components, duration of exclusive breastfeeding, and entire breastfeeding time frame, attitude towards feeding of colostrum as well as knowledge of the advantages and disadvantages of breastfeeding including reasons why mothers may not choose to breastfeed their newborns. The respondents were required to complete the questionnaire in the presence of one of the researchers. The entire questionnaire took approximately 15 minutes to complete. The data was analyzed using SPSS statistical package version 15.0.

3 Results

Of the 36 respondents, 28 (77.8%) were females and 8 (22.2%) males. Their average age was 25.56 ± 5.7 with majority of the respondents in the 26 to 30 years age category. Twenty (55.6%) were single, while 16 (44.4%) were married. One (2.8%) was a doctor, 10 (27.8%) were nurses/midwives and 25 (69.4%) CHO/CHEW. All of the respondents were Christians with the highest representation being from the Yala tribe (36.1%) (Table 1).

Human milk was identified by 97.2% of the respondents as the ideal nutrient for the newborn, while 2.8% indicated artificial milk (Table 2). All the respondents agreed that use of colostrum and EBF were beneficial infant feeding practices. However, 8.3% identified < 4 months as the duration of exclusive breastfeeding, another 8.3% answered > 6 months, and 83.3% indicated 4–6 months. Only 36.1%

Table 1: Socio-demographic characteristics of respondents.

Age group	Number	Percentage
15–20	10	27.8
21–25	9	25.0
26–30	11	30.6
31–35	4	11.1
36–40	2	5.5
Gender		
Female	28	77.8
Male	8	22.2
Marital status		
Married	16	44.4
Single	20	55.6
Tribe		
Yala	13	36.1
Ugep	4	11.1
Bekwara	4	11.1
Ogoja	4	11.1
Others	9	25.0
Cadre		
CHO/CHEW	25	69.4
Doctor	1	2.8
NO/MW	10	27.8

CHO: community health officer, CHEW: community health extension worker, NO: nursing officer, MW: midwife.

Table 2: Frequencies of preferred infant feeding, duration of breastfeeding and exclusive breastfeeding.

Preferred infant feeding	Number	Percentage
Human milk	35	97.2
Artificial milk	1	2.8
EBF duration		
< 4 months	3	8.3
4–6	30	83.4
> 6	3	8.3
Breastfeeding duration		
4–6	3	8.3
7–12	7	19.3
13–18	12	33.3
19–24	13	36.1
> 24	1	2.8

EBF: exclusive breastfeeding.

correctly identified breastfeeding duration of 2 years and beyond (Table 2). One third of the respondents could not name more than 2 components of breast milk and 75.1% did not know greater than 3 advantages of breastfeeding. Pain was identified by 6 (16.7%) of the respondents as a disadvantage of breastfeeding. Surprisingly, mental retardation (11.1%), failure to thrive (16.7%), and diarrheal disease (2.8%) were pointed out as disadvantages of breastfeeding (Table 3).

Table 3: Frequencies of identified breast milk components, advantages and disadvantages of breastfeeding.

Variables	Number	Percentage
Components*		
Water	32	88.9
Protein	22	61.1
Fat	16	44.4
Antibodies	12	33.3
Carbohydrate	7	25.0
Advantages of breastfeeding*		
Mother-infant bonding	23	63.9
Family planning	24	66.7
Prevention of disease	6	16.7
Cheap	15	41.7
Cleanliness	9	25.0
Availability	9	25.0
Others	11	30.0
Disadvantages of breastfeeding*		
Pain	6	16.7
MTCT HIV	13	36.1
Sagging breast	8	22.2
Mental retardation	4	11.1
Failure to thrive	6	16.7
Diarrhea	1	2.8

*Totals greater than 100 due to multiple responses.

4 Discussion

The study revealed that 97.2% of participating health workers identified breastfeeding to be the preferred mode of feeding for an infant, versus artificial milk. Similarly, the acceptability of EBF of infants and use of colostrum as a good source of nutrients for the newborn was unanimous. This finding is encouraging considering the erroneous impressions some people have that breast milk alone does not provide sufficient nutrients for the new born within the first 4 to 6 months of life [7]. It is therefore not surprising that as high as 83.4% of the respondents knew the correct duration of EBF. This finding was similar to the outcomes of other studies [4, 8, 9, 12]. The high level of acceptability of colostrum use negates the local belief of its harmfulness to the newborn [7].

It was however surprising that only 36.1% of health workers knew that breastfeeding should be continued up to 24 months and beyond. Similar knowledge gap has been identified by Sadoh et al., in their study of medical women's breastfeeding practices, where it was shown that as many as 15.7% of respondents felt other drinks and or food should be introduced before the age of six months. Also as many as 40% did not know that breastfeeding should be carried out for 24 months or beyond [12]. Furthermore, one third of respondents could not name more than two components of breast milk. Interestingly, 88.9% knew that breast milk contains water. This is in contrast to the erroneous belief of opponents of EBF, who believe newborns need water in

addition to breast milk [7]. If this knowledge is translated to education of mothers by the health workers, the danger of diarrhea disease from contaminated water given to breastfeeding newborns would be averted [7].

Despite the numerous advantages of breastfeeding, 75.0% of the respondents could not identify more than three advantages. However, 63.9% acknowledged that breastfeeding encourages bonding between mother and child. Initiating close relationship between mother and child at an early age is the key to child development [7, 15].

The benefit of breastfeeding as a means of family planning was noted by 66.7%. It is however important to mention that EBF for the first six months of life is a key criteria for the prevention of pregnancy to be realized. Only 6 (16.7%) health workers recognized EBF as an appropriate practice in preventing diarrheal disease. Surprisingly, one health worker implicated breastfeeding as a cause of diarrheal disease. This is a critical finding given that this erroneous belief could lead to dangerous misinformation and counseling of breastfeeding mothers. There is ample evidence demonstrating that breastfeeding helps prevent death of infants from diarrheal disease [5].

More than a third of the respondents agreed that breastfeeding was cheaper than artificial milk and 9 (25.0%) agreed that it was clean, safe, and always available. Although not many health workers acknowledged the "hygiene" benefits of breast milk, these facts should be emphasized to mothers so that they would be encouraged to appreciate the "safe" advantages of breastfeeding over artificial milk.

Despite its health benefits, breastfeeding has been reported to have some disadvantages [13]. One such disadvantage is the fact that breast milk can be a source of HIV transmission. However, only 36.7% of the participants recognized viral infections, such as HIV, could be transmitted from mother to child through breastfeeding. This critical lack of knowledge amongst health care staff on the transmission of infection to the infant is unacceptable in the era of the HIV pandemic, particularly if the post partum strategy of PMTCT of HIV is to be effectively achieved.

Some health workers showed concern about the breast changes resulting from breastfeeding, with 22.2% indicating the sagging of breasts as a disadvantage to breastfeeding. This particular misconception by health workers may impact negatively on the mothers, thereby affect breastfeeding initiation and duration. There are various factors related to pregnancy and lactation that can alter the physical appearance of breast not just breastfeeding. There is a need for health workers to be educated on these changes so that they can in turn counsel breastfeeding mothers on the care of their breasts during pregnancy and lactation. Breast trauma can be a painful experience for the breastfeeding mother, as such 6 (16.7%) of the respondents identified this as a disadvantage

of breastfeeding. Unexpected and of great concern was the finding that close to a third of respondents identify mental retardation, failure to thrive, and diarrheal disease as disadvantages of breastfeeding. Not only is this gravely incorrect but breastfeeding is a key strategy for resolving failure to thrive and diarrheal disease, the exact opposite of responses. Anemia, stress, and change in lifestyle were also mentioned as negative impacts of breastfeeding, on the mother. There is no evidence to support breastfeeding leading to anemia. Motherhood results in a change in lifestyle for women, a change that is not simply the result of breastfeeding. However, mothers need to be supported if these changes result in increased stress in their lives. Hence health workers require practical tools they can provide for mothers to cope with stressful changes, which will help to support and protect breastfeeding duration.

Even though the majority of the respondents were females, and it is reasonable to assume that they may be more knowledgeable on breastfeeding, given that it is a traditionally and cardinal role of African motherhood; the female participants' youth (average age 25.5 years), single status, and lower cadre of professional training could have accounted for the lack of knowledge demonstrated in this study. This makes the need for education on breastfeeding for all levels of health care staff more critical, regardless of gender or age.

Studies have shown that medical and paramedical personnel who are not adequately trained to counsel mothers on breastfeeding impact optimal practice of breastfeeding negatively due to knowledge gaps [10, 11, 12]. The reported decline in breastfeeding prevalence demonstrated by some studies from different parts of the world may be as a result of this knowledge gap, after ruling out HIV infection [6, 13].

Health workers at the secondary level of care are closer to the majority of the populace and are also highly regarded by people within their communities. Their role as vanguards of information dissemination cannot be over-emphasized. Enhancing their knowledge and skills in counseling breastfeeding mothers at the grass roots level will impact positively on the general health of future generation of Nigerians. It is important to point out that due to inadequate number of professional staff in the facility; the study had narrow representation of all cadres of health workers. This was noted as a major limitation to the study.

In conclusion, the study showed that there were some substantial knowledge gaps on breastfeeding amongst health workers that would present as a significant barrier to the protection, promotion, and support of breastfeeding within this health facility. There is therefore a need to train and support all cadres of health workers on breastfeeding. This effort will improve and promote effective breastfeeding practices, a necessary strategy for child survival. Finally, these findings indicate a need for further studies to

determine barriers to breastfeeding amongst mothers and a wider representation of health workers, from a range of health facilities.

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