WOMEN'S PERCEPTION OF BABY FRIENDLY AND CONVENTIONAL BABY FEEDING PRACTICES IN TARABA STATE.

BY

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DECLARATION

I, Nzuta, Vahey Janet hereby declare that this thesis is a record of my own research work and has not been submitted for award of a degree of any other University. Information and excerpts from published and unpublished works of others have been acknowledged in this text.

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CERTIFICATION

This thesis titled "Women's Perception of Baby Friendly And Conventional Baby Feeding Practices in Taraba State" by Nzuta, Vahey Janet meets the regulations governing the award of the degree of Master of Education, Vocational and Technical Education (Home Economics) of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

I hereby dedicate this research to the memory of my mother Mrs. Esther Ladan Lenge whose love, blessings and inspiration has been the source of my strength. This is also to the memory of my son Aserkwe Kissinger Nzuta whose loss I will never forget. May their souls rest in perfect peace. Amen.

To my husband Mr. Ando Danjuma Nzuta whose encouragement and support has been the source of my success in life.

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ABSTRACT

This study examined the perception of women in Taraba State of Nigeria on Baby friendly Hospital initiative (BFHI) and the conventional baby feeding practices.

The objective of the study was to find out the general perception of women on the whole programme and its benefit as well as to ascertained whether or not they accept the programme.

The general method used for the study was a survey in which 382 nursing mothers from 8 local government areas out of the 16 Local Government Areas in Taraba State were selected, using the random sampling technique. A stratified sampling was used for the seclection of the 8 Local Government Areas. Data was collected using a self moderated questionnaire called (Baby friendly Hospital Initiative Perception Scales). The instalment was validated by this researcher's supervisors and through a pilot study. After which a correlation coefficient of size 0.86 was got using Spearman Brown's formula.

Five (5) null hypotheses were formulated for the study and tested at 0.05 alpha level of significance using t-test and one way analysis of variance (ANOVA) statistical techniques. The result showed that all the five (5) null hypothesis were rejected, meaning that all the variables tested for instance age, religion, location and education among others significantly influence women's perception of the BFHI programme. Also, the findings showed that the

general perception of women on the BFHI is positive. In the process, it is also found that a number of the respondents do not know or understand some of the benefits of the BFHI.

On the basis of these findings therefore, some recommendations were made among them, the need for general education to make the BFHI more effective. It is hoped that this study would serve as an enlightenment to all in Taraba State with regard to nursing mothers on the new method of infant feeding exclusive breast feeding.

TABLE OF CONTENTS

TITLE	PAGE
Title	i
Declaration	ii
Certification	iii
Dedication	iv
Acknowledgment	v
Abstract	vi
Table of Contents	viii
List of Tables	xii
Operational Definitions of Terms	xiii
Chapter 1	
INTRODUCTION	
1.1 Background Information	1
1.2 Statement of the Problem	5
1.3 Objectives of the Study	6
1.4 Null Hypotheses	6
1.5 Significance of the Study	7
1.6 Basic Assumption	8
1.7 Scope of The Study	8

Chapter 2

REVIEW OF RELATED LITERATURE

2.1 Concept of Baby Friendly Hospital Initiative Programme 10

2.1.1 Origin of Baby Friendly Hospital Initiative Programme 11

2..1.2 Benefits of Exclusive Breast-feeding 16

2.1.3 Impediments to Exclusive Breast-feeding 25

2.1.4 Strategies for Promoting Exclusive Breast-feeding 33

2.1.5 Complications Associated With Exclusive Breast-feeding at the Early Stage 38

2.1.6 Strategies for Coping with Exclusive Breast-feeding Complications 40

2.1.7 Education Propaganda 40

2.1.8 Maternal Legislation 40

2.2 Summary 43

Chapter 3

RESEARCH DESIGN AND METHODOLOGY

3.1 The Research Design 44

3.2 Population 45

3.3 Sample and Sampling Procedure 46

3.4 Instrumentation 48

3.5 Result of the Pilot Test 49

3.6 Data Gathering Procedure 50

3.7 Scoring of the Instrument. 51

3.8 Data Analysis Procedure 51

Chapter 4

RESULT AND DISCUSSION

4.1 Biodata Information 53

4.1.1 Distribution of Respondents by Age 53

4.1.2 Distribution of Respondents by Religion 55

4.1.3 Distribution of Respondents According to Level and Type of Educational Attainment 55

4.1.4 Distribution of Respondents by Residential Location 56

4.1.5 Distribution of Respondents According to User/Non-Users of BFHI 57

4.1.6 Distribution of Respondents According to their usage of BFHI 58

4.1.7 General Perception of Respondents on the Benefits of Exclusive Breast-feeding 59

4.2 Testing of Hypotheses 61

4.2.1 Hypothesis 1 61

4.2.2 Hypothesis 2 62

4.2.3 Hypothesis 3 64

4.2.4 Hypothesis 4 66

4.2.5 Hypotheses 5 68

Chapter 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary 70

5.2 Major Findings of The Study 71

5.3 Conclusion 71

5.4 Limitation of the Study 72

5.5 Recommendations 73

5.6 Suggestions for further Study 74

REFERENCES 75

APPENDIX: QUESTIONNAIRE 80

LIST OF TABLES

Table		Page
3.1	Population of Women as per the 16 Local Government Areas (LGAs)	46
3.2	Selection of stratified samples of Respondents from a population less than one million women in 8 Local Government Areas of Taraba State	48
4.1	Distribution of Respondents by Age	54
4.2	Distribution of Respondents by Religion	55
4.3	Distribution of Respondents by Educational Attainment	55
4.4	Distribution of Respondents by Residential Location	56
4.5	Distribution of Respondents According Users/Non-Users BFHI	57
4.6	Distribution of Respondents by According to BFHI Usage	58
4.7	Distribution of Respondents base on measurement of general perception of BFHI	59
4.8	Two-Tailed T-Test Analysis for Users Vs Non-Users of BFHI	62
4.9	ANOVA For Perception of BFHI Among Various Age Groups	63
4.10	Two-Tailed T-Test Analysis of Respondents by Religion	65
4.11	Two-Tailed T-Test Analysis of Respondents of Urban Vs Rural Location	66
4.12	ANOVA Summary on the perception of BFHI Among Respondents of Various Educational Levels	68

OPERATIONAL DEFINITIONS OF TERMS AND ABBREVIATIONS

BABY FRIENDLY HOSPITAL INITIATION PROGRAMME: This is a global effort to promote, support and protect breast feeding the aim of which is to reduce infant morbidity and mortality.

CONVENTIONAL BABY FEEDING - The feeding of an infant with breastmilk in conjunction with other fluids such as water, tea, honey, etc.

EXCLUSIVE BREASTFEEDING: Baby feeding method in which no other drink or food is given to infant except breast milk and is fed frequently for unrestricted periods from 0-6 months of life.

FULL TIME HOUSEWIVES - These are women who do not work outside their homes. They are not gainfully employed.

MENOPAUSAL WOMEN - These are women who have naturally stopped giving birth.

MORBIDITY - This is simply disease conditon

POSTPARTUM - This is the period following immediately after child birth.

AHRTAG - Appropriate health Resources and Technologies Action Group

BFHI - Baby Friendly Hospital Initiative programme

EBF - Exclusive Breast Feeding

FAO - Food and Agricultural Organisation

IBFAN - International Baby Food Action Network

ICCR - Interfaith Centre for Cooperate Responsibility

INFACT - Infant Formula Action Coalition

PAG - Protein Adversary Group

SH - Specialist Hospital

TH - Teaching Hospital

UNICEF - United Nations Children's Fund

WABA - World Alliance for Breastfeeding Action

WBW - World Breastfeeding Week

WHA - World Health Assembly

WHO - World Health Organisation

CHAPTER 1

INTRODUCTION

1.1 Background Information

The Baby Friendly Hospital Initiative Programme (BFHI) advocates exclusive breast-feeding for babies. Exclusive Breast-Feeding (EBF) is the feeding of infants with breast milk only without supplement of any kinf. It is this practice that the BFHI recommended as feeding method of choice during a child's first six months of life. The BFHI programme wants people to realize that feeding infants strictly on breast milk from day one to six months is beneficial; that it ensures optimal health, growth and development, and that the age long conventional method of using breast milk side by side with water and herbal teas to feed babies, is hazardus to the infant's life and so should stop.

Documentary evidence showed that the practice of supplementation takes place in most cultures of the world. In this regard, Khwaja (1995) observed that in Pakistan, as in many traditional cultures nearly all mothers wished to breast-feed their babies but not exclusively on breast milk. He stated that mother's colostrum was usually thrown away. In its place, water, herbal tea and honey were given to infants at birth. Similarly, Fakumoto & Kanashiro (1994) reiterated that in Peru most mothers breast-feed their infants, but EBF was rare. The above authors agreed that most mothers supplement breast milk with herbal tea as well as other forms of milk to feed their babies. Nigerian women too are no exemptions as not all of them feed their babies exclusively on breast milk. Njuepuome (1995) confirmed this when she remarked that, the right to feed the infants with breast milk is not fully exercised by

some Nigerian women. This might be due to ignorance and some wrong notions held about breast-feeding which the BFHI came to correct.

Arguing against supplementing infants feeding, King (1993) explained that the breast milk contains all the water that a normal baby required to survive and grow either in the temperate or tropical climate. She went further to say that other drinks have more sugar and very little nourishment. On the same issue, WHO/UNICEF (1994) remarked that giving of water, herbal or glucose solutions to infants is not only unnecessary on nutritional grounds but that it also reduces the infant sucking capacity which in turn reduces the mothers lactational stimulus. It is, therefore, universally agreed that supplementation with whatever fluid even water at the early stage has no nutritional value.

After World War II, many families were financially handicapped, and this forced many mothers to take up paid jobs outside their homes. And as expected, infants feeding became a problem. Consequently, most nursing mothers who hitherto had breast-fed their babies, resorted to using baby formula to sustain their infants while away from home. The effect has been a decline in breast-feeding especially during working hours.

Research reports from many parts of the world indicated serious decline in breast-feeding. Esterik (1989), for example, found that the rate of decline in breast-feeding among American Women which was put at 50 percent in 1946 had dropped to 25 percent by 1956. And because the infants of the Post World War II Baby Boom era depended largely on the

baby formula, the products witnessed expanded market. Ogala (1996), on breast-feeding in Europe and America, reported the decline from about 90 percent in 1920 to less than 20 percent in 1970s. In Nigeria the author reported that in 1990 about 98 percent of the women breast-fed their babies hapharzadly while only 2 percent could be said to breast-feed their infants properly. The forgoing evidence suggested that women are no longer baby friendly any more.

Another meal for feeding infants which appears more acceptable to babies than herbal tea and water is artificial baby milk. Although this milk is more acceptable to infants than water, it has been found to be nutrient deficient compared to the breast milk. In recent times, however, the harsh economic conditions which pinched on the purchasing powers of every family have also affected the ability of most nursing mothers, to provide sufficient quantities of artificial milk. Thus, the available baby formula which in itself are nutrient deficient are again over-diluted with water, some of which are from questionable sources. The results over the years have been that most of the babies fed this way may become vulnerable to different diseases and some often die prematurely. To avoid malnutrition and disease ridden consequences of the aforementioned conventional mode of infant feeding, exclusive breast-feeding under the **BFHI** has been put up in many important Nigerian hospitals. The thesis of the programme is breast-feeding based on the milk from the breast of the nursing mother without supplementation of any kind. Thus the BFHI expects that breast-feeding should last from day one to the six month of the life of an infant.

On the benefits of the EBF, World Breast-feeding Week (1996:5) Summarized the benefits in the following words:

> *Exclusive breast-feeding promotes development in the community by ensuring the survival of healthy children that grow up to become healthy leaders of tomorrow. It protects the environment since there are no empty cans and waste left over for disposal. It encourages and promotes child spacing and therefore a healthy population communities have lower child death rate. It promotes mother-child bonding which ensures the community of emotionally stable and happy population. Right way of breast-feeding promotes better overall health for women and more efficient roles in the community.*

The World Health organization (WHO) has reported over one million - children deaths annually while more millions suffered impairment from inadequate breast-feeding. Ogala (1996) estimated the infants mortality rate in the developed and developing countries in this order.

1. Developed Countries: Out of 1000 live born infants, there are about 10 mortality cases before the age of five months.
2. Developing countries: Out of 1000 born infants, there are 190 mortality cases before the age of five months.

This is an indication that, there is higher mortality rate in developing countries than in developed countries. Ogala (1996) observed that diarrheal diseases, vomiting, malnutrition and acute respiratory infection are some of the infant diseases responsible for these deaths.

1.2 Statement of the Problem

The art of breast-feeding is as old as creation itself. From experience the first meal usually given to new born babies in most parts of Africa, especially Nigeria is water. Herbal tea, for bathing and drinking, also form important feeding supplement for infants in this country. Observation has however shown that supplementation with herbal teas, regarded in most African societies as multi-purpose curatives, was usually forced down the throat of the babies. Consequently, the babies often show rejection of these meals by vomiting some soon after being fed.

Series of researches have been conducted in an attempt to look into infants nutrition in some parts of the world. A good example of such works was Innocenti Declaration (1990) which stated that breast-feeding is a unique process that provides ideal nutrition for infants while contributing to their healthy development.

The preliminary investigations by this researcher showed that BFHI has published the benefits of EBF as well as the disadvantages of the conventional method of breast-feeding very widely. Despite the trouble taken to propagate BFHI programme, a large number of women in Taraba State are yet to be baby friendly. Their repulsive attitudes to the programme are manifest in how most of them go about with feeding bottles for feeding their babies. Sometimes, the feeders which often remain uncovered attracted flies. Often times, water from questionable sources is administered to the infants. It is unbelievable that despite the spread of the BFHI information all over the country, most mothers do not seem to see the harm they do to the infants and are reluctant to adopt the BFHI.

One wonders why women still have this negetive posture towards breast-feeding. Could this reluctance be attributed to lack of awareness of this programme? Could it be that women are still misled by superstitious beliefs despite their education? Could it be that they are ill-informed about the effects of breast-feeding? Can women be made to change from the conventional style to the exclusive breast-feeding? The answers to these questions may only be justifiably sought through research. The present study is intended to investigate woman's perception of the BFHI and compare this perception across the various categories of women selected for this study. The findings will enable this researcher to conclude whether negative view about the programme had hitherto been responsible for the lack of adoption of the programme.

1.3 Objectives of the Study

This researcher formulated three objectives to serve as a guide to the study. They are as follows:

1. To find out the general perception of women in Taraba State on the use of BFHI method of baby feeding.
2. To find out the perception of women on the benefits of the programme.
3. To find out whether or not the women have accepted the programme.

1.4 Null hypotheses

In order to achieve the stated objectives, this researcher formulated five null hypotheses as follows:

HO 1. There is no significant difference in the perception of respondents who practice **BFHI** method and these who do not.

HO 2. There is no significant difference in the general perception of **BFHI** among the respondents of various age groups.

HO 3. There is no significant difference in the general perception of BFHI between the Christian and the Muslim, respondents.

HO 4. There is no significant difference in the perception of **BFHI** between the urban and those of the rural respondents.

HO 5. There is no significant difference in the perception of BFHI among the respondents of various educational levels.

The above null hypotheses were tested at 0.05 level of significance. This is because level of significance is level of risk, and because the study is dealing with human beings, the chance of committing errors are higher. To avoid the high risk of errors the hypotheses are tested at the above mentioned level.

1.5 Significance of the study

Exclusive breast-feeding during the first six months of life is said to be beneficial in terms of promoting good development, health and survival of infants. This made the study very important. Firstly, the BFHI is a current topically and globally accepted issue. Bsides, it is said to contribute positively and serve as the best strategy for infant's survival. Again this programme presents a new idea or innovation in the area of modern infact nutrition. This will help raise healthy, morally and emotionally sound children who will grow up intellehentely.

Besides the documentary analysis, this study would provide information on women's perception of BFHI in Taraba state. This would aid the BFHI advocates to plan better

strategies for the promotion of the programme. The findings would educate all, especially nursing mothers in Taraba State on the ideals of EBF, thereby strengthening the programme among them. This would also mean a reduction on both maternal and infantile morbidity and mortality, leading to productivity of healthy people in the society as a result of the acceptance of the programme.

Again, the findings would give suggestion that would help to encourage nursing mothers to embrace and adopt EBF as a method of infant feeding.

Globally it is hoped that the findings would add to the body of literature useful for further studies on BFHI in Nigeria and particularly Taraba state.

1.6 Basic assumptions

1. It is assumed that some women are aware of Baby Friendly Programme.
2. It is also assumed that the benefits of the programme both to the child and mother/family are known to some respondents.
3. It is also assumed that women would respond to the questionnaire as honesty as possible.

1.7 Scope of the Study

The study was confined to nursing mothers in Taraba State of Nigeria. It covered nursing mothers in 8 Local Government Areas out of the 16. The nursing mothers were drawn from the market, hospitals, institutions, offices and homes. These places have been

chosen because they have a wide range of nursing mothers. This provided unique opportunity to involve, in the study, nursing mothers of varying backgrounds. This is also an important consideration as it would enhance generalization of the findings.

The study covered areas of benefits that are derivable from BFHI programme and how nursing mothers in Taraba State perceive these benefits. The focus on the perception of these benefits was to indicate the level of acceptance of the programme by the nursing mothers in this state. Also only nursing mothers in Taraba State were the target population. This is because it would afford the respondents to know from experience of nursing babies through other methods, whether the benefits of BFHI are true or not. The researcher does not intend to cover the implementation and even the structure of the programme. She does not intend to focus on the problem inhibiting the success of the programme because these areas could be covered by other researchers if detailed studies are to be carried out.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Breast-feeding has from time immemorial been and still is in many societies the mode of feeding infants. This mode of feeding is very crucial to the infant's life. Not only for its nutritional and hygienic properties, but most importantly for its immunological effects and its influence on growth, development and survival. It can be safely said that breast-feeding is a cultural norm which is entirely beneficial. In recent times, however, women in most part of the world have developed a changed attitude towards breast-feeding. In this chapter, this researcher looks at the various literature on breast-feeding under both conceptual framework and empirical background.

2.1 Concept of Baby Friendly Hospital Initiative Programme

Baby Friendly Hospital Initiative Programme (BFHI) is a recent concept in infant modern nutrition. Ogala (1996), defined BFHI as a high impact global strategy for achieving optimal infant nutrition through the promotion, protection and support of breast-feeding. He further pointed out that the hallmark of BFHI is exclusive breast-feeding. This method of breast-feeding is the feeding method of choice recommended by the BFHI during the first six months of life.

According to Haggai (1996), exclusive breast-feeding (EBF) means giving breast milk alone with no water or other substitutes for six months. He went further to say that breast milk is superior to all infant foods in terms of growth, nutrition and energy. Earlier, Krause (1961) emphasized that the healthy growth and development of infants depend more upon

good nutrition than any other factor. This position was also shared by Morley & Woodland (1979) who saw adequate breast-feeding as the only most vital ingredient in child's growth. To Ogala (1996) exclusive breast-feeding was not only the safest food for babies under the first six months of age but also an indispensable valuable nutrient. From the foregoing, it is clear that only exclusive breast-feeding in the first six months of infant's life can supply the necessary nutrients for healthy growth at the cheapest rate while at the same time, assuring high rate of infant's survival.

2.1.1 Origin of baby friendly hospital initiative programme

Baby Friendly Hospital Initiative Programme which has exclusive breast-feeding as its doctrine came into being mainly to rescue the infant's life from poor feeding. Documentary evidence shows that all mothers breast-feed their babies from birth, and up to the third year of life. Because of the importance attached to breast-feeding, some cultures give preparatory education to the young ones on breast-feeding to aid them take up the role successfully. Confirming the above statement, Ebrahim (1978) remarked that breast-feeding is the normal way of feeding infants in all peasant societies. In a study of forty- five different cultural groups it was found that infants were breast-fed for between one and half and two years. During this period,the mothers and their babies were looked after by the elder women of the immediate family. This was to ensure that the traditional practices were observed and the various rituals carried out accurately. A good point to this claim, is the expression of Ebrahim (1978) which pointed out that anthropological literature is full of descriptions of how peasant societies cope with orphans. Explaining further, he stated that the commonest way for the infant to be fed was by a close relative within the extended family. Mead in Ebrahim op-cit cited instances in

the village of Java where the infants were breast-fed by the deceased sister even though in several cases such a sister had never delivered. She stated that breast milk secretion was induced in such women by various means. Some of which are, eating specially prepared foods, herbs and roots believed to have lactagogue properties.

Although breast-feeding was promoted in most traditional societies in the past, it is curious to note that breast-feeding is becoming unpopular among the elites of Europe and America. Sharp regional variations were known to exit as far back as 1905. It was stated that in some provinces, majority of children were never breast-fed and there were places where almost all children were breast-fed. Similarly an analysis in 1900 of a large number of reports from all regions of Austria showed that it was common practice not to breast-feed infants during the 15th and 16th centuries. In Southern Bavaria infants were fed on pap instead of breast milk. It was said that there were reports of social disapproval and pressures mounted on the few mothers who were breast-feeding their infants. The above discussion noted that the natural practice which provided for the care and nourishment of the infants was neglected and abandoned. This act brought to a decline, and a gradual end to the normal way of baby feeding by mother's breast milk in most countries. Thus women in most part of the world resorted to feeding their babies with cow milk and other varieties of milk in the market. The result was pathetic. Ogala (1996). reported that the result of this change in infant feeding was explosive increase in infant's death traceable to improper feeding.

As earlier mentioned, BFHI is a timely call to curb this situation. Worried by the improper way of infant feeding, WHO/UNICEF began to seek the support of the world

leaders to arrest the situation. World Health Organization and United Nations Children's Fund then founded BFHI with the support of world leaders. Baby Friendly Hospital Initiative Programme is a brain child of series of conventions. Among such conventions were the joint WHO/UNICEF meeting on infants and young children, the International Convention on the Right of children, the World Summit for Children and the Innocenti Declaration in Italy. These conventions were directed at ensuring adequate infant feeding. These organizations had according to Ogala (1996: 3) for their aims.

> *the global goal of optimal maternal and child health and nutrition. All women should practice exclusive breast-feeding from birth to six months of age. Thereafter, children should continue to be breast-fed while receiving appropriate complementary foods up to two years of age.*

Earlier in 1981, the World Health Organization drew up the International Code of Ethics for the Marketing of Infant formula and weaning food. This organization called upon all member nations to adopt the code and to make its provisions law in their countries. A number of countries have prepared their own codes based on WHO code, in some countries these still remain as recommendation. In a few countries, the code has become a law. Nigeria, for example, has prepared and incorporated its code into a Decree 41 promulgated in 1991. Baby Friendly Hospital Initiative Programme was then launched widely in the year 1991. Implementation in Nigeria was first limited to the Teaching Hospitals (TH) and Specialist Hospitals(SH), later to the states and local government areas and finally private hospitals and clinics. It is worthy to mention that Taraba State launched its own chapter of the BFHI programme in 1997.

Before the inception of BFHI, the Federal Ministry of Health had zoned the Primary Health Care Programme into four zones namely: A,B,C, and D. After the launching of the BFHI, it was incorporated into the existing primary health care zones. Nigeria complied with the implementation guidelines issued by the Innocenti Declaration. Thus the operation in Nigeria was as follows:-

- National Coordinator-National BFHI Committee
- Zonal Coordinators-Zonal BFHI Committees
- State Coordinators-State BFHI Committees
- L.G.A Coordinators-BFHI Committees
- Facility Coordinators- Facility BFHI committees
- TH/SH/ Coordinators-TH/SH BFHI Committees.

United Nations Children's Fund/World Health Organization had defined 10 ways in which maternity and other units can implement the BFHI Programme. These are collectively referred to as " ten steps to successful breast-feeding ". When any facility has implemented all the ten items on the steps, a team of global assessors were nominated at the FG level to assess the facility for its adequacy. If found satisfactory i.e. a score of at least 90% the facility is designated as "Baby Friendly" at a colourful ministerial ceremony.

As at now, over 800 health facilities have been designated Baby Friendly in Nigeria. These have been divided into the 4 Primary Health Care Zones as follows:-

ZONE A: Comprises Abia, Akwa Ibom, Anambra, Benue, Cross River, Ebonyi, Enugu,

Delta, Bayelsa and Rivers States.It has its headquarters at the University of Calabar Teaching Hospital.

ZONE B: Consist of the seven states in the South western part of the Nigeria-Lagos, Edo, Ogun, Oyo, Osun, Ondo, and Ekiti. It has the following designated as baby Friendly. UCH Ibadan, OAU Teaching Hospital. Seventh day Adventist Hospital, Ile Ife.

ZONE C: Comprises 7 states-Kaduna, Katsina , Kebbi , Kwara, Kogi, Niger, Sokoto and the Federal Capital Territory (Abuja). It has its headquarter in Zaria A.B.U Teaching Hospital. Out of the 800 Baby Friendly facilities in Nigeria, about 75 of these are located in zone C.

ZONE D: Covers Kano, Plateau, Bauchi, Gombe, Taraba, Yobe, Borno, Adamawa and Jigawa states. It has its headquarters at Jos University Teaching Hospital.

Taraba State which is the major focus of the present study has on the ground, one designated facility. Besides, there are seventeen other facilities ready for assessment. Despite the limited number of designated hospital facilities, the estimated number of women mobilised on breast-feeding is about 264 and estimated number practicing exclusive breast-feeding is said to be about 800. Monitoring exercise and reassessment are regularly carried out in the designated facilities throughout the country. From the above description, it is clear that BFHI came at a needy time for infants. As stated by Issele-Uku (1995), the Baby Friendly Hospital Initiative Programme is the greatest good that has ever happened to humanity.

2.1.2 Benefits of exclusive breast-feeding

Exclusive breast-feeding in recent time gained wider campaigns at national and international levels. This has culminated into BFHI with elaborate outfits for its implementation. The exercise has cost a lot in terms of human material and financial resources. It is therefore expected that there should be some benefits derivable from the exercise. A search into the literature revealed that there are benefits in the EBF. The benefits of the exercise are not for the child alone but also extend to the family and the nation at large.

The benefits of EBF to the child, are much more than mere supplying nourishment. It is a form of mothering which brings him happiness in early life while at the same time providing security. In what looks like a confirmation of the above, Davis (1972:138) said that:

> *when a child is happy, warm and friendly, it is a sure sign that he was nursed until his emotional needs as an infant were fulfilled... a child who has not been nursed unconsciously feels life long rejection, has more difficulty in adjusting as a social being and unconsciously harbours hostilities.*

He asserted that appropriate nursing gives a greater sense of fulfillment to the mother. Most importantly, he said, the mother and the child are nearer and dearer to one another. And the children too grow up to be happier, warmer and more stable individuals. The study by Newton (1971) of three- year old American infants, group (a) exclusively breast-fed and group (b) exclusively bottlefed is a revelation. The findings revealed that the exclusively breast-fed youngsters were more assertive, more outgoing, exhibited higher self esteem and moved along the developmental scale more rapidly. This implies that breast-feeding helps

the mother and the baby to develop a close, loving bond. Having a close relationship with its mother may help a child form good relationship with other people and help the child to develop normally. A number of international organizations like the joint Protein Advisory Group (PAG) of the food and Agricultural Organizations (FAO), World Health Organization (WHO) and United Nations Children's Fund (UNICEF). All said that exclusive breast-feeding would do more than just supply of nutrients. These bodies attributed biological communication between the mother and the child which is relevant to adult personalit development to the function of EBF.

Spock (1969) stated that breast-feeding has a big advantage of satisfying the baby's suck instinct. Expressing the same view, Macauley (1979) posited that the sucking instinct is so strong in human beings that lack of what to suck might make a child suck any available object. He went further to explain that sucking is a natural desire that must be satisfied. And that the baby who sucks a nipple, gains more satisfaction than the one that sucks a feeding bottle. This, according to Ashikeni (1995), is because sucking a bottle is more tiring for small babies. Not only does it cause nipple confusion which makes it more difficult to breast-feed later but also infection. He went on to add that breast-feeding soothes and comforts a child in pain or in fright.

Breast-feeding is the only low cost high protein food which has the effect of strengthening mother-child relationship. The immunity conferred by the globulins, and other constituents in breast milk, serve as a reducing agent in the event of diarrhoea and other

related diseases. Vermeersch & Williams (1977) described breast milk as protective against morbidity and mortality, using such special antibodies as Escherichia coli (E. Coli) to prevent diarrhoea. Conforming the above view was the Joint World Health Organization (1989) which stated that infants up to two months old who were not breast-fed are at least twice as likely to have diarrhoea. The United States National Institute of Environmental Health Sciences (1990) stated that, among healthy babies, breast-feeding decreases the mortality rate during the first year by 4 per 1000 babies born in U.S., Davis (1972:146) was explaining the multi-dimensional benefits of breast milk when he said:

> *This milk, known as colostrum, is such a nutritional power house that any infant not given is a disadvantaged child. If you do not wish to nurse your baby at any other time, get him off to a good start by giving him colostrum. It decreases medical expenses, saves extra work on your part, and usually prevents the heartbreak which can occur should your baby become ill.*

On the contribution exclusive breast-feeding could offer as child survival strategy, Ogala (1996) expatiated thus: "diarrhoeal deaths are best prevented by prompt and adequate rehydration; for infants, the breast milk is the best oral rehydration fluid". He claimed that breast milk is readily available and supplies both calories, electrolytes and water. He also rated breast milk high for its growth capability on infants. In this aspect, Obinya (1990) admitted that growth can be more rapid in childhood. In order to achieve what he described as growth spurts, he advised that children should be given the chance to suckle more on the breast. What this means therefore is that supplementation at this critical period may be detrimental to the infant's growth, development and health. Even in the under nourished communities, Morley

et al (1979) opposed supplementation on the ground that it may have a stunting effect on the child's growth which may be damaging to its intellectual capacities.

On their part, Unwin (1952) and Gutherie (1971) opined that the process of breast-feeding often develops the jaw muscles. This, the above authors argued, can reduce the incidence of crowded dentation in later years. Davis (1972) also saw the benefits of exclusive breast-feeding as including beautification. According to him breast-feeding aid the formation and arrangement of teeth in the dental arch. The study conducted by some European scientist to measure facial development seem to support the above claim.

The study sampled 327 individuals in relation to the length of time they were breast-fed. It found that persons who were breast-fed for longer period had better facial contours than those who were never breast-fed. They therefore concluded that EBF in the first six months can control a person's facial contours for the rest of his life. The above study is therefore useful because it conveys a lot of information derivable from breast-feeding and after-effects of poor breast-feeding. However, the study did not indicate the overall population of the sample. Methodology, research instrument and the statistical techniques were also not mentioned. Despite these shortcomings, the study has offered and added a lot to this present research.

Haggai (1996) posited that breast milk contains some substance known as taurine. This is believed to be promoter of intellectual development in infants. Many studies and works

have confirmed this argument. Davis (1972) reported the study in Europe by a group of scientist. This study found that none of the exceptionally bright children with an intelligence quotient (IQ) of 130 or higher was bottlefed. Lucas, Morley, Cole, Liter & Lesson-Mayne (1992) carried out a study on breast milk and intelligence quotient. They sampled 300 preteen children. All of them weighing 1850g at birth. These children were monitored at the special baby unit of Cambridge hospital for a period of eight years. Intelligence Quotient was assessed using a modified Weschler Intelligence Scale. The result showed that babies who were fed on mother's milk had significantly higher I.Q. than babies that were not fed on mother's milk. The studies above showed that human milk supports the development of intellectual capacity in infants. According to them, this is through the use of the nutrients in the breast milk which are indispensable to biochemical development of the central nervous system. such substances include, lactose, specific polyenic fatty acids and thromboplastin, all of which are key elements in rapid brain growth.

Another benefit of exclusive breast-feeding is its ability to aid clear vision. Birch (1993) was one of the authors who viewed breast milk as a contributor to clearer vision. His study on breast-feeding and optimal visual development, examined the visual capacity of both preterm and full-term infants, fed on breast milk and those fed on formula. He confirmed that breast milk aided the infants to develop good sense of sight. On the same issue, the Food Basket Foundation International (1996), established that vitamin A an important micro nutrient needed for proper functioning of the eye is contained in the breast milk. This body went on to explain the role of this vitamin in preventing nutritional blindness. It argued that

human milk alone provides sufficient vitamin A activity (retinal plus caratene) and that the breast milk has continued to be the largest source of Vitamin A in infants' diet in developing countries. The body maintained that the infants fed on breast milk have less chances of contacting nutritional blindness . Therefore depriving the child of breast milk, is as bad as plugging its eyes out.

Many authors and some well established information sources, have lent support to exclusive breast-feeding. It is their view that breast milk is the main source of energy to infants. For example, the World Encyclopedia (1992) contended that mother's milk is a complete source of food for energy for the baby. Similarly Grolier (1991) posited that breast milk gives the baby the right nutritional balance at a right temperature. It maintained that breast milk is readily available once the mother's body has established a supply. The UNICEF (1996:2) concluded the above statement thus:

> *Breast-feeding ensures an economical supply of hygienically clean food direct to the baby provided by the mother, who during pregnancy and lactation, receives adequate balanced diet. Also breast milk is the original natural convenient food for infants, needing neither culinary preparation nor feeding utensil and available immediately.*

The above literature established the point that there is no other food which can potentially satisfy the basic needs of infants as does breast milk. Therefore, depriving the child of breast milk is psychologically devastating, which may lead to destruction of self-esteem and engagement in untold crimes against oneself and the society. The discussions thus center on the benefits of exclusive breast-feeding to the infants. Just like the infants, the mothers who

practice exclusive breast-feeding also stand to gain from the exercise. In this regard, the World Alliance for Breast-feeding Action (WABA) saw breast-feeding as an empowerment of women. It condemned the biomedical model and business group engaged in promoting bottle feeding. The body stated that exclusive breast-feeding is more of a challenge to women's power. This pointed to self control and self reliance which would lead to increased confidence in their ability to meet the needs of their infants. It concluded by saying that breast-feeding challenges the notion that the breast is simply sex object.

World Alliance for Breast-feeding Action (WABA) (1995) noted that EBF is an effective means of family planning. The body further explained that in areas where artificial contraception was unaffordable, unavailable or unacceptable, EBF would serve a better purpose. The family planners referred to this as "Lactational Amenorrhea" (LAM). Esterik (1995) said that part of the woman's power to control her own body concerns contraception. And that besides the spacing effects, exclusive breast-feeding offers safe contraception without adverse effect on quantity and quality of the breast milk. After all, she further pointed out, the side effect of high dose hormonal contraception pills is decreased milk production. Similarly, Ratner (1975), and Lartham (1996) acknowledged the spacing effect of exclusive breast-feeding. The above authors noted that a woman who breast-feeds exclusively for the stipulated period would achieve natural child spacing with ease. This they argued is possible as EBF tends to defer resumption of ovulation and menstrual cycle for some time. Thus giving the mothers a much longer time to look after the baby before the next pregnancy. This would also afford the baby the security that comes from the undivided

maternal attention.

Of no lesser importance is the fact that exclusive breast-feeding could provide protection against breast cancer (Haggai, 1993). Also Ratner (op-cit) quoted a doctor as saying, failure of the breast to properly perform its physiological function was the most consistent apparent factor in the genesis of breast cancer. Thus, if one nursed one's baby as nature demanded, one is less likely to develop breast cancer later in life. Kristz-Silverstien (1992), Kramer (1993) and Rosenblatt & Thomas (1993) all agreed that exclusive breast-feeding provided maternal protection against ovarian cancer. And that it is also protective against osteoporosis and hip fracture in later life and promotes maternal weight lose. They said that, ovarian cancer is caused by high levels of oestrogen. According to them, during postpartum amenorrhea, oestrogen levels are low consequently there is reduction in the risk of ovarian cancer. It is gathered that successive pregnancies usually increase bone mineral density of the wrist radius and hip. Only the woman who breast-feed exclusively would achieve higher bone mineral densities at these sites which would serve to prevent osteoporosis and hip fracture.

Certain authors, Ogala and Haggai (1996) for example, posited that EBF reduces the risk of retained placenta and postpartum hemorrhage. According to them, during lactation the uterus contracts vigorously and so closes up, thus preventing bleeding. They went further to explain that this is because of the action of oxytocin in the blood stream to the uterus which helps in stopping bleeding.

On the benefits of EBF to the mother, Kramer observed that weight control could be achieved through the process. He noted that mothers who breast-feed exclusively have significantly larger reduction in hip circumference and are less above their pregnancy weights at one month postpartum. In general terms, the forgoing literature provided further support to the accumulating evidence that EBF has a lot of benefits to mothers as well as to infants.

The family and the nation at large are not left out of the numerous benefits of EBF. For the family, EBF reduces poverty in the household by saving money which would have been used for buying formula, feeding bottles and teats, sterilizing units and chemicals. It also lessens hospital attendance bills due to possible reduction in childhood illness gotten from safe breast milk. For the nation, Exclusive Breast-feeding would save cost of importation of artificial formula, lessen health care cost and affirm women's active contribution to the nation. Exclusive breast-feeding has wonderful benefits to both mother and child that nothing else could offer. As such breast-feeding is the only best gift a mother can give to her child. Ratner (1975:3) puts it thus:-

> *you look beyond the steady reputation of days at the breast. The security of your arm, the soft warmth of your breast, the ready comforts of your milk, the quieting pulse of your body all precious food to fill out his body quicken his soul.*

Considering all these, it is clear that exclusive breast-feeding protects the child, promotes his growth physiologically, socially, emotionally, mentally and psychologically. It ensures good maternal health and raises confidence leading to maternal fulfillment. Finally it enriches the

family and boost the nations economy through reduction of infant and maternal morbidity and mortality. A healthy nation is a wealthy nation.

2.1.3 Impediments to exclusive breast-feeding

Breast-feeding is natural to motherhood, and should therefore not require the kind of on going vigorous campaigns. There is, however, the unfortunate trends towards shortening the duration of lactation and making more extensive use of breast milk replacers. The use of artificial feeding with cow milk using feeding bottles, has been described by Jelliffe (1978) as one of the most disastrous imports from the western world in recent times. The tendency for the mothers to stop breast-feeding early more or less voluntarily, is spreading from the privileged to the less privileged classes in developing countries. This can be traced to a large number of factors. Ngeri-Nwagha (1996) credited this dangerous trend to inadequate education of the mother on the benefits of EBF.

There is a widespread ignorance about the function of food as provider of health as against the false assumption that a full belly is all that is necessary from food. This accounted to some extent for the nutritional diseases in these places.It is not conceivable that a person who is never hungry can suffer from physical ailment because something is lacking in the diet.

Environmental factors also impede EBF. This affects nursing mothers in paid jobs more than the self-employed. This is because nursing mothers cannot take babies along with

them to the offices.

Issele-Uku (1995) and Njuepuome (1995) both identified socio-cultural beliefs and practices as some of the impediments to EBF. The first 2 to 3 days after delivery is the period when colostrum is richest in breast milk, but this is squeezed and thrown away. This is because the traditional practice of cleansing of the breast forbids the use of the colostrum, the aspect of breast milk believed to be stale and should be squeezed out. Some cultures even forbid women to breast-feed their first children. Njupuome in particular went a step further to enumerate certain socio-cultural beliefs and practices that constituted real threats to EBF. These include:-

- Breast-feeding flattens the breast
- Disuse of colostrum
- Use of prelacteal feeds, herbal mixtures water or glucose drinks.
- Sour or stale breast milk
- Hot breast milk can make a baby sick
- Mothers should not have contact with their first sons
- Breast-feeding in lying down position is a taboo because this leads to flow of pus from the baby's ear.
- Coitus is discouraged when mother is still breast-feeding.
- Some food items are disallowed for the nursing mother, e.g. sweet fruits, drinks because the baby will suffer from diarrhoea and soreness of the perianal region (jedi-jedi).

- Baby will be addicted to the breast, etc.

Apart from the above restrictions, lactating mothers are sometimes required, in compliance with traditional customs and rites, to take some foods of poor nutritional value while forbidding high protein foods. Lartham (1979) observed that many taboos in Africa, as elsewhere, are the protein rich animal foods which those groups of community needed most. For instance, the taboo which forbids women from eating eggs. This is with the belief that women become sterile if they eat eggs. An example of the Bahaya people was given whose pregnant women should not eat meat, fish and eggs. Further more, most cultures do not see how breast milk can quench the infants thirst.

While studying the water requirement of exclusive breast-fed infants, Almroth (1978) calculated three urine samples from each of Jamaican infants in a hot climate. The specific gravity of each of the 16 infants ranged from 1.005 through 1.015 with mean of 1.00g. The temperature inside the houses did not differ much from that of outside. While the inside one ranged from 23.5 to 32.2c, that of the outside was from 24.1 to 27.6c with mean of 28.3c, and 27.6c respectively. The study showed universally low urine values, meaning that the exclusively breast-fed infants were managing well in the hot climate without additional water.

Searching further, Sachdev, Puri, Satyanarayana & Kumar (1991) on water supplementation for exclusively breast-fed infants during summer in the tropics found that

97% of 34 nurses and 6% of 70 doctors favored supplementation. A sample of 45 healthy male exclusively breast-fed babies of 1 to 4 months was used. Nine of them never received supplemental water. This sample was adequate. A random selection of 14 infants in group I (breast milk only), while the remaining 22 infants in group II had breast milk plus supplemental fluid. The babies all were studied in hospital. The breast milk was measured by weighing the infant before and after each form of feeding. Also the water intake was by calibrated bottles and urine output by accurate collection and measurement. Statical analysis used were the chi-square, student test, paired t-test, wixon rank test, Pearson's correlation and analysis of covariance. These are all appropriate for the study.

At maximum room temperature of 34-41C and relative humidities of below 9-60% it was found that the group II mean water intake was 11% of total fluid intake. Both breast milk intake and the total fluid intake were higher in group I than in group II. But there was no significant difference between the groups in urine output, weight change or rectal temperature whether or not the factors adjusted for included total fluid intake.

The result showed that exclusively breast-fed Jamaican infants did not need supplemental water to maintain water homeostatistis. Another important opinion in the study was that supplementation could be hazardous. However, the respondents agreed that water supplementation was necessary during summer. This researcher is of the opinion that the diversity of response is a reflection of the lack of clear recommendations or consensus in medical books and child care manuals. However, the research findings in the developing

countries tended to agree that both exclusive breast-feeding and water supplementation are important, but that exclusive breast-feeding is more beneficial. And it is believed that water is used to complement direct breast-feeding in the dry part of Northern Nigeria, mostly in hot periods.

Worthinton et al (1977) saw parts of the problem in socio-economic context. He stated that women who were economically well off or had attained some level of improved standard of living rarely attached importance to EBF. According to the author these women believe that, EBF is not keeping with the modern-day. Many of them stated that they preferred bottle feeding because they did not want to be tied down or they must return to work.

The physiological and psychological factors are of equal importance in carrying out EBF. From the physiological point of view, lactational performance is related to several factors in both the mother and the infant. Thus, a number of researchers have found that breast milk production, secretion and the flow are all activities that are affected by the state of the mind. Kitzinger (1979) and Kaine (1988) both admitted that, the secretion of milk is one of the brain activities which is affected by the state of the mind. They went on to say that if one is anxious, afraid or unhappy she may produce little or no milk at all. Grolier International Encyclopedia (1991) supported the above authors, stating that the nervous hormonal relax that ejects the milk could be blocked by anxiety and stress. In an effort to prove the effect of physiological factor on lactation, Newton cited in Ebrahim (1978)

conducted a study. In what looked like self-examined test, Newton subjected herself while breast-feeding to distressful conditions by placing her feet in iced water, or her toes pulled painfully. She at another time had to answer complicated mathematical problems while her mistakes were punished with electric shocks. She discovered that the milk ejecting reflex was inhibited, allowing just 99g of milk collection as against a mean of 196g of milk when there were no distractions.

Spock (1969) and Ebrahim (1978) both agreed that the suckling ability of the infants depends on their physiological mechanism. Ebrahim (1978:79) in particular went a step further to say that:

> *...the suckling stimulus by the baby results in the formation of milk and in its ejection, but there is also evidence to show that the influence of hormones circulating in the maternal blood stream moulds the nipple to the suckling efforts of the baby.*

In a bid to demonstrate the place of physiological factor on breast-feeding, Brimblecombe and Bartrop (1978) stressed the importance of rooting reflex in the infants. They contended that this reflex is best elicited when the baby is hungry. And that swallowing, suckling and rooting reflexes are absent or weak in the premature infants. It seems obvious therefore that premature birth can be an impediment to EBF if not carefully handled. In addition to reflex mechanism, Ebrahim (1978) and Kitzinger (1979) separately asserted that sedative and anaesthetics given to mothers before or during labour can reach the infant. This would cause unresponsiveness to environmental stimuli, and the consequent inability of the new baby to

respond to breast-feeding for several days. Included in the opinions of the authors reviewed above are the signals of drug abuse that need be guided against pregnancy or lactation.

Psychologically, lactation depends largely on the nursing mother's disposition to the exercise. Morley et al (1979) and Kitzinger (1979) both believed that the woman's personality, life experiences and attitudes, have important roles in breast-feeding. They maintained that women with positive attitudes who react to their babies with joy and delight would be more successful in breast-feeding. Ebrahim (1978) saw this in the context of socialization. He stated that the societies owe it a duty to pass on the ideals of breast-feeding to the young ones. Observing further he noted that the extended family system and the close communal life of the village present continuing opportunities for the young to observe the dynamics of breast-feeding. And that by this the adolescent would grow up with a positive attitude towards lactation.

According to PAG (1971) the health services are also to be blamed for the declining rate of breast-feeding. In its opinion PAG (1971:20) stated that:

> *The extensive introduction and indiscriminate promotion of expensive processed milk-based infant foods in some situations may constitute a grave threat to the nutritional status of the infants for whom they are intended. The sophisticated luxury and fashionable appeal of such products to the mother may lead to the undesirable effect of displacing the child from the breast in circumstances where the mother may have no access to affordable alternative foods which can be given safely and without risk of alimentary infections and diarrhoeal diseases.*

Esterik (1989) maintained that technological advancement is another important factor to

successful breast-feeding. He attributed the blame to the multinational pharmaceutical and food companies. That these companies encouraged the comparison between breast milk and their products. Nestle for instance launched massive and unethical campaigns directed towards medical personnel and consumers. The sales promotion actually encouraged nursing mothers in the developing countries to abandon breast-feeding.

Commenting further, Esterik (op-cit) stated that groups like INFACI and ICCR were against the producers of infant formula promoting artificial feeding in developing countries. They argued that breast-feeding is prevalent in the developing areas but that the technology for adequate use of baby milk was absent. The demand of the INFACI, as stated, included accurate information about infant feeding and the possible hazards of bottle-feeding. This information, they stressed, should neither be promotional nor the sort to idealize bottle-feeding. Infant Formula Action Coalition (INFACI) also objected to the distribution of free samples and supplies of baby formula to hospitals, clinics and homes of newborns. The use of infant foods especially the processed weaning foods, and the way they are advertised reflects the adoption of many Western Foods in developing countries.

An example of the portrayal that everything Western must be good is the advertisement of lactogen. On it is a beautiful white baby with blonde hair, looking incredibly happy and healthy. Esterik (1989) saw the problem of bottle feeding as another process of recolonization aided by the art of prestige in the artificial baby foods in the developing countries. Morley et al (1979), observed that the most respectable women in rural

communities have usually been the first to start bottle feeding. These are often female doctors, nurses, teachers and other educated women, who are supposed to give other nursing mothers moral support and child care information. Consequently, the information they dished out to nursing mothers relate to company's products.

From the foregoing, although industries and companies may claim that they create employment opportunities, given the high technology, this contributes nothing to economic development. This is because of the wastage of scarce resources on the products that are made from cheap raw foodstuffs, and converted into over-cooked, over-packaged, over-sugared, and salted over-addictive, over-publicised and over-priced commodities. While in general terms technology advancement has immensely benefited mankind, artificial baby feeding is a disaster. All the sources referred to concluded that its influence has been retrogressive and very detrimental to breast-feeding on which the continued survival of mankind rests. In a nutshell therefore, infant formula sales are a drain on the income of the impoverished Third World families and nations.

2.1.4 Strategies for promoting exclusive breast-feeding

The foregoing discussions on the impediments to EBF, call for renewed effort at returning to it. This becomes necessary and urgent in the words of Carballo cited in Freir (1980) because ineffective practice of EBF has meant a decline in good and healthy development of infants. A developing nation like Nigeria ought not to copy industrialized nations in the use of baby formula. This is because industrial nations possess good outfits of

development for better control of infant morbidity and mortality. As a result, attention was diverted.

In 1981, the World Health Assembly (WHA) adopted 'International Code of Marketing of Breast milk Substitutes' to tackle the problem of unethical marketing of baby milk. But there was lack of compliance. The code which provided some regulatory measures made it mandatory for member nations to ensure that complementary foods were not marketed in ways that would undermine breast-feeding. Appropriate Health Resources and Technologies Action Group (ARHTAG), (1994) reported less breast milk intake by infants because more of the complementary foods were eaten. The International Baby Food Action Network (IBFAN) (1994) in its own international code directed health workers to resist accepting funds for conferences, equipment and studies from baby milk industries. In its resolution, it urged government to ensure that the financial support for professionals working in infant and young children health centres, did not create conflicts of interest especially with regards to the BHF.

As pointed out by Abbas (1994-5) lack of information about EBF was common. She noted that nearly all mothers believed breast milk was good for their babies but they did not know that EBF was best. The problem according to Tompson as stated in Frier (1980), was because many expectant mothers did not realize just how different breast-feeding is, and are totally unprepared for the way and manner it should be giving to new born babies. He saw the need for educating nursing mothers on breast-feeding issues. Thus, Helsang as quoted by

Frier (1980) advised the encouragement of informal education. He said where western education is not possible, traditional education is necessary on lactation. However, traditional education directed at starving the baby should stop.

The idea of information dissemination was well stressed by Ngeri-Nwagha (1996). He also recommended a transformation of societal norms to recognise the value of breast-feeding in order to engender the requisite community support for breast-feeding. In his own contribution, Tompson as reported in Frier (1980) supported pre-natal education especially the recommendations by WHO/UNICEF (1996:2), requiring that:

i All mothers, particularly during pregnancy should be given necessary education on breast-feeding

ii Obstetrical procedures and practices should support the policy of promoting breast-feeding, unnecessary sedation, routine use of episiotomy and lactation suppressants should be avoided;

iii Breast-feeding should be initiated as soon as possible normally during the first half hour and mothers should be permitted to keep their infants with them

iv The entire family should give support to the nursing mother especially the husband.

v All babies should be given colostrum and that the use of supplementary bottle-feeding, water and formula should be avoided.

iv The effect of contraceptive on breast-feeding should be well recognised and if it must be used, consideration should be given to method which do not interfere with normal process of lactation.

Similarly, Lowen in Frier (1980) suggested that breast-feeding education should be given to aid in nursing decisions regarding the method of feeding and as a tool for achieving the goals of breast-feeding. He went further to stress that breast-feeding education would be more effective if it included repetition, printed materials and constant contact with other parents. He also stated that health workers have the major role for educating parents. He made a categorical statement that a mother with a premature baby is faced with a lot of unusual problems not encountered in the general breast-feeding population. And that improved information dissemination tailored to the family's special circumstances may provide a stronger foundation for the breast-feeding education of a mother of a prematured baby.

As with the general education, there is also need for specific education on nutrition for the lactating mother. Unspaced pregnancies often result to depletion in the mother of necessary nutrients, unless she has eccess to exceptionally good diet. As Lartham (1979:15) pointed out:

> *A woman receiving a deficient diet especially one providing for little total quantity of food and energy, will often give birth to a baby that is smaller than if she were adequately nourished during pregnancy. Since mortality is more likely in the underweight babies, poor maternal diet are readily seen to increase the chances of death in the baby.*

He further added that "the nutritional needs of a woman during pregnancy are greater than at any other times in her life. This would enable her to build-up in her own body the tissues and organs of the new human being. This is because the nine months of pregnancy must be considered a period of stress during which the nutrients demand of the developing foetus are

superimposed on those for normal maintenance of the adult woman. According to Guthrie (1971) a pregnant woman needs to have stored enough balanced food for pregnancy state of being. Worthinton (1977) stated that the nutritional demands of pregnant women are so much that it calls for nutritional education and guidance during the pre-natal stage.

And the fact that nutrition plays a vital role in the determination of the outcome of pregnancy, nutrition education becomes one of the major responsibilities of nutritionist. From the information gathered above, there were indications that maternal diet has influence on the milk composition. The effect could be that malnourished mother, though she would produce milk, the quantity might be high but the quality may be low. There is need for both prospective and lactating mothers to know that they need to take enough protein, vitamins, calcium, iron, iodine, and fluids. Cultural taboos disallowing pregnant woman from eating some specific but nutritious foods should be countered through adequate nutritional education. Health workers should be at forefront in educating pregnant and lactating mothers on how to prepare their food in order to preserve the nutrients.

Many mothers, especially in developing countries, are able to maintain prolonged lactational period on the diet well below acceptable standards. This suggests a re-appraisal of nutritional goals for lactating women. Since it is possible that in these cases, lactation has been carried on at the expense of maternal reserve which may be depleted to the point of endangering the maternal health, as such high standards of nutrition through education are justified for the maintenance of a satisfactory level of production.

2.1.5 Complications associated with EBF

A good majority of women can exclusively breast-feed their infants. But quite a large number, at the initial stage, are unable to do so. This is due to reasons that can be traced to both the mothers and the baby. Many authors have identified mother-related cases. These include: breast engorment, sore nipples, breast abscess, cracked nipples, leaking breast, fissure of the nipple, dermatitis of the nipple, mastitis etc. While infant-related causes include: premature baby, low birth-weight, cleft palate etc.(Worthington et al (1977) and Armstrong (1979)).

Kitzinger (1979) defined breast engorment as a condition in which the breast becomes swollen, hot, lumpy and heavy as a result of too much milk accumulation. She observed that this is a difficult situation for the baby since the nipple gradually recede into the breast tissue and create difficulty for the baby to get grip of it with its mouth, even though the milk is there. According to her, the situation can be prevented if the baby is given more and regular sucks at the breast. Kitzinger (op.cit.) viewed breast abscess as an acute infection in the milk ducts leading to a pusfilled lump. She said this should be treated urgently by draining the pus. Armstrong (1992) and King (1992) identified mastitis as another hindrance to EBF. A mastitised breast is usually red, hot, swollen and tender. According to the authors this is caused by an untreated blocked ducts traceable to staphy-lococus guerens. And that proper hygiene and emptying of the breast through sucking could ease the problem.

Gunther (1980) on the draw backs of EBF looked at breast leaking and sore nipples.

On leaking, he said it occurs when the milk-flow mechanism increases the pressure in the ducts above the retaining power of nipple muscles. The leaking situation is not much of a problem, the milk should be fed to the baby as constantly as demanded. And if the baby is sleeping or not around, an absorbent pad and a waterproof layer could be worn to protect clothes from being stained. This should, however, be changed constantly to avoid bacterial growth. On sore nipple, Gunther described as cuts and crack on the nipple, caused by improper positioning during breast-feeding. To prevent this, proper positioning of the baby while sucking and the mother while breast-feeding is necessary.

On the baby related causes, it was obvious that premature, low birth weight and cleft palate are the main hindrances to EBF. Kitzinger (1979) suggested that breast milk for such babies could be expressed and fed to them by spoon, until the infants are strong enough to suck. The infants with cleft palate, as suggested by Worthinton et al (1970), could be fitted artificial palate. This allows for proper sucking techniques. This however demands a strong desire, on the part of a mother to breast-feed the baby. Also manual expression and administration of milk by teaspoon and dropper could work well until satisfactory sucking can be initiated.

This researcher too has observed that feeding a baby for the first time tends to cause awkward and clumsy movements. This is so because the different manipulations had to be learnt and practised over time, before they become part of a rhythmic total activity. It is better to get to know your own baby, make your mistakes and work out your own way of

doing things to the baby's needs and how to cope with difficulties.

2.1.6 Strategies for copping with EBF complication

Most breast-feeding failures start within the first few weeks of delivery. The failures are as a result of some conditions that automatically preclude breast-feeding against the global campaign to vigorously encourage breast-feeding. Even the mother who had strong desire to breast-feed often found herself giving in to doubts when these conditions arise. It is imperative therefore that ways and means have to be explored to cope with these conditions when they arise. The PAG (1971) suggested the devising of appropriate field method of investigating the social dynamics and epidemiology of breast-feeding.

2.1.7 Education propaganda

Serious attention ought to be given to EBF until the baby is at least six months of age, after which nutritious supplementary foods could follow. Appropriate information should reach medical schools and other training institutions projecting the role of human milk in INFACI modern nutrition. The emphasis should be on the economic cost of failure to the breast-fed and also the biochemical and immunological advantages of human milk as well as the danger of artificial feeding generally (Ogala, 1996).

2.1.8 Maternal legislation

The Protein Advisory Group (PAG) (1971) advocated legislation back-up for EBF for nursing mothers in the rural and urban areas. Ngeri-Nwagha (1996) called for a legislation

that would make it mandatory, for employers of labour anywhere to provide sufficient incentives like long maternity leave and flexible working hours to enable the nursing mothers to do EBF. Parts of her desire was awareness campaign on the importance of EBF directed at the nursing mothers. She also solicited the husband's support to reduce nursing mother's workload, while offering her not only resting time but also greater attention for the breast-feeding needs of her baby. This view was shared by Rather (1975:) who saw the father's role as trying to:

- protect the baby's right to its mother's milk
- protect his wife from the discouraging influence of advisors and defend her when his family criticises her
- Acts as helpmate because the fact that certain duties are ordinarily performed by father or mother does not mean that under some circumstances they cannot be forgotten.
- that of being a companion to his wife.

For emphasis on this, BHFI (1996) pointed out that supports from others could make or break a woman's willingness to continue breast-feeding. The Protein Adversory Group (PAG) preached strongly in the involvement of nutritionist and food industry to the emergency situation that may likely develop in urban areas. Its implications, PAG (1971) maintained, was not only the certainty of raising mortalities from almost epidemic marasmus or diarrhoea, but also the economic burden of creative services and of obtaining breast milk substitutes on a large scale. The long term consequences of the effect of recovered cases of infantile malnutrition on the intellectual level of the community, was also identified as another implication.

An empirical study conducted in Taraba State, on the effect of BFHI on working class, nursing mothers would serve as the concluding remarks of this section. Bala (1997) in her descriptive study, sampled 100 women using questionnaire and oral interview, where women were randomly selected to react to the instrument. This researcher felt that the selection of sample was not adequately good since there was no indication of the population from which the sample was drawn. Bala had used table of frequencies and percentages for her study, this also was not appropriate. For an attitudinal study that sought opinions, a better tool like a scale would have been used instead. However, as an undergraduate, her instrument may be accepted. Furthermore, her instrument did not measure what it was supposed to have measured. Where the research was designed to find the effect of EBF on mothers, the questionnaire was measuring opinions not effect. As a study that sought effect, it was supposed to have taken a longer duration, considering certain factors such as mothers' weight before and after pregnancy and delivery, baby's weight, growth rate etc. Result of her study showed that 60% of the mothers interviewed considered breast milk as the best food for the babies. She also observed that mothers observed there was decrease or urination and stooling in infants exclusively breast-fed. She attributed the decrease in urine output to inadequate water. This findings differed form Almroth (1978) and Sachdev et at (1991), that there was no significant difference between exclusively breast-fed and those fed supplementally on urine output. Also that exclusively breast-fed infants do not need water as a supplement to maintain water homeostasis.

The finding of Bala (1997) on "The Effect of Baby Friendly on Working Class Nursing Mothers", in Wukari Local Government Area is at variance with the present study with regards to the urine output by the babies. The present study observed no dehydration and consequently, normal urine. Nevertheless, both findings agreed that exclusively breast fed infants showed attachments to their mothers. Her research is however contributing to the

literature on BFHI especially in Taraba State. That could stimulate further investigation. This researcher, thus, hopes to take off from where Bala (1997) stopped.

2.2 Summary

In this Chapter, the relevant concepts as well as the empirical works had been reviewed. The concept of Baby Friendly Hospital Initiative Programme as explained by other writers is given here. The origin and spread of the programme has equally been reviewed.

Apart from conceptual framework other aspects of the programme are put under review. The main thrust of the programme on exclusive breastfeeding is well reviewed. The area covered under exclusive breastfeeding are its benefits, impediments to exclusive breastfeeding, strategies for promoting exclusive breastfeeding and complications associated with exclusive breasfeeding.

The availability of studies with regard to BFHI in Nigeria to the best of this research's knowledge, appear too scanty although some studies have been conducted in other developed countries.

CHAPTER 3.

RESEARCH DESIGN AND METHODOLOGY

This chapter presents the method and procedure employed in carrying out this research. To this end, research design, population, sample and sampling techniques are discussed. Also contained in the chapter are the instrument and procedure for data collection as well as discussions on the validity and reliability of the instruments. And finally the scoring of the instruments and techniques of data analysis are also discussed.

3.1 Research Design

The design adopted for this study was a survey. This method is identified by many writers and researchers as good for identifying facts, attitude and behavioral self reports from large sample size. The basic function of this method therefore is to enable this researcher to describe and explain or explore women's opinion. Since this researcher is concerned with women's view about the benefits derivable from **BFHI** programme, this method was seen to be appropriate as it would allow the researcher to describe her observations. This is in line with Ndagi's (1984) position that maintained that survey techniques involve large number of persons, and describe population characteristics by the selection of an unbiased sample. For this, the use of the method for this study is justified.

3.2 Population

There are 16 Local Government Areas in Taraba State. The target population for this study consisted of all women in the 16 Local Government Areas as shown in table 3.1 below. The study was however concentrated on only nursing mothers who were randomly selected from 8 Local Government Area out of the 16 Local Government Areas of the state.

The rationale behind restricting the population to only nursing mothers is because this group appeared to be the population that could respond meaningfully through experience to the research problem which has as its focus, women's Perception of **BFHI** and Conventional Baby Feeding Practices in Taraba State. Table 3.1 below shows the Population of Women in each of the 16 Local Government Area from which 8 were randomly selected.

Table 3.1: **Population of Women in the 16 Local Government Area of Taraba state**

S/N	L.G.A.	Women Population
1.	Ardokola	Newly created
2.	Bali	152, 461
3.	Donga	42,953
4.	Gashaka	20,871
5.	Gassol	Newly created
6.	Ibi	52,157
7.	Jalingo	65,938
8.	Karim Lamido	72,939
9.	Kurmi	Newly created
10.	Lau	30,578
11.	Sardauna	107,537
12.	Takum	72,143
13.	Ussa	Newly created
14.	Wukari	40,838
15.	Yorro	28,125
16	Zing	39,496
	TOTAL	726,035

The above total population for the 16 Local Government Areas according to the projected population of 1991 as recorded by National Population Commission in Taraba State put it at 726,035. These figures have not been updated to the year 1997 which explains why the newly created L.G.A. have no figures. It is assumed by this researcher that the newly created L.G.A. have been embedded within the old L.G.A. before their creation.

3.3. Sample and Sampling Techniques

Taraba State has 16 Local Government Areas out of which 8 Local Government Areas were chosen representing about 50%. This was done based on Nwana's (1981) recommendation. He had suggested that if the total population is few, 40% or more of the samples would do.

In order to ensure representativeness, the proportional sampling technique was used. This involved selecting units at random from each LGA in proportion to the actual size of the group. The selection of subjects was by random and purposive sampling techniques. The simple random sampling technique offers each member of the population an equal chance of being selected and purposive sampling technique involves selection of respondents based on certain operating factors. In this regard, this researcher deliberately selected sample of women who were nursing mothers. In some cases, full time housewives who were not gainfully employed in other jobs also were selected to respond to the instrument. This allowed for representativeness of the subjects. Table 3.2 below illustrates the stratified sample of respondents from the 8 Local Government Areas.

The total population for this study was 364,974. Out of this, 382 nursing mothers were selected from the 8 LGAs. The selection of this sample size was based on Krejcie and Morgan (1970) table of selection for a given population. The table indicated that for a population less than one million,a sample of 382 is adequate.

The means used for the random sampling, was the table of random digits. The researcher randomly issued number to the subjects in the area of study. Some numbers were drawn from this table others were just coined out. And none of these numbers were repeated. The subjects with the actual numbers drawn from the table constituted the sample.

Table 3.2: Selection of a Stratified samples of Respondents from a population of 364,974 in the 8 Local Government Areas of Taraba State

S/N	L. G. A.'S	Women Population in each L.G.A.	sample Size
1.	Donga	42,953	45
2.	Gashaka	20,871	22
3.	Ibi	52,157	54
4.	Jalingo	65,938	69
5.	Lau	30,578	32
6.	Takum	72,143	76
7.	Wukari	40,838	43
8.	Zing	39,496	41
	Total	**364,974**	**382**

3.4 Instrumentation

The main instrument that was used for collecting data for this study was a self designed questionnaire. This was developed by the researcher and named "Baby Friendly Hospital Initiative Perception Scale"

This instrument had four sections. Section 'A' was the biodata of the respondents. Most of the independent variables in the Null Hypothesis were picked from this section. It included 10 items in it. Section 'B' was called Awareness and use of **BFHI**. It concerned some basic questions which the respondents were to answer. Most of the questions were descriptive questions that called for basic factors. Four (4) questions were in this section. The responses were rated from 2-1 and 5-1 depending on the number of the items of the response.

Section 'C' was the scale called Measurement of general perception. It had 20 items of statements of benefits derivable from the **BFHI** programme. The instrument was a modified form scale. The responses were rated from strongly Agreed = 5 to No Opinion = 1. The overall score in this scale was to give an indication of whether the respondents have positive or negative perception of the programme. Section 'D' was called Evaluation and Recommendation, this had only two (2) questions, one of which was for the respondents to evaluate the programme while the second inquired whether they could recommend the programme to nursing mothers for baby feeding or not.

Since a wide range of women were used, it was envisaged that this researcher would face cases where the women could not read and write. For this, therefore, the researcher sought the help of a research assistant to help interpret the questionnaire items to the respondents. The response of the respondents was then scored on the questionnaire accordingly.

3.5 Result Of The Pilot Test

Both content and face vitality were established for the instrument. The instrument was content valid because most of the items, especially the scale were drawn from the literature as reviewed in Chapter 2. The benefits are what studies by authors like Ogala (1996), Haggai (1996) and many others identified as the benefits of **BFHI.** For this reason of literature based items, this researcher found the instrument to be content valid. Additionally, nutritionist, research methodologist, the researchers supervisors and experienced mothers looked at the

instrument and certified it appropriate. The instrument was also pilot tested to twenty five (25) nursing mothers in Sardauna L.G.A. which was outside the main 8 Local Government Areas of the study. For the pilot testing, respondents were randomly and purposively drawn. This number was adequate for a pilot test based on Wimmer & Dimick, (1987) who recommended 15-20 respondents for a pilot test. Though the writer did not indicate from what number of population should this size be drawn, however, this provided a clue to the sample size used for the pilot study. All the 25 copies of the questionnaire were returned and analysed.

Correlation coefficient was computed to estimate consistency of the items in the instrument. This method involved the summing up of the scores on odd and even items of the instrument separately. A correlation coefficient was obtained by applying spearman Brown formula as:

$$\text{rho} = 1 - \frac{6\sum D^2}{N(N^2 - 1)}$$

A correlation coefficient of size 0,86 was found and this was significant. The instrument from the result is said to have a satisfactory level of reliability.

3.6 Data Gathering Procedure

The administration of the instrument was done personally by this researcher. However, where this was not practically possible, the researcher sought the help of research assistant

to interpret to respondents, the questionnaire was collected. This was also scored accordingly thereafter.

3.7 Scoring Of The Instrument

The instrument for the study was designed to enable the researcher to collect data for answering and testing the hypotheses. The independent variables in the five null hypotheses such as rural, urban and religion from question in section 'A' were scored. Similarly section B,C, and D items were scored. Each of the information was scored from 1-5, 1-6 or 1-2 depending on the item. For example, a score of one (1) was given to an answer of No while 2 was for a yes response.

The scale in Section 'C' of the instrument had a five point response ranging from 1-5. A respondent's general perception was calculated by summing up all the numbers marked in each statement. The minimum score of one (1) and maximum of Hundred (100) were obtainable by each respondent on the general perception scale.

3.8 Data Analysis Procedure

This researcher employed a number of statistical techniques in the study which helped in data organization, analysis and interpretation. These include: frequency tabulation for organising scores used to determine respondents perception of **BFHI** according to their age, religion, location and educational status. Percentage was used to show the frequency distributions so as to help to describe the respondents. However, the main statistical

techniques used were Two Tailed t-test and one way Analysis of Variance (ANOVA). Two Tailed t-test was used where only two groups were compared and one way ANOVA where more than two groups were used.

CHAPTER 4

Result And Discussion

This Chapter presents description of the results and discussion of the findings of the data collected. The data was information from questionnaire developed by this researcher. Three hundred and eighty two (382) copies of the questionnaire were issued to respondents and all were returned. The data collected were analysed using frequencies, percentages, two tailed t-test and one way analysis of variance (ANOVA). The five null hypotheses were tested at alpha level of 0.05 significance for either their rejection or retention. The results and discussion were organised based on the biodata and the null hypotheses as reflected below.

4.1 Biodata Information

This section examines the Biodata of the respondents (Women) in Taraba State. It focuses on age, religion, educational attainment, residential location, users/non-users, usage and perception of **BFHI** benefits. Below is the discussion of the variables.

4.1.1 Distribution of respondents by age

The first personal data of the respondents to be presented was their age. This is reflected below.

Table 4.1 **Distribution of Respondents By Age**

2Age range	Frequency	Percentage
16-25	168	43.98
26-35	153	40.05
36-45	54	14.14
46-55	07	1.83
Total	382	100.00

The table above shows the distribution of respondents by age. The data showed that the highest concentration of the respondents fell in the age range of 16-25 with 43.98 percent; followed by those in the age range of 26-35 with 40.05 percent . The remaining respondents were in the age range of 36-45 with 14. 14 percent. The respondents within the age range of 46-55 accounted for 1.83 percent. Their mean age was 27.88 and the standard deviation was 1.39. This shows that over 80 percent of the respondents were below the age of 36. Women of this age group should naturally be reproductive. All potential mothers who and mothers most, of whom could breast-feed babies.

The implication of this is that with increasing maternal age, fertility decreases. The data above confirmed Llewellyne-Jones (1974) study that reproductive efficiency is at its peak between the age ranges of 16-25 and 26-35, becoming less efficient after the age of 36 and above. Thus there was ad drop in the number of respondents as the age increases.

4.1.2 Distribution of respondents by religion

The second personal data presented was their religion.

Table 4.2: **Distribution of Respondents By Religion**

Religion	Frequency	Percentage
Christian	274	71.73
Islam	108	28.27
Total	**382**	**100.00**

The distribution of respondents by religion in Table 4.2 above shows that 71.73 percent were Christian while the remaining 28.27 percent were Muslims. All the respondents were married and were all nursing mothers.

4.1.3 Distribution of respondents according to level and type of educational attainment

The educational attainment is yet another consideration of the personal data of the respondents. Below is the presentation.

Table 4.3 **Distribution of Respondents By Educational Attainment**

Educational Attainment	Frequency	Percentage
Non Formal Education	46	12.05
Primary Education	57	14.92
Islamic Education	68	17.80
Secondary/Teacher Training	68	17.80
Post Secondary	102	26.70
University Education	41	10.73
Total	**382**	**100.00**

Table 4.3 above shows the educational attainment of the respondents. It could be seen from the that most of the respondents had post-secondary education and they accounted for 26.70 percent. The next highest were Islamic/Secondary school graduates with 17.80 percent each. This was followed by primary education with 14.94 percent. None formal education accounted for 12.05 percent. The respondents with university education were the least, and they accounted 10.73 percent of the sample studied. It can be inferred that the bulk of the respondents had formal education. The fact that they were educated was an indication that they were likely to be more receptive of **BFHI.**

4.1.4 . Distribution of respondents by residential location

The respondents residential location is also presented in the Table below.

Table 4.4 **Distribution of Respondents By Residential Location**

Residence	Frequency	Percentage
Rural	144	37.70
Urban	238	62.30
Total	**382**	**100.00**

On the residential location of the respondents, the above Table indicates that majority of the respondents are from the Urban Areas with a total percentage of 62.30, while 37.70 percent of the respondents were from the rural areas. In essence, a good representation of the respondents have been met. Thus both urban and rural women participated fully in the study.

4.1.5 Distribution of respondents according to users/none-users of BFHI

The respondents are examined based on whether they are using **BFHI** method.

Table 4. 5 Distribution of Respondents According to Users/None Users of BFHI

Responses	Frequency	Percentage
Yes	277	72.51
No	105	27.49
Total	**382**	**100**

From the responses in Table 4.5, above 70 percent of the respondents used the **BFHI** method recommended for baby feeding. Furthermore, only 27.49 percent of the respondents did not use it. By implication therefore, it means that majority of the respondents have adopted the BFHI as baby feeding method. The findings and that of Bala (1970) who stated that 60% of her respondents considered breast milk as the best food for their babies, are related in this regard.

4.1.6 **Distribution of respondents According to their Usage of BFHI**

The frequency of usage of BFHI by respondents is presented below.

Table 4.6 **Distribution of Respondents According to BFHI Usage**

Usage	Frequency	Percentage
All the time	192	50.26
Most of the time	35	9.16
Average	35	9.16
At times	18	4.72
Non of the times	101	26.44
No response	01	0.26
Total	**382**	**100.00**

Table 4.6 above shows that a greater number of respondents as represented by 50.26 percent used the **BFHI** method of baby feeding " All the time" "Others include those who used **BFHI**" Most of the time" and Average with 9.16 percent respectively. Those who used the **BFHI** " At time " were 4.71 percent while 0.26 percent did not indicate how often the **BFHI** is used. The remaining 26.14 percent indicated their non-usage of the method through their responses which showed they used it "non-of the times. The analysis above indicates that the highest number of the respondents used the **BFHI** "All the time" and this has a corresponding score of 5 on the scale frequency of use of **BFHI.** This implies that on the whole, majority of the respondents used the **BFHI** considerably. Thus, they used it "All times".

4.1.7 **General perception of respondents on the benefits of exclusive breast-feeding**

This portion looks at the general perception of respondents based on the benefits derived from **BFHI**. Table 4.7 summarizes the perception of respondents based on benefits. This is shown in Section C of the instrument in the Appendix.

Table 4.7 **Distribution of Respondents Based On Measurement Of General Perception Of BFHI Benefits**

ITEMS	SD		DA		NO		A		SA		TOTAL		% of A+SA
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	
1. Provides safest food for the child	0		30	7.9	15	3.9	172	45.0	165	43.2	382	100	88.2
2. Is superior to other methods of feeding the child	1	0.3	37	9.7	19	5	187	49.0	138	36.1	382	100	85.1
3. Gives more energy to the child	1	0.3	34	8.9	18	4.7	171	44.8	158	41.4	382	100	86.2
4. Gives the child more nutritious food	1	0.3	38	9.9	18	4.7	178	46.6	147	38.8	382	100	84.1
5. Makes the child feel the warmness of the mother	0	0	19	5.0	19	5.0	148	43.7	196	51.3	382	100	90.0
6. Protects the child from deadly diseases	4	1.0	51	13.4	64	16.8	161	42.1	102	26.7	382	100	68.8
7. Builds a good personality in the child	2	0.5	54	14.1	90	23.5	166	43.5	70	18.3	382	100	61.8
8. Improves the child's sense of sight	2	0.5	47	12.3	99	25.9	170	44.5	64	16.8	382	100	61.3
9. Improves the quality of the child's intelligence	2	0.5	46	12.0	99	25.9	167	47.7	68	17.8	382	100	61.5
10.Makes the mother closer to the child	0	0	13	3.4	18	4.7	137	35.9	214	56.0	382	100	91.9
11. Is more economical to the family	3	0.8	19	5.4	12	3.1	143	3.74	205	53.7	382	100	91.1
12. Improves the mother's health	48	12.6	106	27.7	13.4	13.4	121	31.7	56	14.7	382	100	46.4
13. Reduces the anxiety of an unplanned pregnancy.	11	2.9	46	12.0	28.0	28.0	158	41.4	60	15.7	382	100	57.1
14. Protects the mother from breast cancer	10	2.6	47	11.8	28.8	28.8	158	41.4	57	14.9	382	100	56.3
15. Reduces the risk of retained placenta	9	2.4	45	2.6	30.1	30.1	155	40.6	58	15.2	382	100	55.8
16. Makes the feeding of the child natural to the mother	2	0.5	10	28.5	2.9	2.9	84	22.0	275	72.0	382	100	94.0
17. Enhances or promotes maternal weight loss	85	22.3	109	20.7	10.7	10.7	91	23.8	56	14.7	382	100	34.1
18. Promotes cooperation amongst the family members	8	2.1	79	2.9	7.1	7.1	199	52.1	69	18.1	382	100	70.1
19. Makes the mother more aware of the child's behaviour.	1	0.3	11	9	2.4	2.4	105	27.5	256	67.0	382	100	94.5
20. Is a good contraceptive method for the mother.	20	5.2	35	101	2.6	2.6	104	36.6	86	22.5	382	100	59.1

KEY: SD - 1 (Strongly Disagree) DA - 2 (Disagree) No - 3(No Opinion) A - 4 (Agree) SA - 5 (Strongly Agree)

The data emanating from the above Table shows that the respondents had high positive perceptive attitude towards majority of the benefits credited to the **BFHI**. Out of 382 respondents, 94.50% accepted that exclusive breast-feeding makes the mother more aware of the child's behavior, while 93.98% agreed that it makes feeding of the child natural to the mother. Also 91.88% of the respondents maintained that it brought the mother closer to the child while 91.10% agreed that it is more economical to the family. That exclusive breast-feeding makes the child feel the warmth of the mother was acknowledged by 90.05 percent of the respondents. Another accepted benefit was that it is the safest food for the child with 88.22% respondents. Some respondents, (86.13) were of the opinion that it gives more energy to the child. Within this range too, 85.08% agreed that it is superior to other methods of feeding the child, while 85.08% of the respondents said it offers more nutritious food to the child. Some 78.06% indicated that it promotes cooperation amongst family members.

The next acceptable benefits according to the respondents were that it improves the child's sense of sight with (63.87%) and that it protects the child from deadly disease (61.78%). Another 61.78% agreed it that builds a good personality in the child. Others (61.52%) pointed out that it improves the quality of the child's intellect.

Some (59.16%) agreed that it is a good contraceptive method, while 57.07.% believed that it reduces anxiety of an unplanned pregnancy. Some 56. 28% of the respondents held that it protects the mother from breast cancer. On the average 55.76%, maintained that it reduces the risk of retained placenta.

Some benefits were, however, less popular or acceptable. Among these are: Exclusive breast-feeding improves mother's health which recorded 46.34% . The statement which says " it enhances maternal weight loss received 38.48 percent of the responses. From the data analysis it could be seen that majority of the benefits were highly accepted. It could however be argued that the low scores recorded by some benefits of **BFHI** were due to the level of formal education of the respondents. This is because most of those who practiced the **BFHI** method did so because they were told it was good and in doing so they saw it different from the conventional method through its positive result.

4.2 Testing of Hypotheses

To be able to meet the stated objectives, five (5) null hypotheses were formulated and tested. The hypotheses were based on variables such as user/non users, age , religion, residential location and educational attainment levels with regards to the perception of the **BFHI** programme. The hypotheses were tested using t-test and one way Analysis of variance (ANOVA) for either their rejection or retention at the alpha 0.05 significance level. Hypotheses 1,3 and 4 were tested using Two Tailed t-test because the comparison was between two variables while hypotheses 2 and 3 that were comparing more than three (3) variables were tested using the one-way analysis of variance (ANOVA).

4.2.1 Hypotheses 1

The first hypothesis states that there is no significant difference in the perception of the respondents who practice **BFHI** method and those who do not.

To test this hypothesis, the Scores of the two groups were subjected to two tailed t-test analysis. Below is the summary.

Table 4.8 **Two-Tailed t-test Analysis For Users Vs Non-Users of BFHI**

Respondents	N	$\bar{X}$	SD	T-Cal	df	T-tab
Users	277	83.2	10.9	16.07	380.0	2.58
Non- users	105	62.5	12.1			

From the computed data above, the t-cal is 16.07 and t-tab is 2.58. Since the t-cal is greater than the t-tab at alpha 0.05 level of significance, the null hypothesis is therefore rejected. Thus there is a significant difference in the general perception of users and non-users of **BFHI**. This result is logical because it is expected that users would have seen and experienced the benefits of using **BFHI** than those who do not. In addition, the mean, score of perception of users was 83.2 while that of the non users was 62.5 which confirms more the differences in their perception of **BFHI**. To this point therefore, it could be concluded that users have better perception of **BFHI** than the none-users.

4.2.2 Hypothesis 2

The second hypothesis tested was "There is no significant difference in the general perception of **BFHI** among the respondents of various age groups".

The analysis of variance (ANOVA) technique was used to test whether there is significant difference in the general perception of **BFHI** among the various age groups. The summary of the computation is reflected in table 4.9 below.

Table 4.9 **Anova For Perception of BFHI Among Various Age Groups**

Source	Df	SS	MS	f-cal	f-tab
Between	3	4106	1369		
Within	378	76265	20.2	67.77	3.78
Total	381	80371			

Table 4.9 above shows the general perception of **BFHI** among the various age groups. From the Table, the calculated value of F is 67.77 at 0.05 level of tolerance at df 3,378. Since the f-cal 67.77 is greater than the table value of 3.78, the null hypothesis is thus rejected. There is therefore a significant difference in the general perception of **BFHI** among the respondents of various age groups. This conformed with those findings in Table 4.1 which had shown that the highest concentration of the respondents representing 43.98 percent fell within the age group of 16-25 years. This was followed by those in 26-35 age group with 40.05 present. Others included 36-45 age group with 14.14 percent while the least 1.83 percent were those in the age range of 46-55. The implication of this is that fertility and reproductive performance of women varies according to their age. From Table 4.1 it could be seen that the population of women in ages 16-25 and 25-35 had the highest concentration of respondents. And this showed that there is a higher fertility and reproductive performance rate within this age ranges than any other age range. Thus child-bearing is more within these age groups. This findings have correlated the study conducted by Llewellyn-Jones (1974) which revealed that fertility is not uniform throughout the reproductive years. He further stated that fertility would be lower under the age of 15 and over the age of 35. He also maintained that if two populations differ markedly in the way the ages of their women were

distributed in a five year group between 15-49, the general fertility rate is likely to be affected considerably. He concluded that the population having a greater proportion of women age 20-35 is likely to have a higher general fertility rate.

The differences that existed in perception of **BFHI** among the various age groups could be because those aged 16-35 had reached the peak of child-bearing whereas those in the 36-55 age bracket were in the declining fertility stage. More so, those in age 16-35 who had practiced conventional and the new method would have found the new method **(BFHI)** better, and are more responsive to **BFHI**. As for those aged 36-55, it might be that many of them were so used to the conventional method that only few would like to change to adopt the new method **(BFHI)**. It might also be that fertility had dropped and only a few were still producing and because of maternal fatigue as a result of multiple births, not all of the few could go through the stresses of **EBF,** hence this group, would not like to adopt the **EBF** method. Thus maternal fatigue and lower fertility coupled with the old method fixation influenced the perception of **BFHI** by those aged 36-55. This also may have accounted for why this group has the least number of respondents.

4.2.3 Hypothesis 3

The third hypothesis states that there is no significant difference in the general perception of **BFHI** between the Christians and the Muslims. To test this hypothesis, a Two-Tailed t-test statistical technique was used. Table 4.10 below present the summary.

Table 4.10 **Two-Tailed t-test Analysis of Respondents By Religion**

Religion	N	$\bar{X}$	SD	T-cal	df	T-tab
Christianity	276	80.7	12.0	7.46	380.0	2.58
Islam	106	69.1	17.0			

The above Table indicates the t-cal. of 7.46 and t-tab of 2.58 at alpha 0.05 level of significance. Since the t-cal, is greater than the t-tab the null hypothesis is rejected. Therefore, there is a significant difference in the general perception of **BFHI** between the Christians and the Muslims. This was further confirmed because, the Table showed that while the mean perception of Christians was 80.7 that of the Muslims was 69.1.

Responses presented above have shown that both religions and cultural inclination affected the perception of **BFHI**. This findings could be used to substantialised the fact that there are a number of differences in customs and cultural norms between the various religions. Therefore, the differences that existed in the perception of the Christians and the Muslims in the study is anticipated. This is because there are unique determinants in each religion which importantly affect the manner in which the women take decision. The way an Hausa Fulani woman brings up children reflects the kind of beliefs she holds concerning life itself, food habits and other taboos which may differ among the Jukun, Momoye, etc. In the same way is this difference, between and among the religious sect and cultural grouping in the developing countries, of which Nigeria andin particular Taraba State is a good example.

The significant influence of religion as a factor observed in this study agreed with Rodman (1972) and King (1992) who maintained that cultural fixation or taboo embedded in religions may influence what one does. Rodman (1972) went a step further to support this by saying that with variation in norms, there is usually an attendant variation in values in respect to general way of life. Thus these particular beliefs, values, and traditions held by each religion played an important role in influencing the respondent perception of **BFHI**.

By implication, religion significantly influences the perception of respondents on BFHI.

4.2.4 Hypothesis 4

The fourth hypothesis states that there is no significant difference in the general perception of BFHI between the respondents in the urban areas compared to respondents in the rural setting. This was tested using t-test statistical technique.

Below is the summary.

Table 4.11 **Two-Tailed T-test Summary of Respondents of Urban/Rural Location**

Location	N	$\bar{x}$	SD	T-cal.	df	T-tab
Urban	244	80.1	14.1	4.83	370.0	2.58
Rural	128	72.8	14.1			

From the computation on Table 4.11, the t-cal is 4.83 while t-tab is 2.58. It shows that the T-cal is greater than the t-tab, as such the null hypothesis is rejected. This implies that there is a significant difference in the general perception of **BFHI** by the urban compared with the rural dwellers. While the average perception of the urban dwellers is as high as 80.1 percent, that of the rural dwellers was 72.8 percent.

This confirmed, therefore, that location plays an important part in influencing the respondents perception of **BFHI**. The differences in perception between these two groups could be attributed to several factors. It should be noted that the type of orientation in the urban is not the same as in the rural area. Also some of the tangible opportunities available in the urban areas are lacking in the rural areas. Another consideration may be that the level of awareness in the urban areas might not be the same with the rural areas.

This study confirmed the study of King (1993) when he stated that what one does is depended on where one lives works. For example whether one is in rural area or city and also on one's own. The difference in perception of BFHI between the urban and the rural dwellers could be nature and the rural populist. The rural people are traditionally conservative and suspicious of new ideas, especially if introduced by strangers. The problem becomes compounded if the new ideas demanded that the people should change from their old traditional practices. In this regard the BFHI programme is a good example.

From all the above, therefore, it could be inferred that the differences in perception of **BFHI** between the urban and rural dwellers might be because the urban dwellers are more aware of the benefits of the **BFHI**. Also that the urban dwellers are more experienced and inclined towards the new method of breast-feeding following the vigorous campaigns through media e.g. radio, TV, video, posters, magazines and News papers which are rarely available to the rural areas, coupled with the conservative and suspicious nature of the rural dwellers.

4.2.5 Hypothesis 5

The fifth hypothesis states that there is no significant difference in the general perception of **BFHI** among the respondents of different various educational levels.

The Analysis of variance (ANOVA) technique was used to test this hypothesis.

Table 4.12: ANOVA Summary On The Perception Of BFHI Among Respondents of various Educational levels

Source	Df	SS	MS	f-cal	F-tab
Between	5	46488.8	9297.8		
Within	376	33882.3	90.1	103.18	3.02
Total	381	80371.2			

The data computed in the Table 4.12 shows the f-cal of 103.18 at alpha 0.05 with df 5 = 3.76 while the table value of is 3.02. Since the f-cal 103.18 is greater than the table value of 3.02, the null hypothesis is rejected. This then means that there is a significant difference in the perception of the respondents based on their educational levels. For example, respondents with formal education had the highest mean perception of 92.9

while those with none formal education had 65.3. This is expected because those who have formal education may be more disposed to innovations than those without formal education.

This view was further supported by the fact that attainment of higher formal education could afford the women the chance to make effective decision on important issues without the influence of others. This finding was also in consonance with the findings of Llewellyne-Jones (1974) and Deacon (1975) both of whom observed education as a significant factor of influence in ones life. Llewellyn-Jones (1974:123) specially noted that:

> *The better educated the husband and wife, the more open and receptive will their minds be to new ideas, and the better their chances of making decisions for themselves without the constraints of traditional and religious beliefs. The more educated they are the less ignorance and poor motivation likely to play a part in rejecting family planning. The more educated they are the better they can appreciate that cost of rearing on extra child may diminish the health or educational opportunities of existing children.*

Deacon et al (1975) on his part pointed out that education had a profound effect on the decision making patterns of women. This present researcher attributed this observation to the fact that increased educational level, would sharpen the ability to think and improve on the old life style. The above statements are true and very relevant to the perception of women on **BFHI**. This is because despite the advantages of exclusive breast-feeding some women still do not accept it. This could be attributed to the variations in such factors as age, religion, location of residence as well as education.

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter gives a summary of the major findings of the study. It also presents the conclusion drawn from the study as well as the recommendations from this work.

5.1 Summary

This study was conducted to find out the general perception of women in Taraba State on the **BFHI** programme. Data-was collected by the means of a modified Likert questionnaire from 382 nursing mothers in the 8 selected L.G.As of the area of study.

After a preliminary observation and investigations, this researcher identified and gave the statement of the problem with regards to **BFHI**. And three objectives were to be achieved. In order to meet these objectives, five (5) null hypothesis were formulated and tested at 0.05 alpha level of significance. T-test and one way Analysis of Variance (ANOVA) statistical techniques were used for the analysis of the data, where all the five (5) null hypothesis were rejected.

Earlier, related literature was reviewed based on both conceptual as well as empirical works. The aspects of BFHI covered in the review included origin of BFHI, benefits of EBF, impediments to EBF, strategies for promoting EBF, complications associated with EBF and coping strategies.

5.2 Major Findings of the Study

The followings were the major findings of this study.

1. Age greatly affects women's perception of BFHI
2. Religion has great influence on women's perception of BFHI
3 Educational level or attainment very much influences the perception and use of BFHI.
4. Area of residence influence women's perception and use of BFHI.
5. Women in Taraba State now have positive attitude towards BFHI
6. However, few still are ignorant of some of the benefits of BFHI.

5.3 Conclusion

Although women in Taraba State are becoming more aware of **BFHI** programme and its benefits, their perception of the programme differs significantly. Their perception of the programme was found to be influenced by age, religion, location, and education. The conclusions drawn from this therefore are that:

1. Users have better perception of the BFHI than the non-users.
2 Women within age brackets 36-45, 14.14% and 46-55 or 1.83% were less prompt in practising exclusive breast-feeding.
3. From the data analysed, Christian respondents favoured the BFHI programme more than their Moslem counterparts.
4. Respondents of urban areas showed acceptance of BFHI more than those of the rural areas.

5. Subjects with higher formal education showed acceptance of BFHI more than those subjects with none-formal education..

From the findings of this study, the majority of the respondents exclusively breast-feed their babies while a minority do not wholly conform. Therefore, it would serve a useful purpose to focus on those women currently having negative perception and target them for more education. Clearly any programme seeking to promote exclusive breast-feeding, must focus on the populations with a negative attitude to BFHI.

5.4 Limitation Of The Study

It is difficult to conduct a study without confronting problems. This study was faced with some problems. The BFHI being very new had little or no Nigerian studies. Initially it made the work difficult. However, this researcher resolved this problem by reviewing related areas to the study with both foreign and Nigerian base.

There was also the issue of unequal samples. The number of christians was more than muslims, also the urban respondents were more than the rural respondents. This is obvious because of the method of sampling used. In random sampling, the chance of drawing a subject does not depend on the drawing of the other. Again this method does not give the researcher the knowledge of the respondent's biodata. Moreso, the number used was the number that were found available. Based on these point therefore, there was bound to have unequal samples.

However, this limitation was resolved by the use of computer for the analysis. Again the use of the statistical techniques used for the computation had taken care of the difference that might have existed. This explains why the researcher conuinientely made here generialization.

5.5 Recommendations

Encouraging exclusive breast-feeding, based on the findings of this study should be a combined effort by both the government and individuals. They both have roles to play. For this therefore, the following recommendations are made:

1. Counselors should assist all parents and daughters on the issue of early and late marriage as these have adverse effect on lactation.
2. The BFHI advocates should make sure that all religious leaders are well informed about the BFHI programme. They must be sure that the BFHI is not misunderstood. It is, therefore, important to explain BFHI to them by making it clear that it will not in any way make them to abandon their culture and religion as the BFHI is a better strategy for child's survival. They should thus help in instilling the moral values of exclusive breast-feeding to their followers.
3. The BFHI advocates should carry out wide publicity campaign covering both urban and rural areas utilizing the media to propagate breast-feeding with its attendant advantages to the child, mother, family and the nation at large.
4. Health workers should give antenatal education to expectant mothers on maternal nutrition and proper lactational measures.
5. Government and private organisations should provide facilities for working mothers to breast-feed at working place e.g. creches.

6. The BFHI advocates should try and educate the whole public on the ideas of exclusive breast-feeding and the dangers of the conventional baby feeding method.
7. The BFHI should provide motherhood education, to the public especially mothers and daughters, through organising workshops, seminars and symposium. This would help in widening their scope on issues of child feeding and the rest.
8. Community members should all show supporting attitude towards breast-feeding as this would encourage and help the young to build confidence and grow up with positive attitude towards breast-feeding also.

5.6 Suggestions for Further Study

In the light of the findings of this study, it is recommended that the following should be considered for further study.

1. This present study is delimited to only 8 Local Government Areas in Taraba State. Thus, a further study could be conducted in other local government area s of the state.
2 The present study is conducted to examine women's perception only so a comparative study between women and men's perception is suggested so as to identify the similarities and dissimilarities in perception of the two groups.
3. This present study is a survey kind of study, an experimental research could be done to find out the effects of exclusively breast-feeding on both mothers and their infants.
4. Because of the importance of water balance in the life of every living creature, it would be fair to recommend further research in BFHI especially in tropical and sub-tropical regions where both mother and baby may undergo excessive sweating in different seasons of the year.

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APPENDIX: QUESTIONNAIRE

Dept. of Voc. & Tech. Educ.
Ahmadu Bello University
Zaria
10th July, 1997.

Dear Respondent,

WOMEN'S PERCEPTION OF BABY FRIENDLY AND CONVENTIONAL BABY FEEDING PRACTICES IN TARABA STATE

I am a student in the Department of Vocational and Technical Education Ahmadu Bellow University, Zaria. I wish to write and solicit your cooperation in the study I am conducting on the above title topic.

Your cooperation and honest responses will be of great importance to the success of the study.

Any information given shall be handled strictly confidential.

Thank you.

Yours sincerely,

NZUTA, Vahey Janet (Mrs.)

BABY FRIENDLY HOSPITAL INITIATIVE PERCEPTION SCALE

This questionnaire is expected to be filled strictly by indigenous nursing women of Taraba State only.

SECTION A: BIODATA

Please tick ( ) or fill in the most appropriate column that applies to you.

1. Age Range:
   - (a) 16-25 years [ ]
   - (b) 26-35 years [ ]
   - (c) 36-45 years [ ]
   - (d) 46-55 years [ ]
2. Religion:
   - (a) Christianity [ ]
   - (b) Islam [ ]
   - (c) Others(Specify).....
3. Marital Status;
   - (a) Married [ ]
   - (b) Single [ ]
4. Number of Years in marriage
   - (a) 1-5 years [ ]
   - (b) 6-10 years [ ]
   - (c) 11-15 years [ ]
   - (d) 16-20 years [ ]
   - (e) 21 and above [ ]
5. Number of Children;
   - (a) One [ ]
   - (b) Two [ ]
   - (c) Three [ ]
   - (d) Four and above [ ]
6. Educational Status;
   - (a) Non-formal education [ ]
   - (b) Primary Education [ ]
   - (c) Islamic Education [ ]
   - (d) Secondary/Teacher Training [ ]
   - (e) Post-Secondary [ ]
   - (f) University [ ]
7. Town or Village of Residence
   - (a) Rural [ ]
   - (b) Urban [ ]

8. Local Government Area:

01 Donga	[ ]
02 Gashaka	[ ]
03 Ibi	[ ]
04 Jalingo	[ ]
05 Lau	[ ]
06 Takum	[ ]
07 Wukari	[ ]
08 Zing	[ ]

SECTION B; AWARENESS/USE OF BFHI

9. Are you aware of the baby friendly Hospital Initiative Programme?
   (a) Yes [ ]
   (b) No [ ]
10. Do you use the method recommended by the Programme in feeding babies? (Which is exclusive breast-feeding from birth to six months of age).
   (a) Yes [ ]
   (b) No [ ]
11. If yes to question 10, indicate by ticking any of the following responses as to the way you use the method.
   (a) All times [ ]
   (b) Most of the times [ ]
   (c) Averagely [ ]
   (d) At times [ ]
   (e) None of the times [ ]
12. If No to question 10, state/indicate which of the followings responsible for your not using the method
   (a) Family factor [ ]
   (b) Cultural factor [ ]
   (c) Ignorance [ ]
   (d) Have belief that breast milk alone can not quench the babies thirst [ ]
   (e) Economic Statu [ ]
   (f) Others (Specify) [ ]

SECTION D EVALUATION/RECOMMENDATION

Rate the following two statements by ticking [ ] only one response in the statements.

1. To me BFHI is
   - (a) Very good [ ]5
   - (b) Good [ ]4
   - (c) Fair [ ]3
   - (d) Bad [ ]2
   - (e) Very bad [ ]1
2. To me I recommend the use of the method.
   - (a) All the times [ ]5
   - (b) Most of the times [ ]4
   - (c) Averagely [ ]3
   - (d) At times [ ]2
   - (e) Non of the times [ ]1