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Infant feeding practices among parturient women in rural communities of Anambra State, Nigeria

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ABSTRACT

Background: Infant feeding is an integral part of the reproductive process with important implications for the health of mothers and their babies. However, various practices exist in different communities. It is therefore pertinent to know the infant feeding practices among rural dwellers, as well as the factors that influence them.

Methods: This study was a cross sectional survey. A total of 372 volunteering parturient women were recruited using a multi-stage stratified sampling technique. Ethical approval and respondents' informed consent was obtained. A self-developed and validated questionnaire was used to collect data. Descriptive and inferential statistics was used to analyse data.

Results: Findings revealed that majority (84.4%) of the respondents were aware of exclusive breastfeeding (EBF), but only about half (50.5%) ever practiced exclusive breastfeeding. Also, a significant percentage of the respondents introduced complimentary feeding to the baby immediately after birth while 29.3% of participants reported drinking palm wine which is mainly alcoholic to stimulate breast milk secretion. Occupation of parturient women was associated with the practice of EBF (p=0.002).

Conclusions: Almost half of our studied parturient women do not engage in EBF. There is need for health care workers to strategically educate parturient women and their significant others on the numerous benefits of exclusive breast feeding.

Keywords Infant feeding practices, Parturient women, Exclusive breast feeding, Nigeria

INTRODUCTION

Breast milk is said to be the best milk for the new-born as it contains all the nutrients in their correct proportion and at normal temperature. The World Health Organization (WHO) in 2001 reported that only about 35% of infants are exclusively breastfed. According to the WHO, breast feeding forms an integral part of the reproductive process with important implications for the health of mothers and

their babies.³ Also, basic care for all new-borns should include promoting and supporting early and exclusive breastfeeding, keeping the baby warm, increasing hand washing and providing hygienic umbilical cord and skin care, identifying conditions requiring additional care and counselling on when to take a new-born to a health facility.⁴

Despite the global decline in infant mortality rate from 90 deaths per 1000 live births in 1990 to 48 in 2012, Nigeria

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failed to record any meaningful improvement.³ It has been reported in literature that Exclusive Breastfeeding (EBF) reduces infant mortality rates by up to 13% in countries with low income.⁵ EBP also has been shown to play a salient role in determining infant development and optimal health and is associated with decreased risk of early-life diseases such as otitis media, childhood obesity, respiratory tract infection and diarrhoea.⁶

However, due to education, culture, beliefs and cosmetic purposes, various other practices exist among community dwellers. Although colostrum is very important to the newborn as it contains protein that is three times the quantity present in mature milk and rich in ten amino acids, some tribes in Nigeria, dissuade use of colostrum, (the first milk from the breast).7 Furthermore, despite being rich in antibiotics, some Nigerian tribes still regard colostrum as stale milk that should be discarded to prevent morbidity to new born.7 The misconceptions about breast milk also made some nursing mothers to express and discard their breast milk if they stay stayed away from their infant for four to six hours. Such mothers believe that the milk is sour, hot and contaminated since the baby did not have access to the milk for more than four hours. Furthermore, breast milk has been proposed unorthodox practitioners as medications, and treatment of conjunctivitis, other eye problems and ear conditions. Some communities practice wet nursing where a neighbour or a relative breast-feeds a baby where the mother is not available. There might be risk of HIV transmission if the wet nurse is HIV positive. It is therefore pertinent to note most Nigerians are unaware of their HIV status. Despite the usefulness of breast milk, a study carried out in a semi-urban town in South-Eastern Nigeria, still showed only 35% of the 400 respondents practiced exclusive breast feeding.⁸ The main reasons for not practicing EBF reported in the study were that EBF was very stressful, mother's refusal, and the feeling that EBF was not necessary. Thirty five (13.7%) of the women were constrained by time while the husband's refusal accounted for 1.5% of the reasons for non-practice of exclusive breastfeeding.8 Another study conducted in Turkey revealed that nearly half of the women (45.4%) fed their babies with water containing sugar just after the birth.9

The aim of this study is to determine the pattern of infant feeding practices of parturient women dwelling in rural communities in Anambra state, one of the most populated states in south-eastern Nigeria. Extensive literature search revealed that there was paucity of information on the pattern and practice of EBF in rural communities in Anambra State, south eastern Nigeria.

METHODS

Study design

This research design for this study was an analytical cross sectional survey study.

Sampling techniques and sample size

The Yaro Yamane formula was used to determine the sample size:

$$n = \frac{N}{1 + N(d)^2}$$

Where: n= the sample size; N= the population size; d=the level of precision (assumed to be 0.05 at 95% confidence interval).

The Yaro Yamane formula is frequently used for sample size determination, for estimating proportion in a finite population, with the formula stated above. ¹⁰ Therefore, the sample size for this research study was:

$$\frac{920047}{1+920047(0.05)^2} = 399.8 \approx 400$$

Multi-stage sampling technique was used to select the towns that were included in this study. Anambra State has three senatorial districts; Anambra North, Anambra South and Anambra Central. Each of these senatorial districts consists of seven local government areas, making a total of 21 local government areas (LGAs). A local government was randomly selected from each senatorial district, making a total of 3 LGAs which includes Anambra North senatorial district, Oyi LGA; Anambra South senatorial district, Ekwusigo local government area was selected; Anambra Central senatorial district, Idemili South LGA was selected.

A rural community was finally selected randomly from each of these selected local government areas. This was done using simple random sampling (without replacement) method. For Idemili South LGA, Nnobi community was selected; Ichi community was selected for Ekwusigo LGA and Umunya community was selected from Oyi LGA.

Stratified random sampling method was then used to determine the proportion of the sample size that will be used for the study in each of the selected rural community so as to be able to get a total of 400 mothers who met the inclusion criteria.

Nnobi has an estimated population of about 35,000 and 22% of this population is 7,700 women. Ichi has an estimate population of about 24,452 and 22% of this population is 5,379 women. Umunya had an estimate population of about 33,605 and 22% of this population is 7,393. Thus, 150 (38%) questionnaires were administered at Nnobi community, 105 (26%) questionnaires were administered at Ichi community, while 145 (36%) questionnaires were administered at Umunya community Giving a total of 400 questionnaires administered.

Development and validity of the study questionnaire

The data was collected using a self-developed, self-administered questionnaire structured in such a way to extract pertinent information required for the study. Since the study was conducted in the Igbo speaking area of Nigeria, the questionnaire was also translated to Igbo to serve as an interview guide for participants that cannot comprehend English language.

The questionnaire consists of two sections; section A includes demographic information while section B was divided into sub-sections, so as to reflect the questions that borders on exclusive breast-feeding practices. A panel of four experts was constituted to evaluate the content validity of the developed questionnaire. The four experts were each from the public health nursing, community health nursing, maternal and child health nursing and measurement / evaluation. They examined the specific sections of the items of the instruments to justify the relevance of the contents, logical accuracy, clarity, and their suitability for meeting the study objectives. Necessary suggestions and modifications where made by expert panel, and corrections were effected accordingly. A pre-test of the instrument was conducted to ensure instrument reliability. The research questionnaire was pre-tested among twenty participants at a rural community, which was not included in the study but had a similar characteristic with the study population. The pilot study revealed good internal consistency of the item of the questionnaire (Cronbach alpha's statistics=0.774)

Procedure of data collection

A total of 400 consenting parturient women were consecutively recruited from three communities (one from each senatorial zone) in Anambra State. Two research assistants who are nurses and indigenes of the area of the study were trained on the modalities for instrument administration and collection. Each participant

responded to the questionnaire individually, and the participants without formal education were interviewed in their local language using the questionnaire as a guide. Data collection activity lasted for about three months and spanned from March to May 2015.

Statistical analysis

Data obtained were entered in computer using statistical package for social sciences (SPSS) software for windows version 20.0 (SPSS, Inc, Chicago, IL). Answers to the research questions were provided in frequency tables, and percentages. Test of association type was conducted between occupation and EBF practice using the Pearson Chi square.

Ethical considerations

Ethical approval was obtained from the Research Ethics Committee, Faculty of Health Science and Technology, Nnamdi Azikiwe University, Nnewi Campus before commencement of the study. All participants signed or thumb printed on the informed consent after being enlightened about the study. This study was conducted in strict conformation to the declaration of Declaration of Helsinki on Ethical Principles for Medical Research Involving Human Subjects.

RESULTS

Four hundred interviewer-administered copies of the same questionnaires were distributed to the study participants, out of which 372 were returned giving a response rate of 93%. Analysis of the socio-demographic data obtained revealed that that out of 372 sampled respondents, about half of respondents were between 26 and 35 years old, while 0.8% of participants were 46 years old and above. Also, 0.6% of the respondents had no formal education, while majority of participants (68.5%) attained secondary education. See Table 1 for summary of participant's socio-demographics.

Table 1: Socio-demographic characteristics of participants.

Variable	Frequency (N)	%
Age (years)		
15–24	131	36.0
25–34	184	51.0
35–44	47	12.2
≥45	8	0.8
Education qualification		
No formal education	5	0.6
Primary	53	13.8
Secondary	250	68.5
Tertiary	64	17.1
Marital status		
Single	9	1.9
Married	348	95.1
Widow	9	1.9
Divorced/separated	6	1.1

Continued.

Variable	Frequency (N)	%
Occupation		
House wife	83	22.2
Farming	25	5.7
Trading/artisan	213	59.0
Civil servant	51	13.1
Number of children		
1 child	82	22.0
2-3 children	166	45.4
4-5 children	100	27.0
>6 children	24	5.6

Table 2: Infant feeding practices of parturient women in rural communities of Anambra State, Nigeria.

Questions	Frequency	%			
Q ₁ . What baby was fed with immediately after birth					
Plain water with spoon	44	11.8			
Infant formula only	11	3.0			
Water and glucose	6	1.6			
Breast milk and water	250	67.2			
Breast milk only	46	12.4			
Q2. When did baby commence feeding?					
Immediately after birth	148	39.8			
2–24 hours after birth	84	22.6			
2 days after child birth	38	10.2			
When baby starts crying for food	60	16.1			
Q _{3.} Ever heard of exclusive breast feeding?					
Yes	314	84.4			
No	29	7.8			
Q ₄ . Do you practice exclusive breast feeding?					
Yes	153	41.1			
No	188	50.5			
Q _{5.} What are the reason for not practicing exclusive breast	t feeding?				
Husband's refusal	43	11.6			
Occupation	14	3.8			
Advice of Mother-in-law	27	7.3			
For aesthetic reasons	6	1.6			
Breast milk only will not satisfy the baby	99	26.6			
Q ₆ . When other foods were introduced					
Immediately after birth	28	7.5			
1-3 weeks after birth	32	8.6			
4-6 weeks after birth	91	24.5			
7-8 weeks after birth	85	22.8			
≥9 weeks after birth	73	19.6			

Table 3: Association between occupation and practice of EBF among parturient women in rural communities of Anambra State.

Occupation	Do you practice EBF				
	Yes	No	χ^2	P	
House wife	36	35		0.002*	
Farming	8	9	24.656		
Trading/Artisan	122	74	24.030		
Civil servant	13	32			

^{*=}Significant at p<0.05; EBF=exclusive breastfeeding.

About half of the participants (50.5%) never practiced exclusive breastfeeding.

A total of one hundred and forty-eight of the respondents reported commencement of breast feeding of their babies immediately after child birth, sixty respondents commenced feeding when the baby starts crying for food. 84 (22.6%) commenced feeding 2 to 24 hours after child birth, while about 38 (10.2%) respondents reported commencement about 2days after child birth for various reasons. Also, majority of the respondents 314(84.4%) indicated that they had knowledge of exclusive breast feeding, while only 153 (41.1%) of them said they practiced it. A significant population of the respondents 43 (11.6%) admitted their husbands' refusal as reason for not practicing exclusive breast feeding, 14 (3.8%) claimed occupation, 27 (7.3%) claimed that it was advice from their mothers-in-law, 6 (1.6%) claimed it was for aesthetic purposes, while 99 (26.6%) believed that breast milk alone will never satisfy their babies. A summary of response of participants on exclusive breastfeeding is presented in Table 2. Occupation of respondent was found to be associated with the practice of EBF significantly among the respondents (p=0.002) (see Table 3).

DISCUSSION

The findings of this study revealed that only (n=46, 12.4%) of the respondents gave only breast milk to their babies immediately after childbirth, while majority (n=250, 67.2%) of the respondents gave their babies breast milk and water after childbirth. This contradicts the step four of the breast feeding policy for Anambra State Health Institutions which was adopted from the national breast feeding policy which stipulates that all new born babies should not be given food or drink (water, glucose-water) other than breast milk, except on medical advice.¹² When the respondents were asked if they had knowledge of exclusive breast feeding (EBF), majority of them (n=314, 84.4%) responded in the affirmative. Our study agrees with the findings of a study that determined the knowledge, attitude and practice of EBF among rural women in Ijebu-Ode, Ogun State, Nigeria. They reported that majority of the respondents were aware of EBF.1 It can be assumed that the respondents who said they were not aware of EBF might be those who delivered their babies at home, and at traditional birth places as reported in sociodemographic findings. This is because the home child birth attendants and traditional birth attendants might not have been trained on the benefits and methods of achieving EBF for mothers. And so they will only teach the women what they think is right, and what they have practiced over the years. The WHO stated that breast feeding forms an integral part of reproductive process with important implications for the health of mothers.3 Hence, breastfeeding practice should never be compromised. There may therefore be a need to engage and train the traditional birth attendants on EBF in rural

communities. Despite the high claims of EBF awareness among the respondents, about half 188 (50.5%) of them do not practice it. This might be due to the inability of health workers in the various communities to convince the women on the numerous benefits of EBF, and then help the postpartum mothers to achieve same despite their peculiar challenges such as lack of knowledge on how to express breast milk. Furthermore, majority of the respondents gave their reason for not practicing EBF to be that breast milk alone will not satisfy their babies, while some respondents (n=43; 11.6%) gave husbands' refusal as their reason. However, occupational commitments (n=14, 3.8%), advice from mothers-in-law (n=27, 7.3%), aesthetic purposes while (n=6, 1.6%) were other reasons proffered for poor EBF practices. Our result is in contrast to the statement issued by Integrated Management of Childhood Illnesses (IMCI), Nigerian Adaptation in 2005 that a child should be breast feed day and night, at least eight times a day. 13 Similarly, Oluh in 2007 reported cosmetic purposes as one of the reasons why parturient women in some communities do not practice EBF.7 The findings here also corroborates with that of Ugboaja et al. in 2013 who reported that the main reasons why women in a sub-urban town in south eastern part of Nigeria do not practice EBF was that EBF was very stressful, mothers' refusal, feeling that EBF was not necessary, time constraints and husbands' refusal.8 About 19.6% of the respondents introduced other foods to their babies when the baby was at least more than two months old, while the greater percentage (24.5%) introduced other foods to their babies 4 to 6 weeks after child birth. Also, 7.5% introduced other foods to their babies immediately after child birth. This finding is a contrast to Sabo and colleagues in 2008 who opined that breast milk is the best food for the new born as it contains all the nutrients in their correct proportion¹. It is a nutritional error to give water to a new born because breast milk contains 70% water which is enough to hydrate the new born.

It was also observed in this study that 43.3% of the respondents stimulated breast milk secretion by drinking hot tea or pap, 29.3% drank palm wine while 1.3% took concoctions from herbs to stimulate increased breast milk secretion. This agrees with the findings of a study in Enugu, Nigeria which revealed that 25% of the women drank various forms of alcoholic beverages to induce lactation.¹⁴ Our study thus suggest that alcohol ingestion during breastfeeding may be prevalent in Anambra state. It is an age-long tradition and elderly women maintain that they practiced it and it worked for them, therefore their daughters will not hesitate in taking enough palm wine so as to induce lactation. 9,15 However, since alcohol has been found in human milk and can interfere with milk ejection reflex, it is recommended that alcohol should be avoided while breast feeding. It is also advised that breast feeding women should eat an adequate, varied diet. 14 The WHO stated that breast feeding forms an integral part of reproductive process with important implications for the health of mothers.³ Hence, breast feeding practice should

never be compromised. Furthermore, occupation significantly influenced practice of exclusive breast feeding among parturient women in Anambra State (p=0.002). In our study however, farmers reported the least compliance to exclusive breastfeeding while Traders/artisans amenable to EBF. This is not surprising as majority of residents in Anambra state are predominantly traders hence this observation might be as a result of higher preponderance of traders in our milieu. This finding is in tandem with the findings of Ugboaja and colleagues, in 2013 who opined that 26.2% and 13.7% of the respondents Reported EBF was stressful and that they were constrained by time respectively.8 In this era where many women engage in one job or the other so as to contribute to the family income. EBF which entails feeding the baby on demand now seems to be a challenge as the mothers are torn between fending for the family needs and sitting down to breastfeed the baby on demand.

CONCLUSION

This study provides evidence that majority of the respondents were aware of EBF, while a large percentage of those who claimed to have heard of EBF never practiced it. The main reason for not practicing EBF was the belief that breast milk alone will not satisfy their babies. This suggests poor knowledge of the composition of breast milk, meaning that they do not know that breast milk contains 70% water, and also have all the nutrients the baby needs in the right proportion. Our study showed that the respondents have poor knowledge of the physiology of breast production which is by "let down reflex". This means that the more the baby sucks the breast, the more the milk is produced by the breast irrespective of its size. Occupation influenced practice of EBF significantly among the respondents and this in line with the sociodemographic data which showed that about 78.4% of the respondents were income earners.

Recommendations

There is need for community health care workers (especially the nurse-midwives) to strategically teach breastfeeding women the numerous benefits of EBF, and help them devise ways to achieve EBF despite their peculiar reasons for not practicing it. They need to convince the women that breast milk contains all the nutrients and proportion of water that is sufficient for each new born.

Lastly, platforms which support for breastfeeding such as the Baby-Friendly Initiative (BFI), launched in 1991, by UNICEF and the World Health Organization should be set-up to encourage EBF in Anambra state.

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