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Social Networks and its Influence on Breastfeeding Practices in South - West, Nigeria

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Abstract

Exclusive breastfeeding for the first six months of life improves the growth and health of the new born child. However, many infants in Nigeria are not breastfed exclusively for the recommended duration. This study examines the influence of social network on the breast feeding (BF) practices of lactating mothers. The study was carried out in Osun State of Southwestern Nigeria. Three hundred and forty mothers were randomly selected and interviewed about breastfeeding practices using a structured interview schedule on breastfeeding practices and support from social networks. Data were described using frequency counts and inferences were drawn with logistic regression analysis. Results revealed that most of the mothers were married (92.9%) and between the ages of 31 - 40 years (40.3%). About (93.5%) had between 1 - 4 children, had secondary education (38.5%), tertiary education (39.7%) while only 45.6% were traders. Most (98.2%) of the children were breastfed and 67.6% initiated breastfeeding between 0 - 9 hours after delivery but only 21.6% were exclusively breastfed. Mothers expressed breast milk for infants (50.6%) and fed with feeding bottles (55.9%) and 88.6% gave infant formula. 40.2% commenced the feeding of complementary foods between the age of 3 - 4 months, 39.5% between 5 - 6 months and only 12.7% terminated breastfeeding between 19 - 24 months. Nine social networks were identified to be involved in breastfeeding decision and each of the networks had varied influences on decision for various BF practices. The four major social networks influencing breastfeeding practices were nurses (80%), grandmother of baby (77.1%), Fathers (67.6%) while the lowest is the media (11.8%). Lactating mothers played a major role especially in the use of feeding bottle (34.4%) and termination of breastfeeding (37.1%). The influence of Nurses on breastfeeding reduces after discharge showing lack of post - natal influence after discharge of infant from the hospital. Logistic regression analysis revealed that nurses were likely to influence breastfeeding practices OR = 1.01; 95% CI 0.73, 1.41; doctors OR = 1.06; 95% CI 0.81, 1.39; mother in law OR = 1.01; 95% CI 0.77, 1.31 and friends OR = 1.11; 95% CI 0.76, 1.62 and Grandmother 1.23; 95% CI 0.88 - 1.72. The study concluded that nurses, grandmothers and mothers in law are the major social networks available throughout the stages of breastfeeding. Accordingly, intervention programmes on breastfeeding should make sure that available social network must be knowledgeable about appropriate IYCF practices.

Keywords: *Breastfeeding; Social Network; Support; Breastfeeding Decision; Breastfeeding Practice; Nigeria*

Introduction

The provision of adequate nutrition during infancy and early childhood is a basic requirement for the development and promotion of optimum growth, health and behaviour of the child. The 2008 Lancet series identified the need to focus on the crucial period from conception to a child's second birthday that is, the 1000 days in which good nutrition and healthy growth have lasting benefits throughout life [1-5]. Breastfeeding is known to be the best way to feed infants by providing the psychological and health benefit to both mother and child. The immediate causes of malnutrition in the first two years of life are inappropriate breastfeeding and complementary feeding practices coupled with high rates of infections. Breastfeeding and the use of human milk confer unique nutritional and non-nutritional benefits

to the infant and the mother and, in turn, optimize infant, child, and adult health as well as child growth and development [6]. Although there has been progress over the past 15 years, only 38 percent of infants below 6 months of age in the developing world are exclusively breastfed. In Nigeria, the figure is even lower; rather than increase, the gains previously made in exclusive breastfeeding are being eroded. In 1999, 22% of children were exclusively breastfed. This figure came down to 17% in 2003, in 2008 only 11.7% of children are exclusively breastfed for six months in Nigeria with a slight increase to 17% in 2013 [7-8]. EBF rates in Nigeria continue to fall well below the WHO/UNICEF recommendation of 90% EBF in children less than 6 months in developing countries [9]. Present recommendations are that babies should be put on the breast within 1 hour after birth, be exclusively breastfed for the first 6 months, and for an additional 18 months or longer, be breastfed along with complementary foods. In Nigeria however, just one - third of children were given breast milk within one hour of birth (32 percent), and less than two - thirds were given breast milk within 24 hours of birth (63 percent), indicating a delay in the initiation of breastfeeding [10].

Majority of women have positive attitudes towards breastfeeding and were aware that 'breast is best'. Where women had given up breastfeeding or introduced formula feeding early, this has usually been due to lack of support rather than lack of desire to breastfeed. Mothers who do not know how to initiate and continue breastfeeding after a child is born may fear that it will always be painful or that they will be unable to produce enough milk to fully feed the baby. As a result, they may decide to formula feed the child. Expectant mothers who believe that breastfeeding is difficult or painful identify the fear of discomfort as a major negative influence on their desire to initiate breastfeeding [11-12]. The social networks around a nursing mother should enhance and promote existing motivators and protective factors, such as family support and desire to give babies the best start in life. 'Support' is defined very broadly and is based on accounts of what helps and hinders breastfeeding. It includes tangible support, emotional/attitudinal support, and informational support provided by a range of people (e.g., family, friends, health practitioners, employers, general public) and in a range of settings (e.g., hospital, home, shopping centers, churches, workplaces and other community settings). Some support needs are particular to certain stages since the challenges of each stage are distinct, whereas other support needs and motivators are constant throughout [13].

Therefore, improving access to supportive, culturally appropriate and proactive antenatal care and hands - on support in the days immediately after birth is recommended as an important strategy for improving breastfeeding rates [13]. Almost all stunting takes place in the first 1000 days after conception. It was emphasized in the Lancet series 2013 that suboptimum breastfeeding results in an increased risk for mortality in the first 2 years of life [14]. In 2003 the World Health Organization recommended that, wherever possible, infants should be fed exclusively on breast milk until six months of age [15]. The study therefore examines the influence of social network on the breast feeding (BF) practices of lactating mothers.

Methodology

The cross-sectional study was carried out in Osun State of Southwestern Nigeria. The inhabitants of this state are predominantly of the Yoruba ethnic group. Three hundred and forty mothers with children between the ages of 0 - 24 months were randomly selected for the study. Interview schedule was utilized in obtaining information about socio economic characteristics of respondents, breastfeeding practices such as the age at initiation of breast feeding, practice of exclusive breast feeding and the duration of breast feeding. Information on the support received and expected support from social networks around them were collected. Information on influence of the social network on the specific infant feeding practices were also sought. Odds ratio (OR) and 95% confidence intervals (CI) were reported. The level of 5% significance was used in the statistical analyses.

Ethical Issue

The research was approved by the Department of Family, Nutrition and Consumer Sciences for the University Research Committee. Respondents consent was obtained verbally after given explanation about the purpose of the research.

Results

Socio economic characteristics of mothers

Table 1 shows that of all the respondents, 40.3% were between the age range of 31 - 40years. Majority (92.5%) were married and had secondary (38.5) and tertiary education (39.7%). About half (45.6%) of the respondents were traders while 30.6% were civil servants. The average number of children was between 1 - 4 (51.4%), and the position of the youngest child among siblings was between 1st (30.6%) and 2nd (36.2%). About 50% of respondents had a household size between 1 - 4.

Variables	Frequency (340)	Percentage
Age		
< 20	40	11.8
20 - 30	92	27.1
31 - 40	137	40.3
41 - 50	48	14.1
> 50	23	6.8
Mean 29.7 ± 6.7		
Marital Status		
Single	8	2.4
Married	316	92.5
Divorced	6	1.8
Separated	4	1.2
Widowed	6	1.8
Educational status		
None	6	1.8
Primary	28	8.2
Secondary	131	38.5
Tertiary	135	39.7
Postgraduate	40	11.8
Occupation		
Fulltime housewives	52	15.3
Trading	155	45.6
Artisans	22	6.5
Civil servant	103	30.3
Others	8	2.4
Income (₦)		
≤ 5000	44	12.9
5000 - 10000	96	28.2
10001 - 20000	108	31.8
≥ 20000	92	27.1
Number of children		
1 - 4	318	93.5
5 - 8	22	6.5
Position of current child		
First	105	30.6
Second	123	36.2
Third	62	18.2
Fourth	30	8.8
Fifth	18	5.3
Sixth	2	0.6
Household size		
1 - 4	184	51.4
5 - 8	102	30.0
9 - 12	32	9.4
13 - 16	16	4.7
17 - 20	6	1.8

Table 1: *Maternal socio-economic characteristics.*

Breastfeeding practices

Almost all (98.2%) of the children were breastfed as presented on Table 2. Breastfeeding was initiated within the first hour of birth (67.6%) but only 21.6% of the children were exclusively breastfed. Half (50.6%) of the of respondents fed their children with expressed breast milk, 88.2% of the infant received formula and with 55.9% of the mothers used feeding bottles in feeding their infants. The mean age at commencement of complementary food was 4.6 ± 2.1 months with a range of 3 to 8 months Breastfeeding was terminated as early as six months (2.3%) and for others at between 7 - 12 months (26.8%), 13 - 18 months (54.2%) and 19 - 24 months (12.7%).

Breastfeeding practices	Frequency (340)	Percentage
Children that are breastfed		
Breastfed	334	98.2
Not breastfed	6	1.8
Initiation of breastfeeding (hours)		
0 - 0.9	230	67.6
1 - 2.9	73	21.5
3 - 5.9	16	4.7
> 6	21	6.2
Exclusive breastfeeding for six months		
Yes	73	21.6
No	267	78.4
Feeding of infant formula		
Yes	300	88.2
No	40	11.8
Feeding of expressed milk		
Yes	172	50.6
No	168	49.4
Use of feeding bottle		
Yes	190	55.9
No	150	44.1
Introduction of complementary foods (months)		
3 - 4	136	40.2
5 - 6	134	39.5
> 6	70	20.3
Children no longer breastfed (months)		
1 - 6	8	2.3
7 - 12	95	26.8
13 - 18	192	54.2
19 - 24	45	12.7
***Breastfeeding challenges**		
Lack of sleep	312	91.8
Engorgement	295	86.9
Cracked nipples	250	73.5
Anxiety	218	64.1
Blocked milk duct	116	34.1

Table 2: *Breastfeeding practices of mothers.*

**Multiple choices*

Challenges at the start of breastfeeding

As seen on Table 2 challenges at the start of breastfeeding can influence major decisions of the IYCF practices. Most of the mothers have various challenges. Challenges include lack of sleep (91.8%), engorgement of the breast (86.9%), cracked/sore nipples (73.5%), anxiety (64.1%) and blocked milk duct (34.1%).

Social network available to mothers on breastfeeding

In this study, nine available social networks were identified that offered support for lactating mothers (Figure 1). The major network in infant and young child feeding (IYCF) practices in the study area were the nurses (80%), grandmothers of children (77.1%), fathers (67.6%), mothers in law (60.0%) and doctors (54.1%). Others were employers, nutritionists and friends. The lowest in rank was the media (11.8%).

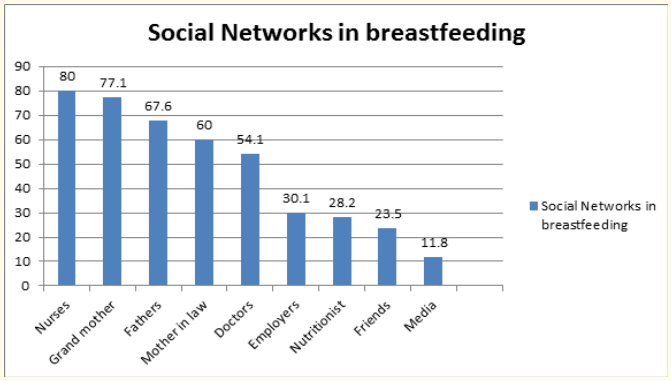

Figure 1: *Number of Social Networks available to lactating mothers.*

Influence of Social Network on IYCF decision at birth

As presented in Table 3, the influence of the social network began as soon as the children were born. In the hospital, the nurses, doctors, grandmothers of children and mothers in - law influenced the mothers' decision on the various IYCF practices; decisions on initiation of breastfeeding, feeding of colostrums and pre - lacteal feeding were influenced soon after birth. The most influential person at this stage was the nurse.

Breatfeeding Decision	Social Networks						
	Nurses %	Grand Mothers %	Mother in laws %	Doctors %	Self %	Friends %	Fathers %
Initiation	66.5	12.4	2.9	18.2	0.0	0.0	0.0
Colostrum	64.4	14.7	16.9	20.9	0.0	0.0	0.0
Prelacteal feeding	59.4	16.9	0.0	6.8	0.0	0.0	0.0
Expressed milk	55.9	8.2	5.0	0.0	0.0	0.0	0.0
Feeding bottle	13.2	20.9	14.1	0.0	42.9	5.9	0.0
Introduction of CF	9.4	23.5	13.5	2.9	44.7	3.5	1.8
Termination	8.8	22.6	7.6	1.2	44.7	4.1	1.2
Support with breastfeeding challenges	12.4	21.2	0.0	0.0	0.0	0.0	28.2

Table 3: *Percentage distribution of social network influence on feeding of infants.*

CF mean complementary food

Influence of Social Network on IYCF practices after discharge

After discharge, the number of social networks increased from four to six and the lactating mothers herself took decisions on some of the IYCF practices as seen on Table 3. The nurses (55.9%) were still a prominent influence especially - in the use of expressed breast milk for the infant - after which the nurse influence reduced to as low as 8.8% in the decision on termination of breastfeeding. Lactating mothers also take self-decisions on the use of feeding bottles of infant formula (42.9%), introduction of complementary foods (44.7%) and termination of breastfeeding (44.7%).

Expected support from networks

Lactating mothers expect support during lactation from the various networks. The nurse is expected to give 100% support. Other supports desired were from grandmothers of the children (76.5%), fathers, mothers' in - law work place and friends. Support needed included lactation management, assistance with household chores and child care (Figure 2).

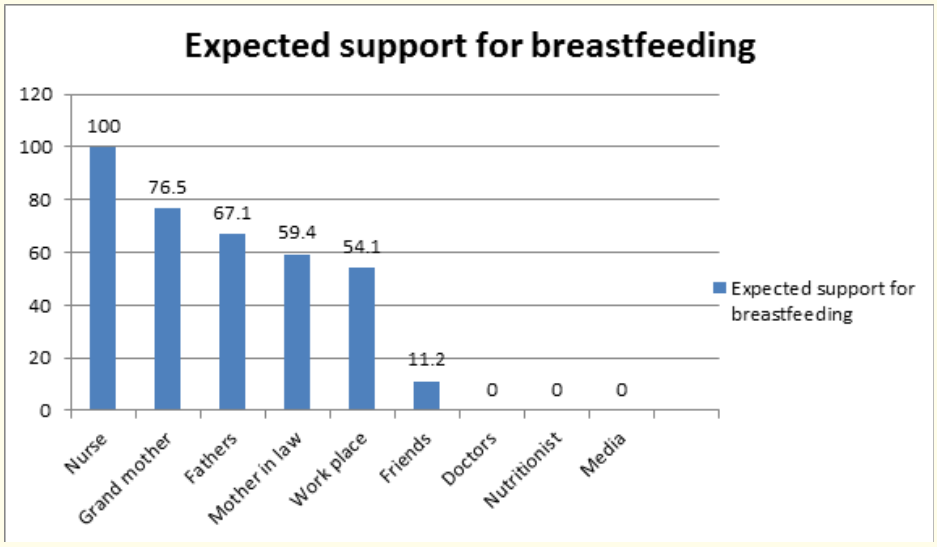

Figure 2: *Expected support from networks.*

Breastfeeding practices and social networks

Logistic regression analysis revealed that nurses were likely to influence breastfeeding practices OR = 1.01; 95% CI 0.73, 1.41; doctors OR = 1.06; 95% CI 0.81, 1.39; mother in law OR = 1.01; 95% CI 0.77, 1.31 and friends OR = 1.11; 95% CI 0.76, 1.62 and Grandmother 1.23; 95% CI 0.88 - 1.72 (Table 4).

Social Network	%	OR	95% CI
Doctors	54.1	1.063	0.81 - 1.39
Nutritionist	28.2	0.922	0.68 - 1.23
Nurses	80.0	1.019	0.73 - 1.41
Media	11.8	0.988	0.71 - 1.36
Mother in law	60.0	1.012	0.77 - 1.31
Fathers	67.6	0.972	0.66 - 1.41
Friends	23.5	1.111	0.76 - 1.62
Grandmother	77.1	1.232	0.88 - 1.72

Table 4: *Odd ratio and 95% confidence intervals of social network for breastfeeding practices.*

Discussion

Studies have identified adoption of inappropriate feeding practices as the major factor in childhood malnutrition. Delayed initiation of breastfeeding, lack of practice of exclusive breastfeeding, prelacteal feeding, and bottle feeding and early termination have been a concern. Only 12.6% of mothers practiced exclusive breastfeeding, early initiation, introduction of complementary feeding and termination which can be compared to the 2008 NDHS data of 13% and also consistent with Agho., *et al*. 2011 study in Nigeria [16]. However, this was not in agreement with the WHO recommendation that exclusive breastfeeding should be for the first six months of age and continued breastfeeding until the age of 2 years [15].

Breastfeeding is the first step which ensures that infants and young children get a healthy and nutritious start in life. It is one of the few consistent sources of energy dense food [17]. In this study, most of the children were born in the hospital and health workers, grandmothers and mother in laws were the social networks available to new mothers in the place of birth influencing the initiation of breastfeeding, feeding of colostrums and use of prelacteal feeding. Support by both lay supporters and professionals had a positive impact on breastfeeding outcomes [18]. Some support needs are particular to certain stages since the challenges of each stage are distinct, whereas other support needs and motivators are constant throughout.

As mothers are discharged from hospital there was an increase in the number of influences on IYCF. The new network therefore includes the fathers, friends and the lactating mothers. However, it is noted that even after discharge, nurses, grandmothers, mothers in - law remained in the network throughout except for the doctors whose support greatly reduced after discharge from the hospital. Decisions about the use of expressed milk, use of feeding bottles, introduction of complementary feeding and termination were taken when the children got home. The use of expressed milk was influenced by the nurses while other decisions were more from the lactating mothers, though grandmothers and mothers in law also played their roles. Women who receive support from family members rather than practitioners, and others who did not receive this kind of support from anyone were likely to give up breastfeeding within a few days. In Renfrew, (2012) all forms of extra support, analysed together, showed an increase in the length of time women continued to breastfeed and the length of time women breastfed without introducing any other types of liquids or foods [18].

The fathers also have decision to make in complementary feeding and termination of breast feeding and friends and friends came in at use of feeding bottles. The inappropriate use of bottled feeding and early termination of breastfeeding were self-decisions of the lactating mothers.

Other support not well noticed was the support from Nutritionists/Dieticians. Bagwell., *et al*. showed that dietitians expressed stronger interest in lactation and exhibited greater knowledge of the questions asked than nurses [19]. Nutrition professionals were more knowledgeable about benefits to infants than about maternal concerns. Sadoh., *et al*. study shows that 25.7% of medical doctors thought breastfeeding should stop at 12months [20]. Results of this study suggested that professional breast - feeding education programs should address IYCF practices in both antenatal and post-natal. Almost half of the lactating mothers were not trained on IYCF practices and had their practices influenced by other networks around them. Education and support for mothers significantly extended the number of months that mothers breastfeed, and was especially helpful in promoting exclusive breastfeeding. Moreover, counseling and support in health facilities have led to increases in the number of mothers who initiate breastfeeding within the first hour of birth [21]. Support can be tangible support, emotional/attitudinal support, and informational support provided by a range of people (e.g., family, friends, health practitioners, employers, general public) and in a range of settings (e.g., hospital, home, shopping centers, churches, workplaces and other community settings).

A quarter of the mothers were influenced by mothers and mothers in law. Her partner and the baby's grandmothers also play critical support roles when it comes to breastfeeding, both with regard to assisting in decision making about how the baby is fed and in providing support for breastfeeding after the baby is born. [22-23]. Breastfeeding challenges were discussed more with the fathers, grandmothers

and nurses, a situation which if not addressed appropriately could increase the use of infant formulas and reduce the duration of exclusive breastfeeding. Women who choose to breastfeed face numerous barriers. Only through the support of family members, communities, clinicians, health care systems, and employers will we be able to make breastfeeding become the easy choice, the default choice [24]. In a supportive work environment may make a difference in whether mothers are able to continue breastfeeding [25-26].

In the study area when making feeding decision nurses, doctors, grandmothers are more likely to influence breastfeeding decisions. Dieticians/nutritionist in the hospital did not have much influence on the choice of feeding practices of mothers despite the fact that they are the trained professionals in breastfeeding, complementary feeding practices and food choices.

Conclusion and Recommendation

Social networks are sufficiently available for the adoption of recommended feeding practices for infants and young children and the decisions on IYCF practices are influenced at every stage. Medical professionals were only involved in IYCF practices at the place of birth whereas their influence was needed both at the antenatal and post-natal stage of the infants' development. Mothers and available networks must be knowledgeable about recommended IYCF practices by WHO. The information should be provided at the hospital, communities and media in form of nutrition education and behaviour change communication strategies. Lactating mothers need both antenatal and post-natal support in this regard.

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