THE PREVALENCE OF EXCLUSIVE BREASTFEEDING IN FOSU SUB-DISTRICT

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DECLARATION

I have hereby declared that this document is the original work produced by me under the supervision of Dr. W.B. Owusu and Pro. Ofosu-Amaah for the award of Master of Public Health Degree. This document has never on any occasion been presented in part or whole to any institution or Board of any degree.

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DEDICATION

This work is dedicated to my beloved Afia who endured my absence during the period of my training.

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I wish to express my gratitude to the staff of the School of Public Health for their assistant during my one year training.

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LIST OF ABBREVIATION

EPI-INFO	Epidemiological Information
DHMT	District Health Management Team
GDHS	Ghana Demographic Health Survey
GFS	Ghana Fertility Survey
GLSS	Ghana Living Standards Survey
GNCC	Ghana National Commission on Children
JSS	Junior Secondary School
MOH	Ministry of Health
UN	United Nations
UNICEF	United Nation Children's Emergency Fund
WHO	World Health Organization

ABSTRACT

Studies have shown that human milk and breastfeeding of infant provides advantages with regard to general health, growth and development for infants. Mothers who breastfeed their babies may also gain health benefits.

In addition to health benefits to mothers and infants, breastfeeding provides significant social and economic benefits to nations and individuals. Researchers have found out that both mother and infant can maximise the benefits if they practice exclusive breastfeeding during the first six months of the infants' life.

Because of the importance of breastfeeding, various organizations like the World Health Organization (WHO), United Nation Childrens' Emergency Fund (UNICEF), institutions, Non Governmental Organizations and Ministry of Health (MOH) in different countries are making efforts to promote it. In Assin District in the Central Region, the health workers have embarked on educational programs to promote the practice. Unfortunately, the prevalence of the practice in the district is not known. This makes it difficult to evaluate the impact of educational programs on breastfeeding in the district.

The main objective of the study was to determine through a survey the proportion of women who practised exclusive breastfeeding in the study area. A cross sectional approach was used in the study. The inclusion criteria for the study were the mothers of children aged between 6-12 months. Midwives, Traditional Birth Attendants (TBAs) and District Nutrition Officer were also interviewed. Interview guide and pre-coded questionnaire were used to obtain information from mothers and the health providers.

The study showed that the estimated prevalence of exclusive breastfeeding feeding practice in Fosu sub-district was 42.7%. Again, the study found out that, breastfeeding was universal in the communities. All the study subjects breastfed their infants during the first six months of their life. Family members such as husband, grandmothers, in-laws, parents, and neighbours influenced the breastfeeding practice during the first 6 months of infant life. Other factors like age, occupation and education also influenced the practice. Two hundred and eighty (94.9%) out of 295 mothers interviewed have heard about exclusive breastfeeding initiative.

Based on the findings, the following recommendations were made:

1. Vigorous education should be embarked upon by the health providers to remove the erroneous impression about the practice of exclusive breastfeeding in the study area;
2. Education about exclusive breastfeeding should not be limited to mothers alone. They should involve grandmothers, grandfathers, and general public in breastfeeding education;
3. Health workers should constantly remind the population of the importance of exclusive breastfeeding during their outreach programs and their home visits; and
4. Various women groups should be helped to form breastfeeding promotion groups to help educate the community and to support breastfeeding mothers.

CHAPTER ONE

INTRODUCTION

Background and the study rationale:

Breast milk provides health benefits for both mothers and babies. Several studies have convincingly demonstrated that breast milk can help to protect the baby against diarrhoea, cough, colds and other common illness (Cunningham, 1999). It is uncontaminated and contains all nutrients needed by children in that period (Lawrence, 1991). For these and other reasons, breast milk is recommended for the first 4-6 months of the child's life. It has been estimated that more than one million infant deaths can be prevented if all babies are exclusively breastfed for the first six months of their life (UNICEF/WHO, 1999). Health benefits for breastfeeding women include weight or fat loss, and protection against premenopausal breast cancer (American Academy of Paediatrics, 1999). Exclusive and frequent nursing, especially at night increases amenorrhoea. Lactation amenorrhoea accompanied with exclusive breastfeeding reduces the risk of pregnancy for at six months (Newcomb et al, 1995).

Breastfeeding is nearly universal in Ghana with about 97% of mothers practicing it (GDHS, 1998). The surveys carried out by the Ghana Fertility Survey (GFS) and the Ghana Living Standard Survey (GLSS) (Ghana Stastical Service, 1998) also showed similar trend. Breastfeeding is widely practised in other developing countries and it is actually improving further despite increasing urbanisation, which tends to exert a downward trend on the practice, (World Food Programme, 1999). Despite this, many studies have indicated that many women now use artificial feed of one kind or other from early child age. These could be cow's milk, formula, diluted cereal, glucose water or plain water. Data from 1998 GDHS show that only 20% of mothers feed their babies

exclusively for the first three months of their life. The findings from other surveys show that the duration of breastfeeding of Ghanaians is prolonged but is done with early supplementation.

Because of the importance of breastfeeding, various organisations, institutions and individuals are working hard to promote it. In 1989, UNICEF and WHO issued a joint statement to promote and support breastfeeding. This was followed by the Innocenti Declaration, which was sponsored by UNICEF and WHO, and adopted by 32 Governments worldwide and 10 UN agencies. The Declaration states " As a global goal for optimal maternal and child health and nutrition, all women should be enabled to practice exclusive breastfeeding and all infants should be fed exclusively on breast milk from birth to four to six months of age. Therefore, children should continue to breastfeed while receiving appropriate and adequate complementary foods for up to two years of age or beyond" (Koval et al, 1984)

On the local front, some institutions and organisations are making an effort to promote and support breastfeeding practices. The Ghana Infant Nutrition Action Network (GINAN), different media houses, Ministry of Health, Ghana Commission on Children, UNICEF, WHO, are examples of these organizations and institutions. In order to create awareness in Ghana on the advantage of exclusive breastfeeding for the first six months of the life of a baby, the Ghana National Commission on Children (GNCC) in collaboration with the Ministry of Health, UNICEF and WHO organized a national seminar on Breastfeeding practices and status in Ghana in February 1993. The MOH has also launched the Baby Friendly Hospital Initiative, which emphasises on breastfeeding. Recently, MOH has come out with Breastfeeding Promotion Regulation 2000 (LI 1667).

Reproductive and Child Health of Public Health Unit Division of MOH in collaboration with the Health Education Unit of MOH, have produced breastfeeding messages in major local dialects.

These messages are being aired on the local FM stations, in communities and clinics. They have also produced posters and booklets containing breastfeeding information. In addition, the MOH celebrates World Breastfeeding Week on every 1st August. In 1999, lactation management training sessions were carried out in Greater Accra, Ashanti, Central, Upper East and Eastern regions and Korle Bu Teaching Hospital. Five hundred and seven health workers comprising physicians, midwives, paediatric nurses, public health nurses and nutrition officers were trained in lactation management using the UNICEF/WHO 18-hour course.

In Assin-Fosu, all the midwives, TBAs and the nutrition officer have participated in lactation management training, which was organised by MOH. They are making efforts to promote exclusive breastfeeding in the town. The women in the town are being reached during the prenatal periods, soon after delivery and the first months postpartum and educated and encouraged to practice exclusive breastfeeding.

The exclusive breastfeeding rate for children aged between 0-6 months in Ghana is 19% (GDHS, 1998). Various efforts have been made to improve exclusive breastfeeding in the Assin District. Unfortunately the prevalence of the practice is not known. This makes it difficult to evaluate the impact of educational programmes on breastfeeding.

The study area

The study was carried out in Fosu sub- district in Assin District. Assin District is the largest of the 12 districts in the Central Region, with the total surface of 2375 sq.km. It covers 25% of the Central Region. The district is situated in the wet semi equatorial zone marked by double maximum rainfall in June and October, with annual rainfall ranging from 125 to 200mm. It has temperature ranging 26 and 30-degree Celsius.

Assin District has a total population of 193,888. It is the highest in the Region. It is bounded by the Adansi East (Ashanti), in the North Birim (Eastern), Asikuma-Odoben-Brakwa and Ajumako in the East, Upper Denkyira and Twifu Hemang Lower Denkyira in the West and Abura-Asebu-Kwamankese in the south, all in the Central Region of Ghana. The district capital is Assin-Fosu.

The community is predominantly rural. About 85% of the people in the area reside in the rural area. All the major settlements are located along Yamorasa-Anhwia trunk Nkwanta road.

Most people in the study area engage in farming. The farmers mainly produce cocoa, palm nut, cassava, plantain, cocoyam, and citrus fruits. Production of these items is mainly at the subsistence level with the few of the farmers engaged in plantation farming. Many women in the district engage in selling foodstuff, food product and trading activities. There are also small-scale manufacturing and processing activities such as palm oil extraction, soap making, cassava processing, and palm wine tapping and akpeteshie distilling. Mining, lumbering, saw millings also take place in the district because of the availability of raw materials.

The main Cape Coast-Kumasi trunk road cut across the south and north of the district. The feeder road to the west and east in the district are very poor and become unmotorable during the rainy seasons. Power supply from the national grid is available in the part of the district and mainly in the southern towns along the main trunk loads. The Accra-Takoradi railway line passes through the district and there are several railway stations within the district. Only Assin-Fosu, the district capital has telephone facilities but it is not reliable. Sources of water supply in the district are, harvested water, hand dug wells, boreholes, streams and rivers.

The district hospital, St Francis Xavier is located at Assin-Fosu, the district capital. It is being managed by the Hospitallers, Sisters with the Sacred Heart of Jesus. The hospital has a large

catchment area within and outside the district. It serves as the only referral in the district. There are clinics/health posts in the capital of the sub-districts. Malaria, upper respiratory disease, disease of skin, typhoid, diarrhoea, accident/burns, anaemia, eye Infections, rheumatism and hypertension were the 10 top diseases reported at the out patient departments at the various health institutions in 2000. Guinea worm, onchocerciasis, tuberculosis and leprosy are public health problems in the district.

The district has 304 schools made up of 64 kindergartens, 157 primary schools, 76 junior secondary schools, 1 training college, and 2 vocational institutions.

CHAPTER TWO

LITERATURE REVIEW

Importance of breastfeeding

Extensive research in recent years has documented diverse and compelling advantages of exclusive breastfeeding to infants, mothers, families, society from breastfeeding and the use of infant feeding. This includes health, nutritional, immunologic, developmental, social, economic and environmental benefits (Wang et al, 1996).

The vital role of breastfeeding in infant nutrition, child survival, and child spacing has been recognized by professionals and institutions around the world. It has been estimated that one million infants life can be saved yearly in the developing world by promoting exclusive breastfeeding. There is an abundant evidence that breastfeeding is associated with a reduced risk of infant mortality especially from infections. (Beaudry, 1997)

Breastfeeding and the immune system

Epidemiological research shows that human milk and breastfeeding of infants provides advantages with regard to general health, growth, and development. Human milk is the baby's first immunization. It provides antibodies, which protect infants from many diseases. It is found to decrease risk for large number of acute and chronic diseases. Research in United States, Canada, Europe and other developing countries provides strong evidence that human milk feeding decreases the incidence and severity of diarrhoea (Dewey et al, 1995). Exclusive breastfeeding eliminates the risk of illness through the use of contaminated foodstuff and utensils. The food

must be prepared, stored, and fed in hygienic conditions to reduce the risk of diarrhoea (4th Report On World Food Situation 2000). To successfully feed an infant on non-human milk or formula the following things are needed; clean water, milk or formula, and effective cleaning methods for the containers. In developing country like Ghana, some of these basic requirements can be difficult if not impossible to meet. This makes breastfeeding more critical to children's health in the developing world.

Breastfeeding also protects infants from other diseases. There are a number of studies that show a possible protection effect of human milk feeding against lower respiratory infection, otitis, media, bactermia, bacterial meningitis, botulism, urinalry tract infection, necrotizing entericolitis, and sudden infant death syndrome, childhood diabetes and childhood lymphoma. Breastfeeding has also found to promote proper jaw, teeth and speech development (The womanly Art of Breastfeeding by La Leche Leaque International, 35th Anniversary Edition).

Bacterial infection

Breast milk substitutes lack the properties of breast milk, which protect against infections. Bacteria may contaminate breast milk substitutes during preparation so it is essential that feeds are prepared and given hygienically. Even where hygiene is good, artificially infants suffer five times more bacteria infections as breastfed infants, and situation where hygiene is poor, the risk of death from diarrhoea in artificial fed young infants may be 20 times that of breastfed infants (Cunningham, 1991).

Studies in Brazil have shown that infants who receive animals milk in addition to breastfeeding were four times likely to die of diarrhoeal disease than exclusively breastfed ones, while infants who receive no breast milk were fourteen times likely to die of diarrhoea disease than exclusive breastfed ones. (Dualeh, et al, 1989). Data from Bangladesh suggest that breastfeeding may protect

against diarrhoea mortality well into the third year of life (Briend, 1988). Breast milk is also convenient. It is always ready and available at a perfect temperature, with no preparation needed. No bottle to measure, prepare wash and, others (Dermer and Montgomery, 1992)

Infant development

Other studies have also documented the significant benefits of including IQ for infants who breastfed. The scientific evidence of the health benefits of breastfeeding for infants and young children continuous to be amazed. Researches have found that premature infants who received breast milk had lower blood pressure at the ages of 13 and 16. Exclusive breastfeeding for at least 4 months significantly reduce the incidence of asthma at the age of 6 years (Koval et al, 1994). According to Dr. Ruth A. Lawrence of University of Rochester, breast milk provides DHA (Docosahexaenic acid), which is one of the most prevalent fats in the brain and eye during the first 6 years of life, when the child's braining is doubling in size.

Breastfeeding and women's health

Breastfeeding lengthens the period of postpartum amenorrhoea and hence, in the absence of contraceptive use, lengthens the birth intervals, which strongly related to infant and child survival. (4th Report on The World Nutrition Situation, 2000). Adopting intensive breastfeeding as a policy and ensuring its implementation will not only help infertility reduction as a result of child spacing, but will also ensure good health for both mother and child (Potts and Selmon, 1991). According to Short (1992), throughout most of human history, lactation has been nature's contraceptive, keeping birth spaced apart and optimising and health of the mother and her infant (Short , 1992)

The prolonged suppression of ovulation cycles appears to be associated with significant long-term health advantages. Mothers who breastfeed for at least 6 months throughout their life time have a decrease of breast cancer, and similar reduced rates have been shown for ovarian and uterine cancer. A recent study from China indicates that a woman's risk of both pre and postmenopausal breast cancer is reduced by 50 per cent if she breastfeeds her children for at least 2 years. It has also been long acknowledged that breastfeeding increases levels of oxytocin resulting in less postpartum bleeding and more rapid uterine involution (Chua et al, 1994)

Nutritional benefits

In addition to child spacing, the delay menses also decrease the mother's iron losses. Other well-documented benefit of breastfeeding is more rapid and sustain weight loss. Breast milk meets nutritional and anti-infection requirement of the infant to ensure optimal growth, development and survival (Lawrence, 1991). Supplementary water is not necessary during the first six months of the life of an infant because breast milk meets all the need for fluid even in hot climate. Exclusive breastfeeding provides the best infants nutrition and growth, with continued growth, if other food beginning at six months (UNICEF/WHO, 1999).

HIV/AIDS and breastfeeding

The real challenge facing the promotion of exclusive breastfeeding is mother to child HIV/AIDS transmission. Worldwide, it is estimated that, 1500 children are infected each day through breastfeeding (The Joint United Nation Programme on HIV/AIDS, July,1996). According to the International Lactation Consultants Association, 33,000 children under the age of 5 die each year from preventable diseases and malnutrition which breastfeeding can provide an essential defence. For this reason, the World Health Organization (WHO) and UNICEF have recommended

breastfeeding in the Third World, even for HIV-positive women, as a first line of immune defence health problems and diseases in that part of the world. Effort is being made to reduce mother to child HIV/AIDS transmission through the introduction of anti-retroviral (drug) therapy.

Social and economic benefits

There are economic as well as social benefits if exclusive breastfeeding is promoted. Social and economic benefits to the nation, including reduced health care costs and reduced absenteeism for care attributable to child illness. The significant lower incidence of breastfed infant allows parents more time and attention to siblings and other family duties. It also reduces parental absence from work and lost income. To buy enough of breast-milk substitutes to feed an infant can cost considerable proportion of family income. In Pakistan, for example purchasing commercial infant formula costs the equivalent of 31 per cent of monthly urban minimum wage, and in Kenya the figure is 84 per cent. In addition to the formula, one has to take into accounts the cost of fuel, water and health care.

The benefits of breastfeeding will be maximised if an infant is exclusively breastfed for the first 6 months. Exclusive breast-feeding is said to have been practised when an infant receives only breast milk from his or her mother for the first 6 months of his or her life (W.H.O, 1991).

Factors that Influence Breastfeeding Practice

Obvious factors such as education, occupation, age, social class, attitude of friends and family influence the breastfeeding practices. Decision about feeding research shows that fathers have a strong influence on women's decision about baby feeding. Some studies have found a father's positive attitude was the most important factor associated with deciding to breastfeed (Bar-Yam

and Darby, 1997). In another study, fathers whose partners were planning to breastfeed exclusively were found to be more knowledgeable about breastfeeding. (Giugliani, 1994)

The level of education of the mother shows opposite effects on breastfeeding in some developed countries. In countries like Sweden, USA and Australia, studies on mothers' education and breastfeeding report a positive association between breastfeeding and mother's level of education (Nag Moni, 1999). In developing countries, studies have revealed that the mother's level of education is negatively associated with duration of breastfeeding. In Kinshasa, Zaire, a study by Tambashe and Shapio (1991) on employment, education, and fertility behaviour among 2400 women aged between 13-49 found that breastfeeding duration was shorter in proportion to education attainment. Studies by Quarshie and Mensah (1987) in Ghana revealed that duration of breastfeeding among urban and educated women is substantially shorter among rural and less educated.

The relationship between breastfeeding pattern and women's work pattern is important because of possible conflict between maternal and work roles may results in a reduction of the duration or the intensity if the breastfeeding (Benefo and Parnel, 1991). Oppong et al (1987) also observed that there is conflict between work and maternal roles among Ghanaian women who work some distance from home.

Age has also been identified to influence breastfeeding behaviour. A number of studies have reported inconsistent influence of parity and age of mothers on breastfeeding behaviour. In a study of countries by Smith and Ferry (1983), they find that older women breastfeed longer because they are less likely to become pregnant. Conversely, Tambashe and Shapiro, (1991) found that increase age was associated with less postpartum abstinence.

Numerous sociocultural factors contribute to relatively short-term breastfeeding. The effect of sociocultural attitudes on infant feeding decision has been thoroughly reviewed and should be considered in effort to promote breastfeeding. (Losch, et all, 1995). In Peru, women's employment affects only breastfeeding duration, not its initiation (Ryan, 1999).

The timing of interventions to promote the desired breastfeeding and complementary feeding behaviour is critical because it is likely to affect the mothers decision making, her motivation to overcome problem, and her persistence in maintaining a recommended behaviour despite negative influences. Evidence shows that in the short-term women can be encouraged to practice exclusive breastfeeding with counselling. (4th Report on The World Nutrition Situation. January 2000). In countries where a concerted effort has been made to increase exclusive breastfeeding, shift in population-level behaviours have been noted. In the Dominican Republic and Peru, the proportion of infants under four months of age who were exclusively breastfed doubled between 1991 and 1996 respectively. (Karim et al, 1996). The breastfeeding initiations rates are very high in developing countries. The incidence of breastfeeding initiation exceeds 90% in almost every country and exceeds 95% in more than half of the countries. (4th Report on the Nutrition Situation, 2000). However, breastfeeding practices are far from the optimal. The recommendation for exclusive breastfeeding is not widely practiced. The rate for Ghana is 19%. (GDSH, 1998). The figure shows that the health workers are not doing much to promote the exclusive breastfeeding.

Effort to promote the practice

Because of the benefits of breastfeeding, WHO and other international agencies have recommended to governments and health-care professionals that mothers should breastfeed their children exclusively for 4-6 months and continue breastfeeding, supplement food, up to the second year of life.

The study will help the health authorities in the Assin District to know the proportion of women who practice exclusive breastfeeding and factors that mitigate against the initiatives. It is hoped that the study will contribute to the exclusive breastfeeding initiatives in the district.

Objectives of the study

The main objective of the study was to determine through a survey the proportion of women who practised breastfeeding in the sub-district, to provide some baseline data on the practice. The specific objectives were to:

know the feeding practices of infants aged between 6-12 months in Assin sub-district;

identify when mothers introduce supplementary foods to their infants;

find out what mothers know and believe about exclusive breastfeeding;

determine factors that influence the decision to exclusive breastfeeding; and

know what health providers believe and teach mothers about exclusive breastfeeding.

CHAPTER THREE

METHODOLOGY

Study type

A cross-sectional approach was used in the study.

Consent

Consent was sought from the District Assembly, District Health Management Team (DHMT), the assemblymen and the opinion leaders from the three communities the survey took place as well as the mothers and guardians of the children who were eligible for the interview

Training

A Research Assistant and 2 Field Workers were identified and trained on how to enter a community and administer questionnaires.

Pre-testing of questionnaire

Twenty mothers who have children aged between 6-12 months were identified at Assin-Juaso, a village near Assin-Fosu for pre-testing of the structured questionnaire. After the pre-testing, some questions were added, others were reframed and some options were added to the existing ones. The structure of the questionnaire was also changed.

Sample size

Available data in the district revealed that, the expected population of the mothers who have children aged between 6-12 months in Fosu sub-district is 1451. The expected frequency of exclusive breastfeeding in the in the sub-district was estimated at 30% and the worst acceptable rate for exclusive breastfeed was pegged at 30%. With this information, Epi-info was used to calculate the sample size. Two hundred and eighty two (283) with 95% confidence level was arrived at. Five (5) midwives, the nutrition officer, and 3 TBAs were also interviewed.

Sampling

Assin sub-district has been divided into four zones; this is to facilitate their health programs. Four of the sub-district capitals were written on pieces of paper and folded. After that, 3 of them were chosen randomly. The same procedure was used to choose midwives from St Francis Xavier hospital at Assin-Fosu and TBAs. The other sub-districts have one midwife each so there was no need for sampling.

Study period

Data collection started on 25th June and ended on 16th July, 2001.

Study subjects

The inclusion criteria for the study include the mothers of children aged between 6-12 months. Midwives, TBA's and a District Nutrition Officer were also interviewed.

Interview tools

Pre-coded structured questionnaires were used to record information from the mothers. This included details regarding the parents age, education, occupation, the children feeding history, health history, mothers' and family perceptions on exclusive breastfeeding. Unstructured questionnaires were also used, to seek the health providers' perceptions on exclusive breastfeeding.

Data entry and management

All the completed forms were checked for completion, discrepant results, and illogical responses at the end of each day. Those with blanks and inconsistencies were sent to the field the following day for rectification. Data entry and management were carried out using Epi-Info Software (Version 6).

Operational definition of exclusive breast-feeding

Exclusive breastfeeding refers to infant feeding on only breast milk from his or her mother or wet nurse, or expressed breast milk and no other liquids or solids with the exception of drops of syrups consisting of vitamins and minerals of medicine (WHO, 1991).

Constraints and limitation

An attempt to select a sample that represents Fosu sub-district was limited in several ways. Money and time were major constraints during the survey. The period for the field residency was only three months. Assin sub-district is the biggest among the 8 sub-districts in the Assin district.

Most of the towns and villages were not accessible during the raining season. Only few communities that were accessible throughout the year were chosen for the study. This may not give the true prevalence of exclusive breastfeeding in the sub-district. However since the majority of the communities have similar characteristics, recommendations have been made for consideration.

CHAPTER FOUR

RESULTS

Basic data

The spatial distribution of the respondents is represented in Table 4.1. One hundred and seventy five (59.3%) are from Assin-Fosu, the district capital, (83) 28.1% and (37) 12.5% are from Akropong and Bediadua respectively. In all 295 mothers were interviewed.

Table 4.1

Number of respondents by communities

Community	Frequency	Percentage
Akropong	83	28.1
Bediadua	37	12.5
Assin-Fosu	175	59.3
Total	295	100.0

Table 4.2 shows the age structure of the mothers of the study population. For the purpose of data analysis, the age groups have been classified into 4 main groups. They are 15-19, 20-29, 30-45 and, 45+. The highest numbers of the respondents were within 20-29 age group. They constitute 60.7% of the respondents. Those who were above 45+ were the least. They account for (4) 1.4% of the total population interviewed.

Table 4.2

Age group of the respondents

Age group	Frequency	Percentage
15-19	27	9.2
20-29	179	60.7
30-35	85	28.8
45+	4	1.4
Total	295	100.0

The age distribution of the infants whose mothers were interviewed is illustrated in Table 4 3. One hundred and thirty eight (46.8%) out of 295 of the mothers interviewed have children aged 12 months. The least among them were those whose children were aged 8 months; there were 21 (7.1%) of them in the sample.

Table 4.3

Age of infants whose mothers were interviewed

Age (months)	Frequency	Percentage
6	44	14.9
7	23	7.8
8	21	7.1
9	27	9.2
10	17	5.8
11	25	8.4
12	138	46.8
Total	295	100.0

The sex of the infants whose mothers were interviewed is shown in Table 4.4. Male and female constitute 48.1% and 51.9% respectively.

Table 4.4

Age of infants whose mothers were interviewed

Sex	Frequency	Percentage
Male	142	48.1
Female	153	51.9
Total	295	100.0

Socio economic status of the respondents

Table 4.5 and 4.6 show the social and economic status of 295 mothers interviewed. As shown in Table 4.5, forty-seven (15.9%) of the population were farmers, 121 (41%) were trader/artisan/food processor, 58 (19.7%) were professionals and, 67 (22.7%) were unemployed. The remaining 2 (0.7%) were engaged in other work.

Table 4.6 shows their educational backgroud. Seventy eight (26.4%) out of 295 have never had formal education, 44 (14%) have had primary education, 152 (51%), that is the highest among them have had middle/JSS education, 18 (6.1%) had secondary/commercial education and only 3 (1.0) out of the total number have had post secondary education.

Table 4.5

Mothers' main occupation

Occupation	Frequency	Percentage
Farmer	47	15.9
Food processor/Artisan/Trader	121	41.0
Professional *	58	19.7
Unemployed	67	22.7
Other	2	0.7
Total	295	100.0

* This criterion included teachers, nurses, seamstresses, and typists.

Table 4.6

Educational level of the mothers

Educational level	Frequency	Percentage
No education	78	26.4
Primary	44	14.9
Middle/JSS	152	51.5
Secondary/Commercial	18	6.1
Post secondary	3	1.0
Total	295	100.0

Feeding history

All the mothers interviewed (295) breastfeed their infants during the first 6 months of their life. Tables 4.7 and 4.8 show the feeding practices of the first six months of the infants whose mothers

were interviewed. As indicated in table in table 4.7, 169 (57.3%) out of 295 mothers gave water to their children before they reached the age of 6 months. The mean age at which water was given is 4.1 and the median is 4.0 months. Sixty two (21%) of the mothers interviewed gave water to their children as soon as the children were born. One hundred and sixty nine (42.7) of the population practised exclusive breastfeeding.

Table 4.7

Age at which water was first given

Age (months)	Frequency	Percentage
0 (At birth)	62	21.0
1	18	6.1
2	2	0.7
3	39	13.2
4	34	11.4
5	14	4.7
6	123	41.7
7	3	1.0
Total	295	100.0

Table 4.8 illustrates when the mothers introduced other supplements to their infants. The pattern here is much different from when water was introduced. For an example whilst 62 (21.0%) of the respondents gave water at birth, only 2 (0.7) of them gave supplement feeds at birth.

TABLE 4.8

Age at which supplement feeds were given

Age (Months)	Frequency	Percentage
0 (At birth)	2	0.7
1	5	1.7
2	4	1.4
3	40	13.6
4	50	16.9
5	27	9.2
6	119	40.3
7	22	7.5
8	7	2.9
9	2	0.7
Not yet given	17	5.8
Total	295	100.0

Breastfeeding initiative

Table 4.9 and 4.10 present information on breastfeeding initiative and the source of information. As shown in table 4.9, 280 out of 295 interviewed said they have heard about the exclusive breastfeeding initiatives. Only 15, (5.1%) of respondents said they have not heard about the exclusive breastfeeding initiative. According to the survey, 269 of the respondents said, they heard about the initiative from the health providers, seven got their information through friends and the rest (3) heard it from Radio/Television.

Table 4.9

Information on exclusive breastfeeding initiative

Initiative	Frequency	Percentage
Heard about the initiative	280	94.9
Have not heard about the initiative	15	5.1
Total	295	100.0

Table 4.10

Source of information on breastfeeding initiative

Breastfeeding Initiative	Frequency	Percentage
Health worker	269	91.2
Friend	7	2.4
Radio/Television	3	1.0
Have not heard about it	16	5.4
Total	295	100.0

Mothers' perception on exclusive breastfeeding

On the issue of whether the infants should be exclusively breastfed for the first 6 months of their life, 153 (51.9%) of the respondents answered in the affirmative. They had the notion that the infants grow well and healthy if they are exclusively breastfed. One hundred and forty two (48%) of the population answered in negative. They said exclusive breastfeeding could have negative impact on the infants' life because breast milk alone cannot be sufficient for the infants

during the first 6 months of their life. Table 4.11 demonstrates the mothers' perception on exclusive breastfeeding.

Table 4.11

Mother's perception on exclusive breastfeeding

Mothers views on exclusive breastfeeding	Frequency	Percentage
Exclusive breastfeed for the first 6 months	153	51.9
Should not exclusive breastfeed for the first 6 months	142	48.1
Total	295	100.0

Relation between some variables and exclusive breastfeeding

Table 4.12, 4.13 and, 4.14 show the relationship of mothers age, educational level and, occupation and exclusive breastfeeding. As indicated in table 4.12, the highest prevalence of exclusive breastfeeding was in 20-29 age group. The least prevalence was in 45+ age group. As shown in table 4.13, those who have had middle/JSS education practiced exclusive breastfeeding than others. By occupation, the highest prevalence was found in Traders/Artisans/Food processors group.

Table 4.12

Practice of exclusive breastfeeding by mother's age

Age-Group	Frequency	Percentage
15-19	9	7.2
20-29	17	61.6
30-35	36	28.8
45+	3	2.4
Total	125	100.0

Table 4.13

Practice of exclusive breastfeeding by mothers' education level

Education level	Frequency	Percentage
None	78	26.4
Primary	44	14.9
Middle/JSS	152	51.5
Secondary/Commercial	18	6.1
Post Secondary	3	1.0
Total	295	100.0

Table 4.14

Practice of exclusive breastfeeding by mothers' occupation

Occupation	Frequency	Percentage
Farmer	47	15.9
Trading/Artisan/Food Processor	121	41.0
Professional	58	19.7
Unemployment	67	22.7
Other	2	0.7
Total	295	100.0

The relation between exclusive breastfeeding and diarrhoea

The prevalence of diarrhoea was highest among those who did not practice exclusive breastfeeding. Out of 80 diarrhoea reported cases, 56 (70%) did not practice exclusive breastfeeding and 24 (30%) practiced exclusive breastfeeding. Table 4.15 shows the relationship of diarrhoea by exclusive breastfeeding.

Table 4.15

Practice of exclusive breastfeeding by diarrhoea

Diarrhoea	Frequency	Percentage
Exclusively breastfed	24	27.2
Not exclusively breastfed	56	72.8
Total	80	100.0

Factors that influenced breastfeeding practices

Husbands, mothers, fathers and, other influenced the practice of exclusive breastfeeding on one way or the other. Two hundred and sixty two of the population were married and living with their husband. Out of the number, 42 constituting 16.0% discouraged their wives from practicing exclusive breastfeeding, 66 (25.2) encouraged the practice and 154 (58.8%) were neutral. Two hundred and twenty four of the interviewees lived with their mothers during the first 6 months of their infants' life. Seventy seven (34.4%) of them were discouraged from the practice, 34 (15.2) were encouraged to practice and 133 (50.4) were neutral.

Mother in laws also played a role as far the practice of exclusive breastfeeding was concerned. In all 224 of the study subjects were living with their mothers. Fifty-nine (17.28) of the mothers of the infants recruited for the study were discouraged by their in-laws from the practice. Fourteen constituting 8.7% were encouraged to practice, 42 (16.0) discouraged them from the practice, and 88 (54.7) were neutral. Others (friends and other relatives) also influenced the practice. Friends and other relatives discouraged 121, representing 41.0% of the study population from the practice. Twenty-six (9.1%) were encouraged by either their relatives or friends to adopt the practice.

What health workers believe and teach mothers about exclusive breastfeeding

Eight health providers were interviewed on their beliefs and what they teach the mothers about exclusive breastfeeding. All of them had received lactation management training. They all believe that the exclusive breastfeeding practice promotes the health of the infants and enhances their growth. According to the health providers, they inform the mothers about the advantages of exclusive breastfeeding and how to practice it when they attend clinics for antenatal, delivery and

postnatal. They said the majority of the mothers are convinced that the practice is good while others think otherwise.

On the question on whether the mothers practice what they tell them, they replied that some do and others do not. When the question was posed as to how they verify this, some said those who do not practice exclusive breastfeeding normally suffer from diarrhoea and malnutrition. Others also said they detect whether the mothers practice exclusive breastfeeding through interview and conversation. They mentioned the influences of the relations especially the old ladies end the belief of some mothers that the infants could not survive without taking water.

CHAPTER FIVE

DISCUSSION

Demographic Characteristics of the population

The percentage of mothers interviewed from each community (Table 4.1) shows the population distribution in Fosu sub-district. One hundred and seventy five (69.4%) of the population come from Assin-Fosu, the district and sub-district capital. Fosu sub-district is predominantly rural but Assin-Fosu, the district capital is more populous than any community in the district.

The age structure of the mothers interviewed shows that, majority of the mothers fall within the 20-29 age group. This pattern is characteristics of a high fertility population, like most developing countries, for example Ghana. The total fertility rate in Ghana for women aged 15-49 is 4.6 births per women, (1998, GDHS). The fertility rate for women aged 20-29 is higher than other age groups in their fertility. The fertility rate of those ages 45 plus is the least (GDHS, 1998). The sex ratio of the infants whose mothers were interviewed was 48.1 and 51.9. This is almost similar to the result of GDHS survey carried out in 1998. The survey results give the overall sex ratio as 93 males to every 100 males.

Social and economic characteristics of the respondents

Two hundred and twenty eight constituting 77.28% of the study population were employed. One hundred and twenty (52.6%) of them were either food processors, artisans or traders. Those working at this sector far exceed those working in agriculture sector. This finding is similar to that of 1998, G.D.H.S. Quite a substantial number of women in the communities where the study took place were illiterate. Seventy-eight (26.4%) of the women have never been to school. Forty-four

(14.9%) reached primary level, 152 (51.5%) reached JSS/Middle School level, 18 (6.1) were secondary/commercial graduates and only 3 (1.0) acquired post secondary education. The low level of education in the communities could affect the health practices in the area since there is high correlation between level of education and positive health practices.

When mothers introduced water and supplementary food

The survey revealed that breastfeeding is universal in all the communities. All the 295 mothers interviewed breastfed their infants during the first 6 months of their life. This confirms similar findings from other studies. In addition to breastfeeding, 56.3% of the study population gave water or other supplements before their infants reached the age of six months. Sixty-two (21%) out of the respondents of 295 gave water to their infants as soon as they were born. Eighteen (6.1%) gave water at the age of 1 month, 2 gave water at 3 months, 39 gave water at 3 months and, 14 gave water when the infants were 5 months. Two hundred and seventy nine mothers representing 94.6% said they have heard about the exclusive breastfeeding initiative. Two hundred and sixty nine (93.07%) were informed by the health providers when they visited clinics for antenatal, delivery and postnatal. Ten others (6.92%) heard it from either friends or the media.

The health providers are doing good job as far as the education on breast-feeding is concerned. Unfortunately, the efforts of the health personnel do not reflect on the prevalence of exclusive breastfeeding in the study area. Despite the awareness being created by the health providers and media houses, a considerable number (57.3%) of mothers interviewed did not practice exclusive breastfeeding.

Mothers' knowledge, belief and practice

One hundred and fifty three (51.8%) out of 295 mothers interviewed said the infants should be exclusively breastfed for the first 6 months of their life. This figure is higher than the number who exclusively breastfed their infants. They said the infants do better and grow well when they do breastfeed for the first six months. The remaining 142 were against the practice of exclusive breastfeeding for the first 6 months. They said the infants need water and supplements before the age of 6 months. One hundred and thirty three (44.1%) mentioned thirst as their reason for not practicing exclusive breastfeeding.

Perception of family and others on exclusive breastfeeding

Family members like husbands, grandmothers of the infants, in-laws, friends and other relatives influenced the breastfeeding practices during the first 6 months of the infants' life. The influence of grandmothers affected the feeding practices of most of the infants. Seventy-seven (26.1%) mothers interviewed said their mothers were against the practice of exclusive breastfeeding for the first 6 months of their grandchildren life. They discouraged the mothers from the practice. They said they have been giving water to infants as soon as they are born since time immemorial so they do not see reason why mothers should not give water to children during the first months of their life. However not all the grandmothers discouraged the practice. Thirty-three (11.2%) of them encouraged the practice. They said the health personnel know better so their advice should be heeded to. Majority of them (133) did not encourage or discourage their daughters from the practice. Husbands, in-laws, fathers, other relatives and, friends also influenced the practices in one way or another.

Other factors that influenced the breast feeding practices

Factors such as education, occupation, and age influence the breastfeeding practices (Bar-Yam and Darby, 1997). During the survey, it was found that the prevalence of exclusive breastfeeding was the highest among mothers aged between 20-29 years. The least was found in those who are 45 years plus. Though age of mothers has been identified to affect breastfeeding behaviour, inconsistencies have been noted from different studies. While some studies reported on increase in mean duration of breastfeeding with age, others reported no significant effect of age on breastfeeding.

There is high correlation between level of education and positive health practice (GDHS, 1998). This cannot be said about education and exclusive breastfeeding practice in developing countries. Mothers with less education are more likely to exclusively breastfeed (Chabra et al, 1998). The illiteracy level in Fosu Sub-District was quite high. Of the sample of 295, 78 (26.4%) have never been to school. Only 3 (1.0%) attained post secondary education. The majority of the mothers 152 (51%) reached JSS/middle level and the prevalence of exclusive breastfeeding was high among these people. Quashie and Mensah (1987) made similar observation in their study.

The association between employment and breastfeeding practice revealed that traders/artisans/food processors practiced it. It is probably because these people spend more time with their infants than those who engaged in other jobs that often separate them from their infants. The mothers' employment has effect in deciding on breastfeeding practice. In Zaire, a study by Tambashe and Shapiro (1991) revealed that that self-employed women breastfed longer and women in modern sector breastfed shorter.

Teaching and beliefs of exclusive breastfeeding by the health workers

All the health workers interviewed believed that the exclusive breastfeeding is beneficial to the infants. They have been staunch advocates of breastfeeding as the optimal form of nutrition for the infant. They are also highlighting the importance of the practice and removing the misconception about the practice. Despite this effort, 169 (57.3%) of the population recruited for the study did not practice exclusive breastfeeding. For many women, health workers are their only source of help at this stage so they should work hard to achieve the recommended M.O.H target of universal of universal exclusive breastfeeding for 6 months of age.

Estimated prevalence of exclusive breastfeeding of Fosu sub-district

The estimated prevalence of exclusive breastfeeding practice in Fosu sub-district was 42.7%. Though this is higher than the national prevalence (19.7%), it is much lower than the M.O.H recommendation of universal exclusive breastfeeding for 6 months of age. As a global goal for optimal maternal and child health and nutrition, all women should be enabled to practice exclusive breastfeeding, and all infants should be fed exclusively on breast milk from birth to 6 months.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

The exclusive breastfeeding awareness is high in Assin-Fosu Sub-District. This does not reflect the practice of exclusive breastfeeding in the area. The health workers need to assess their educational campaign strategy and come out with one, which will have more impact.

Education about exclusive breastfeeding should not be limited to mothers alone. They should involve grandmothers, grandfathers, and the general public in breastfeeding education. Where key support people are knowledgeable and supportive of breastfeeding, mothers are more likely to have positive breastfeeding experience.

Health workers should constantly remind the population of the importance of exclusive breastfeeding during their outreach programs and their home visits. They should also inform the people about the difficulties involved in the practice and how to overcome them.

Knowledge regarding infant feeding practices should be incorporated into the syllabi in the first and second circle institutions in Ghana.

Various women groups should be involved in breastfeeding education. They should also be helped to form breastfeeding promotion groups to help educate the community and to support breastfeeding mothers.

From the study, it can be concluded that breastfeeding is universal in the study area. This cannot be said about said about the practice of exclusive breastfeeding, though the prevalence is higher than the national rate. To achieve the recommended M.O.H target and also in conformity to

Innocenti Declaration on breastfeeding, the educational strategy should be reviewed to cover the civil society as a whole.

The prevalence rate is likely to improve in the distant future, if the recommendations made are adhered to.

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ANNEXES

Annex 1

EXCLUSIVE BREASTFEEDING PREVALENCE FORM 25/06/2001	BREAST FORM NO	FORMNO

BASIC DATA

1.1 Name of Cluster:		CLUSTER
1.2 Compound Number:		COMPNO
1.3 Name of Child:		CNAME
1.4 Date of Visit:		DATVIS
1.5 Staff Code		FW
1.6 Age of child.....		CAGE
1.7 Sex of child.....	1. Male / 2. Female	SEX

2. MOTHER'S SOCIO-ECONOMIC STATUS

2.1 Mother's age.....		MAGE

2.2 Marital status

1.Single	2. Separate or divorced	3. Widowed	4. Married	MATAL

2.3 What is your main occupation?

1. Farmer	2. Trader/Artisan/Food processor	3. Professional	OCCUPA
4. Unemployed/Homemaker	5. Other (specify)		

2.4 Have you ever been to school?	1. Yes	2. No	SCHOOL

2.5 If yes, what is the level of school you reached?

1. None	2. Primary	3. Middle/JSS	EDULEV
4. Secondary/commercial	5. Post secondary	6. Tertiary	

2.6 How many years did you spend at that level?		YEARSP

3. FEEDING HISTORY

3.1 Did you breastfeed the name child during the first 6 months? | 1. Yes | 2. No | BFED

3.2 Is this child still breastfeeding? | 1. Yes | 2. No | 9.NA | STBRED

3.3 Did you have enough breast milk during the first 6 months? | 1. Yes | 2. No | ENOMK

3.4 Did you use any of the following to supplement your breast milk during the 6 months?

1. Water	2. Formula	3. Porridge		SUPPL
4. Fruit juice	5. Solid food	Other (specify)	9. NA	

3.5 How old was your baby when you started giving it water? [ ][ ] WATER

3.6 How old was your baby when you started giving it porridge? [ ][ ] PORRID

3.7 How many months old was your baby when you started giving it fruit/juice? [ ][ ] OTHERFL

3.8 How many months old was your baby when you started giving it other milk? [ ][ ] MILK

3.9 How old was your baby when you started giving it solid food? [ ][ ] SOLID

4. Beliefs about exclusive breastfeeding

4.1 Have you heard about the exclusive breastfeeding initiative? | 1. Yes | 2. No | INITIATE

4.2 What is your source of information?

1. Health provider	2. Friend	3. Radio	4. Church	BRENFO
5. Other (Specify)			9. NA	

4.3. In your view do you think that a child should be exclusively breastfed for the first six months? | 1. Yes | 2. No | KNOWLE

4.4 In your view do you believe that infants do better on only breast milk without water\ or supplementary foods up to the age of six months? | 1. Yes | 2. No | 8. NK | DOBETTE

4.5 If yes, give reason(s)

4.5.1 Reason 1_____ [ ] REASON1

4.5.2 Reason 2_____ [ ] REASON2

4.5.3 Reason 3_____ [ ] REASON3

4.5.4 Reason 4_____ [ ] REASON4

4.6 If no, give reason(s)

4.6.1 Reason 1_____ [ ] REASON5

4.6.2 Reason 2_____ [ ] REASON6

4.6.3 Reason 3_____ [ ] REASON7

4.6.4 Reason 4_____ [ ] REASON8

5. Perception of family on exclusive breastfeeding

How well did the following encourage you to breastfeed your child?

5.1 Husband	1 Very good	2. Good	3. Satisfactory	4.Discourage	5. Neutral	HUSINF
5.2 Mother	1 Very good	2. Good	3. Satisfactory	4.Discourage	5. Neutral	MOINF
5.3 Father	1 Very good	2. Good	3. Satisfactory	4.Discourage	5. Neutral	FATINF
5.4 In-Law(s)	1 Very good	2. Good	3. Satisfactory	4.Discourage	5. Neutral	LAWINF
5.5 Other	1 Very good	2. Good	3. Satisfactory	4.Discourage	5. Neutral	OTHINF

6. Health history

Could you mention the diseases you child had during the first months of his/her life?

6.1 Disease 1 _____		DISEASE
6.2 Disease 2 _____		DISEASE
6.3 Disease 3 _____		DISEASE
6.4 Disease 4 _____		DISEASE

6.5 Could you remember the number of times you child had diarrhoea? | | | NODIARR

CHECK YOUR FORM AND THANK THE RESPONDENT

Annex 2

INTERVIEW GUIDE FOR MIDWIVES AND TBAs

1. Type of care provider.....
2. What is your name .....
3. What do you believe about exclusive breastfeeding?
4. What do you tell mothers about exclusive breastfeeding?
5. Do you think the mothers are convinced the practice is good for infants?
6. Do you think the mothers practice exclusive breastfeeding?
7. How do you verify this?
8. Could you tell me why some mothers do not practice exclusive breastfeeding?

END OF THE INTERVIEW. THANK THE CORRESPONDENT.