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FACTORS INFLUENCING KNOWLEDGE AND PRACTICE OF EXCLUSIVE BREASTFEEDING IN NYANDO DISTRICT, KENYA

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ABSTRACT

The overall objective of this study was to determine factors influencing the knowledge and practice of Exclusive Breast Feeding[1] (EBF) among lactating mothers with infants aged zero[2] to six months at Ahero Sub District Hospital in Nyando District, Kenya. A cross- sectional design was conducted to 117 breastfeeding mothers at Ahero Sub-District Hospital at Maternal Child Health clinic; these were selected consecutively until the desired sample was attained. The independent variables were maternal education, marital status, both maternal and child age, maternal employment status, health factors (place of delivery and maternal chronic illness), and cultural beliefs while dependent variables included EBF practice and mothers' knowledge of EBF[3] (awareness of EBF and its benefits), pre lacteal feeds and exclusive breastfeeding consistency. Exclusiveness was measured in time initiated (30 minutes initiation after birth) Data were collected by trained enumerators who administered a structured questionnaire. Analysis was done using Statistical Package for Social Scientists (SPSS) by running frequencies and cross tabulation. Chi square test was used to check for strength of association between variables at 95% confidence level. The study found that there was low EBF practice (33%) in the area and this posed a great concern. It was established that marital status, employment, maternal education, place of delivery and both infant and mothers' age were closely associated with knowledge and practice of EBF. Marital status and employment were strong predictors of both knowledge and practice which showed statistical significance of P= 0.02 and P=0.00, respectively. It was evident that family support is a key factor in the success of EBF with special focus on partner involvement. Actions to empower women and promotion of EBF campaign are recommended to achieve the fourth Millennium Development Goal (MDG) and probably reduce infant mortality in the area. Further studies are required to assess the impact of a strong focused educational program (focused on building family support) on improving EBF rates.

Key words: Determinants, Knowledge, Exclusive, Breastfeeding, Practice

[1]***Exclusive breast feeding*** *– The infant has only breast milk (including expressed breast milk and wet nurse)and no other food or drinks at all including water except for drops or syrups consisting of vitamins minerals supplements or medicine (when indicated)*

[2]***Aged zero months-*** *These are neonates who have not completed twenty eight days*

INTRODUCTION

Extensive research in various countries has provided evidence that breastfeeding has clear health benefits for infants as well as the mother. Infants who have been breastfed optimally have reduced risk of common childhood illnesses such as gastro-intestinal and respiratory infections, otitis media, atopic eczema, and allergy during childhood [1, 2]. In resource- poor countries, where the negative impact of Human Immune deficiency Virus (HIV) is high, exclusive breastfeeding for the first six months also has greater benefit than mixed feeding or formula feeding for the Prevention of Mother to Child Transmission (PMTCT) of HIV [3]. It is evident that early introduction of liquids and solid is unnecessary, reduces the duration and frequency of breastfeeding, and increases risk of infant morbidity and mortality [4].

UNICEF and WHO recommend that children be exclusively breastfed during the first six months of life. Breast milk is uncontaminated and contains all the food nutrients necessary for children in the first few months of life. The first breast milk is known as colostrum, which is highly nutritious and has antibodies that protect the newborn from diseases. Mothers benefit from early suckling because it stimulates breast milk production, and facilitates the release of oxytocin hormone, which helps the contraction of the uterus and reduces postpartum blood loss. Early initiation of breastfeeding also fosters bonding between mother and child [5].

Many infants, in addition to breast milk, are given something else from an early age, such as water, tea or milk. These other foods can lead to malnutrition due to inadequate nutritional content and intolerance, which increases infant morbidity and mortality rates. In the early months of life, EBF is correlated strongly with increased child survival and reduced risk of morbidity, particularly from pneumonia and diarrhoeal diseases [4]. The Kenyan government developed and issued a breastfeeding policy to protect, promote and support EBF for the first six months of an infant's life which was endorsed in 1990 [6]. Due to the scourge of HIV/AIDS, various strategies have been developed like PMTCT which advocates for EBF to reduce the risk of postnatal HIV transmission [7]. Among other factors, women need to have adequate knowledge to be able to sustain EBF for the recommended period [8].

Globally, it is estimated that about 18% of women practice EBF while in developing countries it is 40% [4]. In Kenya, breastfeeding is a common occurrence with more than 90% of infants under four months of age being breastfed [9]. In 2003, EBF was 29% at two months of age, 9% at three months, 2% at six months and 13% overall. This represents no change in breastfeeding patterns when compared with the 1998 Kenya Demographic Health Survey (KDHS) [9]. This has been associated with various factors including inadequate knowledge about EBF. In Nyando District, only 26% of infants aged zero to six months are exclusively breastfed. This could be even lower if 'birth dietary recall data' were used on infants aged six months [7]. This trend raises concerns and suggests the need to investigate the determinants of knowledge and practice of EBF to provide policymakers and non governmental organizations (NGOs) with relevant information for future planning and interventions. Exclusive breastfeeding has been identified as one of the major interventions toward the

achievement of the Millennium Development Goal (MDG) four (reducing child mortality by two thirds between 1990 and 2015) [3, 7, 10].

METHODS AND PROCEDURES

A cross- sectional study was conducted with 117 breastfeeding mothers at Ahero Sub-District Hospital, Nyanza Province, Kenya, who were selected consecutively until the desired sample size was attained. The independent variables were maternal education, marital status, both maternal and child age, maternal employment status, health factors (place of delivery and maternal chronic illness), and cultural beliefs while dependent variables included current EBF practice and maternal knowledge of EBF. Exclusiveness was measured in time initiated (30 minutes initiation after birth), pre-lacteal feeds and consistency. Data were collected by trained enumerators who administered a structured questionnaire. Analysis of the data collected was done using the SPSS statistical package version 12.0 by SPSS Inc. in the year 2003. The Chi-Squire Test was used to check for strength of association between variables at the 95% confidence level.

ETHICAL CONSIDERATION

Approval for the study was sought from the Research Committee of the Great Lakes University of Kisumu (GLUK) faculty of TICH. Informed consent was obtained from each of the respondents before their participation in the study.

RESULTS

Some of cultural beliefs mentioned during data collection were; '*Baby boys need solid foods immediately they are born to make them strong and healthy, If a child is fed on breast milk alone for six months, the bones get weak and they become sickling'*.

Socio- demographic factors and Knowledge in exclusive breastfeeding

Table 1 shows that the majority of the married mothers (80%) were aware of EBF as compared with 46% of single mothers (P= 0.04). Awareness of EBF increased with an increase in the education level, 58% for non educated and 87% for secondary level and above (P=0.04).

According to Table 2, the study found that more (36%) of married mothers knew the benefits of EBF as compared to the single mothers (P=0.01). Similarly, knowledge of the benefits of EBF increased with an increase of education level from none educated, primary level, secondary level and above from 58%, 63% and 81%, respectively (P=0.02). Considering knowledge by mothers' age, figures did not show significant values.

Knowledge and practice on exclusive breastfeeding

With respect to knowledge of EBF[2], the analysis was done on two aspects: knowledge of the benefits and awareness of EBF. The study found that awareness in EBF had a positive influence in practice. In Table 3, it showed that those who were aware and practiced EBF were 23 percentage points more than those who were not aware but did the EBF. This difference was statistically significant (P = 0.03).

Exclusive breastfeeding practice by Socio demographic characteristics

The nutritional assessment was done using 24 hr recall method, whereby the respondents were asked about what they had fed their infants on for the last 24 hours. Table 4 revealed that, EBF was higher among married by 27% as compared to single mothers. (P=0.02). Employment strongly influenced the practice of EBF whereas non-employed mothers breastfed more by 42 percentage points compared to the employed ones (P=0.00).

In assessing EBF practice by health factors, the study found that all mothers (100%) who had suffered from chronic illness practised EBF (P=0.01), probably because much of this was HIV and there was an active PMTCT program in the area. More EBF was observed among those who had hospital delivery with a difference of 21 percentage points (P=0.03). Both chronic illness and place of delivery appeared to influence EBF (Table 5).

According to the result of infants' age by EBF practice (Figure. 1), the study found that exclusive breastfeeding rate reduced with an increase of infants age; 50% at zero months and 30% at six months which showed a statistical significance (P=0.03). This is a normal expectation anywhere as families tend to add other foods as the child gets older. The pattern is not a smooth decline probably because of the large proportion with HIV (Table.5), who were determined to continue breastfeeding until six months.

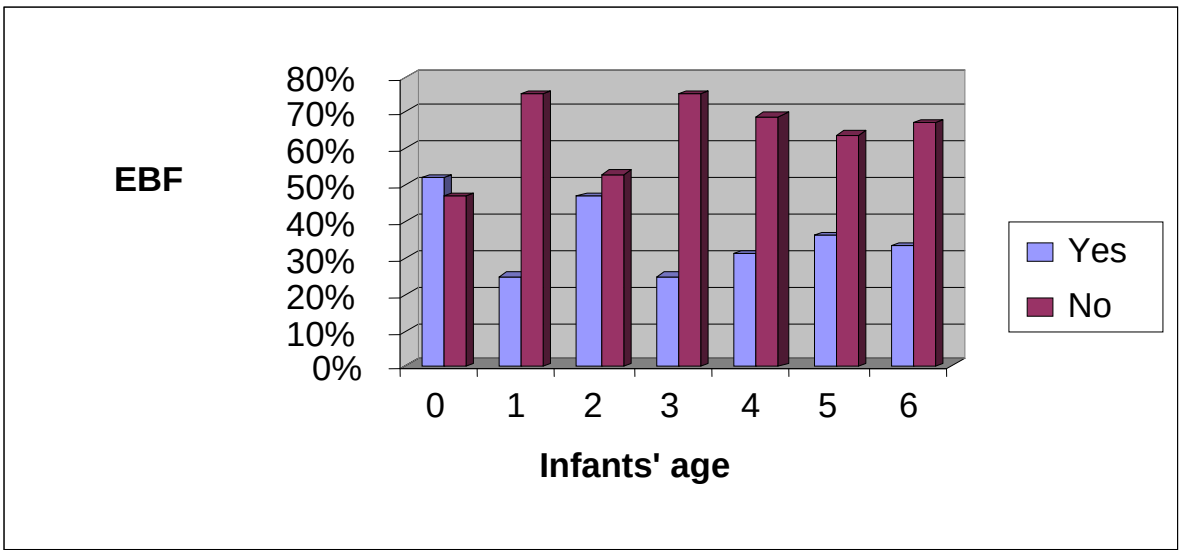

Figure 1: Current exclusive breastfeeding by infants' Age in months (N=117), based on a 24- hour recall.

[3] ***Knowledge of EBF*** *– In this context it meant being aware of EBF and its benefits*

DISCUSSION

This study has examined factors associated with knowledge and practice of EBF in a resource poor setting. The results showed that all respondents who were interviewed breastfed their infants (100%). This finding conforms to a Kenyan Health Survey report, on EBF of infants aged zero to six months, which reported 98 percent [9] and with those of Manongi *et al*. and Chatman *et al.* [11, 12].

According to the findings, marital status was significantly (p=0.02) associated with exclusive breastfeeding (Table. 4). Similarly, a cross- sectional study in northern Tanzania showed that unmarried women and women not having knowledge of EBF were more likely to terminate EBF early [11]. However, level of education influenced knowledge of the benefits of EBF (Tables 1&2), which in turn showed insignificant result (p=0.05) on EBF practice (Table 3). This could be due to the likelihood of an educated woman getting committed in employment. This compares well with a study of a sample of 463 rural women, who gave birth during August to October 2002 in Vietnam, which revealed that the non-EBF women were less educated [13].

In contrast, in both rural and urban Morogoro in Tanzania, Shirima *et al*.[14] found no determinants of EBF except knowledge . They point out that exclusive breastfeeding may not be practised just by conveying knowledge about it, but without that knowledge it is definitely absent because it is the norm.

The findings reveal that employed women are less likely to practise EBF (Table 4). Probably women whose spouses are the main source of income for the family are twice as likely to exclusively breastfeed their infants, compared with the group where mothers are the main source of income. This was similar to the case in a cross-sectional study done to assess breastfeeding practices and factors influencing it at Pune [12].

The findings of an inverse relationship of the infant's age by EBF rate (Fig.1) conform with those of some studies done in Uganda, Pakistan and India [10].The dominant reason for non exclusive breastfeeding was maternal anxiety that breast milk alone might not provide sufficient nourishment for the baby.

Like in many other developing countries, the practice of a mother giving water or tea to an infant in addition to the breast milk was common. The belief that colostrum is harmful and that fresh milk is produced from the third day relates well to the findings of Morisky *et al*. [15], which prompts mothers to feed their infants on pre lacteal feeds. Most of the mothers provided their children with water because they thought that the milk was insufficient. Breast milk was seen primarily as food and water is required to satisfy the needs of the child, so the mothers believed.

The use of pre-lacteal feeding (feeds other than breast milk within the first three days of birth) is common in many developing countries, including Kenya. The explanations

given in this study were first, that mothers believe they need to wait until the milk starts flowing, and secondly, that giving liquid will clean the baby's throat. It has been a long standing tradition even in other locations, which is comparable with Engebretsen *et al*. [16] findings on low adherence to EBF in Uganda.

Exclusive breastfeeding knowledge can be reinforced through education but family involvement is necessary. The mother does not have the power in most African societies to decide all on her own how a baby should be fed. Exclusive breastfeeding often meets opposition from the older generation of women.

Maternal chronic illness (probably largely HIV) positively influenced EBF. This could be due to Prevention of Mother To Child Transmission of HIV intervention which at first advocates for it during the first months of life.

This study suffered from the limitation that it did not incorporate multivariate analysis. This limited the knowledge of how much of the association found is due to shared variance and interactions between different independent variables. Marital status, for example, interacts with wealth and education.

RECOMMENDATION

Since marital status was found to be the main factor in successful EBF, it appeared that family support is imperative in successful exclusive breastfeeding strategies. Spouse and other family members (who assist in the care of the baby), need to understand what exclusive breastfeeding entails with their full support for success.

Further study is required to assess the impact of a strong focused educational program (emphasizing the need for family support/community health) on improving EBF rates. There is also need for support interventions and follow-up to the breastfeeding mothers by knowledgeable and skilled workers into the community.

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Table 1: Awareness of exclusive breastfeeding by socio demographic characteristics

Socio demographic characteristics	Awareness of EBF				
	Yes		No		P value
	N	%	N	%	
Marital status					
Single	12	46	14	54	
Married	73	80	18	20	**P=0.04**
Education level					
- **None**	7	58	5	42	
- **Primary**	46	68	22	32	
- **Secondary and above**	32	87	5	13	**P=0.04**
Mothers age					
15 to 34 years	54	75	18	25	
35 years and above	31	69	14	31	**P=0.05**

Table 2: Knowledge on the benefits of EBF by socio demographic characteristics

Socio demographic characteristics	Knowledge of the benefits of exclusive breastfeeding				P value
Marital Status	Yes	%	No	%	**P=0.01**
Single	11	42	15	58	
Married	71	78	20	22	
Education level					**P=0.02**
- **None**	7	58	5	42	
- **Primary**	43	63	25	37	
- **Secondary and above**	32	81	5	19	
Mothers age					
- **15 to 34 yrs**	51	71	21	29	**p>0.05**
- **35 years and above**	31	70	14	31	

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Table 3: Exclusive breastfeeding by knowledge

Awareness of EBF	EBF practice				
	Yes		No		
	N	%	N	%	P value
Yes	36	42	49	58	
No	6	19	26	81	**P=0.03**
Benefits of EBF					
Yes	34	42	48	59	
No	8	23	27	77	**P=0.05**

Table 4: Exclusive Breastfeeding Practice by socio demographic characteristics

Socio demographic characteristics	Exclusive breastfeeding				P value
	Yes		No		
	N	%	N	%	
Marital status					
Single	5	15	22	85	**P=0.02**
Married	38	42	53	58	
Education level					
- **None**	5	41	7	58	**P=0.05**
- **Primary**	25	37	43	63	
- **Secondary and above**	12	32	25	68	
Employment status					
Employed	3	8	36	92	**P=0.00**
Not employed	39	50	39	50	

Table 5: Chronic illness and place of delivery by socio demographic characteristics

Background characteristics	Exclusive breastfeeding		P values
	Yes	No	
	No. %	No. %	
Chronic Illness			
Yes	6 100	0 0	**P=0.01**
No	36 32	75 68	
Place of Delivery			
Hospital	24 48	26 52	**P=0.03**
Home	18 27	49 73	

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