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The influence of prior plan, sources of information, popular culture and past teenage exposure on mothers' optimal infant feeding practices in Nakuru municipality, Kenya

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Abstract

In Kenya, the infant and young child feeding (IYCF) recommendations states that mothers should initiation breastfeeding within one hour of birth, EBF for six months, continue breastfeeding for two years and beyond meanwhile introduce solids, semi-solids and soft food at six months; that meals frequency and food diversity be done as for appropriate age. Unfortunately, a number of factors influence mothers' compliance with these recommendations. Therefore, the study sought evaluated the levels of compliance with IYCF recommendations amongst mothers with infants aged 0-24 months in Nakuru Municipality. This paper discusses the findings on the influence of mothers' prior plan, sources of information, popular culture, prior teenage exposure to breastfeeding mother and support for IYCF on mothers' infant and child feeding behaviours. The data was collected using an interview questionnaire adapted from the WHO questionnaire on the 24 hour recall food diversity. Nine research assistants were trained and used to collect data from 377 mothers with children aged 0-24 months. Almost half (49.6%) of the mothers had prior plans for exclusive breastfeeding for six months. However, only 14.2% carried through their plan. The main sources of IYCF information was the media (radio and television) by 39.3%, a large majority (95.5%) of the mothers had prior teenage breastfeeding exposure to witnessing a mother frequently breastfeed. The popular culture of IYCF was early (0-3 months) introduction of solids, semi-solids and soft foods (39%). The main source of reassurance (support) on mothers' IYCF practice was by the community health nurse (46.4%). Following these findings, the study recommended that policy makers should come up with strategies of building capacity to increase the community health nurse efforts of supporting IYCF.

Keywords: prior plan, sources, information, popular culture, past teenage exposure, mothers, optimal infant feeding practices, Nakuru, Kenya

Introduction

In developing countries such as Kenya, poor infant and young child feeding (IYCF) practices pose a threat to child development causing growth faultering (WHO, 2007). More so, in the urban setting, where households are faced with the challenges of broken extended family support systems, and have to engage in rigorous activities to ensure household food security, the mothers must decide how to feed their young children within contexts that constrain them (KNBS & ICF macro, 2010). The resultant choices may be reflected in less than 3% of Kenyan infants being exclusively breast fed for the first six months of life (MOPHS, 2008) [30]. It may cause the Kenyan children to be at risk of food contamination due to exposure to ingestion of contaminated foods and drinks when these are introduced too early. Contamination of dairy products was found by a study conducted in Dagoretti, Nairobi which revealed *Escherichia coli* in dairy products (Kang'ethe *et al*., 2007) [20]. This was associated with milking hygiene, sources and treatment of water. Furthermore, lack of EBF arising from inappropriate optimal BF also causes risks of infection due to lack of immunity commonly found in breast milk (Lamberti *et al*., 2011) [27]. A number of factors play a role in a mothers' optimal infant and young feeding behaviour. These include a mother's prior plan to breastfeed, her sources of information, popular culture and past teenage exposure to a breastfeeding mother. Direct support on the IYCF practices also play an important role in mothers' choices of whether or not to breastfeed.

Mothers' Prior Plan of IYCF

Prior plan made for intention to breastfeed as part of IYCF is a strong predictor of behaviour (Di Girolamo *et al.,* 2005) [11]. Such IYCF intentions are influenced by significant others' opinion such as the spouse, family and friends (Hill *et al.,* 2008). In addition, maternal knowledge of infants' health benefits of breastfeeding also affects the mothers' intention to breastfeed (Stuebe & Bonuck, 2011). However, having an intention to meet the IYCF recommendation has been weakly positively associated with the initiation of breastfeeding (Wen *et al.,* 2012) [41].

Mothers' Source of IYCF Information

Mothers obtain information on IYCF from a variety of sources, the quality of which may vary, and is not necessarily evidence-based (Raats, 2010) [35]. A study by Halfon (2011) [14] has shown that primary health care providers have a role of disseminating IYCF information at the community level and can thus reduce early introduction of solids, semi-solids, and soft foods. Dissemination of IYCF information to mothers is best done through existing health systems as recommended by Kabir *et al.* (2012) [18] in a study done in Bangladesh. According to Muluye *et al*. (2012) [32], in a study conducted in Ethiopia, IYCF education aligned to national policy should be strengthened in Primary Health Care (PHC) activities. In Kenya, the Ministry of Public Health and Sanitation (MOPHS) has stipulated the need for the mothers to receive IYCF messages during their antenatal visits

(District Health Information System [DHIS] Nakuru, 2012) [12] where many PHC activities are done. Such IYCF messages are known to build confidence in the mother once they return home after delivery at a HF as revealed in a study done in England by Beake *et al.* (2010) [3].

Despite the advantages of daily dissemination of information in support of IYCF, studies done in India and Kenya by Biswas *et al.* (2010) [5] and Lakati *et al.* (2010) [26] have revealed that health education sessions are not carried out as per recommendation due to heavy workload of the Community Health Nurses (CHN) in whose docket it falls. However, according to DHIS (2012) [12] Nakuru, there is evidence of IYCF message dissemination during the ante-natal and post-natal period being in accordance to the expectation of the Baby Friendly Initiative in Nakuru.

Skilled trained health workers such as midwives were identified in various studies to be potentially cost effective in IYCF information dissemination (Renfrew *et al.,* 2009; Brown *et al.,* 2011; Heinig *et al.,* 2006; Senarath *et al.,* 2010) [36, 6, 15, 38]. However, IYCF information dissemination has various challenges amongst the identified sources such as the health workers providing conflicting advice or guidance, being unavailable and lack of resources, especially time, to support the mothers on IYCF practical aspects (Brown *et al.,* 2011; McInnes & Chambers, 2008) [6, 29]. According to Heinig *et al.* (2006) [15], grandmothers are sources of information to mothers. Other sources include the mass media such as television and the radio as depicted in a study done in Nepal by Joshi *et al.* (2012). Unsatisfactory exposure to media is cited as factor that is associated with risks of premature cessation of EBF (Gewa *et al.,* 2011) [13].

Popular Culture

Mothers base their infant feeding decisions on an array of factors which include cultural beliefs (Pak, Aliya & Elinor, 2009) [34]. As Jellife (1968) [16] has pointed out, "… all different cultures, whether in a tropical village or in a highly urbanized and technologically sophisticated community, contain some practices and customs which are beneficial to the health and nutrition of the group, and some which are harmful. No culture has a monopoly on wisdom or absurdity." Pre-lacteal feeding is a popular culture as reflected in various studies done in India, Ethiopia and Tanzania (Dakshayani & Gangadhar, 2008; Alemayehu, Haidar & Habte, 2009; Shirima, Greiner, Kylberg & Gebre-Medhin, 2001) [10, 39, 1]. Additionally, early introduction of complementary feeding is common in many cultures and frequently, such feedings are viewed as a means of socializing the infant into the family's diet culture (Pak *et al.,* 2009) [34].

Mothers' Prior Teenage Exposure to a Breastfeeding Mother

According to Hoddinott, Kroll, Raja and Lee (2010) and Giles, Connor, McClenahan and Mallet (2010), there is a positive association between breastfeeding exposure (witnessing others who are role models breastfeed and knowing someone who has breastfed) and positive breastfeeding attitudes. Targeting the prior exposure to an IYCF role model of a mother factor may be an important step in positively influencing infant feeding behaviour and moving toward breastfeeding-friendly culture (Kavanagh, Lou, Nicklas, Habibi & Murphy, 2012) [22]. It is critical to influence the decision-making process among young adults, as this decision is an important predictor of actual infant-feeding behaviour (Kavanagh *et al.,* 2012) [22].

Support for IYCF

IYCF support classes

According to Saltan (2008) [37], the modern society is no longer taking breastfeeding included in optimal IYCF as "instinctive, effortless or natural" or "the automatic action" but it is viewed as skills that need to be acquired through learning (Zwelling, 1996) [43]. In the urban set up in Nairobi, young couples are availing themselves for classes where they are taught how to take care of their infants and young children (Carroll, 2004) [7]. One of the lessons in these classes is breastfeeding (Carroll, 2004; Bingham, 2010) [7, 4]. There is need for effective communication of IYCF recommendations which is an essential element in supporting optimal IYCF (Simmons, 2003) [40]. Informational and other forms of support for breastfeeding need to be continuous so as to produce effective results as well as integrating other types of interventions during different phases of motherhood (Kaunonen, Hannula & Tarkka, 2012) [21].

IYCF support in health facilities

Within health facilities the concept of Baby Friendly Hospital Initiative (BFHI) has been established to strengthen and to support optimal breastfeeding by implementing the tens step to successful breastfeeding. However, not all health facilities (HF) adhere to recommendations as revealed in a Nairobi study by Lakati *et al.* (2010) [26]. Implementation of IYCF recommendations and health education communication strategies to disseminate IYCF recommendations when undertaken, depict positive impact on mothers' IYCF behaviour (Lingshi & Jingxu, 2011) [28]. Therefore, efforts are made nationally to ensure information on IYCF recommendations are disseminated to mothers in the health facility with the aim of higher EBF rates than those depicted in Kenyan studies (Kimani *et al.,* 2011; Kamau *et al.,* 2008) [23, 19].

A study based in Kisumu conducted by Morgan *et al.* (2010) [31] has revealed that Community Health Nurse (CHN) support influences mothers' decisions regarding breastfeeding cessation. CHN support during the birth of the infant also has influence on the initiation of breastfeeding (Heinig *et al.,* 2006) [15]. According to Craig and Dietsch (2010) [9], in a study carried out in Australia, a mother requires practical skills on breastfeeding, reduction of anxiety, fostering a sense of self-confidence in their ability to breastfeed and ample time for CHN to assists the mothers initiate and continue breastfeeding.

Post-natal care is aimed at supporting the mother especially on initiation, establishing and managing breastfeeding problems. However, health facility post-natal care is chaotic in nature and is not conducive to mothers to learn breastfeeding (Athena *et al.,* 2009) [2]. Hardly does CHN carry out home visits post-natally to mothers. Such home visits are left to either the students nurses which is part of their nursing course requirement and the peer support groups (Kruske *et al.,* 2007) [25]. The support for breastfeeding that mothers need includes assistance to latch baby on the breast and breastfeed, support on mothers' need for sleep and need to meet their goal of maternal identity (Athena *et al.,* 2009) [2].

However, CHN practice of assisting mothers has been shown in a study done in Nairobi by Lakati *et al.,* (2010) [26] as not feasible with the current shortages of CHN in many HF.

Peers IYCF Support

Breastfeeding support is also done by peers. The role of peer support has been identified as the most important intervention during the post-natal period and if professional support is not available for mothers, then peer support could provide an alternative worth considering (Kaunonen *et al.,* 2012) [21]. Peer support significantly decreased the risk of discontinuing EBF in a study done in low and middle-income countries (Sudfel, Fawzi & Lahariya, 2012). Breastfeeding peer support is key in helping improve breastfeeding and exclusive breastfeeding rates (Thomsons *et al.,* 2012). The peer supporters provided feedback on mothers' and infants' progress, and through praise, reassurance and instilling calm, they helped women to focus their energy to achieve their breastfeeding goals as revealed in study by Thomsons *et al.* (2012).

Other persons that are key in supporting mothers on IYCF are family members, friends, church members and occasionally strangers (Heinig *et al.,* 2006; Morgan *et al.,* 2010) [15, 31]. Cultural norms also influence mothers' decision regarding breastfeeding cessation Morgan *et al.* (2010) [31]. Cultural relationships within the extended family, as is a practice amongst the Asian mothers, cause conflict between the mother and mother in laws in regard to the best feeding method and cause the mother to end up using formula feed in order to sustain the daughter in law/mother in law relationship (Choudhry & Wallace, 2012) [8].

Statement of the problem

Infant Young Child Feeding (IYCF) recommendations in Kenya are given to ensure child survival through interventions that are cost effective. Child malnutrition, morbidity and mortality are reduced when mothers comply with the national IYCF recommendations (Nduati, 2012) [33]. Compliance with national IYCF recommendations is in the mothers' domain as they make decisions as to how their children will be fed in terms of types of foods in a meal, frequency as well as timing of when to commence and stop breastfeeding. Mothers' non-compliance is manifested in outcomes of children health. No study had addressed the most current mothers' compliance with IYCF recommendations in Nakuru Municipality. Therefore, the study sought to fill the gap by assessing the current situation in mothers' compliance to national IYCF recommendations. There is need to be in touch with current IYCF practice status frequently so as to be aware of the current trends and make interventions in good time to ensure achievement of reduction of child mortality by two thirds by 2015 (World Bank, 2006) [42].

Materials and Methods

The study utilized the cross-section descriptive research design to assess mothers' compliance with the five core IYCF indicators and six optional IYCF recommendations amongst children within their first two years of life. It was conducted in Nakuru Municipality. The Municipality is a dynamic urban area with a varied representation of people from different cultures and tribes. Since IYCF varies widely within and between populations for various reasons, Nakuru Municipality was chosen as an urban set-up to identify different aspect of IYCF information that is only available in a cosmopolitan area. This would assist in deciding approaches to IYCF recommendation in response to urban settings. The Nakuru Municipality hosts 39 health facilities. There are four hospitals and 3 health centres, five dispensaries, two nursing homes and over 110 private health facilities (Municipality of Nakuru, 2010) [12].

The target population for the study comprised all children within two years of life who attended clinics on a monthly basis. There was a total of 4356 children aged below two years in Nakuru Municipality (DHIS, Nakuru). The mothers with children aged 0-24 months who resided in Nakuru Municipality attending 5 clinics in Nakuru Municipality and were willing to participate in the study were the eligible respondents. Mothers with children aged 0-24 months residing in Nakuru Municipality but had children too ill requiring immediate medical interventions or were unwilling to participate in the study were excluded.

The health facilities in Nakuru Municipality were stratified into management strata namely central government, local government, faith based and private health facilities. Purposive sampling was used to select 5 health facilities with the largest mean monthly attendance amongst the health services offered to the mother and child. The health facilities selected were: PGH (Government), Mother Kevin (Faith Based), Gate House (Private), Langa Langa and Lanet (Local Government). Purposive sampling was done to obtain dates to visit the health facilities. Every mother with a child aged from 0-24 months seeking health care services on the day the health facility was visited had an equal chance to be interviewed. Consecutive sampling was done to select the respondents in the health facility. The minimum sample size determined was 330 and for each of the five health facility, 13% was added to increase the sample size proportionately leading to a total of 377 subjects. The sample distributed to the five health facilities were as shown in Table 1 below.

Table 1: Sample Size in Five Health Facilities

Health facility	Average Monthly attendance	% Total	Sample number
Langa Langa H.C	1113	14	47
Lanet H.C	708	9	30
PGH Nakuru	4032	52	170
Gate house	697	9	29
Mother Kevin	1268	16	54
Total	7818	100	330

Administration of questionnaire was done to 377 mothers whereby interview of respondent by the researcher and research assistants on IYFC indicators was done. The author was the principal investigator who supervised the research

assistants as well as provided guidance all through the data collection period. The information gathered through interview included data on infants' and mothers' characteristics, mother's level of knowledge on infant feeding guidelines', current practice of mothers' IYCF obtained from a 24 hour recall and support for optimal IYCF was collected. Maternal level of knowledge on IYCF were assessed using a knowledge scale developed consisting of 13 knowledge items which took approximately five minute to complete. Each correct response received a score of one allowing an overall range in scores of 0-17.

Current IYCF practices are the mothers' behaviour relating to what is fed and how often. The core indicators assessed in the study relating to mothers' IYCF practices included early initiation of breastfeeding, exclusive breastfeeding for children under six months, continued breastfeeding at 24 months, time introduction of solids, semi-solids or soft foods was done, minimum dietary diversity and minimum meal frequency. To assess dietary diversity, information was collected on different foods from different food groups that would have been given the last 24 hours. Other information gathered included the optimal indicators namely: children ever breastfed, continued breastfeeding at 24 months, duration of breastfeeding and bottle feeding. Observation of CWC cards (road to health) was used to confirm the age of infant. All the collected data were coded, entered, and analysed using SPSS version 20. Descriptive statistics were computed to determine proportion of timely initiation of breastfeeding and timely introduction of solids, semi-solids and soft foods. Chi-square analysis was computed to determine whether there was any relationship between variables.

Results

The study sought to examine the influence of mothers' prior plan of IYCF, exposure to breastfeeding mother during teenage, popular IYCF culture, sources of IYCF information and support for IYCF on mothers' infant feeding behaviour in Nakuru Municipality. The findings for the various variables under this objective were as discussed below.

Mothers' Prior Plan of IYCF

Almost half, 187(49.6%), of the mothers had made decision to breastfeed for more than six months, 95(25.2%) had not made a decision, 76(20.2%) had decided on four to six months, and 19(5%) had opted for 0 to three months as shown in Figure 1 below.

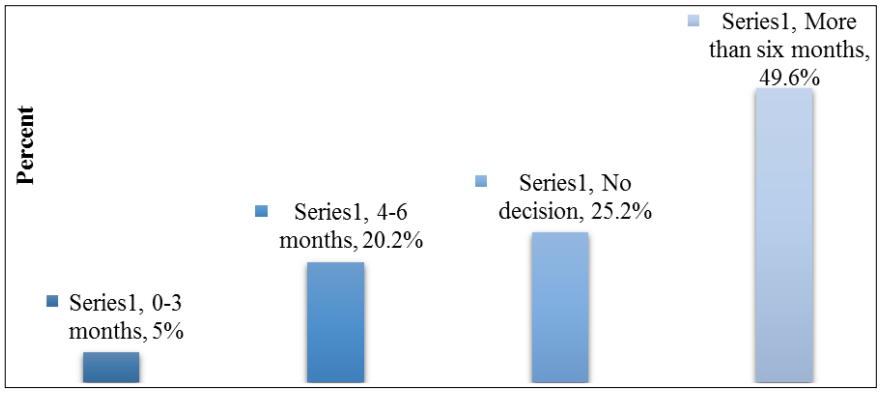

Fig 1: Mothers' Prior Plan for Exclusive Breastfeeding Practice

Prior Teenage Exposure to a Breastfeeding Mother

Majority, 360(95.5%), of the mothers stated that they had been exposed to a role model of a breast feeding mother during their teenage either through own mother, a close relative or neighbour, while 17(4.5%) of the mothers had not witnessed any one breastfeed (Figure 2).

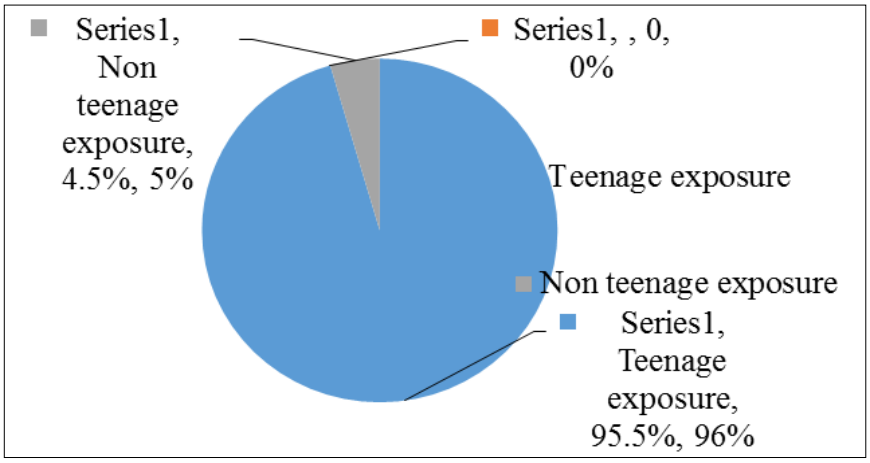

Fig 2: Mothers' prior teenage exposure to role model of breastfeeding mother

Popular IYCF Culture

As regards the popular and culturally accepted time to introduce solids, semi-solids and soft food, 147(39%) of the mothers indicated 0-3 months, 119(31.6%) did not know and 111(29.4%) stated 4-6 months as shown in Table 2 below.

Table 2: Popular Culture for Introducing Solids, Semi-solids or Soft Food

Popular cultural recommended time to start weaning	Frequency	Percent
0-3 Months	147	39
4-6 Months	111	29.4
Mothers do not know culturally acceptable time	119	31.6
Total	377	100.0

Sources of IYCF Information

Majority, 318(84.6%), of the mothers had received IYCF information while 59(15.4%) of them had not. The mothers stated that the IYCF information was received from: the mass media (all radio and television stations (148, 39.3%), Community Health Nurse (CHN) (108, 28.9%), magazines (19, 5%), books (15, 4%) and the internet (7, 1.9%). Nevertheless, 58(15.4%) of the mothers had never received IYCF information, as shown in Figure 3 below.

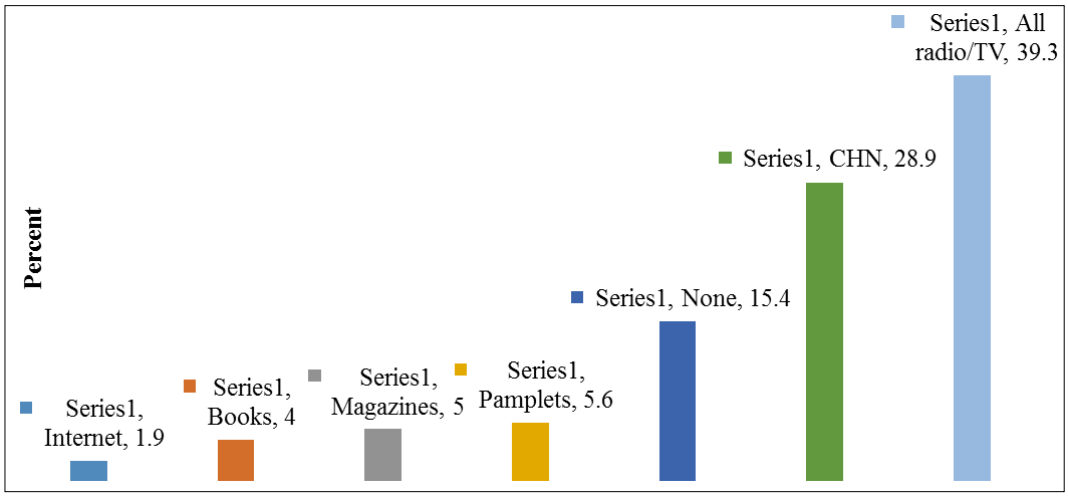

Fig 3: Sources of IYCF practice information

Support for IYCF

The study assessed the support the mothers had received for their IYCF practices and the findings are depicted as; key person supporting through words of praise, providing reassurance and opportunity to discuss IYCF. About a third (117, 31.1%) of the mothers cited the child's father and community health nurse (CHN) (114, 30.2%) as the key persons who supported BF through praising the mothers for their efforts. The mother-in-law, accounting for 16(4.2%), had the least proportion of providing words of praise to the mothers in support of IYCF (Table 3).

Slightly less than half (174, 46.4%) of the mothers cited the health worker as the person who provides reassurance on mothers' practice of breastfeeding. Own mother accounted for 78(20.7%), child's father (63, 16.7%), mother-in-law (16, 5.6%), friend (7, 1.9%) and 33(8.8%) of the mothers had no one to reassure them on breast feeding (Table 3).

Slightly more than half, 215(57%), of the mothers cited the health worker as the person who gave them opportunity to discuss IYCF practices, 70(18.6%) indicated their own mother, 38(10%), their friend, 15(4%), the mother-in-law and 12(3.2%), relatives, as shown in Table 3. These findings indicate that the Community Health Nurse (CHN) and the child's father were key persons in offering the mothers IYCF support.

Table 3: Support for IYCF

Support Person	Frequency	Percent
	Support of praise for IYCF efforts	
Child's Father	117	31.1
CHN	114	30.1
Own mother	66	17.5
Mother in law	17	4.3
No one	63	17
Total	377	100
	Support of Providing reassurance on IYCF	
Child's Father	63	16.7

Own mother	78	20.7
Mother in law	21	5.6
Friend	7	1.9
No one	19	8.8
CHN	175	46.4
Total	377	100
	Support of giving opportunity to discuss IYCF	
Own mother	70	18.6
Mother in law	12	3.3
Friend	38	10.1
Other relatives	12	3.2
CHN	215	57
No one	8	2.1
Total	355	100

There was no association between: mothers' prior plan for IYCF (χ^2 [51, n=375] =45.923, p=.675), popular breastfeeding culture (χ^2 [17, n=375] = 19.764, p = .286), support for IYCF by giving mother words of praise for breastfeeding (χ^2 [68, n = 375] =145.079, p = .000) and sources of IYCF information (χ^2 [102, n = 375] = 106.78, p = .353) with positive IYCF practices since the p-value was more than .05 hence null hypotheses was not rejected.

Exposure of the mothers' during her teenage phase to a role model mother breastfeeding (χ^2 [68, n=375] =101.347, p = .005) and response with concern to mothers' satisfaction (χ^2 [68, n = 375] =105.826, p = .002) showed positive IYCF practices where p-value was less than .05 suggesting that the null hypotheses was rejected (Table 4).

Table 4: Determinant Variables of IYCF Association with Mothers' IYCF

Determinant IYCF practice factors (Variables)	Chi-square	Degree of Freedom	P value	N
Mothers' prior plan of IYCF	χ^2= 45.92	51	.675	375
Mothers' prior teenage witness of BF mother	χ^2 =101.3	68	.005*	375
Popular culture of BF	χ^2 =19.76	17	.286	375
Source of IYCF information	χ^2 =106.7	102	.353	375
Support via giving word of praise for BF	χ^2 =145.1	68	.000	375
Support via responding satisfactorily to concern on BF	χ^2 =105.8	68	.002*	375

Note: -p–value was.005; where p-value of less than .005 was computed with *.

Discussion

Source of IYCF Information

From the findings of the study, the mothers had the opportunity to make choices of how to feed their infants from the position of having received information on IYCF whereby 39% of mothers had received IYCF information from the all the radio and TV stations, 28.9% from community health nurses and others from pamphlets, magazines, books, and internet. This shows that only a few mothers in Nakuru Municipality visited antenatal and post-natal clinics as recommended. However, the opportunities they had to receive information may not have been effective to change the mothers' IYCF practices to comply with the recommendations. They made choices which were contrary to even their prior plan decisions made before the baby was born. The mothers' preferred means of IYCF information dissemination was the health facility based interventions. This would mean improving the health facilities interventions in place to address the gap.

Prior Plan for IYCF

Almost half (49.6%) of the mothers had made a decision to exclusively breastfeed for six months. However, only 14.4% had followed their decision. These findings show that there is a willingness to comply to the recommendations but lacks the push by family, relatives and community members to follow up with the recommendations. These findings reiterated those of Wen *et al.* (2012) [41] that having an intention to meet IYCF recommendations was weakly associated with initiation of breastfeeding only and not duration.

Support for IYCF

This study identified community health nurses (CHN), health workers and own mother as key persons in provision of IYCF support of giving praise words on mothers' efforts of BF, providing opportunity for discussion, reassurances, responding satisfactorily to mothers' concerns on IYCF and motivating the mothers on IYCF. However, with the present known situation of shortages of CHN in health facilities, they may not be in a position to provide the much needed support of hands-on in solving IYCF problems as was cited as a source of lack of compliance with IYCF recommendations. The child's father was identified as key in provision of IYCF support of providing praise to the mother on IYCF efforts. They may offer praise to the mother but may not be competent to skilfully provide best IYCF practices when faced with difficult problems such as insufficient breast-milk which may lead to both mother and father being frustrated and hence non-compliant with the recommendations.

The person stated to be key in providing physical support for IYCF was own mother and neighbours. It was also revealed that 23% of the mothers received no physical support on IYCF. This may be attributed to social network in an urban set up where the closely knit network of relatives is worn out due to economic related activity demands common in urban set ups. The demands of urban livelihood may cause the

provision of IYCF support of visiting the mothers at home to be low as stated in this study whereby about 23% of the mothers reported that no one visited them.

Popular IYCF Culture

Exposure of teenagers to popular culture on breastfeeding as depicted by other mothers in a community who breastfeed their children in line with IYCF recommendations may impact to them once they too become mothers to breastfeed as it was instilled in them as acceptable. This may explain the universal practice of ever breastfed status (98.9%) but may not have an influence in compliance with whole package of IYCF recommendation. However, 70% of the mothers stated that popular culturally accepted time to introduce complementary food was before the child was six months old, it may suggest that a mother may have a false accomplishment of being a good mother if they manage to breastfeed for 3 months. This popular and culturally accepted duration falls way below the recommended complementary food commencement period of from six months. The Kenya Government Strategy of provision of health at level one through the Community Health Extension Workers (CHEW) may impact on the IYCF support to ensure IYCF information is accorded at the community level.

Mothers' Past Teenage Exposure to a Breastfeeding Mother

The frequent exposure of a teenager to a mother who was a role model in IYCF practices may have positive outcomes in the mothers' future IYCF practices. The past teenage witnessing of a mother frequently breastfeeding had an association with positive mothers' IYCF practices. Mothers who had witnessed a mother breastfeed frequently had positive breastfeeding durations. Such influence culminates in the reasoning that when a teenager has exposure to a role model of a mother complying to IYCF recommendations this would influence their future IYCF practice positively. This particular study finding resonated with the views shared by Hoddinott *et al*. (2010) and Giles *et al*. (2010).

Conclusion and Recommendations

Mothers' prior plan of IYCF, exposure to breastfeeding during teenage and support by community health nurse and child's father for IYCF has an association with positive IYCF practices. On the other hand, popular breastfeeding culture and sources of IYCF information have no association with IYCF practices. This means that policy makers need to come up with strategies of building capacity to increase the community health nurse efforts of supporting IYCF.

References

1. Alemayehu T, Haidar J, Habte D. Determinants of exclusive breastfeeding practices in Ethiopia. The Ethiopian Journal of Health Development. 2009; *23*(1):12-18.
2. Athena S, Schmied V, Barclay L. Complex decisions: theorizing women's infant feeding decision in the first six weeks after birth. Journal of Advanced Nursing. 2009; *66*(2):377-380.
3. Beake S, Rose V, Bick D, Weavers A, Wray A. Qualitative study of the experiences and expectations of women receiving in-patient postnatal care in one English maternity unit. BMC Pregnancy and Childbirth. 2010; 10:70.
4. Bingham D. Lamaze certified childbirth educators: Drawing strength from our past to build the future. Journal of Perinatal Education. 2010; 19(3):8-10.
5. Biswas B, Das K, Roy R, Saha I, Shrivatava P, Mitra K. Awareness and perception of mothers about functioning and different services of ICDS in two districts of West Bengal. Indian Journal of Public Health. 2010; 54(1):33-35.
6. Brown A, Reynor P, Lee M. Health care professionals' and mothers' perception of factors that influence decisions to breastfeed or formula feed infants: a comparative study. Journal of Advanced Nursing. 2011; *67*(9):1993-2003.
7. Carroll I. Birth and a vision: Lamaze childbirth education in Kenya, East Africa. Journal of Perinatal Education. 2004; 13(3):27-30.
8. Choudhry K, Wallace M. Breast is not always best: South Asian women's experiences of infant feeding in the UK within an acculturation framework. Maternal and Child Nutrition. 2012; 8(1):72-87.
9. Craig H, Dietsch E. Too scary to think about'. First time women and birth. Journal of Australian college of midwives. 2010; *23*(4):160-165.
10. Dakshayani B, Gangadhar M. Breast feeding practices among the Happikis: a tribal population of Mysore district, Karnataka. Ethno-Medicine. 2008; *20*(2):127-129.
11. Di Girolamo A, Thopson N, Martorell R, Fein S, Grummer L. Intention or experience? Predictors of continued breastfeeding. Health Education and Behaviour. 2005; 32:208-226.
12. District Health Information System (DHIS) Nakuru. Nakuru Health Information System. *DHIS*, 2012.
13. Gewa C, Oguttu M, Savaglio L. Determinants of early child feeding practices among HIV infected and non-infected mothers in rurals Kenya. Journal of Human lactation. 2011; 27(3):239-249.
14. Halfon N, Kuo A, Inkelas M, Slusser W, Maidenberg M. Introduction of solid food to young infants. Maternal and child health Journal. 2011; 15(8):1185-1194.
15. Heinig J, Follett J, Ishii K, Kavanagh-Prochaska K, Cohen R, Panchula J. Barriers to Compliance with Infant-Feeding Recommendations among Low-income Women. Journal of Human Lactation. 2006; 22:27.
16. Jellife D. *Child Nutrition in Developing Countries: A Handbook for Fieldworkers*. Washington, DC: United States Public Health Service, 1968.
17. Joshi N, Agho E, Dibley J, Senarath U, Tiwari K. Determinants of inappropriate complementary feeding practices in young children in Nepal; secondary data analysis of demographic and health survey 2006. Maternal and child nutrition. 2012; *8*(1):45-59.
18. Kabir I, Khanam M, Agho E, Mihrashahi S, Dibley J, Roy K. Determinants of inappropriate complementary feeding practices in infant and young children in Bangladesh: secondary data analysis of Demographic Health Survey 2007. Maternal Child Nutrition. 2012; 1:11-27.
19. Kamau- Mbuthia E, Ellmadfa I, Mwonya R. The impact of maternal HIV status on Infant Feeding patterns in

Nakuru, Kenya. Journal of Human Lactation. 2008; 28(3):431.
20. Kang'ethe K, Onono O, McDermontt B, Arimi M. Isolation of E. coli O157:H7 from milk and cattle faeces from urban dairy farming and non-dairy farming neighbour households in Dagoretti Division, Nairobi, Kenya: prevalence and risk factors. East African Medical Journal. 2007; 84(11):65-75.
21. Kaunonen M, Hannula L, Tarkka L. A systematic review of peer support interventions for breastfeeding. Journal of Clinical Nursing. 2012; *21*(13-14):1943-1954.
22. Kavanagh F, Lou Z, Nicklas J, Habibi M, Murphy L. Breastfeeding Knowledge, Attitudes, Prior Exposure, and Intent among Undergraduate Students. Journal of Human Lactation. 2012; *28*(4):556-564.
23. Kimani-Murage E, Madise N, Fosto J, Kyobutungi C, Mutua M, Gitau T, Yatich N. Patterns and determinants of breastfeeding and complementary feeding practices in urban informal settlements, Nairobi Kenya. BMC Public Health. 2011; 26(11):396.
24. Kenya National Bureau of Statistics (KNBS) and Measures DHS ICF Macro. *Kenya Demographic and Health Survey 2008-09*. Maryland, USA: Calverton, 2010.
25. Kruske S, Schmied V, Cook M. The 'early bird' gets the breast milk: findings from an evaluation of combined professional and peer support groups to improve breastfeeding in the first eight weeks after birth. Maternal and Child nutrition. 2007; 3(2):108-119.
26. Lakati A, Makokha O, Binns C, Kombe Y. The effect of pre-lacteal feeding on full breastfeeding in Nairobi, Kenya. East Africa Journal of Public Health. 2010; 7(3):258-262.
27. Lamberti L, Fischer C, Noiman A, Victora C, Black R. Breast feeding and risk for diarrhea, morbidity, and mortality. BMC Public Health. 2011; 11(3):15.
28. Lingshi S. Jingxu Z. Recent evidence of the effectiveness of educational interventions for improving complementary feeding practices in developing countries. Journal of Tropical Pediatrics. 2011; *57*(2):91-98.
29. McInnes R, Chambers J. Supporting breastfeeding mothers: qualitative synthesis. Journal of advance nursing. 2008; 62(4):407-427.
30. MOPHS-DON/NASCOP. *National Strategy on IYCF to*. Republic of Kenya, *2007*-2008-*2010*.
31. Morgan M, Masaba R, Nyikuri M, Thomas T. Factors affecting breastfeeding cessation after discontinuation of ARV therapy to prevent mother to child-transmission of HIV. AIDS CARE. 2010; *22*(7):866-873.
32. Muluye D, Woldeyohannes D, Gizachew M, Tiruneh M. Infant feeding practice and associated factors of HIV positive mothers attending prevention of mother to child transmission and antiretroviral therapy clinics in Gondar Town health institutions, Northwest Ethiopia. BMC Public Health. 2012; 12:240.
33. Nduati R. Supporting women to practice safe infant feeding: Kenya a case study of the African experience. Paper presented at breast conferences, 2012.
34. Pak G, Aliya H, Elinor A. Cultural influence on infant feeding practices. Pediatrics in review. 2009; *30*(3).
35. Raats M. The role of consumers. Nestlé Nutrition Workshop Series. Paediatric Programme. 2010; 66:161-171.
36. Renfrew M, Craig D, Dyson L, McCormick F, Rice S, King S, *et al*. Breastfeeding promotion for infants in neonatal units: a systematic review and economic analysis. Health Technology Assessment. 2009; 13(40):146.
37. Saltan B. Breaches in baby food advertisement. *International law office legal newsletter*. Calverton USA, 2008.
38. Senarath U, Dibley J, Godakandage S, Jayawickramath H, Wickramasinghe A, Agho E. Determinant of infant and young children feeding practices in Sri Lanka; secondary data analysis of demographic and health survey 2000. Food and nutrition bulletin. 2010; 31(2):352-365.
39. Shirima R, Greiner T, Kylberg E, Gebre-Medhin M. Exclusive breast-feeding is rarely practised in rural and urban Morogoro, Tanzania. Public Health Nutrition. 2001; 4(2):147-154.
40. Simmons V. Inconsistent advice and practice: Part 3. British Journal of midwifery. 2003; 11(9):259-567.
41. Wen M, Simpson M, Rissel C, Baur A. Awareness of breastfeeding recommendations and duration of breastfeeding: findings from the healthy beginnings trial. Breastfeed Medicine. 2012; 7:223-229.
42. World Bank. *Reconstruction and Development as Central to Development: A Strategy for Large-Scale Action.* The International Bank for Washington, DC 20433 USA 1818 H Street, NWT, 2006.
43. Zwelling E. Child birth education in 1990s and beyond. Journal of Obstetric Gynaecologic and Neonatal Nursing. 1996; 25:425-432.