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KNOWLEDGE, ATTITUDE AND INTENDING PRACTICE OF FEMALE UNDERGRADUATES ABOUT BREASTFEEDING

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ABSTRACT

The recommendation by the World Health Organization (WHO) is that infants should be fed exclusively on breast milk for the first 6 months, but the rate of exclusive breastfeeding (EBF) has been on the decline in Nigeria. The study determines knowledge, attitude and intending practice of unmarried female undergraduates about breastfeeding (BF). Two hundred females were selected using the simple random sampling procedure. Interview schedule was used to obtain information on socio-economic characteristics, knowledge, attitude and intending practices of EBF of Obafemi Awolowo University Ile Ife, Nigeria. Knowledge and attitudes on BF were determined using a three and five point Likert Scale, respectively. Data was described using percentages, frequency counts and regression. Sixty percent of the respondents were between the ages of 21 and 24 years and more than half are four hundred level students (54.5%). Knowledge on the term EBF is misconstrued as BF for 12 months by 33% of the respondents. Women intend to initiate BF between the first 0-6 hour of birth (65%) and breast feed on request (62.5%). However, 61% may not practice EBF because of their jobs, will introduce infant formula or water during the first six months and 38.3% will not breast feed in public. Women intend to terminate BF at 3 months (5.0%), 6 months (16.5%), 1 year (50.5%) and 2 years (28.0%) because of their health status (54.0%). Knowledge about BF was average (94%) and attitude was neutral (77.4%). Women intend to manage EBF during working hours by having fixed feeding schedules (14.0%) and using expressed breast milk (16.0%). About 34.5% of respondents will not use expressed breast milk because of fear of contamination (42.0%) and their health (36.3%), 6.0% expressed the opinion that EBF is not possible. Major influence on BF decisions includes maternal health (59.7%), maternal jobs (54.4%), husbands (34.5%), mother (24.8%), and mothers in law (17.5%). Regression analysis revealed that knowledge ($b=-0.025$) has a negative significant relationship with duration of EBF of mothers at $p < 0.05$. It is concluded that women lacked understanding of the BF recommendations, duration of EBF, have average knowledge and neutral attitude towards EBF. It is recommended that child health matters should be taught not only in the medical schools, but special courses should be offered to increase knowledge on appropriate recommendations on BF practices for all students.

Key words: undergraduate, attitude, knowledge, practice, breastfeeding

INTRODUCTION

Breastfeeding is the normal, natural way to feed infants, and is part of laying the foundation for a healthy life from infancy and childhood. Breast milk is easily absorbed and has a low solute load, and an increased availability of minerals, vitamins, and proteins. It has been estimated that exclusive breastfeeding (EBF) reduces infant mortality rates by up to 13% in low-income countries [1]. Studies [2, 3] indicate that breastfed infants have fewer ear and respiratory tract infections, diarrheal illnesses, and atopic skin disorders. Early introduction of breast milk substitution and cow's milk have been shown to increase the risk of type 1 diabetes later in life [4].

The World Health Organization (WHO) recommends that infants be fed exclusively on breast milk from birth to six months of age. While exclusive breastfeeding rate is on the increase globally and in sub-Saharan Africa, it has continuously been on the decline in Nigeria. The Nigerian Demographic and Health Survey [5] estimated the level of exclusive breastfeeding in the country at 13 percent in 2008 which is a drop from the 17 percent estimated in 2003.

Nigeria has poor nutritional indices which indicate 14% low birth weight, 13% EBF, 14% stunting and 27% underweight [6]. Nigeria comes third after India and China in the world list of greatest number of undernourished children and is currently one of the two African countries listed among the twenty responsible for the 80% of global malnutrition. Malnutrition is particularly severe in the Northern region of the country [7].

The factors responsible for the sharp decline include reduced baby friendly hospital initiative programming, inadequate training, poor enforcement of the code of marketing of breast milk substitutes, and weakened compliance with the ten steps in accredited maternities. Mothers who had four or more antenatal visits were significantly more likely to engage in EBF [8]. Studies have revealed that a mother's level of education has a positive impact on her knowledge and how she deals with child health care issues [9]. Breastfeeding decisions and practices are influenced by multiple factors including knowledge, attitudes and beliefs, as well as socio-cultural and physiological factors [10-13]. Therefore, the mother's knowledge about child care influences the nature and quality of care that is given to the child [14]. There seems to have been little improvement in the knowledge of mothers on common child health matters over the years in spite of the many years of girls' education in the country. Al Ayed studies revealed that no statistically significant correlation was evident between mothers' knowledge of child health related matters and level of education, age, or number of children [9]. Research has repeatedly found that women's pre-birth

breastfeeding intentions are a good predictor of the actual duration of breastfeeding [15-17]. The decision to breast feed or to bottle-feed was most often made before pregnancy [18]. The study, therefore, investigated the knowledge, attitude and intending practice of unmarried female undergraduate students about EBF.

METHODOLOGY

The study was carried out amongst University undergraduates of Obafemi Awolowo University Ile Ife Nigeria. The purpose of the study was to examine the attitude, knowledge and intending practice of female University undergraduates toward BF. Data were gathered for 200 women that were randomly selected from the University community. A structured interview schedule was used to solicit information on socio economic characteristics, knowledge, attitude and intended practices of breastfeeding. Knowledge and attitude were assessed with positive and negative statements on BF practices. A three point and five point Likert scale was used to determine knowledge and attitude, respectively. The 3 point Likert scale had a score of 3 for *agree*, 2 for *I don't know* and 1 for *disagree* for positive statements and vice versa for negative statements. Attitude was measured on 5 point scale with *Strongly agree*(5 points), *agree*(4 points), 3 points for *I don't know* and 2 and 1 point respectively for *disagree* and *strongly disagree* for positive statement and the reverse for negative statements. Data processing and analysis were done using frequency counts, percentage, correlation and logistic regression analysis using SPSS package 16.0.

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 economics characteristics

As presented in Table 1, majority (60.0%) of the respondents were between the ages of 21 and 24 with a mean of 21.3 ± 2.2 , single (91.0%) and were Christians (87.5%). A total of 73 (36.5 %) of them have \$31 - \$60 as monthly allowance, 39.5% are Science students and 54.5% were Part four students of the University.

Knowledge on breastfeeding

Knowledge about breastfeeding was examined and the results in Table 2 revealed that the term EBF is misconstrued as breastfeeding for 12 months by 33% of the

respondents, 25.0% and 16.5% would give water and infant formula as part of EBF. Knowledge about the immunological protection of colostrum was not known (22%) while 27.5% do not have the knowledge that mothers with HIV can breast feed. Mothers disagreed on the advantages of breastfeeding as it allows intimacy between mother and child (87.5%) and its beneficial effect on mothers (59.0%). Overall knowledge about breastfeeding was low (3.5%), average (94%) and high (2.5%).

Attitude toward breastfeeding

Attitude toward breastfeeding on Table 3 shows that most of the respondents will not practice exclusive breastfeeding since 61.5% will combine infant formula with breast feeding. One third (39.5%) cannot breast feed in public and 7.0% can only if they do not have enough money for infant formula. Also 54.0% agreed that babies should be given breast milk on request. Eighty seven percent agreed that it is not a waste of time to practice EBF and 6.0% sees it as an outdated fashion. Attitude toward exclusive breast feeding was, however, negative (14.6%), neutral (77.4%) and positive (8.0%).

Intending practice of breastfeeding

Results on Table 4 revealed that most of the respondents will initiate breastfeeding between 0-6 hours of birth. Few will give water and concoction and 33.0% intend to practice EBF assuming it is for 12 months. Duration of EBF varied from 3months (11.0%), 6 months (40.0%), 1 year (25.0%) and 2 years (14.0%) while respondents intend to terminate breastfeeding at 3 months (5.0%), 6 months (16.5%), 1 year (50.5%) and 2 years (28.0%). The major reason anticipated for termination is for health reasons (37.9%).

Exclusive breastfeeding at work

As presented in Table 5, intending mothers plan to manage EBF at work by expressing breast milk (16.0%), have fixed feeding schedules (14.0%), give excuses at work (13.0%) and practice mixed feeding (0.5%). Also 34.5% of respondents will not use expressed breast milk because of their health (36.3%), education (7.3%), social status (4.3%) and fear of contamination (42.0%).

Influence on breastfeeding decision

Results in Table 6 revealed that nine factors may influence breast feeding decision. These include maternal health (59.7%), maternal jobs (54.4%), husbands (34.5%), mother (24.8%), and mothers inlaw (17.5%). Others are education (19.4%), friends (10.2%) and inadequate milk (19.4%).

Socio economics characteristics, knowledge and attitude of respondents

Results in Table 7 revealed that Medical and Science students had better knowledge and more positive attitudes towards exclusive breastfeeding. Students in the sciences had positive attitude and high knowledge when compared to others in the arts, social sciences and education at $p < 0.000$. Also women from monogamous households had positive attitude and greater knowledge about breastfeeding practices at $p < 0.002$.

DISCUSSION

Breastfeeding is a practice embraced by Nigerian mothers since almost every newborn is breastfed. However, EBF is not well practiced for several reasons which include misconception about the term EBF and knowledge about the practice. This is also found in Shirima *et al.* [19]'s study in Tanzania that EBF is not well practiced due to the lack of knowledge about the concept. Inadequate maternal knowledge about feeding practices is often a greater determinant of malnutrition than lack of food [20]. It is recommended that babies be exclusively breast fed with breast milk which implies no feeding with other liquids (including water) or food for the first 6 months of life [21]. The study found out that respondents had limited understanding of the term "exclusive breastfeeding" because 33% of the respondents assumed that EBF is for 12 months and half of the respondents will give water to children as part of the EBF practices as shown in Table 2. The recommendation by WHO is that children be put to the breast immediately or within one hour after birth [22]. Early breastfeeding practices determine the successful establishment and duration of breastfeeding. Intending mothers will initiate BF between 0 and 6 hour after birth, 21.5% will initiate the second day (as shown in Table 4) and most will not practice EBF. Mothers who were aware of the recommendation were 5.6 times more likely to intend to breast feed exclusively for six months [23]. Amongst mothers that may practice EBF, 16.0% intend to use expressed milk while others may have feeding schedule for babies, which may eventually influence mixed feeding of the infant. About 31% will feed infant formula with feeding bottle as against infant feeding recommendation. Bottle-feeding is not recommended because unhygienic conditions and poor formula preparation associated with bottle-feeding can put the child at greater risk of illness and malnutrition [24]. Bottle-feeding is thus perceived as the modern way and breastfeeding as old fashioned and inconvenient. Half of the respondents will terminate when the child is one year and only 28% will follow the two years' recommendation [22].

The course of study of women influenced their knowledge and attitude concerning breastfeeding. Termination of BF may be determined by mother's health and education because most of the women have it in plan to go for further study after

marriage. Female education has often been described as one of the strongest determinants of the practice of EBF [25]. Women lacked understanding of the BF recommendations, duration of EBF, have low knowledge and indifference attitude towards EBF. Breastfeeding practices and decisions may be influenced by the health of the mother, job, husband and mother. Others include mother in-law, friend, social status and education.

CONCLUSION

The wrong knowledge about exclusive breastfeeding recommendation, low knowledge and the indifference of unmarried women can result in the reduction in the number of children that are exclusively breastfed, reduction in use of prelacteal feeding, encouragement of mixed feeding and a reduced duration of EBF and early termination of breastfeeding. Awareness and increased knowledge about the recommendations of exclusive breastfeeding practices should be a key goal for nutrition educators for both married and unmarried women. Knowledge on child health matters should be taught in schools as special courses, not only in the medical schools, but in all tertiary institutions. These may be important strategies to increase breastfeeding rates, duration and adoption of appropriate breastfeeding practices.

Table 1: Socio economics characteristics of respondents

Variables	Frequency(200)	%
Age(years)		
<16	6	1.5
17-20	124	31.0
21-24	120	60.0
25-29	15	7.5
Marital Status		
Single	182	91.0
Engaged	16	8.0
Married	2	1.0
Religion		
Christianity	175	87.5
Muslim	25	12.5
Allowance(\$)		
<30	46	23.0
31- 60	73	36.5
61- 90	39	19.5
91-120	26	13.0
121-150	8	4.0
151-180	5	2.5
>180	3	1.5
Course of study		
Sciences	79	39.5
Social Science	55	27.5
Art	22	11.0
Medical Sciences	35	17.5
Education	9	4.5
Level of study		
One	10	5.0
Two	35	17.5
Three	25	12.5
Four	109	54.5
Five	21	10.5

Table 2: Distribution of respondents based on knowledge about breastfeeding

S/N	Knowledge statements	Agree	I don't know	Disagree
1	Exclusive breastfeeding is for 12 months	66(33)	33(16.5)	101(50.5)
2	Exclusive breastfeeding can serve as a means of child spacing	58(29.0)	47(23.5)	86(43.0)
3	Exclusive breastfeeding involves giving of water	50(25.0)	38(19.0)	112(56.0)
4	Exclusive breastfeeding involves feeding with infant formula	33(16.5)	25(12.5)	142(71.0)
5	Colostrum contains antibodies	18(9.0)	44(22)	138(69.0)
6	I can exclusively breast feed my child even if I am HIV-positive	27(13.5)	55(27.5)	118(59.0)
7	Breastfeeding will help to improve my health	22(11.0)	60(30.0)	118(59.0)
8	Breastfeeding will enhance parent-child intimacy	7(3.5)	18(9.0)	175(87.5)
9	Exclusively breast feed child develops a strong immune system than those feed with formula	8(4.0)	21(10.5)	171(85.5)

*percentage in parenthesis

Table 3: Attitude toward breastfeeding

S/N	Attitudinal Statements	Strongly Agree	Agree	I don't know	Disagree	Strongly Disagree
1.	I will exclusively breast feed my child	2(1.0)	8(4.0)	10(5.0)	64(32.0)	116(58.0)
2.	I can only breast feed if I did not have enough money for formula	3(1.5)	11(5.5)	13(6.5)	89(44.5)	84(42.0)
3.	I will combine breastfeeding with infant formula	31(15.5)	92(46.0)	28(14.0)	34(17.0)	15(12.5)
4.	Exclusive breastfeeding is a waste of time	7(3.5)	5(2.5)	13(6.5)	55(27.5)	120(60.0)
5.	Baby should be given breast milk on request	48(24.0)	60(30.0)	26(13.0)	39(19.5)	27(13.5)
6.	I cannot breast feed in public	27(13.5)	52(26.0)	45(22.5)	40(20.0)	36(18.0)
7.	Exclusive breastfeeding is an outdated fashion	6(3.0)	6(3.0)	9(4.5)	70(35.0)	109(54.5)
8.	Children looking healthy should not be breastfed	3(1.5)	1(0.5)	4(2.0)	56(28.0)	129(64.5)
9.	Immunization can prevent infection instead of exclusive breastfeeding	5(2.5)	13(6.5)	41(20.5)	91(45.5)	51(25.5)

*percentage in parenthesis

Table 4: Distribution of respondents based on intending practice of exclusive breastfeeding

Intending practice	Frequency(200)	Percentage (%)
Initiation of breastfeeding		
0-6 hour	130	65.0
7-10 hour	23	11.5
11-15 hour	4	2.0
After first day	43	21.5
Prelacteal feeding		
Concoction	2	1.0
Water	20	10.0
Exclusive breastfeeding after birth		
Yes	180	90.0
No	20	10.0
Duration of exclusive breastfeeding		
3months	22	11.0
6months	80	40.0
1year	50	25.0
2years	28	14.0
No exclusive breastfeeding	20	10.0
Main reason for not exclusively breastfeeding		
Job	10	50.0
Time	4	20.0
Health	6	30.0
Termination of breastfeeding		
3months	10	5.0
6months	33	16.5
1year	101	50.5
2years	56	28.0
Main reason for termination of breastfeeding		
Job	12	3.5
Health	108	54.0
Education	47	23.5
Age of child	11	3.0
Weaning	12	3.5
To reduce intimacy	5	1.0
Eating habit	5	1.0

Breastfeeding style		
Demand	125	62.5
Fixed	75	36.4
Reason for timing of feeding		
Job	4	5.3
Education	15	20.0
Substitute	3	4.0
Time	16	21.3
Hunger	17	22.7
Health	14	18.7
Eating habit	6	8.0

Table 5: Management of exclusive breastfeeding at work

Management	Frequency(200)	Percentage (%)
Management of exclusive breastfeeding at work		
Expression	32	16.0
Feeding at fixed time	28	14.0
Excuse at work	26	13.0
Mixed feeding	1	0.5
Exclusive breastfeeding impossible	9	4.5
Don't know	104	52.0
Use of expressed milk		
Yes	84	42.0
No	69	34.5
Don't know	47	23.5
Reason for not feeding expressed breast milk		
Job	1	1.5
Education	5	7.3
Time	2	2.9
Status	3	4.3
Health	25	36.3
Contamination	29	42.0
Dislike	4	5.7

Table 6: Influencing on breastfeeding decision

*Factors	Frequency	Percentage %
Mother	51	24.8
Mother-in-law	36	17.5
Husband	71	34.5
Friends	21	10.2
Job	112	54.4
Social status	26	12.6
Education	40	19.4
Health	123	59.7
Inadequate milk	40	19.4

*Multiple responses

Table 7: Frequency distribution of attitude, knowledge and characteristics of respondents

Variables	Attitude (%)			P value	Knowledge (%)			P value
	Negative	Indifference	Positive		Low	Average	High	
Age(years)								
15-20	1.6	25.0	73.4	0.000	6.3	53.1	40.6	0.000
21-25	1.8	24.8	73.4		6.4	52.3	41.3	
26-30	0.0	28.6	71.4		0.0	71.4	28.6	
Course of study								
Sciences	2.5	24.1	73.4	0.000	7.6	54.5	37.9	0.000
Social Science	1.8	22.3	70.9		7.1	56.3	36.6	
Art	0.0	31.8	68.2		4.6	54.5	40.9	
Medical Sciences	0.0	17.1	82.9		0.0	45.7	54.3	
Education	0.0	22.2	77.8		11.1	66.7	22.2	
Family type								
Monogamous	1.4	25.3	73.5	0.007	6.9	51.6	41.5	0.002
Polygamous	2.8	25.7	71.5		2.8	62.8	34.4	
Others	0.0	0.0	100.0		0.0	100.0	0.0	

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