

Knowledge of Exclusive Breastfeeding and Proposed Infant Feeding Pattern of Post-Natal Mothers in Maiduguri, Nigeria

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Abstract: Breast milk is known to be the best food for the infants because it contains all the nutrients in the correct proportions. It is readily produced, easily digested and assimilated, has the correct temperature and is always available at no cost. Exclusive breastfeeding protects the child from potentially unsafe food or water. Despite the strong evidence and wide publicity on its benefit, exclusive breastfeeding has remained low in Northern Nigeria. This research therefore is aimed at assessing the knowledge of Exclusive Breastfeeding and proposed infant feeding pattern of post-natal mothers in University of Maiduguri Teaching Hospital. A descriptive survey involving a total of 127 mothers who gave birth to live infants not more than 48 hours were selected using purposive sampling technique, and self-developed questionnaire was administered to collect data from the respondents. Findings revealed that majority of the respondents (70%) had high knowledge of exclusive breastfeeding, however only few respondents intend to practice exclusive breast feeding. Two-third of the respondents who had received information about EBF got it from health workers. The study therefore suggest that health workers and other government apparatus should intensify efforts that enhances the practice of exclusive breastfeeding.

Keywords: Exclusive Breast Feeding, Infant Feeding, Knowledge, Postnatal Mothers.

I. Introduction

Breast milk is known to be the best food for the infants because it contains all the nutrients in the correct proportions. It is readily produced, easily digested and assimilated, has the correct temperature and is always available at no cost¹. Optimal breastfeeding of children has the greatest potential impact on infant's health and development as well as child survival from all preventive diseases to adulthood. Black, Allen, Bhutta, Caulfield, De nois, Ezzatic, Mothers and Rivera² reported that optimal breastfeeding of children has the capacity of protecting and preventing 1.4 million deaths in children under five in developing world annually. Traditionally, most mothers keep their babies on breast milk for as long as possible until such a time the child is capable of tolerating traditional foods. This is wise of them since they could not provide replacement of milk and there has usually existed good local knowledge about breastfeeding, although, practices have varied from culture to culture.

Exclusive breastfeeding (EBF) is defined as “ infant's consumption of human milk with no supplementation of any type (no water, no juice, no non human milk and no foods) except for vitamins, minerals and medications”³. Breastfeeding exclusively does not allow the infant to be exposed to potentially unsafe food or water. Despite the strong evidence and wide publicity on its benefit, exclusive breastfeeding has remained low worldwide. Researchers have unveiled that exclusive breastfeeding pattern have improved significantly in some countries over the past ten years but they are still far from the recommended levels in the developing world as a whole^{4,5,6}. This therefore indicates that the potential to improve child survival in the developing countries remains untapped-only 39% of all infants 0-5 months of age in developing world are exclusively breastfed⁷.

In Nigeria, the major factors influencing exclusive breastfeeding practice includes; urbanization, mothers working outside home, women education, attitudes of health workers, policies of health facilities to exclusively breastfeed or choice of other suitable infant feeding patterns and knowledge of mothers on exclusive breastfeeding pattern among others. Successful breastfeeding depends on mothers' knowledge and beliefs about breastfeeding. Since breastfeeding behaviour of a mother is an important predictor of infant and child nutrition, health and development, it becomes necessary to assess mothers' knowledge, and proposed infants feeding patterns.

II. Statement of the Problem

Global campaign urges mothers to be baby friendly,^{4, 6} however, in most developing countries of the world like Nigeria, malnutrition is still a life threatening issue particularly among the poor and low income

earners. The most affected are babies and children under five years of age. High mortality rates are still persisting among the babies who are not breastfed⁴

In Nigeria, despite increasing level of campaign on exclusive breastfeeding, there is still a wide gap between knowledge and practice of breast feeding since most mothers do not appreciate practicing it appropriately^{8,4}. As the biblical injunction put it “my people are destroyed due to lack of knowledge”. Lack of knowledge and poor practice of Exclusive Breastfeeding may be disastrous to infants and child nutrition, health and development⁹. Therefore this research is aimed at assessing knowledge of Exclusive Breastfeeding and proposed infant feeding pattern of post-natal mothers in University of Maiduguri Teaching Hospital.

Objectives Of The Study

The specific objectives of this study are to:

Verify the Proposed Infant Feeding Pattern of Post-natal Mothers in University of Maiduguri Teaching Hospital.

Ascertain mothers’ knowledge about exclusive breastfeeding

Identify mothers’ sources of information concerning exclusive breastfeeding.

Null Hypotheses (Ho)

There is no significant relationship between sources of information about EBF and intension to practice EBF.

There is no significant relationship between level of Knowledge on EBF and mothers intension to practice EBF

Significance Of The Study

Findings of this study will add to the existing database and will assist nurses and other health professionals to plan strategies to enhance or sustain exclusive breastfeeding among mothers. If it is found that the mothers practice EBF, they will be encouraged to continue this practice. However, if it is otherwise, they will equally be educated about the advantages of EBF and its positive practices to be maintained in order to enhance the healthy growth of the children.

III. Methodology

Study Design

A descriptive survey design was used for this study because it deals with the accurate and factual description and summary of the actual situation.

Study Setting

The research was conducted in Obstetric ward of University of Maiduguri, Teaching Hospital (UMTH) located in Jere local government along Bama road northeastern Nigeria. The hospital which is a tertiary institution has a bed capacity of 530 spread over 20 wards. The hospital serves as referral centre for various individuals seeking tertiary level health care services. Obstetric ward of UMTH has a bed capacity of about twenty four and admits both pre and post-natal cases.

Study Population And Sampling Technique

Purposive sampling method was used to select 127 mothers who gave birth to live infants not more than 48 hours as respondents for the study.

Instrumentation

The researchers used questionnaire to collect data from the respondents. The instrument was validated by health experts and ten copies of the questionnaires were pre-tested at state specialist hospital Maiduguri, Borno State using test retest method to ensure consistency and reliability of the instrument. Reliability coefficient of 0.75 was obtained which made it fit for use in the study area. The instrument consisted of three sections; section A was for the demographic data of the respondents, section B elicited responses on the knowledge of exclusive breastfeeding, while section C dealt with proposed infants and child’s feeding pattern.

Procedure ForData Collection

The researcher obtained an ethical approval from the research and ethical committee of University of Maiduguri, Teaching Hospital. 150 respondents were selected over a period of one week using purposive sampling. Consent was obtained from the pregnant women after explanation of the purpose and objective of the research. The researchers then administered the questionnaires directly to the literate pregnant women, while those that were uneducated, the questions were interpreted for them to choose the right options. Out of the 150

questionnaires served, only 127 were retrieved. The identities of the women remained anonymous throughout the study period. The questionnaires and responses were treated with confidentiality after retrieval.

Data Analysis

Data collected was analysed manually. Also a marking scheme for the mothers’ knowledge on EBF was developed. A correct response was scored as ‘1’ and incorrect or I don’t know response was scored as ‘0’. The mothers’ scores in the section B of the questionnaire were further categorized as high level of knowledge (3-5) and low level of knowledge (0-2). Descriptive statistics of frequency counts and percentages was used to discuss objective one and two while inferential statistics of chi- square was used to test the relationship between independent and dependent variables at 5% level of significance.

IV. Findings

Table I: Age of Respondent

Variables	Frequency	Percentage
14-24 years	56	44.09%
25-35 years	53	41.73%
36-46 years	16	12.59%
47 and above	2	1.57%
Total	127	100%

TABLE I shows that respondents from age 14-24 years were the majority with 56(44%) followed by 25-35 years with 53(41%) then 36-46 years 16(13%) and lastly 2% (2) of the respondents fall within 47 years and above.

Table II: Occupation of the Respondents

Variables	Frequency	Percentage
Civil servant	51	40.15%
House wife	40	31.49%
Business women	18	14.17%
Student	18	14.17%
Total	127	100%

TABLE II shows that 40% of the respondents were civil servants with the highest score followed by house wives, 31% and 18% each of the respondents were both business women and students respectively.

Table III: Educational status of the Respondents

Variables	Frequency	Percentage
None/Quranic school	33	25.98%
Primary	14	11.02%
Secondary	27	21.25%
Tertiary	53	41.73%
Total	127	100%

TABLE III shows that 41% of the respondents had tertiary education, 21% with secondary education. 11% with primary education and the remaining 25% have not attained any formal education.

Table IV: Marital status of Respondents

Variables	Frequency	Percentage
Single	2	1.57
Married	91	71.65
Widowed	13	10.23%
Divorced	21	16.54%
Total	127	100%

TABLE IV shows that 72% of respondents were married, 16.54% divorced, 10.23% widowed and 1.57% were single parents.

Table V: Parity of Respondents

Variables	Frequency	Percentage
Primipara	40	31.49%
Multipara	55	43.30%
Grand multipara	32	25.19%
Total	127	100%

TABLE V shows that 55% of the respondents were multi-parous, 31% primiparous and 25% Grand multiparous women.

Table VI: Booking Statue and Number of Antenatal Visits of the Respondents

Antenatal visits	Mothers booked n=100		Mothers not booked n=27	
	Frequency	Percentage	Frequency	Percentage
None	-	-	27	100%
2-4	50	50%	-	-
5-7	41	41%	-	-
Above 7	9	9%	-	-

TABLE VI Shows that out of 100 mothers who were booked, 50% had 2-4 antenatal visits, 41% had 5-7 visits and 9% had above 7 visits. While among the un-booked respondents 27, none had any antenatal visits.

Table VII: Perinatal Factors of Respondents

Mode of delivery	Frequency	Percentage
Spontaneous vaginal delivery	90	70.86%
Operative delivery	24	18.89%
Other assisted delivery	13	10.23%
TOTAL	127	100%

Table VII shows that 90(70.86%) of respondents had spontaneous vaginal delivery. 18.89% had operative delivery while the rest 13 (10%) had assisted deliveries.

Table VIII: Knowledge of Respondents about Exclusive Breast Feeding (n= 127)

Knowledge Areas	Frequency	Percentage
Awareness of EBF	114	90.1
Knowledge of what EBF is	77	60.3
Knowledge of when to wean	25	20.0
Knowledge that breast milk alone is sufficient for the baby for 0-6 months	89	70.1
Knowledge that more breast milk is produced as the baby sucks	102	80.4
Level of Knowledge		
Low Knowledge(0-2)	38	30
High Knowledge(3-5)	89	70
Total	127	100

TABLE VIII shows the knowledge of respondents about some aspects of EBF. 90 %(n=114) of respondents were aware of EBF, 77 (60.3%) knew what exclusive breastfeeding is and (70.1%; n=89) knew that breast milk alone is sufficient for the baby for the first six months, 80.4%(n=102) knows that more breast is produced as the baby suckles. However, only (20.0%; n=25) knew when to wean the baby. Cumulatively, table 8 also revealed that on a general note; there was high knowledge of EBF 89(70%) among the respondents.

Table IX: Awareness of Exclusive Breastfeeding and source of Information (n=127)

Sources of information	frequency	percentages
Radio	13	10.2%
Television	16	12.60%
Health Workers	73	57.48%
Friends (others)	25	19.69%
Total	127	100%

TABLE IX shows that all of the respondents aware of exclusive breastfeeding. Majority of them (57,48%) heard it from health workers, 19.69% from friends and 10.2% and 12.60% heard from Radio and television respectively.

Table X: Mothers Choice of Baby Feeding

Choice of feeding	frequency	percentage
Mothers' exclusive breast feeding	51	40.2%
Mothers breast feeding and bottle feeding	74	58.3%
bottle feeding only	2	1.5%
TOTAL	127	100%

TABLE X shows that mothers who intend to exclusively breast feed were 51(40.2%), mothers who intend to combine breastfeeding and bottle feeding were 74 (58%) while mothers who intend to practice bottle feeding only were 2 (2%).

HYPOTHESES

H_{0 1} There is no significant relationship between source of information and mothers' intension to practice exclusive breastfeeding

Table XI: Relationship Between Sources of Information About EBF and Intension to Practice EBF (n=127)

Sources of Information	Intension to Practice EBF		Total
	YES	NO	
Radio	7(5.22)	6(7.78)	13
Television	6(6.43)	10(9.58)	16
Health Workers	32(29.32)	41(43.69)	73
Friends/Family	6(10.04)	19(14.96)	25
Total	51	76	127

At 5% level of significance and $df=3$, X^2_{cal} of 4.21 is less than X^2_{tab} of 7.815. There is therefore no statistical evidence to reject the null hypothesis which states that there is no significant relationship between source of information and mothers' intension to practice exclusive breastfeeding.

H_0_2 There is no significant relationship between level of Knowledge on EBF and mothers intension to practice EBF

Table XII: Relationship Between Mothers Level of Knowledge on EBF and Intension to Practice EBF (n=127).

Level of Knowledge on EBF	Intension to Practice EBF		Total
	YES	NO	
Low(0-2)	30(15.26)	8(22.74)	38
High(3-5)	21(35.74)	68(53.26)	89
Total	51	76	127

At 5% level of significance and $df=1$, X^2_{cal} of 33.95 is greater than X^2_{tab} of 3.841. There is therefore a statistical evidence to reject the null hypothesis which states that there is no significant relationship between level of Knowledge on EBF and mothers intension to practice EBF. This implies that mothers' level of knowledge on EBF has a significance influence on their intension to practice EBF.

V. Discussion Of Findings

Socio- Demographic Data Of Respondents

Majority of the respondents were between ages 14 and 24 years, only a few percentage (1.58%) falls above 47 years. 51(40.15%) were civil servants and 40(31.49%) were fulltime housewives. 53(41.73%) had tertiary education as their highest academic qualification. This result shows that majority of the respondents had formal education and may possibly belong to the working class.

Practice Of Exclusive Breastfeeding

Among the respondents studied, 51(40%) intend to exclusively breastfeed their babies while a higher percentage 74 (58%) of respondents intend to combine breast and bottle feeding, only 2% of respondents intend to bottle feed only. This result is consistent with a study conducted on breastfeeding patterns among mothers in Yobe state, Nigeria where the researcher reported that majority of the respondents (65.9%) intend to triangulate breastfeeding and bottle-feeding while only 34.1% intend to exclusively breastfeed¹⁰. On the Contrary high level of exclusive breast feeding pattern was reported in other parts of Nigeria, Essien et'al⁹ in Calabar and Raheal, Grace, patience and Bolanle¹¹ in Ogun state of Nigeria reported 60% and 66% respectively. This implies that the practice of exclusive breastfeeding is low among northern Nigerians than in other parts of Nigeria. This low patronage of exclusive breastfeeding pattern in the northern Nigeria may not be unconnected with the cultural beliefs of many of the ethnic nationalities and mixed feeding promotional practices of breast milk substitute in this part of the country.

Knowledge About Breastfeeding

Findings also show the knowledge of respondents about some aspects of EBF. 114(90.1%) of respondents were aware of EBF, 77 (60.3%) knew what exclusive breastfeeding is and 89(70%) knew that breast milk alone is sufficient for the baby for the first six months. However, only 25(20%) knew when to wean the baby. Cumulatively, there appears to be a higher knowledge about exclusive among the respondents as revealed by Table 8. This result supports the aim of the "Baby friendly hospital initiative" which encourages the spread of awareness of exclusive breastfeeding. The high level of awareness on exclusive breastfeeding is supported by WHO⁶ and Raheal Grace & Patience and Bolanle¹¹. Furthermore, the high level of awareness in this study may be attributed to the efforts made by the health care personnel's in disseminating information on exclusive breastfeeding. Although the hospital was designated as baby friendly, not all hospitals designated as baby friendly carry out activities that leads to successful exclusive breastfeeding.

Source of Awareness On Breastfeeding

Out of 113(88.9%) respondents who were aware of exclusive breastfeeding, 64% received information from health workers, 22% from friends and relatives, 5.30% from Radio and 7.96% from the television. Results showed that only a few percentages heard about exclusive breastfeeding through the media. This implies that the media in Maiduguri is not effective about information dissemination on the promotion of breastfeeding and hence need to improve on their efforts.

Level Of Knowledge On Breastfeeding And Mothers' Intension To Practice Breastfeeding

In spite of the high level of knowledge among the respondents, there exists a gap between knowledge and mothers intension to practice EBF. This gap may be partly due to cultural beliefs since exclusive breastfeeding is not among the traditional norms and most of the cultural practices involve giving herbs or traditional medicines in addition to breast milk to babies under 6 month of age. It may also be due to the fact that majority of the mothers fall into the categories of civil servants and house wives (TABLE II), with civil servant carrying the highest percentage. These mothers (working mothers) tend to introduce supplements earlier. This experience has been reported in urban areas like Calabar and Yobe in Nigeria^{9, 10}. This was in part due to short periods of maternity leaves offered to working mothers by their employers. These mothers tend to breastfeed intensively during their maternity leaves and supplement when they are out for work.

VI. Conclusion

Majority of the respondents were aware of EBF and knew that breast milk alone is sufficient for the baby for the first six months, yet less than two-thirds of them actually intend to practice EBF. Two-third of the respondents who had received information about EBF got it from health workers.

VII.Recommendations

- In order to enhance exclusive breastfeeding practices, health workers should intensify their health talks, house visits and communication promoting breastfeeding.
- Hold EBF crusade in the village squares, markets, churches, mosques and gatherings where women usually meet.
- Discourage beliefs, attitudes and practices that do not promote breastfeeding.
- Discourage the use of breast milk substitutes and encourage mothers to breastfeed their babies within one hour of birth.

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