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Role of Religion on Knowledge, Attitude and Practices of Lactating Mothers on Infant Feeding

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Abstract

Infant and young child feeding (IYCF) practices directly affect the nutritional status of children under two years of age, and ultimately, impact child survival. These practices are influenced by maternal knowledge and attitudes as well as socio-demographic and cultural factors; and an understanding of such factors is important to scaling up IYCF practices. This study was designed to assess the role of religion on knowledge, attitude and infant feeding practices among Christian and Muslim lactating mothers in Ibadan North Local Government Area (LGA), Oyo State.

The descriptive cross-sectional study was conducted among 320 lactating mothers in the LGA. Eight focus group discussions were carried out among Christian and Muslim lactating mothers. An adapted pre-tested questionnaire was used to collect information on socio-demographic characteristics and IYCF knowledge, attitude and practices of the respondents. Knowledge on IYCF was assessed on 14-item scale, and the scores categorised as: <5.60 poor, 5.60–10.88 fair, and >10.88 good knowledge. Attitude was assessed on 13 statements from the IOWA Infant Feeding Attitude scale with lowest and highest obtainable score of 13 and 65 respectively. A score of <44 was ranked as poor, and >44 points good. Data were analysed using descriptive statistics and one-way ANOVA. Qualitative data was analysed thematically.

Mean age of respondents was 30.0±4.9 years, 55.9% were Muslims, and 63.8% had fair knowledge. There was no significant difference in fair knowledge categorisation (63.7%, 63.8%), but there existed slight difference in good (20.7%, 21.3%) and poor (15.6%, 14.9%) knowledge of the Muslim and Christian respondents respectively. Mothers with poor attitude constituted 56.0%. Muslim religion directly supports pre-lacteal feeding and duration of breastfeeding while the other indirectly supports breastfeeding.

Religious practices directly and indirectly affect knowledge, attitude and practices of nursing mothers on infant feeding; hence, healthcare Professionals should pay more attention to nutrition education in religious houses using the infant and young child feeding module.

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Introduction

A child's growth is determined by the adequacy of dietary intake, which depends on infant and young child feeding and care practices and food security[1]. In accordance to Infant and Young Child Feeding (IYCF) guidelines, early initiation of breastfeeding immediately after birth (preferably within thirty minutes), exclusive breastfeeding for the first six months of life, timely introduction of complementary foods after the six months, continued breastfeeding for 2 years or beyond, age appropriate complementary feeding for children 6-23 months while continuing breastfeeding, active feeding for children during and after illness are recommended[2]. These practices are influenced by multiple interwoven factors which include health, psychosocial, cultural, political, and economic factors[3].

At about six months of age, an infant is developed and mentally ready for other foods. If complementary foods are not introduced, or are given inappropriately, an infant's growth may falter[4]. Culture, ethnic heritage, personal preference, habit, and other traditions are some of the factors that manipulate cultural diets. A diet that is culturally sensitive and takes into consideration all aforementioned factors is a must in promoting better nutrition in a community[5].

Nigerians are often very strict about their religious practice and beliefs, though the range of commitment, belief, and practice varies with each religion[6]. Religious belief globally influences specific eating practices and diets[7]. Despite interventions to reduce child mortality rate in Nigeria, child malnutrition is still a problem as the prevalence of stunting, wasting and underweight are 32%, 10.2% and 19.9% respectively[8]. Nigeria is often portrayed as a country where the religious demography is static; everybody belonging to one faith or the other and professing religion[6].

Oman and Thorensen[9] stressed that religion can influence health through various psychological conditions such as character, will-power, focused attention or increased motivation beyond pathways such as social support. In agreement to this, a study carried out in Ethiopia by Basu-Zharku[10], reported that religion seems to play a role in the use of contraceptives and women's decisions to seek antenatal care. A study conducted in northern Ghana between two religious groups reported that religion plays a role in the practices of exclusive breastfeeding[11]. There is dearth of information on the role religions play on infant and young child feeding in Nigeria. This study was therefore designed to assess the role of religion on the knowledge, attitude and practices of mothers on infant and young child feeding.

Methodology

The study was descriptive cross–sectional in design. A three-stage sampling technique was used to select Ibadan North Local Government area (LGA) (being the most populous LGA in Ibadan) purposively out of eleven LGAs, twelve churches out of the list of churches with at least 500 worshippers and four mosques using simple random sampling technique. A total of 320 mothers with infant and children between 0-23 months were selected as respondents.

Information was obtained from respondents using focus group discussions (FGDs) and adapted, pre-tested interviewer-administered questionnaire. Eight FGDs were conducted - six in the churches and two in the mosques. Each FGD session had 6-10 participants and was conducted within the church or mosque premises. Knowledge on infant feeding was assessed using 14-item questions derived from IYCF core indicators. The highest score obtainable was 14, and grouping of the scores was based on mean of the scores of the participants. Knowledge score was categorised as: < 5.60 - poor knowledge, 5.60 – 10.88 fair knowledge, and score >10.88 was grouped as good knowledge. Attitude construct was assessed with 13 statements from the IOWA Infant Feeding Attitude scale[12]. These statements were scored using the 5-point Likert scale in

which 1= Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree and 5=Strongly Disagree. Statements in favour of breastfeeding and complementary feeding were scored as 5=Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree and 1= Strongly Disagree. The lowest and highest scores obtainable from the attitude section were 13 and 65 respectively. Then based on the mean of the attitude score which was 43, the attitude score was grouped into two categories: score below 44 was grouped into fair attitude while participants with 44 point and above were categorized as good. The practice construct was measured using a 3-point Likert scale and some open-ended questions. Ethical approval was sought and obtained from the University of Ibadan/ University College Hospital Ethical Review Board.

Statistical Analysis

Qualitative data obtained from the FGDs was transcribed, translated and analysed using thematic approach method, while quantitative data were analysed using descriptive statistics, Chi square test, one-way ANOVA and regression analysis through the use of Statistical Package for Social Sciences (SPSS) version 18.0, at $p < 0.05$.

Results

Focus Group Discussions

All the participants in the FGDs consented to the fact that they had received health talks on different topics in their various churches and mosques but none had been on breastfeeding or complementary feeding. The health talk which varied according to the religious settings was organized either yearly, quarterly, bimonthly, monthly or fortnightly. It was organized for the congregation as a whole or just within the sub-groups in the religious setting. They reported that initiation of breastfeeding depends on the mother, the baby and circumstances.

Most respondents voiced out a positive response to initiation of breastfeeding which should be immediately, some argued otherwise that the baby should be washed, and made to sleep while the mother rests for few hours. Few respondents in two of the FGDs did not agree to giving a baby colostrum as it is regarded as being unclean, and thus should be washed away while majority argued against it, stating the benefits. On the issue of exclusive breastfeeding (EBF), the respondents knew the meaning of EBF, as most of them mentioned that they got the information from the health workers; but some felt that breast milk and water means EBF. Only few of them reportedly got the information on EBF from friends and families.

Although most of the respondents had adequate knowledge of EBF, their attitude towards it differed, as some argued that breast milk only is enough for a baby less than six months, while some argued otherwise. Some also argued that EBF practice depends on the gender of the baby, as it is generally believed that baby boys eat more than baby girls, therefore breast only cannot be enough for a baby boy for six months.

Most of the lactating mothers were aware of the duration of breastfeeding and its benefits, as they stated that they were told at the clinic to breastfeed for 24 months. However, this did not translate into their level of practice, as most of them whose children were above one year had stopped breastfeeding**.** Few of them argued that duration of breastfeeding depends on the gender of the baby as they felt a boy should breastfeed longer than a baby girl, while majority of the mothers stated that breastfeeding should be stopped once the child starts walking.

There was a consensus in two groups of FGDs on the preference of their religious leaders' advice to that of health workers because they believed there could be some spiritual implication for disobeying a religious leader, and that the health worker who is a stranger could advise them against their religion especially if she's not practicing their religion; while other groups disagreed with the reasons and stated that they will

rather listen to a health worker's advice on their baby's health than their religious leaders, stating that both are professionals in different fields and the health worker will be more knowledgeable than their religious leaders in the area of child care practices.

Most of the lactating mothers mentioned that they were aware that water should not be given to a child less than six months, but only very few of them practiced it due to reasons such as "having the feeling that the child will be thirsty if not given water", "pressure from the grandmothers", "emulating the health worker's practices", "feeling that the child's tongue will stick to the throat", and "the mother feeling bad". Other reasons stated for giving water was "to ensure the baby get used to plain water taste". Some of the mothers stated that water should be given the very first day after delivery to welcome the baby to the world, while some argued that water should not be given to the baby until after 2-4 weeks, some argued three months and some 2 months. Only few of the women agreed with, and practiced the health worker's advice on not giving water to a baby less than 6 months of age.

The foods used to initiate complementary feeding as stated by the mothers were semi-solid foods like pap mixed with crayfish or groundnut, *Amala* (yam flour pudding) with *ewedu* soup, milk, Indomie and egg, tea, golden morn, infant formula, and *moinmoin* (bean cake). Some respondents stated that they were taught at the clinic how to mix several ingredients with pap for their infants. Time of initiation of complementary feeding differed among the respondents, as some of them stated that any food or liquid should not be given to a child less than six months, and some argued that liquids and semi-solid food can be given to an infant after 3 months. Some of the respondents argued that the gender of the baby determines when to initiate complementary feeding as it is believed that boys eat more than girls, therefore boys should start complementary food earlier than girls. Most of the mothers stated that proteinous food must always be included in the food given to young children.

Discussion

The age range of the respondents was within the women reproductive age (WRA), with almost all being less than 41 years (Table 1). This is beieved to be due to the fact that the reproductive stage of most women before menopause is within this range, and most women prefer completing child bearing before the age of forty years due to the fear of reduction in level of fertility at ages higher than forty years. However, there was no significant difference ($p > 0.05$) between the age and infant feeding knowledge of the respondents. This is in line with the finding in a study conducted in North India[13]. The mean age of the children (11.54±6.5 months) was indicative that majority of them were already being fed complementary foods. The higher percentage of Muslim respondents compared to the Christian counterpart might be due to the fact that there were limited but very big Nasfat centres where the Muslims gathered for worship on Sundays, unlike in the Christian settings where there are several churches, though big, but with less congregation than the Nasfat centres. The literacy level of respondents was quite high, and the type of employment they were involved in might have contributed to their knowledge about infant and young child feeding. Similar finding was reported by Adnan and Muniandy[14].

Pre-lacteal feeding practices among the respondents in this study was lesser than the 43% reported in a study in Uganda by Wamani *et al.*[15] The foods commonly used as pre-lacteal feeds are glucose water, gripe water, salt-sugar solution, plain water, fruit juice, infant milk and honey. This report is in line with a study carried out in India and Ghana on infant feeding practices[11, 13].

Of all the respondents who used honey as prelactal feed, 89.3% were Muslims. This was reported

Table 1. Demographic characteristics of the Respondents

Variable	Frequency	Percentage
Mother's age at last birthday		
19-30 years	181	56.6
31-40years	131	40.9
41-50years	6	2.5
Age of last child (in months)		
0-6 months	90	28.1
7-12 months	92	28.8
13-18 months	84	26.2
19-23 months	54	16.9
Religion		
Christian	141	44.1
Muslim	179	55.9
Marital Status		
Single	8	2.5
Married	285	89.1
Cohabiting	22	6.9
Widow	5	1.6
Highest level of education		
None	4	1.3
Primary education	19	5.9
Secondary Education	87	27.2
Ordinary National Diploma certificate	72	22.5
Higher National Diploma certificate / Bachelor's degree	101	31.6
Post graduate degree	34	10.6
Quranic education	3	0.9
Respondent employment status		
Civil/Public servant	55	17.2
Private employment	78	24.3
Artisan	29	9
Trader	115	36.1
Unemployed/housewife	43	13.4
Estimated monthly income		
Less than ₦20,000	78	24.4
₦20,001 - ₦50,000	115	35.9
₦50,001 – ₦70,000	61	19.1
₦70,001 – ₦99,000	29	9.1
More than ₦100,000	37	11.6
Total	**320**	**100**

Table 2(a). Respondents' knowledge on infant feeding

Variable	Frequency	Percentage
When should breast feeding be initiated?		
Less than 30 minutes	177	55.3
31-60 minutes	95	29.7
61mins – 6 hours	21	6.5
6 – 24 hours	25	7.8
More than 24 hours	2	0.6
Should Colostrum be given to an infant?		
Yes	220	68.8
No	38	11.9
Don't Know	62	19.4
How long should a baby be given breast milk only?		
Less than 6 months	53	16.6
≥6 months	267	83.4
When should a baby start taking water		
Less than 3months	73	22.8
4months	21	6.6
5months	6	1.9
≥6months	220	68.7
When should a baby start taking herb and other liquids?		
Less than 3months	81	25.3
4months	23	7.2
5months	7	2.2
≥6months	209	65.3
Mothers to breastfeed when the child is sick		
Yes	293	91.6
No	3	0.9
Don't Know	24	7.5
Mother to breastfeed when the mother is sick		
Yes	191	59.7
No	57	17.8
Don't Know	72	22.5
Glucose water can be given to a baby if breast milk is delayed		
Yes	217	67.8
No	43	13.4
Don't Know	60	18.8
Dangers associated with bottle feeding		
Yes	160	50
No	86	26.9
Don't Know	74	23.1
Total	**320**	**100**

Table 2(b). Respondents' categorisation of knowledge on infant feeding

Knowledge	Poor		Fair		Good		Total	(%)
	Frequency	(%)	Frequency	(%)	Frequency	(%)		
Combined	49	15.3	204	63.8	67	20.9	320	100
Christians	21	14.9	90	63.8	30	21.3	141	100
Muslims	28	15.6	114	63.7	37	20.7	179	100

Table 3(a). Respondents' attitude to Infant feeding

Variables	Strongly agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)
Breast milk only is not enough for my baby who is less than 6months	15.6	26.3	6.3	35.3	16.6
My baby who is less than 6months should be given water	11.3	35.9	5.9	32.8	14.1
I feel embarrassed breastfeeding in public places like banks, school, cafeteria, market etc.	10.0	30.6	9.4	31.9	18.1
Formula feeding is the better choice because am working.	7.2	31.9	19.1	32.2	9.7
There's no difference between a breastfed baby and formula feed baby	2.2	8.4	15.9	50.6	22.8
Breast-fed babies are likely to be overfed than formula-fed babies.	7.5	14.7	28.8	32.6	13.4
I can start giving my baby semi-solid foods before 6months.	4.7	30.9	9.7	40.3	14.4
I can't breastfeed my child more than one year.	5.0	10.6	9.7	56.9	17.8
Semi solid food should be used to initiate complementary feeding.	12.5	53.4	17.5	12.2	4.4
I'll rather listen to my religious leader's advice on my baby's feeding than a health worker.	9.7	27.5	13.4	30.9	18.4
I can't give my baby any food not supported by my religion.	15.3	45.0	9.4	15.6	14.7
I feel ashamed breastfeeding in the church or mosque during service.	3.4	19.4	12.5	45.3	19.4
I force my baby to eat if he/she refuses to eat	10.6	31.6	13.4	31.9	12.5

Table 3(b). Respondents' categorisation of attitude

Attitude	Poor		Good			
	Frequency	(%)	Frequency	(%)	Total	(%)
Combined	179	55.9	141	44.1	320	100
Christians	82	58.2	59	41.8	141	100
Muslims	97	54.2	82	45.8	179	100

Table 4. Respondents' practices on infant feeding

Variable	**Frequency**	**Percentage**
Initiation of plain water		
Less than 6 months	156	48.7
6 months	98	30.6
More than 6 months	6	1.9
Not yet initiated	60	18.8
Initiation of teas, juices, sweetened water		
Less than 6months	57	17.8
6months	147	45.9
More than 6 months	21	6.6
Not yet initiated	95	29.7
Initiation of animal and plant milk		
Less than 6months	64	20
6months	121	37.8
More than 6 months	32	10
Not yet initiated	103	32.2
Initiation of semi-solid foods		
Less than 6months	34	10.6
6months	119	37.2
More than 6 months	70	21.9
Not yet initiated	97	30.3

Initiation of solid foods		
Less than 6months	11	3.4
6months	97	30.3
More than 6 months	106	33.1
Not yet initiated	106	33.1
Initiation of breast milk		
Less than 1hr	158	49.4
1-24hrs	133	41.6
More than 24hrs	19	5.9
Don't Know	10	3.1
Duration of breastfeeding		
Less than 12months	7	2.2
12-18months	66	20.6
19-24months	10	3.1
Still breastfeeding	237	74.1
Infants still breastfeeding		
Yes	217	67.8
No	103	32.2
Received breast milk in the last 24hrs		
Yes	229	71.6
No	91	28.4
Received vitamins/minerals in the last 24hrs		
Yes	169	52.8
No	151	47.2
Total	**320**	**100**

to be so by religious leaders who highlighted that their religion supports pre-lacteal feeding, especially the use of honey, water and tamaru seed to perform a ritual before the child starts taking breastmilk. It is believed that this ritual performed for the child whereby the first thing he/she tastes is sweetness, will make life enjoyable for the baby. According to Shaikh and Ahmed[16], the ritual which is known as '*Tahneek*' is performed based on the practice of the Holy Prophet. The Hadith have indicated that Prophet Muhammad softened dates in his mouth and rubbed them over the soft palates of newborns. The taste of the sweetness is what is sought and not the ingestion. According to WHO[17], using honey as pre-lacteal feeding is putting the baby at risk of botulism.

Early initiation of breastfeeding within one hour after birth is one of the core indicators of practicing infant feeding, as this reduces infant mortality rate[4]. In a study conducted in Ghana, religion was found to plays a role in initiation of breastfeeding as reported by Aborigo *et al.*[11]

The percentage of respondents that reportedly initiated breastfeeding within one hour of birth in this study was greater than that reported in a study from in India on infant and young child feeding practices by Sinhababu *et al.*[18], and lesser than the 53% obtained from a study in Sokoto by Oche *et al.*[19] Nigeria, and 62.6% obtained in Southwest Ethiopia by Tamiru *et al.*[20]. This percentage can be increased if pregnant women are well trained on infant feeding.

Majority of the respondents who agreed to rather listen to their religious leader's advice on their baby's health than health workers were Muslims while 42% were Christians. In line with the finding from FGDs, the reason for the preference of religious leader's advice rather than that of health workers by respondents was because it was believed that there will be spiritual implication for disobedience to whatever the spiritual leader says, while some of them stated that they don't trust the health workers unlike their women coordinator who they can run to at any time due to the fact that she has the experience; and that the health worker may advise them against their religion. The implication of this finding may be severe if the religious leader and women coordinator's knowledge is not in line with the WHO recommended infant practices.

From the findings in this study, Muslim mothers breastfeed longer than Christian mothers. This could be due to the fact that the Islamic religion does not permit married women to work outside of their home, as the husband is solely responsible for earning income and providing for the family, thus giving enough time for the lactating mother to breastfeed the children for a longer period of time.

As regards initiation of complementary feeding, a larger proportion of the respondents disagreed that an infant can start eating semi-solid foods before six months. Also, majority of the mothers agreed that semi-solid food should be used to initiate complementary feeding. This is in contrast with the result obtained from the focus group discussions, as most of the respondents were of the opinion that complementary feeding can be initiated three to four months after the birth of the child. (Table 2a and 2b)

Reasons given for why early complementary foods should be introduced earlier were: insufficient breast milk, gender of the baby (as it is believed that a baby boy should eat more than a baby girl), and the baby getting used to the taste of the family food, and lack of time (for working mothers). All these reasons were believed to be due to inadequate knowledge of the respondents on infant feeding, as this is not usually being taught despite the several health talks that are usually being given under religious settings.

The respondents acknowledged that trainings on preparation of nutritious complementary foods were conducted by health workers at the clinic, however, not

all of them practice optimal complementary feeding due to cost of food, preparation time and availability. This was similar to the finding of a study carried out in Ebonyi State by Ugwu and Obi[21]. (Table 3a and 3b), (Table 4)

Strength and Limitation

The strength of this study is in the use of both quantitative and qualitative methods in data collection, while the limitation of the study is the potential for recall bias because mothers had to remember time of initiation of breastfeeding and how the child was fed from birth and in the preceding day for those with children more than 6 months.

Conclusion

Even though majority of the respondents were knowledgeable about good infant and young child feeding practices, their attitude and practice was sub-optimal. Religion affected the attitude and practice of good IYCF, as the respondents claimed to rather listen to their religious leaders than the health workers. It is therefore recommended that religious leaders should be taken into consideration and educated on good infant feeding practices as they are capable of influencing the attitudes of their followers positively or negatively. Also, since all the religious gatherings do have health talks or seminars, nutrition education using a module on infant and young child feeding can be incorporated into the health talks which will be a benefit for all, especially the pregnant and lactating mothers.

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