Paper title: Infant feeding practices in Cape Coast: A sociological approach

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Abstract

Infant feeding has not always been seen as a social behaviour and this has contributed to the higher infant mortality among various communities. This paper describes infant feeding practices among mothers in Cape Coast from a sociological perspective. Symbolic interactionists' perspective guided the study, and a descriptive cross-sectional survey design methodology was used. The study targeted women 20years and above with not more than six months old babies. A total of 138 mothers were selected at the Central Regional Hospital. Mother's marital and employment status, friends' way of feeding their babies, social support and baby's age were found to influence mothers' infant feeding practices in Cape Coast. Culturally, water as a welcoming drink was also found to be an important part of infant feeding practices in Cape Coast. It was however recommended that the Ghana Health Service should fashion infant feeding education along sociological lines for the general public.

Introduction

Nearly 40 per cent of infants in the developing world are exclusively breastfed (Black et al., 2003). Complementary feeding frequently begins too early or too late, and foods are often nutritionally inadequate and unsafe. Poor feeding practices – particularly suboptimal breastfeeding and complementary feeding practices for infants and young children - are the major cause of child malnutrition along with common illnesses often exacerbated by intestinal parasites (UNICEF, 2007). An increase in exclusive breastfeeding prevalence can substantially reduce mortality and morbidity among infants. Human milk is specifically designed for a human child and satisfies an infant's physiological, psychological, nutritional and immunological needs (Matusiak, 2005). Healthy infant feeding practices, including exclusive breastfeeding and

delayed introduction of complementary foods, are promoted by health clinicians as well as by numerous national and international organizations. However, mothers base their infant feeding decisions and behaviours on a number of factors, including their experiences, family demands, socioeconomic circumstances, and cultural beliefs (Pak-Gorstein, Haq & Graham, 2009). In most cultures there exist a number of factors and beliefs not directly related to infant feeding practices that nevertheless affect women's decisions on how to feed their children (Matusiak, 2005). Literature on infant feeding practices is primarily based on nutritional and economic factors. Promotional programs focus on educating mothers on the immunological and nutritional superiority of human milk over artificial substitutes, especially in third world contexts. As a result of these practices, infant feeding has not always been seen as a social behaviour with sociological importance. However, studies have shown that maternal choices among alternative infant feeding practices are based on a number of complex issues, including environmental constraints, economic and political conditions, women's workloads, and cultural beliefs about the nature of children and the nature of food (Dettwyler, 1988). Thus infant feeding behaviours are embedded within a wider socio-cultural context (Stuart-Macadam & Dettwyler, 1995).

Hence this study was carried out to describe infant feeding practices sociologically in Cape Coast. In more specific terms, the study describes how social issues, such as mothers' source of feeding information and source of support, influence feeding practices other than medical and physiological issues which has dominated infant feeding studies (Van Esterik, 2002).

Literature review

Despite many years of research and policy initiatives, on infant feeding in sub-Saharan Africa, rates of infant malnutrition and under-nutrition have remained consistently high.

This situation has led to excessive rates of morbidity and mortality, stunted growth, and impaired neurobehavioural development. Approximately one-third of children less than five years of age in developing countries have low height-for-age (ACC/SCN 2000), and even larger proportions are deficient in one or more micronutrients. The Ghanaian situation is similar to that of the Sub region. Breastfeeding dominates infant feeding practices in Ghana. Studies have shown that mothers initiating breastfeeding ranges between 98% in 1979 and 99.7% in 1989 and was still 99% in 2003 (MOH, 1989; LLLI/CBI, 2003).

Mothers initiate breastfeeding early and breastfeed for long periods. The average breastfeeding duration for Ghanaian mothers in 1979/80 for instance, was 15 months. This figure rose to 20.4 months in1988 and then to 21.6 months in 1993 (Ministry of Health, 1994). Despite this bright picture, exclusive breastfeeding has been below 32% (Population Reference Bureau, 1999; LLLI/CBI, 2003). Mothers are quick to start complementary feeding. For instance, Elliot (2003) reported that Ghanaian mothers still frequently feed their one month old babies "with tea alongside breastfeeding", reducing the benefits of breastfeeding and inhibiting the absorption of iron, important in the prevention of anemia (Elliot, 2003). Specifically, water and maize-based fermented porridge are widely given to infants in their first months of life (Davis, Tagoe-Darko & Munkuria 2003) which contravenes the WHO's recommended exclusive breastfeeding practice.

No wonder, the Ghana Statistical Service reports that an estimated 17 percent of children in Ghana under age five are moderately stunted while another 9 percent are severely stunted (Ghana Statistical Service, 1999). Malnourished children who survive are more frequently sick and suffer the life-long consequences of impaired development (WHO, 2003). Because poor feeding practices are a major threat to social and economic development, they are among the

most serious obstacles to attaining and maintaining health that face the world of today. There is therefore the need to reverse this trend of high infant malnutrition in our society.

Factors influencing Infant feeding behaviour

Investigators have found a strong, positive correlation between maternal age and education level and breastfeeding initiation and duration. Specifically, older, and more educated women are the subgroup most likely to choose breastfeeding as their preferred infant feeding method, and generally they breastfeed their children longer than other groups (AAP, 1997; Scott & Binns, 1999; Arora, McJunkin, Wehrer, & Kuhn, 2000, p. 4; De La Mora, Russell, Dungy, Losch, & Dusdieker, 1999). Multiple studies addressing the factors associated with the infant feeding practices have "identified adolescent mothers as one group that is unlikely to breastfeed" (Volpe & Bear, 2000, p. 196).

The relationship between breastfeeding and pre-pregnancy employment, enrollment in school and intention to return to work are reported inconsistently in research findings (Littman et al., 1994, p. 1). However, most investigators agree that full-time employment and school enrollment are associated with decreased breastfeeding duration as the result of environmental barriers at both work and school (Spisak & Gross, 1991, p. 38).

Married women breastfeed their infants exclusively more often than single women (Arora et al., 2000, p. 1; Scott & Binns, 1999, p. 7). Similarly, unmarried women with less than a high school education choose breastfeeding at much lower rates than married women or women with a higher level of education. When unmarried women do prefer to breastfeed, their rates and duration are lower (Grossman et al., 1989, p. 4). In a study by De La Mora et al. (1999), the attitudes of married women concerning breastfeeding were more positive than were the attitudes of single mothers (p. 2366).

Mothers are more likely to feed their infants in the same manner in which they themselves were fed (Hawthorne, 1994, p. 26; Meyerink & Marquis, 2002, p. 38). Mothers are also influenced by other women in their social groupings. Women are more likely to choose to feed their infants in the same manner as their friends. Having breastfeeding role-models such as friends and mothers, together with positive attitudes to breastfeeding, are important in the final decision to breastfeed (Hawthorne, 1994, p. 27).

Hospital practices also affect infant feeding practices, with regards to the initiation and duration of breastfeeding, and the introduction of infant formulas (Ford & Labbok, 1990, p. 451). The role of the healthcare professional can be very critical in providing women with the information they need to make the decision on how to feed their baby. Negative attitudes and lack of knowledge on the part of healthcare providers can be barriers to successful infant feeding practices (Black et al., 1990, p. 259). The study therefore examines the problem of poor infant feeding practices using symbolic interactionist perspective.

Infant feeding in Symbolic Interactionist's terms

Karp and Yoels (1993) define symbolic interactionism as "a theoretical perspective in sociology that focuses attention on the processes through which persons interpret and give meanings to the objects, events, and situations that make up their social worlds" (p.31). In *Mind, Self, and Society* (1934), Mead explained how behaviours are constructed form a symbolic interactionist's perspective. Rather than viewing behaviour as a product of conditioning and social reinforcement, Mead believed that the mind is the most important consideration in attempting to understand human behaviour.

Through *mind* humans have three special abilities. First, mind helps people to create symbols. Through language and reflection, people name and make judgments regarding objects,

feelings, and behaviours in their environment and within themselves. Second, mind enables people to *imaginatively rehearse their behaviour*. People have internal conversations in their minds about what is going on, what they feel, and what they want to do. Third, mind gives people the ability to make choices about these feelings and behaviours that *give meaning* to the social world (Longres, 2000). A pregnant woman may imaginatively rehearse how she will feed her baby. And what people will think of her as a result. Her choice, as it is lived out, may become inscribed with personal meanings for her performance of the role of mother.

Though the mind is a human biological organ, it exists in society. The mind produces human society and it is in turn influenced and re-shaped by society. People symbolize, use language, and communicate through ongoing interactions in a complex mode of perceptions. Through this relationship between the mind and society, the social system of norms, values and social institutions are formed and re-formed. The *Self*, which is the set of concepts we use in defining who we are (Hughes & Kroehler, 2005), is created from the relation of mind to society. A self-concept is derived from this ability to see one's behaviours from the point of view of others, and ultimately from the point of view of the standards of society. A self is chosen from imaginative rehearsals and meaningful lines of action that a person decides upon. Through this perspective we see the mind, self, and society as processes.

The development of the self is central to symbolic interactionism. This happens as an individual imaginatively constructs the attitudes of others about a particular role, and thus anticipates the reaction of the other (Bailey, 2001). It must be noted however that not all "others" are equally influential in constructing the self. Three categories of "others" exert various forms in influences on the construction of the self. The 'generalized other', thus the widespread cultural norms and values we use as reference in evaluating ourselves (Macionis, 2000). Marketing,

advertisement and media portrayals of infant care products are the generalized others for nursing mothers (Newman & Pittman, 2002).

'Reference groups' are social groups to which people may or may not belong but use as a standard for evaluating their values, attitudes, and behaviours (Merton & Rossi, 1950 in Anderson & Taylor, 2006). Thus groups with which the individual interacts that are capable of influencing them. Family, friend, neighborhood, and workplace groups may become such reference points for mothers who are feeding their infants (Scott & Mostyn, 2003). 'Significant others' are considered actual influential people with whom an individual interacts. Most often they are members of a primary social group where face to face contact occurs (Longres, 2000). Intimate partners have been found to exert substantial influence on mothers' infant feeding choices (Rempel & Rempel, 2004).

Infant feeding choices can be framed in symbolic interaction terms. A woman who occupies a social status as mothers must decide on an infant feeding behaviour with special reference to societal expectations. Decisions are made about the symbolic meanings of these behaviours for the performance of the role of a mother. These behaviours are carried out with both the perception of the relative benefits of the behavior and thee influences of a key reference groups and/or significant others. That is if a mother's family tradition is mixed feeding, she then has a reference group that may encourage continued mixed feeding. However, a key significant other who supports and encourages exclusive breastfeeding may trigger a behavioural change.

Through this process of role taking and role performance, a sense of identity is formed as the symbolic interaction continues. Infant feeding therefore is behaviour with symbolic importance for most people.

Materials and methods

Study area and design

Cape Coast, the capital town of the Central Region of Ghana is chosen for the study, principally because of its heterogeneous inhabitants. Cape Coast is predominantly an urban town. The town has two main government hospitals, the Central Regional hospital and the Cape Coast Metropolitan Hospital, in addition to a university hospital. The study adopted a descriptive cross-sectional survey design utilizing mixed methods. A descriptive study was chosen because the research problem, in this study, does not lend itself to an experimental or quasi-experimental design, that is, human characteristics and behaviours are inherently not subject to experimental manipulation, it would also not be ethical to manipulate the respondent's knowledge (Pilot & Hungler, 1995).

Subject Recruitment and Selection Criteria

The recruitment source was the Central Regional Hospital. Eligibility to participate in this study was based on meeting the following criteria: older than 19 years of age, a mother to an infant not older than six months, and a resident of Cape Coast Metropolis. All mothers attending welfare clinic at the Central Regional Hospital, totalling 154, were checked against the inclusion criteria out of which 138 qualified and were thus recruited to participate in the study. Study participants were informed about the study, assuring them of their voluntary participation. They were assured that their names would not be put on the questionnaire. The study sought approval from the hospital administration's committee for use of human subjects in research.

Instrument and Data Collection

A standardized and pre-tested questionnaire was developed, based on a literature review. It was pre-tested and redrafted twice. The mothers were visited in their homes on an agreed date and time. Mothers were asked about their breast-feeding, formula-feeding, complementary feeding, their sources of information about infant feeding practices and the pressures from family, friends and neighbours when in feeding their babies. Their socio-demographic information was also obtained. . Each interview lasted for 30-45 minutes.

Data analysis

All data were coded and analyzed using SPSS version16.0 for Windows. Findings from the analysis were presented in contingency tables with summary statistics including multi-variants chi-square and proportions to look at the various relationships that exist among variables of interest. Chi-square test was conducted and a 0.05 level of significance was used. In addition narratives and texts gathered by the study were analyzed manually to support the statistical data.

Results

Socio-Demographic Characteristics of Respondents

The most important socio-demographic variables describing the lactating mothers who were interviewed in this study are summarized in Table 1. These variables were known to influence infant feeding practices (Arora et al., 2000; Alexy& Martin, 1994; De La Mora et al., 1999).

Mothers' ages ranged from 20 – 39 years with a mean age of 29 years (Table 1). A little above two-thirds, (71%) of the mothers interviewed were between 30 and 34 years of age, while twelve mothers representing 8.7% were aged between 20 and 24 years. A display of respondents'

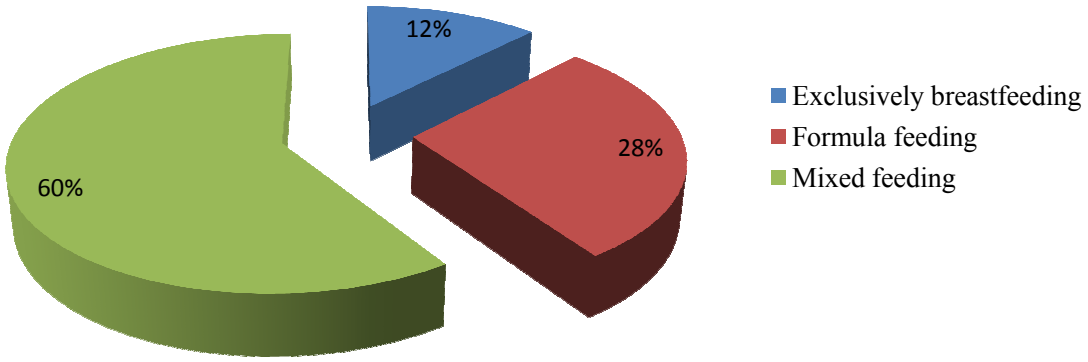
reported marital status as given in Table 1, indicates that the majority (103, (74.6%)) of mothers were married. None of the respondents reported being widowed, separated or divorced. Fifty-seven mothers (41.3%) have had some tertiary education, while 12 (8.7 %) reported having completed senior high, and vocational/technical school respectively. None of the respondents reported to have no education, meanwhile out of the 24 mothers reported to have had some primary education, 22 representing 92%, could not read and write the English language. Respondents indicated their ethnicity as shown in Table 1. The findings indicated that the majority (n=101, 73.3%) of the respondents were Akans, while ten (5.2%) were Ewes. The majority of the mothers, 103 (75%) were employed. As many as 106 (76.8%) mothers interviewed were Christians, and the remaining 32 were Muslims.

Table 1: Socio-Demographic Characteristics of Mothers

Characteristic	Frequency (N =138)	Percent
Age		
20-24	12	8.7
25-29	15	10.9
30-34	98	71.0
35-39	13	9.4
Marital Status		
Married	103	74.6
Cohabitation	23	16.7
Never married	12	8.7
Education		
Primary	24	17.4
Junior high	33	23.9
Senior high	12	8.7
Voc/Technical	12	8.7
Tertiary	57	41.3
Ethnicity		
Akan	101	73.2
Ewe	10	7.2
Ga/Adangbe	12	8.7
Hausa	15	10.9
Employment		
Yes	103	74.6
No	35	25.4

Current Infant Feeding Patterns of the Mothers Interviewed

Mothers interviewed breastfed for varied periods. Meanwhile, other foods (formula, juice, porridge etc.) were introduced at varied times in the first six months of the child's life. Figure 1 shows the infant feeding practices of mothers who participated in the study. As shown, the proportion of women who practiced exclusive breastfeeding and formula feeding were 12.0% and 28.0% respectively. The proportion of women who practiced mixed feeding within the first six months of life was 60%.



Feeding practices of mothers

Figure 2 show the age at which mothers introduced other supplemental foods to their babies. Almost half of the mothers (44.9%) reported to have introduced their babies to other foods aside breast-milk within the ages of three to four months. This is within the period that the WHO recommends that babies are breastfed exclusively. Meanwhile, seven mothers (5.1%) were already giving their babies others foods in their first two months of life. Fifty-two (37.7%) mothers introduced other foods within the fifth and sixth months of their infants' life. Also, seventeen mothers have not yet introduced their babies to any food apart from breast milk (Figure 2).

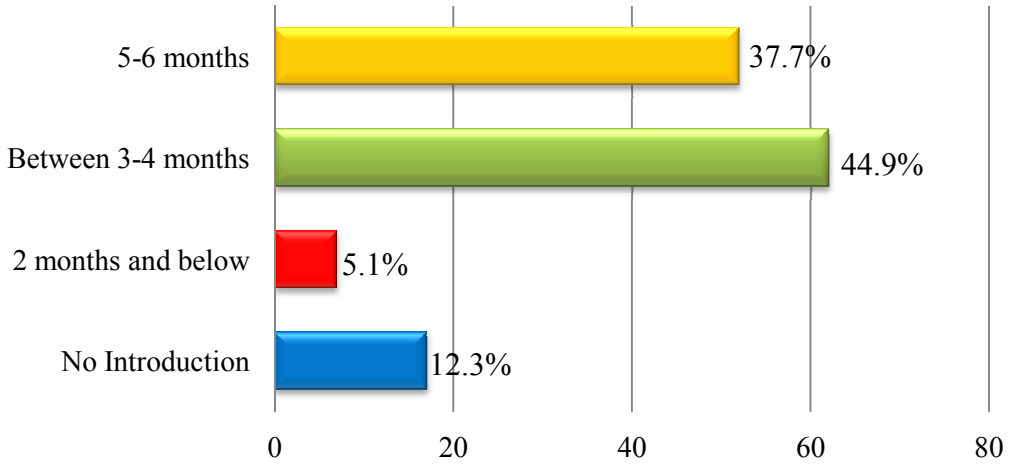


Figure 2: Age at which other food supplements were introduced

When mothers were asked what food they introduced to their infants in the first six months of life majority were quick to respond that they give water. Their responses are summarized in Table 2.

Table 2: Type of food introduced by age of infant

	Type of food introduced			Total
Age of infant	No introduction	Water	Formula/home food	
	17(%)	80(%)	41(%)	138(%)
2 months & below	1(5.9)	29(36.2)	20(48.8)	50(36.2)
3-4 months	16(94.1)	24(30.0)	12(29.2)	52(37.7)
5-6 months	0(0.0)	27(33.8)	9(22.0)	36(26.1)
Total	17(100.0)	80(100.0)	41(100.0)	138(100)

The majority (80 of 138) of respondents responded they give water in addition to breast milk to their infants. As mentioned earlier 17 respondents were exclusively breast feeding, however, 41 were giving their babies formula and other home prepared foods. Of the 80

respondents who introduced their infants to water, 36.2% gave their infants water in their first two months of life. Another 30% were still receiving water and breast milk at the ages of 3 and 4 months (Table 2). Mothers in this category explained that water has been part of our culture as a welcoming drink and as part of our food. Their responses emphasize the importance of water in infant feeding practices. The case of a 28-year-old mother indicates some of the views expressed by the mothers who gave their babies water.

I: Is there any reason why you give your baby water?

R: When people visit us, we give them water to welcome them, therefore give my child water always to assure her that she is welcome into this world (A 28year mother of a 1 month old baby girl).

Factors influencing infant feeding practices in the first six months of life

Cardinal among the focus of the study was to look for sociological factors that could help explain feeding practices mothers adopted in the first six months of their infant's life. This section therefore looks at the influence of mothers' socio-demographic characteristics, mothers' friends, and family and health attendants on feeding practices. Table 3 presents data on how socio-demographic variables of mothers influence infant feeding practices. A distribution of current feeding practice by age of mother is displayed in Table 3. Of the respondents aged between 25 and 29 years, 1 (6.7%) reported breastfeeding her youngest child exclusively, compared with 14 (14.3%) of the respondents between the ages of 30 and 34 years, and 2 (15.4%) of those 35 and 39 years. None of the mothers aged between 20 and 24 exclusively breastfed.

However, almost 60% of mothers aged between 30 and 34 are practicing mixed feeding. A critical look at the row percentages of mothers' age by current feeding practices displayed in

the Table 2 reveals an interesting trend. The percentage of mothers exclusively breastfeeding and formula feeding tend to increase as the age of mothers increases. However, that of mixed feeding decreases as mothers' age increases. There seems therefore to be a relationship between maternal age and feeding practice as older mothers are more likely to exclusively breastfeed whiles younger mothers are more likely to mixed feed.

Table 3: Distribution of current feeding practices by socio-demographic characteristics

Variable		Currently feeding practice			Total	p-Value
		Exclusively breastfeed	Formula feeding	Mixed feeding		
		n=17(%)	n=39(%)	n=82(%)	n=138(%)	
Age of mother	20-24	0 (0%)	2 (16.7%)	10 (83.3%)	12 (100%)	0.357
	25-29	1 (6.7%)	4 (26.7%)	10 (66.7%)	15 (100%)	
	30-34	14 (14.3%)	27 (27.6%)	57 (58.2%)	98 (100%)	
	35-39	2 (15.4%)	6 (46.2%)	5 (38.5%)	13 (100%)	
Marital Status	Married	3 (2.9%)	35 (34.0%)	65 (63.1%)	103 (100%)	0.000
	Cohabitation	14 (60.9%)	2 (8.7%)	7 (30.4%)	23 (100%)	
	Never married	0 (0%)	2 (16.7%)	10 (83.3%)	12 (100%)	
Mother's Level of Schooling	Primary	13 (54.2%)	2 (8.3%)	9 (37.5%)	24 (100%)	0.000
	Junior High	0 (0%)	8 (24.2%)	25 (75.8%)	33 (100%)	
	Senior High	2 (16.7%)	3 (25.0%)	7 (58.3%)	12 (100%)	
	Voc/technical	0 (0%)	2 (16.7%)	10 (83.3%)	12 (100%)	
	Tertiary	2 (3.5%)	24 (42.1%)	31 (54.4%)	57 (100%)	
Employment	Yes	4(3.9%)	34 (33.0%)	65 (63.1%)	103 (100%)	0.000
	No	13(37.1%)	5 (14.3%)	17 (48.6%)	35 (100%)	
Religious Denomination	Christian	17 (16.0%)	29 (27.4%)	60 (56.6%)	106 (100%)	0.053
	Muslim	0 (0%)	10 (31.2%)	22 (68.8%)	32 (100%)	
Age of last baby	2months and below	1 (2.0%)	19 (38.0%)	30 (60.0%)	50 (100%)	0.000
	3-4 months	16 (30.8%)	11 (21.2%)	25 (48.1%)	52 (100%)	
	5-6 months	0 (0%)	9 (25.0%)	27 (75.0%)	36 (100%)	

Looking at the distribution of current feeding methods by mothers' marital status (Table 3), a significant relationship was observed between marital status and exclusive breastfeeding of the youngest child. Out of the 17 exclusively breastfeeding mothers, 14 were living together with their partners but were not married. The remaining three were married. None of the never-married respondents was exclusively breastfeeding. However, formula and mixed feeding (35 of 39 and 65 of 82 respectively) is very high among married women, compared with those who were living- together -but- not- married and never married respondents. Mothers with partners are more likely to exclusively breastfeed than mothers without partners.

A distribution of feeding method by mothers' level of schooling is also presented in Table 3. Respondents who reported having primary schooling were more likely to breastfeed exclusively than respondents of the other levels of schooling. Junior High and Vocational/Technical graduates were not exclusively breastfeeding. Meanwhile respondents with tertiary schooling were practicing formula feeding more than other respondents.

Mothers' employment status was found to be strongly associated with how they were feeding their babies. As portrayed in Table 3, of the seventeen mothers practicing exclusively breastfeeding, 14 were mothers who reported that they were unemployed. However 65 of 82 mothers practicing mixed feeding were employed.

All the mothers exclusively breastfeeding were Christians. However, majority of the Christians (n=60 of 106) were mixed feeding, whiles the remaining 29 were formula feeding. Of the 32 Muslim, 22 are mixed feeding whiles the remaining ten were formula feeding.

Looking at the babies' age and how they were fed, only one mother out of the 50 mothers with children aged two months and below was exclusively breastfeeding. However 30 of the 50 mothers of children within the same age were mixed feeding their babies. Approximately 49% of

the 39 exclusively formula fed babies were aged two months and below. Exclusively breastfeeding was high (94.1%) among babies between the ages of three and four months. None of the children aged between five and six months was exclusively breastfed.

Table 4: Mothers' Employment status and Level of Education by Current Feeding Practices

Employment Status			Current Feeding Practice			Total	p-value
			Exclusively Breast feeding N=17 (%)	Formula feeding N=39 (%)	Mixed feeding N=82 (%)	N=138 (%)	
Yes	Level of Schooling	Junior High	0 (0.0)	5 (21.7)	18 (78.3)	23 (100)	0.049
		Senior High	2 (16.7)	3 (25)	7 (58.3)	12 (100)	
		Voc/ Technical	0 (0.0)	2 (16.7)	10 (83.3)	12 (100)	
		Tertiary	2 (3.6)	24 (42.9)	30 (53.6)	56 (100)	
No	Level of Schooling	Primary	13 (54.2)	2 (8.3)	9 (37.5)	24 (100)	0.033
		Junior High	0 (0.0)	3 (30.0)	7 (70.0)	10 (100)	
		Tertiary	0 (0.0)	0 (0.0)	1 (100)	1 (100)	

Most unemployed mothers had lower educational qualification and were more likely, than employed and highly educated mothers, to exclusively breastfeed (p=0.033) Table 4. Employment status of the mother and age of the baby combine to influence infant feeding practices. This is to ascertain whether the age of baby was a factor why working mothers are not exclusively breastfeeding (Table 5).

Table 5: Mothers' Employment Status and Age of Baby, by Current Feeding Practice.

Employment Status			Current Feeding Practice			Total	p-value
			Exclusively breast feeding N=17 (%)	Formula feeding N=39 (%)	Mixed feeding N=82 (%)	N=138 (%)	
Yes	Age of last baby	2 months and below	1 (2.0)	19 (38.0)	30 (60.0)	50 (100)	0.154
		3-4months	3 (10.7)	9 (32.1)	16 (57.1)	28 (100)	
		5-6months	0 (0.0)	6 (24.0)	19 (76.0)	25 (100)	
No	Age of last baby	3-4months	13 (54.2)	2 (8.3)	9 (37.5%)	24 (100)	0.008
		5-6months	0 (0.0)	3 (27.3)	8 (72.7)	11 (100)	

All, but one, of the babies exclusively breastfed were above two months of age and were babies of unemployed mothers. All the mothers exclusively breastfeeding were Christians. However, majority of the Christians (n=60 of 106) were mixed feeding, whiles the remaining 29 were formula feeding. Of the 32 Muslim, 22 are mixed feeding whiles the remaining ten were formula feeding (Table 5).

Looking at the babies' age and how they were fed, only one mother out of the 50 mothers with children aged two months and below was exclusively breastfeeding. However 30 of the 50 mothers of children within the same age were mixed feeding their babies. Approximately 49% of the 39 exclusively formula fed babies were aged two months and below. Exclusively breastfeeding was high (94.1%) among babies between the ages of three and four months. None of the children aged between five and six months was exclusively breastfed.

Influence of Family, Friends and Health Workers on Feeding Practices

An objective of the study is to find out how families, friends and health workers influence current infant feeding practices. The study found out that these groups exert some amount of influence on mothers' choices of infant feeding practices. The following table (6) presents a summary of results on the influences of family, friends and clinic-based health workers on current infant feeding practices.

Seventy-one out of the 138 mothers interviewed were advised by clinical nurses on how to feed their infants. Of this number, 16.9% were exclusively breastfeeding, 26.8% were formula feeding, and 56.3% were mixed feeding. However only one out of the 17 exclusively breastfeeding mothers received advise on how to feed her baby from friends. It was also observed that 66% of mothers who received advice from their family members on infant feeding were mixed feeding. This shows that the families of the mothers were more likely to support mixed feeding than the other types of feeding. One young woman reported: "Older people at home wish the baby eats, they like to see the baby eating every time, and they believe if the baby is crying then he/she must eat something". Also, a 22-year-old mother who had chosen to mixed-feed her baby reported: "At home they say breast milk is not enough for the baby, they say I must give him other foods so that he can grow. They feel it's a burden for me to give only breast milk".

Table 6 also portrays to a very large extent that mothers are more likely to be influenced by what their friends do. Majority (68 out of 138) of the mothers have friends who formula feed. Here, it was observed that 16 of the 17 exclusively breastfeeding mothers had friends who also breastfeed, however only one out of the 17 exclusively breastfeeding mothers had a friend who formula feed. Likewise, 95.6% of mothers mixed feeding have friends who mixed feed.

Table 6: Influence of Family, Friends and Health Workers

Variable		Current Feeding Practice: Exclusively breast feeding N=17 (%)	Formula feeding N=39 (%)	Mixed feeding N=82 (%)	Total N=138 (%)	p-Value
Mothers' source of infant feeding advise	Nurse	12 (16.9)	19 (26.8)	40 (56.3)	71 (100)	0.357
	Friends	1 (7.1)	6 (42.9)	7 (50.0)	14 (100)	
	Family	4 (7.5)	14 (26.4)	35 (66.0)	53 (100)	
What friends feed their babies with	Formula only	1 (2.8)	26 (72.2)	9 (25.0)	36 (100)	0.000
	Breast-milk only	16 (47.1)	10 (29.4)	8 (23.5)	34 (100)	
	Mixed Feeding	0 (0)	3 (4.4)	65 (95.6)	68 (100)	
Source of assistance in caring for babies	Husband	3 (20.0)	4 (26.7)	8 (53.3)	15 (100)	0.024
	Fiancée	0 (0.0)	1 (7.7)	12 (92.3)	13 (100)	
	Parents	14 (18.4)	22 (28.9)	40 (52.6)	76 (100)	
	No one (self)	0 (0)	12 (35.3)	22 (64.7)	34 (100)	

Table 6 again looks at people who assisted the mothers most in taking care of their babies and whether such assistance affected the way the babies are fed. It was realized that parents (of the mothers) assisted majority (76 (55.1%) of the mothers interviewed compared to fiancées who assisted 13 (9.4%) and husbands who assisted 15 (10.9%) mothers, while 34 (24.6%) mothers were assisted by no one. Table 6 further portrays that majority of the exclusively breastfeeding

mothers were assisted by parents. This shows the importance of grandparents in the lives of children born in the study area.

However, the proportion of exclusively breastfeeding mothers out of the mothers assisted by their husbands was greater than those of the other subgroups looking at the row percentages. This therefore implies that mothers who have their husbands supporting them are more likely to exclusively breastfeed. Interestingly, mothers who have nobody to assist them were not exclusively breastfeeding, likewise those who were assisted by their fiancées.

Opinions regarding Current Feeding Practices

Mothers were asked about their opinions and perception on benefits and drawbacks of formula feeding and breastfeeding. Their responses are presented in the table (7) below.

Table 7: Mothers' Opinion about Feeding Practices

		Frequency N=138	Percentage (%)
Makes babies grow faster	Breastfeeding	21	15.2
	Formula	117	84.8
Most convenient for mothers	Breastfeeding	92	66.7
	Formula	46	33.3
Helps bonding more between mother and baby	Breastfeeding	138	100.0
	Formula	0	0.0
Most difficult to combine with work	Breastfeeding	71	51.4
	Formula	67	48.6

Approximately, 85% of the mothers believe that formula feeding makes babies grow faster than breast milk; however, 67% of the mothers find breastfeeding more convenient. All the mothers interviewed (including those who never breastfed) agree that breastfeeding fosters bonding between mother and child more than formula feeding. A little above half of the mothers interviewed expressed that; breastfeeding is more difficult to combine with work than formula

feeding. Looking at the Table (7) above, it can be speculated that majority of mothers are not exclusively breastfeeding because of the perception that formula/cereal feeding makes babies grow faster. At best, they mixed feed, or formula feed exclusively.

Discussion

A review of the literature on current infant feeding practices showed the effects of socio-demographic characteristics on infant feeding practices (Ford & Labbok, 1990). In this study it was observed that all the demographic characteristics except the age of mother affect the way infants are fed. Young mothers below 25 years of age were less likely to exclusively breastfeed, likewise mothers who were never married. Exclusive breastfeeding was high among mothers aged between 30-34 years, among mothers living together with their partners, unemployed, less educated mothers and Christian mothers. Scott & Binns (1999) and Arora et al. (2000) reported that, older women were more likely to exclusively breastfeed. Volpe & Bear (2000) had also identified that young mothers are unlikely to breastfeed. This study agrees with these claims, though the relationship between the two variables was not statistically significant ($p=0.357$) (Table 3).

Mothers' level of education and employment status were found to be significantly related ($p=0.000$) to current infant feeding practices. Mothers with higher educational degrees were not exclusively breastfeeding likewise mothers who were employed (Tables 4 & 5). Bick et al. (1998) made it clear that working mothers are less likely to maintain breastfeeding. It follows therefore that, educated mothers are mostly employed and are more likely to mixed feed than exclusively breastfeed in the first six months of their child's life. A banker, mother of a three-and-a-half-month old baby reported that: "my leave has expired and my job too is very demanding, so I have to mixed feed, even that, I'm still stressed up each day", when she was

asked a follow up question on why she was not practicing exclusive breastfeeding. Work therefore plays a major role in conditioning mothers' infant feeding practices. Bick, et al. (1988) found a return to work within 3 months of birth predictive of early mixed feeding.

The issue of a three-month leave period for workers could be a factor as most mothers who return to work after three months would have to stop breastfeeding exclusively and rather resort to formula feeding or mixed feeding. To Auerbach & Guss (1984), maintaining breastfeeding is more difficult for women with shorter maternity leaves, and those employed full-time as opposed to part-time and unemployed mothers. However, all the babies aged two months and below were babies of working mothers, and 60% of them were receiving mixed foods, 38% were receiving formula, while 2% were exclusively breastfed (Table 5).

Again, if the duration of the leave period therefore is the only factor explaining the high mixed and formula feeding among working mothers, then we expect that working mothers' babies below three months of age be exclusively breastfed. There are other factors apart from the duration of leave period that prevent majority of working mothers from exclusively breastfeeding. The fact that clinic based nursing staff are the most important source of infant feeding information underlines the important role that clinic based staff can play in shaping appropriate infant feeding decisions (Table 5). Of all the sources of advice, those who consulted the clinical nurses were more likely to exclusively breastfeed than the other subgroups. Black et al. (1990) emphasised the enormous role health workers play in shaping infant feeding practices of mothers. Though in this study, the relationship between sources of mother's advice and current infant feeding practices was not statistically significant ($p=0.357$) (Table 5), certain trends are noticed.

Literature has also shown that mothers are more likely to feed their infants the way their friends do (Hawthorne, 1994, p. 27; Meyerink & Marquis, 2002, p. 38). This study tends to portray this trend. Mothers to a considerable extent were practicing what their friends were doing (p=0.000). Majority of exclusively breastfeeding mothers had friends who breastfeed, likewise those of the other subgroups. Looking again at this trend from the symbolic interaction's perspective, it is realized that, friends had become the mother's reference points as friends form integral part mothers reference groups. Such associations with the reference groups enable mothers to develop the *self* which is very central to symbolic interactionism (Bailey, 2001).

The Table 6 also looked at persons who assist the mothers in taking care of their babies and whether such assistance received from various persons influenced the way mothers fed their babies. Assistance here refers to domestic chores assistance. The literature makes it clear that, mothers whether employed or unemployed, are mostly engaged in domestic chores and thus keeping them away from proper infant feeding routines (Sullivan, Leathers, & Kelley, 2004; Bick, Macarthur & Lancashire, 1998). The table portrays that mothers assisted by their husbands were more likely to exclusively breastfeed.

Mothers' opinion and perception about a particular feeding practice is very influential in shaping their infant feeding practice. Mothers affirmed that breastfeeding is difficult to combine with work. As is demonstrated in Table 7, mothers identified combining breastfeeding with work as the most difficult option regardless of whether or not they were in the workforce. It is possible that it is so well accepted that working and breastfeeding is difficult that work is seen as a more socially acceptable reason for not breastfeeding. Mothers are aware of breastfeeding as a mothering ideal (Guttman & Zimmerman, 2000). Social desirability may have prompted mothers in this sample to conceal other reasons for not breastfeeding with the work reason.

Summary

Mothers were not exclusively breastfeeding as they should, instead, majority of them were mixed feeding. Current infant feeding practice was found to be associated ($p<0.05$) with the following demographic variables: age of last baby, marital status of mother, level of education and employment status of mother. With respect to current infant feeding practices, parents, clinical nurses, and friends were found to play a major role.

Clinical nurses were the major source if infant feeding information. Mothers were also more likely to feed their babies the way their friends feed their babies. Who assists the mother in taking care of their baby was also found to influence mother's choice of infant feeding practice. The mothers who participated in the study believed formula feeding make babies grow faster than breastfeeding, meanwhile, they were also of the view that breastfeeding helps to foster bonding between mother and baby. Finally the mothers feel breastfeeding is more convenient but is difficult to combine with work.

It is recommended that health workers and health authorities do not only target the mother as the sole recipient of infant feeding education, but also the general public, since anyone could be a reference point or a significant other for a lactating mother.

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