

AN ASSESSMENT OF THE IMPACT OF BABY FRIENDLY
HOSPITAL INITIATIVE IN AZARE TOWN

BY

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DECLARATION

I hereby declare that this project has been written by me and it is a record of my research work carried out under the supervision of Dr. K. Sabitu. It has not been presented in any previous application for higher degree. The work of other investigators are acknowledged and referred to accordingly.



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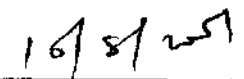
CERTIFICATION

This thesis entitled "An Assessment of the Impact of Baby Friendly Hospital Initiative in Azare Town" meets the regulations governing the award of the Degree of Masters of Public Health of Ahmadu Bello University, Zaria and is approved for its contribution to science and literary presentation.



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DEDICATION

This work is dedicated to my parents, my wife Hajara and my son Nasirudeen for their love and support.

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ABSTRACT

A global perspective of high infant morbidity and mortality, high prevalence of malnutrition and low prevalence of breastfeeding heralded the global declaration to protecting, promoting and supporting breastfeeding through the baby friendly hospital initiative in 1990. Several hospitals were designated baby friendly.

Mothers with children aged 0 - 23 months were randomly sampled in a cross-sectional study to assess the impact of the BFHI in Azare, a town with a General Hospital designated baby friendly in 1997. The ancient town is predominantly inhabited by Hausas and Fulanis and the mothers are mostly housewives.

The full set of data obtained was analysed. Breastfeeding remained universal with 66.67% of mothers initiating breastfeeding within one hour of delivery. Exclusive breastfeeding was low with 16.67% at four months and steadily declining to 14.78% at six months. Water in addition to breastmilk was widely given to infants under six months as indicated by the high breastmilk + water rate of 74.78%. Cultural beliefs rather than ignorance were identified as hindering exclusive breastfeeding as 58.57% of all mothers had average knowledge on breastfeeding.

Predominant breastfeeding rate was 73.54% while the timely complementary feeding rate was 62.67%. Breastfeeding was well continued into the second year of life as indicated by the high rate of 95.31% at one year and 75.00% at two years. Feeding bottles are rarely used as shown by the low bottle feeding rate of 9.17%. Diarrhoea tends to occur more in non-exclusive than exclusively breastfed infants. There was unexpectedly no association between increasing mother's education and exclusive breastfeeding.

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CHAPTER ONE

1.0 INTRODUCTION

Exclusive breastfeeding is the practice of feeding the baby with only breastmilk by his or her mother or a wet nurse, or by expressed breastmilk and no other liquids or solids with the exceptions of drops or syrups consisting of vitamins, mineral supplements or medicines. Exclusive breastfeeding for about six months of baby's life initiated within the first hour after birth and continued on demand, protection from commercial pressures for artificial feeding, timely introduction of complementary foods and continued breastfeeding into the second year of life are all indispensable for the survival of most babies in the developing countries (1).

In the Western societies, the early 20th century was marked by unprecedented increase in formula feeding at the detriment of breastfeeding. This in part was due to the development of nutrition science coincided with a pervasive increase in scientific products and process. The latter part of the 1930s had witnessed an increasingly sophisticated and specialized range of products designed to meet all the individual food requirements of infants and young children. As women asserted their right for self-determination in public life, those who were wealthy enough and sufficiently in line with contemporary values were adopting formula feeding for their infants (2). Since then infant feeding practices have undergone dramatic changes for instance, in 1971, the incidence of breastfeeding was seen to decline to its lowest level of 25% in the U.S (3). In the developing

countries as those of Africa, the story had been different. Breastfeeding was relatively successful when compared with the industrialized nations. Here breastfeeding had been universal since time immemorial. This may not be unconnected with attitudes and child rearing beliefs. Just as strength is considered as a basic attribute of manliness, so fertility linked with ability to breastfeed successfully are considered basic attributes of women (4). African women, for example, may be seen in Nigeria carrying a load of wood on their head, while feeding a child slung on the back (5). Wetnursing had been an alternative when the child for one reason or another would have otherwise been deprived of breastmilk in many of the societies.

Islam particularly recognizes wetnurse as the foster mother. She is also considered as the child's mother. Her children become the babies brothers and sisters and no marriage is allowed between them (6).

However, the tide of Western civilization has since continued to change the pattern of social and cultural attitudes of all developing countries. Breastmilk substitutes initially developed in the industrialized countries gradually become more widespread and a common place in the developing countries. This led to an unfortunate trend towards shorter duration of breastfeeding and more extensive use of breastmilk substitutes. The introduction of breastmilk substitutes is not unconnected with whole series of prevailing inadequate water supply, poor environmental sanitation, inadequate facilities for the proper cleaning of bottles and teats and prohibitive cost of formula leading to over dilution. As a result bottle-fed babies in the developing countries often receive dilute and contaminated

feedings containing few nutrients, but massive doses of pathogenic microorganisms.

The overwhelming promotion and other marketing practice of manufacturers and the attitude of healthcare providers in promoting formula feeds did further compound the problem. For instance in Ahmadu Bello University Teaching Hospital (ABUTH) complex, one of the pre-conditions of the discharge of babies from nurseries was the purchase of a tin of baby milk by parents for stock replenishment (7).

Many hospitals and maternity units fell on the side of bottle, failing to give mothers proper information on the benefit of breastfeeding while favouring infant formula products.

Several early studies in Britain and the U.S.A have shown higher mortality among artificially fed than breastfed infants. For instance a study on 20,000 infants in Chicago between 1924 – 1929 showed that infant mortality was ten times higher among the artificially fed (8). This subsequently led to the move by organizations such as the La Leche in 1956 and the International Paediatric Association to promote breastfeeding (9).

However, it was not until 1981 that revival of breastfeeding was globally brought to the limelight. On May 21, 1981 the World Health Assembly overwhelmingly adopted the international code of marketing of breastmilk substitutes. The code was adopted as a recommendation and call on individual states to translate it into national legislation. In response to this, the Nigerian Government enacted decree 41 of 1990 (10). Since the

International code, the WHO and UNICEF continued to sponsor several activities such as the Convention of the Right of the Child (1989) towards promoting breastfeeding.

A more laudable effort to revolutionize the way hospitals treat newborn babies and mothers was perhaps the Innocenti Declaration. The WHO and UNICEF sponsored a meeting of world leaders in Innocenti Italy in 1990. A global declaration to protecting, promoting and supporting breastfeeding through the Baby Friendly Hospital Initiative (BFHI) was made (Appendix I). The global perspective observed was high infant mortality, high infant morbidity, high prevalence and incidence of malnutrition, low prevalence and reduced duration of breastfeeding. The BFHI is therefore aimed at improving infant and children morbidity and mortality, ensuring optimal growth and development and promoting optimal maternal and child health and nutrition. The goal is to enable all mothers to practice exclusive breastfeeding for the first four to six months of baby's life, thereafter to introduce complementary foods and continue breastfeeding till two years or beyond. The strategies to achieve these goals include creating an appropriate environment of awareness and support for women to breastfeed appropriately, re-enforcement of breastfeeding culture and removal of constraints and influence that manipulate perceptions and behaviour towards breastfeeding. Supportive measures include establishing breastfeeding policy that fosters content of the ten steps to successful breastfeeding and establishing crèches to cater for the needs of breastfeeding infants whose mothers have to work outside

home. In Nigeria, BFHI was launched in 1991 under the Hospital Services Department of the Federal Ministry of Health. The nation was divided into four zones each with zonal BFHI committees, with offices at Calabar (Zone A), Ife (Zone B), Zaria (Zone C) and Jos (Zone D). Focal local government areas similarly have L.G.A BFHI committees.

1.1 AIMS AND OBJECTIVES

1.1.1 General

To assess the impact of the Baby Friendly Hospital Initiative Programme on infant and early childhood feeding practices in Azare town.

1.1.2 Specific

Specific objectives were to assess

1.
 - i. Exclusive Breastfeeding Rate
 - ii. Predominant Breastfeeding Rate
 - iii. Timely Complementary Feeding Rate
 - iv. Continued Breastfeeding Rate (1 year)
 - v. Continued Breastfeeding Rate (2 years)
2. To assess mother's knowledge on breastfeeding
3. To relate the effect of exclusive breastfeeding to the episodes of infant diarrhoeal disease.
4. In light of the information obtained, to give recommendation on how to facilitate exclusive breastfeeding practice in Azare community.

1.2 Rationale for the study

In Azare, an ancient town with a designated baby friendly general hospital, exclusive breastfeeding has been widely seen as an innovation, a deviation from societal norms and something often said but impracticable. This view is common among the majority, but also more widely held by grandmothers who usually stay taking care of the newborn up to 40 days after delivery. The grandmother in many instances dictates what should be given to the baby.

The BFHI activities are largely hospital based, but how many mothers present themselves to the hospitals either for antenatal or delivery? Have the BFHI activities really reached the target group. Are the current exclusive breastfeeding rates of 68 and 62% at four and six months for this zone (30) representative of the community? Would there have been a more effective way of addressing the problem of giving water to babies, which continues to hinder exclusive breastfeeding?

This study would attempt to provide answers to these paramount questions.

CHAPTER TWO

2.0 LITERATURE REVIEW

Every year 140 million babies are born. Nine out of ten of them are born to mothers in developing countries. Tragically, some eight million infants most of them in the developing countries die within a year. A baby born in a developing country is almost six times more likely to die than in an industrialized country (11).

Infant mortality rate in Nigeria is as high as 90 per 1000 (12). Diarrhoeal disease, acute respiratory infections (ARI) and malnutrition are among the leading causes. Diarrhoea was the leading cause of child mortality in 1980, accounting for 4.6 million deaths annually, worldwide (13)". An important intervention to control diarrhoea aside ORT is the promotion of breastfeeding. WHO reports that a bottle fed baby in a poor community is 15 times more likely to die from diarrhoeal disease and 4 times more likely to die from pneumonia than a baby who is exclusively breastfed. It also estimated that more than 1.5 million infant lives could be saved from diarrhoea and ARI deaths each year if mothers breastfeed exclusively during the first four to six months (14).

Research findings have since documented the superiority of human milk over any substitute. Human milk is an excellent cheap nutrient mixture most suitable for the baby's digestive system, gives protection against infection, its protein content not allergenic, gives satisfaction and pleasure to the baby and the mother which is of lasting benefit to both. Breastfeeding protects the mother against breast cancer (15). It suppresses ovulation

thereby offering some contraception to the mother. Advantages of breastfeeding to the community and the nation includes saving family money for food, less money on healthcare, decreased importation of milk, environmental protection and increased productivity by mother as time for milk preparation is saved (16). A study in 1994 in Netherlands showed that nine year olds who had been breastfed performed better on neurologic tests than their bottlefed counterparts (17).

Prior to Innocenti declaration and the subsequent BFHI, the global view showed wide variation in the pattern of breastfeeding. Breastfeeding varied from country to country, from culture to culture and community to community. While breastfeeding rarely continued beyond six months and more often stopped much sooner in the more affluent countries (18), breastfeeding was universal in developing countries.

In a WHO collaborative study on contemporary patterns of breastfeeding in 1981 (19), it was shown that in Nigeria and Zaire, breastfeeding was universal among all socio-economic groups as it were in India and Ethiopia. Except in Sweden and Hungary, breastfeeding was notably more common in rural than urban areas, and within the urban population, it was more prevalent among the poor than among the economically advantaged. The study however highlighted some deficiencies in the knowledge and practice of breastfeeding. For instance, the most common overall reason was lack of sufficient milk among the urban economically advantaged and middle income groups in India and among the urban poor of Chile and Philippines, this reason was given in

over half of responses. The study also showed that between 90 and 100% of all babies in Nigeria who received supplementary food were given extra milk or milk based products during the first three months of birth. Reason given for the supplementation was that the child would grow better.

Other studies have demonstrated several deficiencies in the knowledge and practice of breastfeeding. A study in Ilorin in 1987 indicated that among the mothers studied 47% acknowledged breastmilk supplemented by cow milk as the best food for the first four months of baby's life; it also showed that 26.2% would stop breastfeeding their babies with diarrhoea until it subsided whereas 96.6% would discontinue breastfeeding at 9 months, 1 year and 11/2 years (20). Another study on infant feeding in Zaria (1988) showed that 59% of babies were bottlefed, whereas 55.5% of all mothers stopped breastfeeding between 15-18 months (21).

A Nigeria Demographic & Health Survey (NDHS, 1990) indicated an exclusive breastfeeding rate of 2%. As reported by UNICEF, exclusive breastfeeding rates among infants aged 0-3 months varied in different countries. Nigerian and Ghana had the lowest rates of 2%, Malawi had 8%, Egypt 38% and Morocco 48% (22).

With the launching of the BFHI, hospitals became centres for breastfeeding support. A hospital is designated baby friendly when it has agreed not to accept free or low cost breastmilk substitutes, feeding bottles or teats, and to implement the ten steps to support breastfeeding. Since the

initiative began, mothers are encouraged to feed their infants appropriately and child health has improved in some countries.

In Cuba where 49% of the country's 56 hospitals and maternity facilities were friendly, exclusive breastfeeding rate at four months of life almost tripled from 25% in 1990 to 72% in 1996; as was reported by UNICEF. This report also indicated that within the first two years of BFHI implementation at the Libreville Central Hospital, Gabon, cases of neonatal diarrhoea fell by 15%, dehydration due to diarrhoea by 14% and mortality fell by 8% (23).

Increased exclusive breastfeeding was demonstrated in Chile in 1991. Exclusive breastfeeding was promoted through the first six months of life using prenatal lectures, monthly support and education, peer encouragement, home visits, growth monitoring and assistance in returning to exclusive breastfeeding. Exclusive breastfeeding increased significantly in the service area after the programme started, while morbidity decreased significantly and nutritional status remained about the same among clinic attenders (24).

However, in a study in Lahore, Pakistan (1993), the feeding practice of children from birth to 24 months was determined in a longitudinal study. Four socio-economic groups at various levels of urbanisation were considered. Initiation of breastfeeding was delayed in all the neonates. 65% of the peri-urban slum mothers and 45% of the village mothers had not started breastfeeding at 48 hours after birth of the infant. Prelacteal feedings especially of herb water and honey were the norm. Exclusive

breastfeeding was still rare with 9% at one month, declining rapidly with age. Feeding bottles were used by 82 – 100% of mothers to feed supplements and human milk substitutes such as the fresh animal milk among the lower class and commercial formula among the upper middle class (25).

In Jamaica, 85 mothers attending postnatal and well baby clinics in West Indies were interviewed regarding breastfeeding at six weeks postpartum (1996). An overall prevalence of 98.8% at six weeks was observed. However the exclusive breastfeeding rate was as low as 37.6% it was noted that older maternal age and multiparity favoured exclusive breastfeeding (26).

Although mothers often cite time pressure as a reason to introduce other foods, a study in Honduras compared maternal activity budgets and time spent breastfeeding among low income urban mothers not employed outside the home who exclusively breastfed or gave other foods in addition to breastmilk. Breastfeeding time was similar between the groups (averaging 75min/12hr) except that multiparous exclusive breastfeeding mothers at 24 weeks spent more time than did mothers who gave other foods in addition to breastmilk. However, total time devoted to infant feeding was significantly greater in mothers who gave other foods in addition to breastmilk than the exclusive breastfeeding group. Cultural pressures were identified as hindering exclusive breastfeeding for example many introduced solid foods to their infants prior to six months as they

believe that infants should learn to eat other foods to acclimate the stomach and learn to differentiate flavours (27).

Other findings have supported the WHO and UNICEF recommendation that children should be breastfed for at least 2 years. A study showed that children in the longest duration of breastfeeding group gain 3.4cm and 370g more than those in the shortest duration and 0.6cm and 230g more than children in the intermediate group. The strongest association between breastfeeding and linear growth was observed in households that had no latrine and daily water use of less than 10 litres per person (28).

To ensure healthy development and survival, infants after six months of life need to be given nutritious food together with breastmilk up to 2 years and beyond. This is because the supply of energy and some nutrients from breastmilk is no longer sufficient to meet the infant's needs. In three health clinics in a rural area of Senegal, a study was conducted between 1992 – 1994 to compare nutritional status and physical growth among infants according to age at introduction of complementary food. Infants complemented at 2 – 3 months has significantly lower length for age, weight for length and circumference at 2 – 3 months than predominantly breastfed infants. The introduction of complementary food after the age of 2 – 3 months and before the age of 4 – 5 months was also associated with a later introduction (29).

A survey to assess the impact of the BFHI programme in Nigeria was conducted between the months of May and June 1999. The survey

showed that all mothers (100%) breastfed their babies at onetime or another indicating that breastfeeding still remained culturally accepted. The national exclusive breastfeeding rates stood at 62 and 59% at 4 and 6 months respectively. Educated and over 19 years of age favoured exclusive breastfeeding whereas mothers 19 years and below had low exclusive breastfeeding compliance. Rooming in was universal and only a third of the mothers gave colostrum to their babies. The disuse of colostrum was highest among mothers who were delivered by traditional birth attendants or religious houses. The timely introduction of complementary food was 63% for infants aged 6 – 9 months. The study however showed a low rate of continued breastfeeding at one and two years of 15 and 13% respectively (30).

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Ethical consideration

Before embarking on this study, an approval was sought from the L.G. Chairman, and the district head which was promptly given. Consent was equally obtained from each selected household head.

3.2 Background of the study area

Azare town is the headquarter of Katagum L.G.A. its an ancient town located about 188 KM Northeast of the capital Bauchi. Katagum L.G.A. is one of the oldest and largest local governments in Bauchi State. It has a total population of about 268,393 according to 1991 census (32). There are about 53,678 women in the reproductive age group of 15 – 49 years in the Local Government. The town is divided into three major political wards, namely, Tsakuwa/Kofar Gabas/Kafin Kuka, Nassarawa/Bakin Kasuwa, and Matsango/Madangala. The predominant tribes of the people are Hausa and Fulani.

The economic basis of the area is subsistence and commercial farming. The housing standard is of semi-urban setting with good ventilation and sewage disposal facilities. There is adequate water supply mainly from dug wells as pipeborne water supply is irregular.

Postpartum care of the mother and baby by an elderly woman is a popular traditional practice which not only ensures proper nutrition of the mother, but also allows for early initiation of breastfeeding. Similarly,

traditional slinging of baby in the mother's back fosters mother-infant bonding thus encouraging breastfeeding.

Formula food commonly available in the market include NAN and SMA although no active promotion takes place.

General Hospital Azare was opened by the native authority as far back as the colonial era. It has since then been in existence, and at a point, it became a referral center for the whole zone. The hospital now has a capacity of 250 beds. It was designated Baby Friendly in 1997 and has written policy that addressed all the ten steps to successful breastfeeding. The policy and posters of mothers breastfeeding could be seen posted on several walls of the hospital. Contact is being made with women at the antenatal and child welfare clinic. Postnatal services are scanty because mothers don't return. All pregnant women for antenatal care are informed about the benefits and management of breastfeeding. Mothers whose deliveries are normal are encouraged to initiate breastfeeding within half an hour after birth. Nursing staff often assist mothers on how to appropriately breastfeed by demonstrating how to correctly position and attach their babies for breastfeeding. Room-in is encouraged and mothers are advised to breastfeed their babies on demand. No promotion of infant food or drinks other than breast milk takes place in the facility. However no contact is made with family members so that they can be educated on how to support the breastfeeding mother at home. Similarly no system of follow up support for breastfeeding mothers after their discharge either in the form of home visits, or breastfeeding clinic check ups can be actively identified.

3.3 Type of study

The study is a cross-sectional type of study. The study population included all nursing mothers between the ages of 15 – 49 years with their children less than 24 months of age in the town. Where the mother has more than one child under 24 months, the last born was taken.

The breastfeeding indicators were obtained using household survey method whereby mothers with their children were assessed. The indicators were based on the current status data in which the age of the child and other information for the 24 hours preceding the survey. The 24-hour recall period had been widely accepted in survey of dietary intake.

3.4 Sample size

The sample size was 420. This number is above the minimum calculated sample size (n) of 362 as shown below:

$$\text{Mathematically } n = \frac{z^2 Pq}{d^2} \quad (31)$$

Where n = sample size

z = level of confidence usually 1.96 for 95% alpha level

p = proportion of mothers exclusively breastfeeding for the zone

(62%) (30).

q = 1 – P (38%)

d = alpha level of precision (0.05)

$$\therefore n = \frac{1.96^2 \times 0.62^2 \times 0.38}{(0.05)^2} = 362$$

3.5 Sampling technique

It's a cluster sampling technique with each ward as a cluster. The list of all households represent the sampling frame. 140 households were selected from each cluster by simple random sampling. One mother was randomly selected in households with more than one mothers qualified for the study.

3.6 Data collection

Data were collected by the use of structured questionnaires. The questionnaires were designed to elicit information on certain demographic data such as age, family and educational background and parity of mothers. It assessed mothers practice with respect to exclusive breastfeeding, complementary feeding and duration of breastfeeding. It also assessed mother's knowledge on breastfeeding. Three health workers fully oriented on the method of administration were used as interviewers. Literate mothers were administered the questionnaires while illiterate ones were interviewed.

3.7 Limitation for the study

- a.** This study is a quantitative research technique, quantifying the size, distribution and association of variables. An additional qualitative research technique would have been more informative if not for financial constraints.

- b. In illiterate mothers, the presence of the interviewer could influence their responses.

- c. The community does not represent the wide range of cultural and socio-economic circumstances of other areas, therefore generalization may not be possible.

CHAPTER FOUR

4.0 RESULTS

Table I: Age Distribution of Mothers

Age Group (in years)	Frequency	Percent
15 – 19	44	10.48
20 – 24	115	27.38
25 – 29	76	18.10
30 – 34	56	13.33
35 – 39	58	13.81
40 – 44	40	9.52
45 – 49	31	7.38
Total	420	100.00

Table I shows that most mothers are within the age group of 20 – 24 years. They constitute 27.38%. This is followed by mothers in the age group of 25 – 29 years representing 18.10% whereas those in the age group of 45 – 49 years have the least representation of 7.38%.

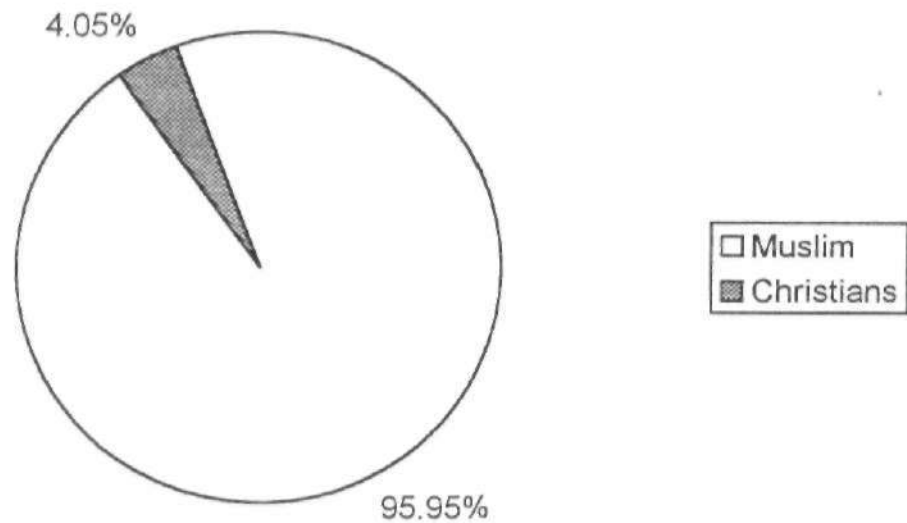


Fig 1: Religion of mothers

All mothers studied are either Muslims or Christians. None practice any other religion. The majority (95.95%) are Muslims whereas the remaining 4.05% are Christians.

Table II: Distribution by Ethnic group of mothers

Ethnic group	Frequency	Percent
Fulani	203	48.33
Hausa	172	40.95
Kanuri	9	2.14
Others	36	8.57
Total	420	100.00

Majority of the mothers (48.33%) are Fulanis. This is closely followed by the Hausas (40.95%). There are few Kanuris (2.14%), 8.57% represent other ethnic groups.

Table III: Distribution of Mothers by Marital Status

Marital Status	Frequency	Percent
Married	418	99.52
Widowed	1	0.24
Divorced	1	0.24
Separated	-	-
Single	-	-
Total	420	100.00

Of the 420 mothers studied, 418 (99.52%) are married, one (0.24%) each is widowed and divorced respectively. None of the mothers is either separated or single.

Table IV: Distribution of Mothers by type of marriage

Type of marriage	Frequency	Percent
Monogamy	268	63.81
Polygamy	152	36.19
Total	420	100.00

Most mothers are in monogamous families representing 63.81% of those studied.

The remaining mothers (36.19%) are in polygamous families.

Table V: Distribution of mothers by level of education

Level of Education	Frequency	Percent
Illiterate	56	13.33
Quranic	224	53.33
Primary	56	13.33
Secondary	78	18.57
Post secondary	6	1.43
Total	420	100.00

Majority of the mothers attended Quranic school representing 53.33% as shown in table V. 13.3% and 18.57% attended primary and secondary schools respectively.

Only 1.43% attended post secondary education.

Table VI: Distribution of mothers by occupation

Mothers occupation	Frequency	Percent
Full time house wife	396	94.29
Civil servant	11	2.63
Petty trading	4	0.95
Other	9	2.14
Total	420	100.00

Table VI shows that 396 out of 420 mothers are fulltime housewives constituting 94.29%. Civil servants and petty traders form 2.62% and 0.95% respectively. 2.14% are engaged in other occupations.

Table VII: Level of education of respondents husbands

Level of education	Frequency	Percent
Illiterate	34	8.10
Quranic	189	45.00
Primary	35	8.33
Secondary	98	23.33
Post secondary	64	15.24
Total	420	100.00

Table VII shows that 45.00% of the husband of the respondents attended Quranic School. 8.33 and 23.33% attended primary and secondary schools respectively. 8.10% attended no school.

Table VIII: Occupational Distribution of respondents husbands

Husbands occupation :	Frequency	Percent
Farming	302	71.90
Civil servant	63	15.00
Petty trading	32	7.62
Other	23	5.48
Total	420	100.00

Table VIII shows that farming is the predominant occupation of the husbands representing 71.90%. Civil servants and petty traders constitute 15.00 and 7.62% respectively while 5.48% engaged in other occupations.

Table IX: Distribution of mothers by their parity

Parity	Frequency	Percent
1	95	22.62
2	78	18.57
3	79	18.87
4	62	14.76
5 or more	106	25.24
Total	420	100.00

In table IX, 22.62% of respondents are para 1, 18.57% para 2, 18.81% para 3 and 14.76%. 25.24% have delivered five or more children.

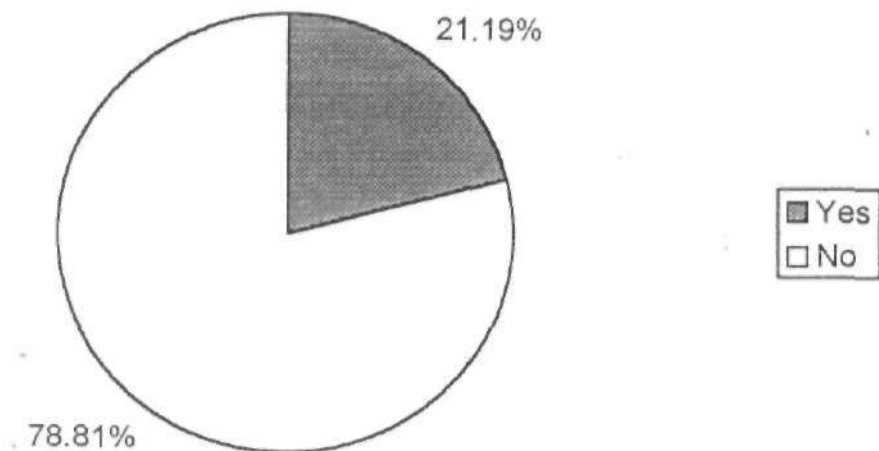


Fig 2: Attendance at antenatal clinic

The pie diagram above shows that 78.81% attended antenatal clinic during their last pregnancy. 21.19% have not attended clinic.

Table X: Place of antenatal clinic

Place of ANC	Frequency	Percent
General Hospital Azare	293	88.52
Maternity clinic Azare	16	7.85
Other	12	3.63
Total	331	100.00

Of the 331 who attended antenatal clinic, 88.52% received antenatal care at the general hospital and 7.85% at the maternity clinic. 3.63% attended other clinics.

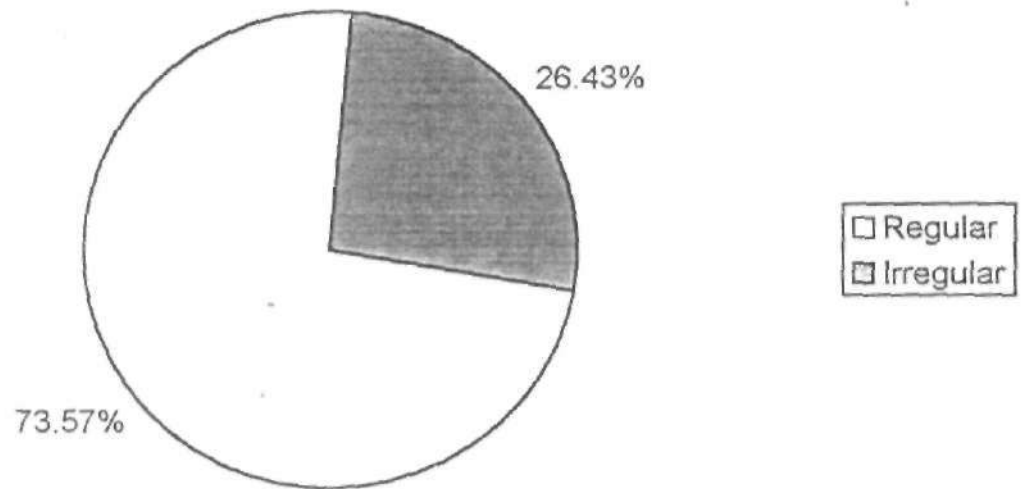


Fig 3: Frequency of attendance at ANC

The pie diagram clearly shows that majority of mothers who attended antenatal clinic did so regularly (73.57%). 26.43% were irregular in attendance.

Table XI: Place of Delivery

Place of delivery	Frequency	Percent
At home unassisted	16	3.81
At home with unskilled attendant	72	17.14
At home with TBA	107	25.48
At the General Hospital	212	50.48
Other	13	3.09
Total	420	100.00

Majority of the mothers (50.48%) delivered at the General Hospital Azare. 3.09% delivered at other facilities. The remaining mothers either delivered at home unassisted (3.81%), at home with unskilled attendant (17.14%) or at home with TBA (25.48%).

Table XII: Duration of stay in the hospital/clinic after delivery

Duration	Frequency	Percent
< 1 day	208	93.69
1 or more days	14	6.31
Does not recall	-	-
Total	222	100.00

Table XII, shows that 93.69% of the 222 mothers who responded stayed less than 1 day in the hospital/clinic after delivery whereas 6.31% stayed up to or beyond one day after delivery.

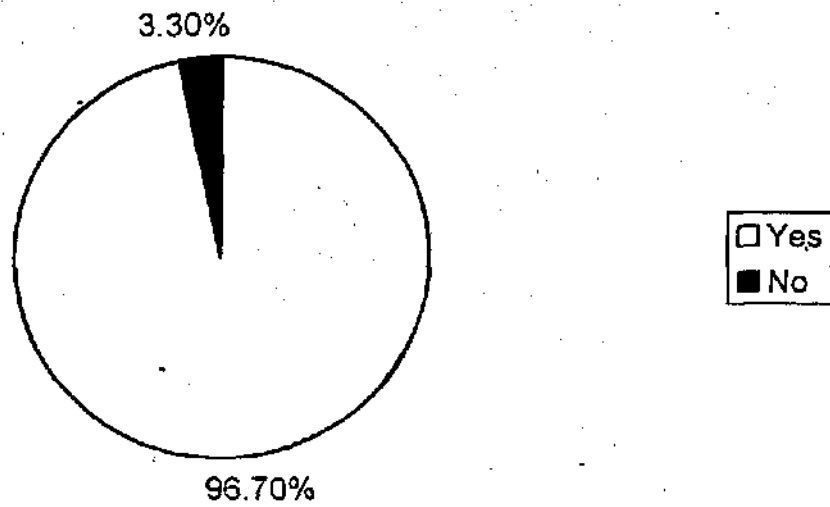


Fig 4: Instruction on breastfeeding at place of delivery

Of the 222 mothers who delivered at the General Hospital, Azare 96.70% admitted receiving instructions on breastfeeding at the place of delivery. 3.30% did not receive any instructions.

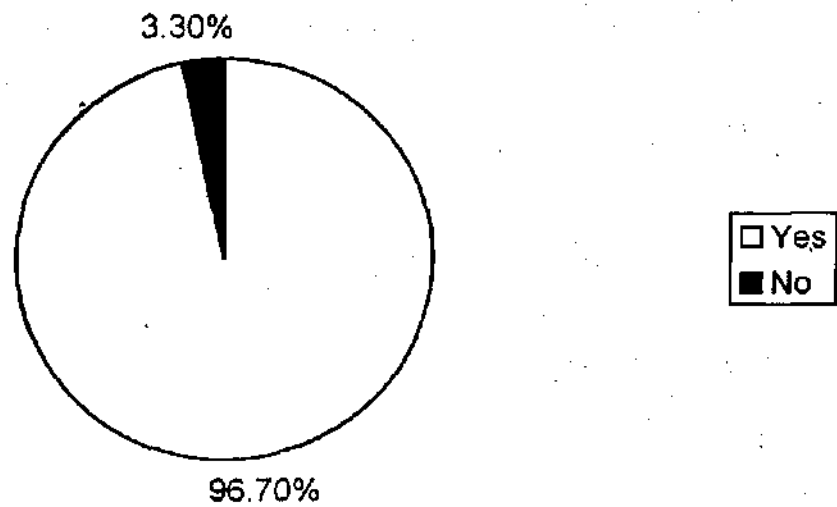


Fig 4: Instruction on breastfeeding at place of delivery

Of the 222 mothers who delivered at the General Hospital, Azare 96.70% admitted receiving instructions on breastfeeding at the place of delivery. 3.30% did not receive any instructions.

Table XIII: Initiation of Breastfeeding after delivery

Duration	Frequency	Percent
Within 30 mins	168	40.00
31 – 60 mins	112	26.67
61 – 120 mins	50	11.90
>2hrs - <6 hrs	39	9.29
6 – 24 hrs	22	5.24
2 nd day	13	3.09
3 rd day	16	3.81
4 th day	-	-
TOTAL	420	100.0

Table XIII shows that 40.00% of mothers commenced breastfeeding within 30 minutes of delivery. Others started within 31 – 60 mins (26.67%), 61 – 120mins (11.90%), >2hrs - <6hrs (9.29%) and within 6 – 24 hours (5.24%). 3.09 and 3.81% commenced on second and third day. None delayed to the fourth day.

Table XIV: Source of advice on initiation of breastfeeding

Source of advice	Frequency	Percent
Health worker	140	33.33
Self	201	47.86
Mother	79	18.81
Mother-in-law	-	-
Other	-	-
Total	420	100.00

Table XIV, shows that majority of mothers initiated breastfeeding on their own (47.86%). 33.33% were advised by a health worker while 18.81% were advised by their own mothers.

Table XV: Type of feeding given before commencement of breastfeeding

Type of feeding	Frequency	Percent
Water	58	13.88
Glucose solution	33	7.89
Honey	16	3.83
Other	22	5.26
Nothing	289	69.14
Total	418	100.00

Out of 418, 58 (13.88%) of the babies were given water before breastfeeding was commenced after delivery. Other babies had glucose solution (7.89%), honey

(3.83%) and other feeds (5.26%). However, majority (69.14%) did not receive any feeding before commencement of breastfeeding.

Table XVI: Age and sex distribution of babies studied

Age group	M	F	Total	Percent
0 – 3	36	24	60	14.29
4 – 5	22	33	55	13.09
6 – 9	32	43	75	17.86
10 – 11	25	25	50	11.90
12 – 15	22	42	64	15.24
16 – 19	42	26	68	16.19
20 – 23	17	31	48	11.43
Total	196	224	420	100.00

Of the 420 children between the ages of 0 – 23 months studied, 14.29% are in the age group of 0 – 3 months, 13.09% between 4 – 5 months and 17.86% between 6 – 9 months. There are more children (16.19%) in the age group of 16 – 19 months than in the age group of 16 – 19 (11.90%) and 12 – 15 (15.24%). 11.43% represent the age group of 20 – 23 months.

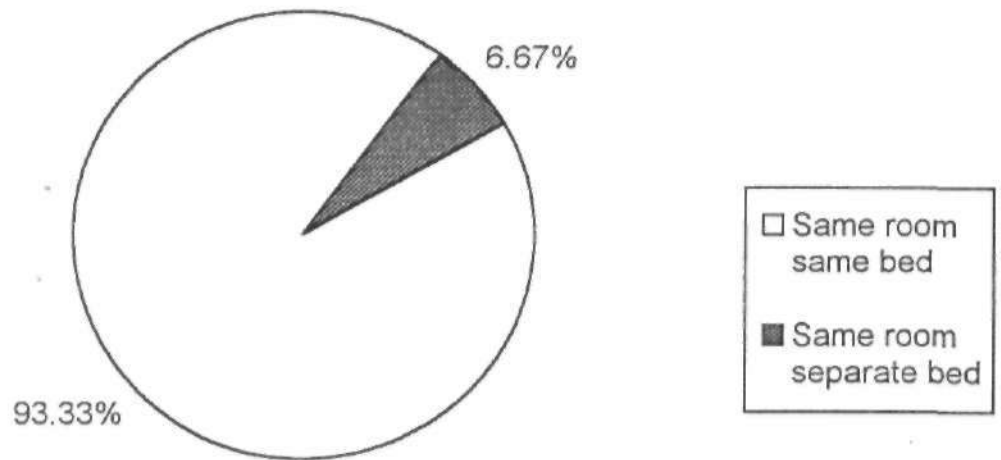


Fig 5: Place of sleep of the child in the first six months of life.

Within the first six months of life, 93.33% of the children were sleeping in the same room and same bed with the mother, 6.67% in the same room but separate bed. None of the children were sleeping in different room from that of the mother.

Table XVIII: Frequency of Breastfeeding

How often	Waking hours	%	Sleeping hours	%
On demand	292	69.52	242	57.62
To schedule	128	30.48	178	42.38
Total	420	100.0	418	100.00

In table XVIII, it can be seen that majority of mothers breastfeed on demand during the waking (69.52%) and sleeping hours (57.62%). 30.48% and 42.38% breastfeed to schedule during waking and sleeping hours respectively. It also shows that breastfeeding is universal (100%) among all mothers.

Table XIX: Distribution by use of colostrum

Colostrum use	Frequency	Percent
Discarded	36	8.76
Allowed to drain away	101	24.57
Fed baby with it	274	66.67
Total	411	100.00

When asked on the yellowish brown breastmilk (colostrum) produced immediately after delivery, 66.67% of the 411 mothers fed baby with it, 24.57% allowed it to drain away while 8.76% discarded it as shown in table XIX.

Table XX: Exclusive Breastfeeding by age

Age (months)	Yes	No	Total
0	1	4	5
1	2	9	11
2	4	17	21
3	3	20	23
4	6	33	39
5	1	15	16
Total	17	98	115

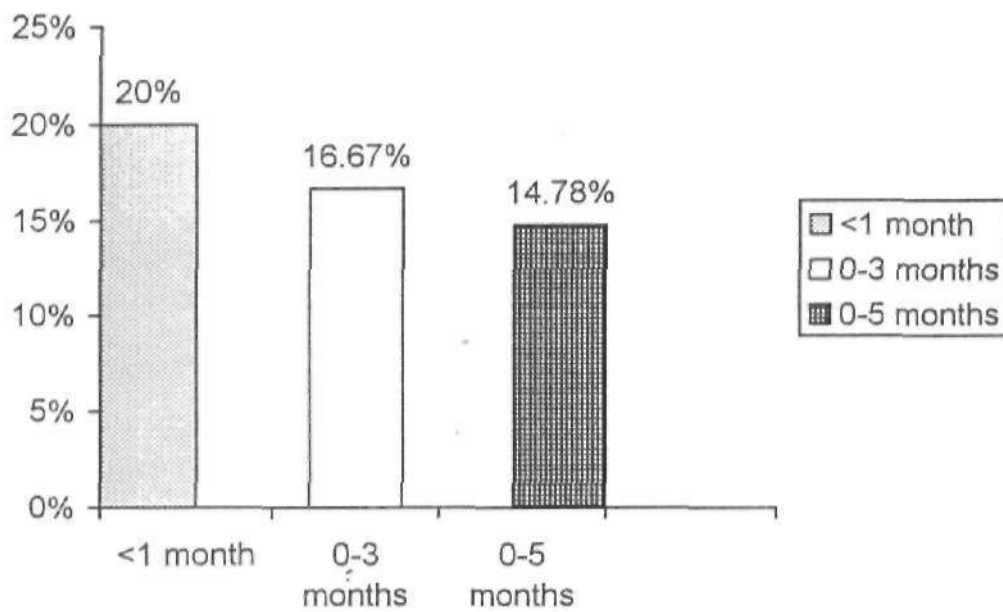


Fig 6: Exclusive breastfeeding rates.

The bar diagram shows exclusive breastfeeding rates at less than 1 month (20%), 0-3 months (16.67%) and 0-5 months (14.78%).

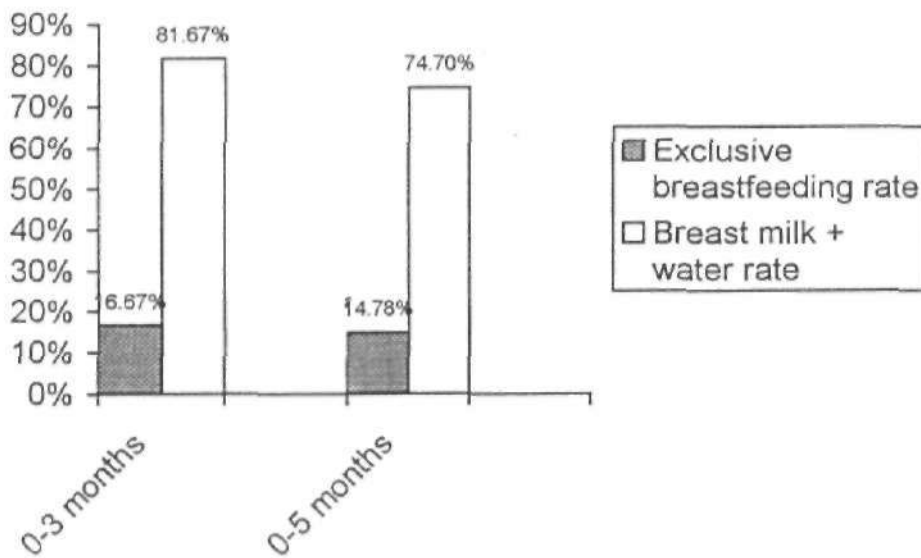


Fig. 7 Breast milk + water/Exclusive breastfeeding rate

Fig 7 shows breast milk + water rates as compared to exclusive breastfeeding rates. The breast milk + water rates stand at 81.67 and 74.78% at 0 – 3 months and 0 – 5 months respectively.

Table XXI, shows predominant breastfeeding rate (PBR) by age as 80.00% at 0 month, 72.73% at 1 month, 76.19% at 2 months and 82.60% at 3 months. It also shows the PBR at 4 & 5 months as 71.79% and 56.25% respectively.

The predominant breastfeeding rate for the town is 78.33% and 73.04% at 4 and 6 months respectively.

Table XXI: Predominant breastfeeding by age

Age	No. of children	PBF	PBF(%)	No. of children	PBF	PBR (%)
	0 – 4 months			0 – 5 months		
0	5	4	80.00	5	4	80.00
1	11	8	72.73	11	8	72.73
2	21	16	76.19	21	16	76.19
3	23	19	82.60	23	19	82.60
4	39	28	71.79	39	29	71.79
5	-	-	-	16	9	59.25
Total	99	75		115	84	73.04

Table XXII: Timely complementary feeding rate (6 – 9) months by age

Age (months)	Yes	No	Total	CFR (%)
6	12	16	28	42.86
7	8	4	12	66.67
8	4	2	6	66.67
9	23	6	29	79.31
Total	47	28	75	62.67

The study shows complementary feeding rates by age as 42.86% at 6 months 66.67% at 7 months and 8 months and 79.31% at 9 months.

The timely complementary feeding rate (CFR) for the town is 62.67%. (Table XXII).

Table XXIII: Continued breastfeeding rate (1 Year) by age

Age (months)	Yes	No	Total	CBR (%)
12	26	-	26	100
13	15	1	16	93.75
14	15	1	16	93.75
15	5	1	6	83.33
Total	61	3	64	95.31

The continued breastfeeding rate (1 year) by age is 100% at 12 months. It is 93.75% at 13 and 14 months respectively and it is 83.33% at 15 months. From

table XXIII, the continued breastfeeding rate (1 year) for the community was 95.31%.

Table XXIV: Continued Breastfeeding Rate (2 years) by age

Age (months)	Yes	No	Total	CBR (%)
20	8	2	10	80.00
21	-	-	-	-
22	4	1	5	80.00
23	24	9	33	72.73
Total	36	12	48	75.00

Table XXIV, shows continued breastfeeding rates (2 years) as varying by age from 80.00% at 20 and 22 months to 72.73% at 23 months. It shows that the overall continued breastfeeding rate (2 years) for the community is 75.00%.

Table XXV: Method of giving other foods/drinks (0 – 11 months)

Method	Total	Percent
Bottle	22	9.17
Cup	51	21.25
Plate and spoon	158	65.83
Forced	9	3.75
Total	240	100.00

Of the 240 babies between the ages of 0 – 11 months, 21.25 and 65.83% were fed using cup and plate and spoon respectively. 3.75% were forced fed. The bottle-feeding rate for the area as shown in table XXV is 9.17%.

Table XXVI: Type of breastfeeding and episode of diarrhoea in past 28 days (0 – 5 months)

Breastfeeding type	Diarrhoea	No diarrhoea	Total
EBF	3 (17.65%)	14 (82.35%)	17
Non-EBF	59 (60.20%p)	39 (39.80)	98
Total	62	53	115

Table XXVI, shows type of breastfeeding and episode of diarrhoea in the past 28 days in babies aged 0 – 5 months. 82.35% of exclusively breastfed babies had no episode of diarrhoea in the past 28 days while 17.65% had. However, 60.20% of the non-exclusively breastfed had at least an episode of diarrhoea in the period. This shows that diarrhoea is more common among the non-exclusively breastfed than exclusively breastfed babies. This is statistically significant (Chi square 10.5, 1 degree of freedom).

Table XXVII: Distribution by episodes of diarrhoea (0 – 5 months)

Age (month)	Once	2ce	>3ce	Total
EBF	2 (66.67%)	1 (33.33%)	-	3
Non-EBF	24 (40.68%)	22 (37.21%)	13 (22.03%)	59
Total	26 (41.93%)	23 (37.10%)	13 (20.97%)	62

Table XXVII, shows that of the 3 babies who had diarrhoea, 2 (66.67%) had one episode while 1 (33.33%) had 2 episodes of diarrhoea. None had more than 2 episodes. Among the non-exclusively breastfed 24 (40.68%) had one episode, 22 (39.29%) had 2 episodes and 13 (22.03%) had 3 or more episodes of diarrhoea.

Table XXVIII: Level of mother's knowledge on breastfeeding

Level of knowledge	Frequency	Percent
Low	107	25.48
Average	246	58.57
High	67	15.95
Total	420	100.00

Assessing the level of knowledge of the 420 mothers, table XXVIII shows that majority of mothers (58.57%) have average knowledge. Only 15.95% had high level of knowledge whereas 25.48% had low level of knowledge.

Table XXIX: Level of knowledge on breastfeeding by mothers age group

Age group	Low %	Average %	High %	Total
15 – 19	5 (11.36)	33 (75.00)	6 (13.64)	44
20 – 24	38 (33.04)	61 (53.04)	16 (13.91)	115
25 – 29	4 (5.26)	57 (75.00)	15 (19.74)	56
30 – 34	6 (10.91)	31 (55.36)	19 (33.93)	56
35 – 39	14 (24.14)	38 (65.52)	6 (10.34)	58
40 – 44	24 (60.00)	14 (35.00)	2 (5.00)	40
45 – 49	16 (51.61)	12 (29.26)	3 (9.68)	41
Total	107	246	67	420

Out of 67 mothers who had high level knowledge on breastfeeding, most (33.93%) are in the age group of 30 – 34 years followed by the age group of 25 – 29 years (19.74%). Only 5.00% of those between 40 – 44 years had high level of knowledge. Of the 107 mothers with low level of knowledge, only 11.36% are in the age group of 15 – 19 years. 60.00% of those aged 40 – 44 had low level of knowledge.

Table XXX: EBF (0 – 5 months) by mother's education

Education	No	Yes	Total	0/EBF
Illiterate	20	2	22	10.00
Primary/Quranic	63	9	72	14.29
Sec/post sec.	15	6	21	28.57
Total	98	17	115	14.78

Table XXX, shows exclusive breastfeeding (0 – 5 months) by mothers education. 10.00% of illiterate mothers exclusively breastfed. 14.29% of those who attended Primary/Quranic education and 28.57% of those who attended secondary or post secondary education exclusively breastfed. The difference is not statistically significant (Chi square 4.40 with 2 degree of freedom).

Table XXXI: EBF (0 – 5 months) by type of marriage

Type of marriage	No	Yes	Total	% EBF
Monogamy	59	10	69	14.49
Polygamy	39	7	46	15.22
Total	98	17	115	14.78

Table XXXI, shows exclusive breastfeeding (0 – 5 months) by type of marriage. 14.49% of mothers in monogamous marriage exclusively breastfed while 15.22% in polygamy did. There is no statistically significant difference between monogamy and polygamy in terms of exclusive breastfeeding (Chi square 1.6 with 1 degree of freedom).

CHAPTER FIVE

5.0 DISCUSSION

5.0.1 Age distribution of mothers

In the study of 420 mothers within the age group of 15 – 49 years (table 1) most mothers, constituting 115, were in the age group of 20 – 24 years. There were 44 mothers in the age group of 15 –19. The wide difference between the groups may be due to the delay in marriage as a result of attainment of secondary school by the latter. Only 33 mothers (38%) were in the age group of 45 – 49.

5.0.2 Religion of mothers

All mothers studied were either Muslims or Christians (fig 1) none practise other religion. 403 out of 420 mothers were Muslims. This indicates that Islam is the predominant religion of this area. The Christians were mostly the non-indigenes mainly from the major ethnic groups of Igbo and Yoruba.

5.0.3 Ethnic group of mothers

The study shows that most mothers were either Fulanis or Hausas. The Fulanis were slightly more than the Hausas (40.95%), constituting about 48.33 of all mothers studied (table II). 9 (2.14%) out of 420 mothers were Kanuris whereas 36 (8.57%) represented other ethnic groups such as Igbo, Yoruba, Tangale and Karekare.

5.0.4 Marital status of mothers

All the respondents were married, widowed or divorced (table III). 418 out of 420 mothers were married at the time of the study. One each was widowed and divorced respectively. None of the respondents was single. This has to do with the Islamic culture prevalent in the area, which very much discouraged extramarital affairs.

5.0.5 Type of marriage

This study showed that both polygamy and monogamy were practised in this area. This can be attributed to the fact that Islam, the predominant religion in the area permits polygamy. Hence although majority (63.81%) of the mothers were in monogamous families, many (36.19%) were in polygamous families. This is shown in table IV.

5.0.6 Mothers level of education

It was found that Quranic education was the most common form of education as 224 out of 420 mothers attended this form of education (table V). This constitutes about 53.33%. Of those who attended western education, most attended secondary education, only 6 (1.43%) of the mothers attended post secondary, this shows that the area is backward in western education.

5.0.7 Mothers occupation

Most mothers (94.29%) were full time housewives. Only 2.62% were civil servants whereas 0.95% were engaged in petty trading; mainly Igbo and Yoruba mothers. The remaining 2.14% were engaged in other forms of occupation such as tailoring, hair dressing and fashion design.

5.0.8 Level of education

Like the respondents, majority of the husbands attended Quranic school. This represents 45.00% of all husbands. 8.33 and 23.33% attended primary and secondary schools respectively. More husbands (15.24%) than respondents (1.43%) however attended post secondary school. Only 8.10% were illiterates.

5.0.9 Occupation of husbands

The study indicates that farming is the predominant occupation of husbands, representing 71.90% (table VII). 63 (15.00%) out of 420 husbands were civil servants. 7.62% were petty traders while 5.48% engaged in other occupations like auto mechanic and electrical repairs.

5.0.10 Mothers parity

Most of the mothers studied (74.76%) had one, two, three or four children as shown in table (IX). This however does not indicate low parity as most mothers were in the younger age group.

5.0.11 Attendance at antenatal clinic

The study showed a high antenatal attendance rate. 331 out of 420 mothers ever attended antenatal clinic in their last pregnancies representing 78.81%, indicating a very good level of awareness in terms of antenatal care. Only 21.19% have not attended antenatal clinic (fig 2). Similarly 73.57% of those who attended, did so regularly while 26.43% were irregular in attendance (fig 3).

5.0.12 Place of antenatal clinic

Of those who attended antenatal clinic, majority (293) were attending general hospital Azare for their antenatal, only 26 mothers attended the town maternity clinic. Few others (12) attended private and other health centres. This shows that most mothers were at one time or another exposed to the breastfeeding promotion of the general hospital (table X).

5.0.13 Place of delivery

Although slightly over half the mothers studied delivered at the General Hospital, there were fewer mothers who delivered at the General Hospital (50.48%) than those who attended antenatal (69.76%). Many mothers delivered at home either with TBA, unskilled attendant or unassisted. This may have to do with the Hausa/Fulani culture of preferential home delivery which still abounds (table XI).

5.0.14 Instruction on breastfeeding at place of delivery

On the 212 respondents who delivered in the general hospital 205 (96.70%) admitted receiving instruction on breastfeeding at the hospital indicating that active breastfeed promotion takes place (fig 4).

5.0.15 Initiation of breastfeeding after delivery and source of advice

Early initiation of breastfeeding, breastfeeding on demand and frequent contact between mother and the child help mothers to exclusively breastfeed. The study showed that most mothers initiated breastfeeding babies within 6 hours of delivery (table XIII). In most cases the decision to initiate breastfeeding was taken by the respondents. Only 33.33% were advised by health workers and 18.81% by respondents own mothers. This sharply contrasts the Lahore study (1993) where 65% of the periurban slum mothers had not started breastfeeding 48 hours after delivery.

5.0.16 Type of feeding given before commencement of breastfeeding

Of the babies of 48 respondents, 69.14% had nothing given to them after delivery before commencement of breastfeeding. 13.88% had water, 7.89% had glucose solution and 3.83 had honey. In the remaining 5.26%, other things such as rubutu were given (table XV). This again contrasts the Lahore finding where prelacteal feeding especially of herb water and honey was the norm.

In the study in Ilorin (1987) by Doyin and Adedoyin, cow milk, agbo (traditional concoction) and glucose water were recognized as suitable food for the new born.

Giving foods or liquids, prior to the commencement of breastfeeding replaces the nutrients that would have been provided by colostrum.

5.0.17 Place of sleep of the child in the first six months/frequency of breastfeeding

The study clearly shows that most children were sleeping in the same room and same bed with the mother fig (5). This indicates a good rooming-in. This may have to do with the age long African tradition of nursing the offsprings, an important role of the mother. Baby cot is virtually unknown in this area. The repeated contact with the mother increases the infant's ability to elicit a strong bond from the mother. This ensures emotional attachment.

Similarly most mothers breastfeed their babies on demand both during waking and sleeping hours (table XVIII). This demand feeding makes mothers feel capable and adequate. Having a family which provides social support may be necessary for successful demand feeding. In malnourished mothers, dietary supplementation should be encouraged to optimize breastmilk nutrient level and also prevent maternal depletion. The table also showed that all mothers studied were breastfeeding their babies at one time or the other indicating that breastfeeding was still universal in the area. This is in line with BFHI assessment finding.

5.0.18 Age and sex of babies studied

In the study, 27.38% of children were under 6 months of age. There are slightly more males in this group than females. Thereafter, females tend to predominate. The age group of 6 – 9 months had the largest representation (17.86%) while 20 – 23 months had the least (11.43%).

5.0.19 Use of colostrum

Table XIX showed that colostrum was widely used in this area. Up to 66.67% of mothers fed their babies with colostrum. The remaining 33.33% either discarded it or allowed it to drain away. This is as against what was found in Ilorin by Doyin and Adedoyin (1987) where 37.8% of mothers studied said no to use of colostrum which according to them was dirty. Colostrum produced during early stages of lactation provides natural antibodies, which protect the newborn from a wide range of diseases. It has high protein content than mature breastmilk which accounts for its yellowish brown colour.

5.0.20 Exclusive breastfeeding rate

The study showed that the exclusive breastfeeding rate at four and six months were 16.67 and 14.78% respectively (fig 6). These rates fall below what obtained for the zone in the 1999 National BFHI Impact Assessment (68 and 62%). This may be explained by the fact that water

was widely given to the babies as indicated by the very high breastmilk + water rate of 74.78% at six months (fig 7).

Research findings have demonstrated the role of exclusive breastfeeding for the first six months of life in promoting growth and development. Infants exclusively breastfed have low rates of infection with diarrhoea, acute respiratory infections and ear infection. All foods and drinks give to the baby under four months of age are not beneficial because they are inferior to the breastmilk. Available evidence shows that gastrointestinal infections are less frequent and less severe in exclusively breastfed infants than those not. Breastmilk has anti-infective properties due to the presence of immunoglobulins, phagocytic cells, enzymes, lactoferin and bifidus factor.

5.0.21 Predominant breastfeeding rate

Predominant breastfeeding rates at four and six months as found in the study were 78.33 and 73.33% respectively. This very high rate can again be explained by large scale use of water.

5.0.22 Timely complementary feeding rate

Timely introduction of complementary food in addition to breastmilk was determined in the study (table XXII). The timely complementary feeding rate was 62.67%. This corresponds with the national figure of 63% obtained in 1999. Timely complementary feeding is necessary because at the age of about six months infants can no longer meet their nutritional

needs through breastmilk. Locally prepared soft enriched foods are introduced at about the age of six months. These complementary foods are given in addition to the breastmilk. Nutritious complementary foods are continued up to 12 months after which the family diets with some adaptation are introduced.

5.0.23 Continued breastfeeding rate (at 1 and 2 years)

The continued breastfeeding rates at 1 and 2 years for this community stood at 95.31 and 75.00% respectively. This shows that breastfeeding is well continued into the second year of life. This practice may be linked with the Islamic injunction that babies are fed up to 24 months of life.

Because of the high density of breastmilk when compared with that of complementary food, breastmilk continues to be necessary even after starting complementary feeding.

Continued breastfeeding into the second year provides a good source of energy, protein and micro-nutrients and also offers protection from infection including diarrhoea. Mothers therefore need be encouraged to continue breastfeeding up to 2 years of child's life.

5.0.24 Method of giving other foods/bottle feeding rate

Most of the babies aged 0 – 11 months were fed using cup and spoon (table XXV). Only 22 out of 240 babies were fed using bottle

indicating a bottle-feeding rate of 9.17%. This is slightly lower than the national rate of 11% shown in the 1999 study.

Bottle-feeding is very much discouraged because hygiene which cannot be achieved using bottles, is very vital to prevent food contamination and subsequent infection.

5.0.25 Type of breastfeeding and episode of diarrhoea in the past 28 days

Of the babies aged less than 6 months only 17.65% of the exclusively breastfed had at least an episode of diarrhoea in the past 28 days whereas more than half (60.20%) of the non-exclusively breastfed had. This shows that diarrhoea is more common among the non-exclusively breastfed than the exclusively breastfed with statistically significant difference.

Exclusive breastfeeding offers protection against diarrhoeal diseases. This is due to its anti-infective and anti allergenic properties. Diarrhoea was the leading cause of child mortality in 1980 which accounted for 4.6 million deaths annually. Effort to control diarrhoea in the past two decades, aside the ORT is promotion of exclusive breastfeeding. Feeding children during episode of diarrhoea not only reduces the nutritional impact of diarrhoea but also shortens its duration. By exclusive breastfeeding dangerous unhygienic practices of preparing breastmilk substitutes are avoided.

5.0.26 Level of mothers knowledge on breastfeeding

Mothers knowledge on breastfeeding was also assessed in the study (table XXVIII). It showed that most mothers, 240 out of 420 had an average knowledge on breastfeeding, indicating that the low exclusive breastfeeding practice was mainly due to cultural belief rather than ignorance. 67 mothers (15.95%), had high level of knowledge most of whom were in the age group of 20 – 34 years. The study by Doyin and Adedoyin in Ilorin highlighted some deficiencies of mothers studied in knowledge of breastfeeding, which would have led to the faulty practices prevalent in that area.

In that study 47% of the mothers acknowledged breastmilk supplemented by cow milk as the best food for the new born. Similarly majority of the mothers would stop breastfeeding at 9 months.

5.0.27 EBF (0 – 5 months) by mothers education/type of marriage

Table XXX, showed that although exclusive breastfeeding increases with increasing mothers education, the difference is unexpectedly not statistically significant. The BFHI assessment indicated that high level of maternal education favoured exclusive breastfeeding. Education creates awareness and increases women access to information. It enables women to adopt more health seeking behaviours.

By type of marriage, 14.49% of the mothers in monogamous families were exclusively breastfeeding their babies while 15.22% in polygamy did. The difference is however not statistically different among the two groups.

unlike the finding of the BFHI assessment. This is probably because more mothers studied were in the monogamous families.

CHAPTER SIX

6.0 RECOMMENDATIONS

- 6.1 This study has indicated that the current policy on promotion of breastfeeding which is largely hospital based is not making very significant impact, and therefore the need for some modifications. The BHFI should be reviewed to be more people centred, community based and typified by the primary health care.
- 6.2 The commitment from, and full participation of doctors, health workers, community leaders, religious leaders and community based organisations are indispensable for it to be successful.
- 6.3 While many mothers realised that exclusive breastfeeding is desirable, they are at the same time exposed to influences of cultural beliefs and pressures. There is the need for behavioural changes in order to modify these beliefs and pressures through various methods of health education.
- 6.4 Individuals, families and communities should be enlightened of the benefit of appropriate breastfeeding through home visits, community drama and the media. Greater emphasis should be placed on promoting household behaviours that are not dependent on the health system.
- 6.5 It is universally accepted that mothers education is inversely related with infant mortality. There is the need for massive investment in female

education. Education creates awareness and enables women to adopt more health seeking behaviors like exclusive breastfeeding. The school also provides a good medium for health education.

- 6.6 Activities towards improving breastfeeding and hence improved health status of children and reduced morbidity and mortality, need be multi-sectoral. Stakeholders should accord necessary support to breastfeeding through provision of credit facilities to nursing mothers and longer period of maternity leave.

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INNOCENTI DECLARATION

On the Protection, Promotion and Support of Breastfeeding

RECOGNISING THAT

- Breastfeeding is a unique process that
- Provides ideal nutrition for infants and contributes to their healthy growth and development;
- Reduces incidence and severity of infectious diseases, thereby lowering infant mortality and morbidity;
- Contributes to women's health by reducing the risk of breast and ovarian cancer, and by increasing the spacing between pregnancies;
- Provides social and economic benefits to the family and the nation;
- Provides most women with a sense of satisfaction when successfully carried out; and that
- Recent research has found that
 - these benefits increase with increased exclusiveness of breastfeeding during the first six months of life, and thereafter with increased duration of breastfeeding with complementary foods; and
 - promotion of interventions can result in positive changes in breastfeeding behaviour.

The Innocenti Declaration was produced and adopted by participants at the World Health Conference on Infant and Child Health, held in Geneva, Switzerland, in 1990. A global initiative, it was developed by the World Health Organization, the United Nations Children's Fund (UNICEF), the Swedish International Development Co-operation Agency (SIDA), and the World Bank. The Declaration reflects the consensus of the original background document for the meeting and the views expressed in group and plenary sessions.

WE THEREFORE DECLARE THAT

As a global goal for optimal maternal and child health nutrition, all women should be enabled to practise exclusive breastfeeding and all infants should be fed exclusively on breast milk from birth to 4-6 months of age. Hereafter, children should continue to be breastfed while receiving appropriate and adequate complementary foods for up to two years of age or beyond. This child-feeding ideal is to be achieved by creating an appropriate environment of awareness and support so that women can breastfeed in their own time.

Attainment of the goal requires, in many countries, the reinforcement of a "breastfeeding culture" and its vigorous defence against incursions of a "bottle-feeding culture". This requires commitment and advocacy for social mobilization, utilizing to the full the prestige and authority of acknowledged leaders of society in all walks of life.

Efforts should be made to increase women's confidence in their ability to breastfeed. Such empowerment involves the removal of constraints and influence that manipulate perceptions and behaviour towards breastfeeding, often by subtle and indirect means. This requires sensitivity, continued vigilance, and a responsive and comprehensive communications strategy involving all media and addressed to all levels of society. Furthermore, obstacles to breastfeeding within the health system, the workplace and the community must be eliminated.

Measures should be taken to ensure that

women are adequately nourished for their optimal health and that of their families. Furthermore, ensuring that all women also have access to family planning information and services allows them to sustain breastfeeding and avoid shortened birth intervals that may compromise their health and nutritional status, and that of their children.

All governments should develop national breastfeeding policies and set appropriate national targets for the 1990s. They should establish a national system for monitoring the attainment of their targets, and they should develop indicators such as the prevalence of exclusively breastfed infants at discharge from maternity services, and the prevalence of exclusively breastfed infants at four months of age.

National authorities are further urged to integrate their breast-feeding policies into their overall health and development policies. In so doing they should reinforce all actions that promote, promote and support breastfeeding within complementary programmes such as prenatal and prenatal care, nutrition, family planning services, and prevention and treatment of common maternal and child blood disease. All health-care staff should be trained in the skills necessary to implement these breast-feeding policies.

Exclusive breastfeeding means that no other drink or food is given to the infant, the infant should be fed frequently and for unrestricted periods.
 © World Health Organization, Geneva, 1990

OPERATIONAL TARGETS

- All governments by the year 1990 should have
 - appointed a national breastfeeding coordinator of appropriate authority; and established a multisectoral national breastfeeding committee composed of representatives from relevant government departments, non-governmental organizations and health professional associations;
 - ensured that every facility providing maternity services fully practices all ten of the *Ten Steps to Successful Breastfeeding* set out in the joint WHO/UNICEF statement "Protecting, promoting and supporting breastfeeding: the special role of maternity services";
 - taken action to give effect to principles in *Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions* in their countries; and
 - enacted innovative legislation protecting the breast-feeding rights of working women and established means for its enforcement.
- We do call upon international organizations
 - draw up action strategies for protection, promotion and supporting breastfeeding including global monitoring and evaluation strategies;
 - support national efforts in this area and the development of national goals and targets for action; and
 - encourage and support national authorities in planning, implementing, monitoring and evaluating their breast-feeding policies.

APPENDIX 2

Indicators for Assessing Breastfeeding Practice:-

- i. **Exclusive Breastfeeding rate:-** Proportion of infants less than 4 months of age who are exclusively breastfed

= $\frac{\text{Infants of <4 months of age (120 days) who were exclusively breastfed}}{\text{Infants <4 months of age}}$

- ii. **Predominant Breastfeeding rate:-** Proportion of infants less than 4 months of age who are predominantly breastfed.

= $\frac{\text{Infants <4 months of age predominantly breastfeeding last 24 hours}}{\text{Infants <4 months of age}}$

- iii. **Timely Complementary Feeding rate:-** Proportion of infants 6 – 9 months of age who are receiving breastmilk and complementary foods

= $\frac{\text{Infants 6 – 9 months of age who received complementary food + breastmilk last 24 hours}}{\text{Infants 6 – 9 months of age}}$

- iv. **Continued breastfeeding rate (1 year):-**

= $\frac{\text{Proportion of children 12-15 months of age breastfed in the last 24 hrs}}{\text{Children 12 – 15 months of age}}$

Continued Breastfeeding rate (2 years):-

= $\frac{\text{Children 20 – 23 months of age breastfed in the last 24 hours}}{\text{Children 20 – 23 months of age}}$

- v. **Bottle feeding rate:-** Proportion of infants less than 12 months of age who are receiving any food or drink from a bottle with a Nipple/teat including expressed breastmilk.

= $\frac{\text{Infant <12 months of age who were bottlefed in last 24 hours}}{\text{Infants <12 months of age}}$

APPENDIX 4

AN ASSESSMENT OF THE IMPACT OF BABY FRIENDLY HOSPITAL
INITIATIVE IN AZARE TOWN

Respondent: Mothers with children 0 – 23 months of age

Interviewer's name

Date of interview

Household number

1.0 Personal Data

1.1 Name of respondent

1.2 Address

1.3 Age

1.4 Religion

a. Islam

b. Christianity

c. Other specify.....

1.5 Ethnic Group

a. Fulani

b. Kanuri

c. Hausa

d. Other specify.....

1.6 Marital Status

a. Single

b. Married

c. Divorced

- d. Widowed
- e. Separated

1.7 Type of marriage

- a. Monogamy
- b. Polygamy

1.8 Level of education :

- a. Illiterate
- b. Quranic
- c. Primary
- d. Secondary
- e. Post secondary

1.9 Occupation

- a. Fulltime housewife
- b. Civil servant
- c. Petty trading
- d. Others specify.....

1.10 Religion of Husband

- a. Islam
- b. Christianity
- c. Others specify.....

1.11 Education of Husband

- a. Illiterate
- b. Quranic
- c. Primary

- d. Secondary
- e. Post secondary

1.12 Occupation of Husband

- a. Farming
- b. Civil servant
- c. Petty trading
- d. Others

specify.....

1.13 No. of children born to the mother

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5 or more

2.0 On the child

2.1 Age of child in months

2.2 Sex Male Female

2.3 Are you and the child part of nuclear or extended family

Nuclear Extended

2.4 Did you attend antenatal clinic during the pregnancy? Yes No

2.5 If yes was it regular or irregular

2.6 Place of antenatal

- a. General hospital Azare
- b. Maternity Clinic Azare

c. Other specify.....

2.7 Type of birth single multiple

2.8 Where was the child delivered?

a. At home unassisted

b. At home with skilled attendant

c. At home with TBA

d. At the General Hospital

e. Other specify.....

2.9 If in the hospital/clinic, how long did you stay after delivery

a. hours

b. days

c. does not recall

2.10 Did you receive any instruction on breastfeeding in the place of delivery

Yes No

2.11 How soon was the baby put to breast after birth

a. Within 30 mins.

b. 31 – 60 mins

c. 61 – 120 mins

d. >2 hours - < 6hrs

e. 6hrs – 24 hrs

f. 2nd day

g. 3rd day

h. 4th day

2.12 Who decided on that

- a. Health worker
- b. Yourself
- c. Your mother
- d. Mother-in-law
- e. Other specify.....

2.13 What was given to the baby before breastfeeding was commenced

- a. Water
- b. Glucose solution
- c. Honey
- d. Other specify.....
- e. Nothing

2.14 What did you do with the yellowish brown breastmilk produced immediately after delivery

- a. Discarded
- b. Allowed to drain away
- c. Fed baby with it

2.15 Who decided on that?

- a. Yourself
- b. Mother
- c. Mother-in-law
- d. Other specify.....

2.16 Where did the child sleep mostly within the first six months of life

- a. Same room, same bed with mother

- b. Same room, separated bed
- c. Different room

2.17 How many times do you breastfeed the child during your sleeping hours

- a.times
- b. On demand

2.18 How many times do you breastfeed during your waking hours

- a.times
- b. On demand

2.19 What was given the child in the last 24 hours

- a. Breastmilk only
- b. Breastmilk + water
- c. Breastmilk + formula
- d. Breastmilk + pap
- e. Breastmilk + family food
- f. Family food only
- g. Other specify.....

2.20 If breastfeeding for how long do you intend to breastfeed your baby.....

2.21 If not breastfeeding now how long was the child breastfed?

- a.months
- b. Never breastfed
- c. Does not recall

2.22 Why do you stop breastfeeding

- a. Not enough milk
- b. Cracked nipple

- c. Engorged breasts
- d. Became pregnant
- e. None

2.23 If you never breastfeed the child, give reasons

.....

2.24 Who discourages you most from breastfeeding if any (multiple answers allowed)

- a. Husband
- b. Your mother
- c. Mother-in-law
- d. Breastfeeding support group
- e. Other specify.....

2.25 Do you know by brand name any commercial formula? Yes No

2.26 If yes specify.....

2.27 At what age did you start giving foods/drinks aside breastmilk?

months

2.28 How do you give the food/drinks?

- a. Bottle
- b. Cup
- c. Cup and spoon
- d. Plate and spoon
- e. Forced feeding

2.29 In the past 28 days did the child have any episode of diarrhoea?

- a. Yes

b. No

2.30 If yes how many times in the last 28 days?

a. Once

b. Twice

c. Three times or more

3.0 Mothers Knowledge about Breastfeeding

3.1 What is the importance of giving only breastmilk not even water to the baby up to the age of six months?.....

3.2 When should other foods be given to the child?.....

3.3 What do you know about disadvantages of breastfeeding generally.....
.....

3.4 What difficulties do you have with breastfeeding your baby?.....

3.5 What conditions would make you not to breastfeed your baby at all?.....