TITLE PAGE

Knowledge of infant nutritional needs in Enugu state:

Implications for child health in Nigeria.

CERTIFICATION

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DEDICATION

This thesis is dedicated to my father – Ugwokeja, Nwangwu (Osuamara Dike) and my brother Ngwu, Joseph both late for their early love and care.

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ABSTRACT

The study was located in Enugu State of South Eastern Nigeria and the focus of the study was to examine the knowledge of infant nutritional needs. The study population was drawn from five local government areas of the state, namely, Nsukka, Enugu North, Udenu, Isi-Uzo, and Igboeze South. The population of Enugu State in the 2006 census exercise was three million, two hundred and fifty-seven thousand, two hundred and ninety-eight (3,257298) persons (FGN, Official Gazette, 2007). The study population consisted of married women of reproductive age (18-49) and their husbands aged 18 and above. The multi – stage sampling approach was adopted in order to select the local government areas, communities, villages, households as well as respondents for the study. The five local government areas were clustered into communities and from these clusters, two communities were selected from each of the five LGAS through simple random sampling. Three instruments of data collection were used. These were the questionnaire, focus group discussion guide, and in-depth interview guide. One thousand (1000) questionnaires were distributed to the respondents. However, nine hundred and seventy – six (976) were validly completed and returned. The questionnaire sought information on the socio-economic and educational status of parents, child mortality, knowledge of infant nutrition and exclusive breastfeeding. For the qualitative data, a total of ten (10) Focus Group Discussions (FGD) were conducted. The data were processed and analyzed using Statistical Package for Social Sciences (SPSS). The study found that many Nigerian families are not aware that they can mash carrot, potato and cucumber and mix with meat broth and spoon feed their children.. It was found, that more of the younger respondents had the knowledge of infant nutrition, support exclusive breastfeeding and perceived the importance of immunization than their older respondents. However, results show that only place of residence had no relationship with any of the dependent variables like “knowledge of infant nutrition”, “views about importance of immunization” and “support of exclusive breastfeeding”. These findings have clear implications for social work practice in Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Child health problems constitute the greatest threat to public health in the world today. The world is filled with believers in the importance of good care and attention for children during their earliest months and years (Myers 1992). That widespread belief is embedded in many cultural traditions. The young child may be seen as a little god-still in a state of relative perfection or as a "little sun" around which the world revolves. Belief in the need for proper care is also grounded in the recognition that children are the next generation, they represent the continuity of tradition as well as the hope for, and fear of change. There is a need to believe that the children of today can be both a rallying point for social action and the constructors of a better tomorrow.

According to Myers (1992) personal experience creates believers in the value of early childhood care and development. Parents, professionals and others who are simply close observers of how the neighbor's children grow, recognize the healthy effect of good care and attention to infants and young children. They do not need an elaborate rationale to justify their personal feeling that rudimentary health precautions and a good diet, combined with smiles, cuddling, talk and play, will enhance a child's development. Such actions are seen as a good investment of time and money.

For many people, the obligation to protect a child's human rights is the most fundamental and convincing reason to invest in programmes that enhance early childhood development. The Declaration of the Rights of the Child, adopted unanimously in 1959 by the United Nations General Assembly recognized among its ten principles that, children of working parents have the right to benefit from child care services and facilities for which they are eligible. The Declaration of Children's Rights and the Convention suggest that the right

for children to develop to their full potential is widely accepted internationally, providing the rational for child health programme.

Weiser (1982) asserts that the convention on the rights of the child has already proved to be an effective framework for international action. The convention has established social, and economic rights – right to survival, early development, education, health care and social welfare support. The world's response to the needs of children began in the 1950s, when mass campaigns promised to end a number of infectious diseases including tuberculosis, yaws, trachoma, leprosy and malaria. With 1990s, a new era had opened for children, with the world making great strides towards achieving the World Summit for children's basic health, nutrition and education.

UNICEF (1989) posits that statistics provide an essential foundation for gauging children's well-being which are vital indicators of the care, nurture and resources that children receive in their communities and countries. We are reminded that more than 12 million children each year continue to die from the "silent emergencies of preventable diseases and malnutrition.

Atkins (2002) observed that malnutrition remains one of the major contributing factors to disease and death in the world, while its impact is greatest in poor and underdeveloped parts of the world, where protein energy malnutrition accounts for 49% of deaths in children under the age of 5 years. Lack of access at all times to a sufficient quantity and quality of safe and nutritious food for an active and healthy life can cause under-nutrition and micronutrient deficiencies, which affect every age group throughout the developing world (FAO and UNDP, 2001). Increased awareness of the pathophysiological processes associated with malnutrition can guide therapies to reduce the associated morbidity and mortality, but improved access to food-providing a balanced combination of energy and nutrients continues to be the key to prevention of malnutrition (Ravelli 1998). Adequate nutrition must be addressed within the context of an explicit framework that reflects the

biological and social causes of the problem as well as the importance of causes at both macro and micro levels (Onyezili, 2005). This captures the multi-sectoral nature of the problems.

Nutritionists and other health professionals have long recognized the importance of establishing healthful nutrition practices during childhood and early adolescence. As such, diet and exercise patterns adopted during these prime developmental years set the stage for life-long habits that can mean the difference between health and infirmity in later years (NHANES, 2000).

According to Okolie (2005), most children in Nigeria fall sick as a result of eating inappropriate food for a long period of time. This situation, most often, leads to prolonged deficiency of appropriate vitamins, minerals and proteins which could cause some serious health problems. Balch and Balch (2000) argue that too many of us do not have the slightest idea of how to maintain good health. Many children suffer from diseases that could have otherwise been prevented by eating good and appropriate food. The treatment of this eating disorder must begin with efforts directed towards worldwide prevention. Complex societal, economic, and political factors must be overcome in order to provide effective coordinated programmes targeted at improving access to nutrition.

In this study, therefore, the overriding interest of the researcher was on the nutritional needs of children vis-à-vis the health promotion and disease prevention of children. This has been adjudged the best by WHO in reducing infant mortality rate.

1.2 STATEMENT OF THE PROBLEM

Children and women have been the worst victims of poverty, conflicts, violence and disease, which have characterized a huge chunk of the developing regions of the world in the last century (Onyezili, 2005). In Nigeria, two thirds of our populations live below poverty line, and household, food security, quality of care, health services, as well as environmental sanitation are inadequate. Nigeria is gripped by both low income and food poverty, and poor access to the means of supporting rural development is among the causative factors

(FGN/WHO, 2004). Indeed, Nigeria exemplifies the paradox of a country which, although she boasts of one of the best resource endowments in Africa has recorded less progress in reducing under-five mortality rate than any country in sub-Sahara Africa (UNICEF 2001).

According to Obionu (2001), childhood mortality (death before age five) accounts for approximately forty percent or more of the total mortality rate in most developing countries. Infant mortality rate (IMR), which is a measure of death within the first year of birth, ranges from 50 to 150 per thousand which is up to 10 times greater than that of industrialized countries. Data from the Multiple Indicator Cluster Survey (MICS) a survey carried out nationwide by the Federal Office of Statistics (FOS) in 1999, indicate that almost one in five Nigerian children dies before reaching the age of five (FOS A. 2000). This implies that, on average a baby born in Nigeria is about 30 times more at risk of death before the age of five than a baby born in the industrialized countries. In her 2005 study, Onyeneho argued that Nigeria, like many sub-Sahara African Countries, has witnessed a dramatic increase in mortality rate among infants and children, contrary to the decline experienced in the mid 1980s. WHO/UNICEF (2003) estimates that the child mortality rate for Nigeria is 183/1000. This is high compared with those of countries of other world regions such as Asia, Latin America and Europe.

There is a growing concern about the recent persistent high mortality rates, especially in the early ages in these developing countries. When illnesses are contracted during the early years, they may be devastating e.g. polio which may produce permanent paralysis or death. These tragedies can be prevented by appropriate immunization. It is crucial that we build on the success of current campaigns against polio to improve the routine immunization of children against the common vaccine preventable diseases (NDHS, 2003). Malnutrition, largely preventable, contributed to more than half of the deaths of one fifth of the 5 million babies born in this country, (Onyezili 2005). At least one million of those babies had of low birth weights. Onyezili, (2005) maintained that unless the present situation is arrested in

Nigeria we will find that one in ten children aged less than 5 years, especially in rural areas may suffer impeded mental development.

The rural children (they are also usually children of younger, less educated mothers) are definitely disadvantaged in terms of nutritional status. Children living in rural areas are, on the average, twice as likely to be deprived of essential goods and services as their urban peers. The sad fact is that disadvantages overlap and reinforce one another. For example for rural children, the lack of sanitation pollutes the water, while and poor nutritional status renders them more vulnerable to illness, which if untreated, may reduce their body weight, and resistance to disease.

The past years have witnessed heightened and continuing concern with malnutrition as a serious public health problem. These constitute a threat to the normal growth and development of many thousands of poor children in various regions of the world, including Nigeria. Malnutrition tends to occur primarily in poor families as a result of the adverse socio-economic and environmental conditions typically associated with poverty, including poor housing and sanitation, exposure to infectious and parasitic diseases, inadequate health care, large family size, very limited educational and occupational opportunities, poor feeding and child care practices etc (Mavis 1981).

Scrimshaw (1997) observed that one of the most obvious clinical manifestations of serious malnutrition in infancy is a dramatic combination of apathy and irritability. The infant is grossly unresponsive to his surroundings and obviously unable to profit from the objective opportunities for experience present in his surroundings.

In Nigeria, a nutrition survey, conducted by the government of Nigeria and the United Nations children's Fund (UNICEF) in 1993 revealed that Kano State in the northern savannah zone of the country faced worsening food insecurity. It had the highest prevalence in the country of stunting or chronic under-nutrition among children under the age of five and alarming statistics for micronutrient deficiencies of vitamin A and iodine in children. This

led to the high incidence of malnutrition related diseases including marasmus, kwashiorkor and goiter (FAO and UNDP, 2001). The major underlying causes of nutritional problems include poor maternal and child care practices, lack of awareness and education, family food insecurity, poor intra family food distribution, poor access to good quality health and sanitation services (World Bank, 2002). Nutrition problems are due to lack of education and proper utilization of food rather than lack of food. Rokx and Brown, (2002) argue that lack of knowledge about healthy nutrition behaviours and practices is a major cause of poor nutrition in most of the developing world.

World Bank (2002) observed that in Africa, where malnutrition is high, inadequate feeding of young children preceeded economic hardship. Poor nutrition is also caused by non exclusive breastfeeding, the early introduction of foods other than breast milk, and inadequate amounts of complementary foods starting at about six months. Most of these are related to poor child care practices. Because resources to buy adequate quantities of high quality foods have declined in some families, feeding practices have deteriorated further (Rokx and Brown, 2002).

According to Burgess and Grace (1998) poor nutrition prevents children and communities from reaching their full potential and from participating fully in social and economic life. Even worse, under-nutrition affects not just one generation as under nourished parents bear undernourished children. Over time communities continue to suffer.

Nigeria should affirm not by words alone, but by deeds that the well being of today's children is the concern of all people, government agencies and adults. This is because the well-being of children is inseparably linked with peace and prosperity of tomorrow's adult community. The study therefore hopes to look into the knowledge and awareness of nutritional needs of children in Enugu State.

1.3 RESEARCH QUESTIONS

The study was guided by the following research questions:

1. What are the factors that contribute to infant mortality in Enugu State?
2. What are the diseases that are common among the children, which can be easily associated with poor feeding?
3. Do respondents have knowledge of infant nutrition?
4. What are the influences of the socio economic status of parents on infant nutritional balance?
5. What are the causes of nutritional problems of our rural communities in Enugu State?
6. Do the Urban dwellers have more knowledge of infant nutrition than their Rural Counterparts?
7. Do Enugu State women observe six months exclusive breast-feeding for their babies?
8. What are the damaging effects of malnutrition to the children?
9. What roles can wocial work play in modern child health care delivery?

1.4 OBJECTIVES OF THE STUDY

The general objective of the study is to examine infant nutritional needs in Enugu State. The specific objectives of the study are the following:-

(1) To find out the causes of infant mortality in Enugu State.

(2) To identify the diseases that are common among the children of Enugu State, which can be easily associated with poor feeding?

(3) To ascertain the respondents knowledge of infant nutrition.

(4) To ascertain the influence of the socioeconomic status of parents on the nutritional balance of children.

(5) To identify the causes of nutritional problems of rural communities in Enugu State

(6) To examine whether the urban dwellers have more knowledge of infant nutrition than their rural counterparts

(7) To find out whether Enugu State women breast feed their babies exclusively for six months.

(8) To determine the damaging effects of malnutrition to the children.

(9) To identify the roles of social work in modern child health care delivery.

1.5 SIGNIFICANCE OF THE STUDY

The study has both theoretical and practical relevance. The success in preventing and controlling malnutrition in children depends on awareness of the complexity of the issue, and on the foresight and political will to include appropriate nutrition as an objective in formulating and implementing social and economic development strategies (World Health, 1988).

Promotion of breast-feeding and improved weaning practices are considered to be effective and feasible interventions in the reduction of childhood mortality and morbidity (Obionu, 2001). It is hoped that this study will add to the body of knowledge in child health care services in Nigeria and will also lay a useful foundation for further studies on health services for children in Enugu State.

The practical importance of this study is not only to the selected groups like parents or child caregivers but also to all, with regard to available knowledge about nutritional needs of children. The study therefore hopes to:

1. Provide information on the role of parents and other child care givers in the provision of appropriate nutrition for children in Nigeria.
2. Supply information to mothers and other child care givers on the needs to promote, protect and support exclusive breast-feeding.
3. Raise awareness of nutrition problems in Enugu State of South Eastern Nigeria and will provide necessary information that will help the Ministry of Education

and the Ministry of Health to join hands to keep child health care on the right track in the country.

1.6 OPERATIONALIZATION OF CONCEPTS

The following definitions of concepts are provided for better understanding of their operational meanings in the study.

1. **CHILD:** A child is a person who, because he is less than 18 years of age, is presumed in law to be dependent and incapable of making decisions for himself. In this research, a child means (is) a person who is between the ages of 0-5 years irrespective of sex.
2. **CHILD SURVIVAL:** Is the term presently accepted to describe programmes developed to decrease mortality and morbidity of children from birth until five years of age.
3. **HEALTH:** Health is defined by Webster's Dictionary as "a state of bodily or mentally, well-being, normal condition of mind or body in which all parts and facilities perform their functions dully, easily, satisfactorily, soundly; freedom from disease, disorder, pain or weakness".
4. **HEALTH EDUCATION:** This means educating mothers or child care givers on children's healthy living, which may include nutrition education, disease causation and prevention, personal and environmental hygiene.
5. **HEALTH SERVICES:** Health services are concerned with the activities - directly concerned with health status of a child or children.
6. **KNOWLEDGE:** This refers to the facts, information, understanding and skills that a person has acquired through experience or education.
7. **MORBIDITY:** This means the presence of disease or disease conditions.
8. **MORTALITY:** Death

9. **MORTALITY RATE:** Frequency of deaths per 1000 population in a given period.
10. **NUTRITION:** All the processes used by the child to take in food and to digest, absorb, transport, utilize and excrete food substances.
11. **OVER-NUTRITION:** Over consumption of one or more nutrients in children.
12. **STUNTING:** Consequence of chronic under nutrition in children arising from insufficient food intake and exposure to infections over long period.
13. **SOCIO ECONOMIC FACTORS:** These refer to the status of mothers in terms of income, education and occupation as well as social and legal freedom.
14. **SOCIAL WORK:** Is the art of bringing various resources to bear on individuals, group and community needs by the application of a scientific method of helping people to help themselves.
15. **SOCIAL WORK SERVICES:** Services provided by social workers for children, and adults alike.
16. WASTING: Symptom of acute under nutrition in children, a critical period in their development, forming sufficient muscle or depositing enough fat.

CHAPTER TWO

LITERATURE REVIEW

2.1 REVIEW OF EMPIRICAL LITERATURE

2.1.1 KNOWLEDGE OF NUTRITION

According to wise (2002) several conceptual models exist, involving the sense, beliefs; ecology and perception, that attempt to explain how dietary patterns are established in an individual. Although it appears to make sense that knowledge is related to behavior. Some early literature gives the impression of failing to link knowledge to behavior because of the method used and this may also partly be the result of the fact that the studies do not directly test the link between knowledge and behavior on specific foods. A study in La paz, Bolivia, however noted that considerably more than half of the deaths in children occurring in households or community could be ascribed to inadequate knowledge, or correct behavior or both, (Claeson and Waldman, 2000).

Studies in the UK, looking at other aspects of nutrition knowledge have had equally concerning findings. Buttress (1997) found that people were poor at identifying foods containing starch and even worse at knowing which foods contained fibre, with 35% of the sample failing to correctly categorize as many as half of the foods presented as high or low in fibre. Research in other countries has reported similar results. Analyzing surveys conducted in the United States of America in 1983, 1986 and 1988, Levy et al, 1993 found that although nutrition knowledge relating to fat and cholesterol was improving, it was still unacceptably low, with no more than 60% of respondents correctly answering questions on individual items.

In the US, Levy et al (1993) found that levels of knowledge about fat and cholesterol were highest for more educated people. In a study in Australia, (Crawford and Baghurst, 1990) found that knowledge about the links between disease and fat, sodium and sugar was generally better for women, people of higher socio-economic status (SES) and older people.

Tate and cade (1990) reported similar results from a U.K sample. Buttress (1997), also in the UK found significant gender and class differences in ability to identify foods containing starch and fibre, with women performing better than men, and middle and upper-middle class respondents better than working class respondents.

In a nutrition knowledge survey carried out on a cross-section of the adult population of England (n = 1040) in 2002, investigating knowledge relating to current dietary recommendations, sources of nutrients, healthy food choices, and diet disease links, it was found that there were significant differences in knowledge between socio-demographic groups, with men having poorer knowledge than women, and knowledge declining with lower educational level and socio-economic status. In this survey, as regards fruit and vegetables, well over a third of respondents (41%) were unaware of a link between low intake and health problems. Only 42% correctly thought that eating more fruits and vegetables can help reduce that risk of cancer and 47% knew that it could also reduce the chances of heart disease.

The role of fruits and vegetables in the infants' diet is functional, and they are recommended as ideal first foods. Introducing fruits and vegetables in the infant's diet facilitates dietary balance as well as diversification. A similar trend in the introduction of fruits and vegetables, earlier than the recommended age has been reported in studies of Mexican-American and African - American mothers.

In Nigeria, a nutrition survey was carried out in 1993 by the government of Nigeria and it was found that Kano State in the Northern part of the country had the highest prevalence of stunting or chronic under – nutrition among children under the age of five. This has led to a high incidence of malnutrition related diseases including marasmus, kwashiorkor and goiter (FAO AND UNDP, 2001). In areas where malnutrition is an indicator of a community's nutritional status, women and children have been noted to be more acutely malnourished than men due to their differential feeding practices.

According to the new statistics released by UNICEF in 2005, children who are undernourished have lower resistance to infection and are more likely to die from common childhood ailments such as malaria, diarrhea or respiratory infections.

2.1.2 FACTORS ASSOCIATED WITH EXCLUSIVE BREAST FEEDING

The study carried out in Cape Coast, Ghana in 2010 sought to investigate socio-cultural factors that influence the infant feeding practices of mothers attending welfare clinics. Majority of the respondents were Akan, married, over 27 years of age, and held at least junior high school certificate. Respondents who reported having primary education were significantly more likely to exclusively breastfeed than were respondents who reported having higher levels of schooling. Mother's marital status, mother's employment status, social support and baby's age were also influential in infant feeding practices. It is therefore suggested that health workers or social workers carrying out infant feeding education need to be aware of the infant feeding practices applicable to their target group as well as the socio-cultural beliefs held by that target group.

Studies conducted in sub-Saharan Africa showed that the proportion of those breastfeeding exclusively for up to 6 months was below 32% (population Reference Bureau, 1999). This figure is woefully below the WHO/UNICEF'S aim of achieving 75% and above exclusive breastfeeding in sub-saharan Africa. There are numerous studies demonstrating breastfeeding's contribution to saving children's lives. For instance, an infant who is breastfed has a reduced risk of developing diarrhea. A study in Peru showed that infants under 6 months of age who were not breastfed had fourfold greater risk of developing acute respiratory infections compared with exclusively breastfed babies (Brown et al, 1989). Research studies addressing the influence of maternal age on breastfeeding initiation and duration have varying results (Ford and Labbok, 1990). Investigators have found a strong, positive correlation between maternal age and education level and breastfeeding initiation and duration.

Specifically, older and more educated women are the subgroup most likely to choose breastfeeding as their preferred infant feeding method and they generally breastfeed their children longer than other groups (AAP, 1997, Scott and Binns, 1999) Multiple studies addressing the factors associated with the infant feeding practices have "identified adolescent mothers as one group that is unlikely to breastfeed (Volpe and Bear, 2000: 196). In a study conducted to compare infant feeding practices of Anglo-American (AA) and Asian-Indian-American (AIA) residing in the southeastern United States, showed that there were significant group differences in feeding practices. AA mothers had a higher incidence of breastfeeding compared to AIA mothers, and the literature supports this finding.

A cross-sectional study on knowledge and practice of breastfeeding carried out in the North of Jordan in 2006 showed that higher education and higher employment rates in recent years among women have had an impact on traditionally based infant feeding. Employed women were more likely not to practice full breastfeeding compared to unemployed women, and women who had caesarian delivery were more likely not to practice full breastfeeding compared to those who had vaginal delivery (Khassawneh et al, 2006). The 2001 Singapore National Breastfeeding survey showed that working status had no effect on initiation of breastfeeding but had an effect on breastfeeding duration. In Singapore, the median breastfeeding duration for non-working and working mothers was 9 weeks and 8 weeks respectively.

Various foreign and local studies have shown varying effects of work status on the initiation and duration of breastfeeding. Most studies showed that there was no association between mothers' employment and the decision to breastfeed. The World Health Organization expert consultation on the optimal duration of exclusive breastfeeding recommended in 2001 that infants should be exclusively breastfed during the first 6 months of life, instead of the previous recommendation of 4 – 6 months, and that they should continue to receive breast milk throughout the remainder of the first year and during the

second year of life (Ong, G. et al, 2001). A review by the US Preventive services task force in July, 2003 determined education on breastfeeding to be the most effective single intervention for increasing breastfeeding initiation and short-term duration.

2.2 REVIEW OF THEORETICAL LITERATURE

2.2.1 What is nutrition?

Nutrition can be defined as all the processes used by the adult or child to take in food and to digest, absorb, transport, utilize and excrete food substances (Endres, 1980). The components or substances found in foods are called nutrients. Food is essential for life; what children and adults eat affects their nutritional status as well as their health. Food supplies essential nutrients that the body requires for:

- energy
- growth and development
- resistance to illness and infection
- tissue repair.

Lynn (1989) noted that a daily intake of essential nutrients depends on eating a variety of foods in adequate amounts. However, the availability of food is often determined by one's environment – the availability of money, geographic location, cultural preferences and consumer knowledge of good nutrition. Good nutrition according to WHO (1988) simply means having a nutritional status that enables us to grow well and enjoy good health. Nutritional balance is something that is built up day by day right from the very first minute of life or from the point where the embryo starts to form in the mother's womb.

Ekpo (1982) posits that nutrition is influenced by such factors as culture, economy, education, and religion. He noted that the cultural food pattern of any community depends on two factors; (a) The success of its agricultural system measured by the extent to which it provides full and balanced diet for physical fitness and greater productivity and (b) Marketable products for exchange economy. This is of great concern to Nigeria where

available medical evidence points to widespread incidence of protein – calorie malnutrition. Ekpo attributed the nutritional problems of rural communities to ignorance in the choice of foods or individual poverty in wage earning.

2.2.2 Nutritional status of Children

In judging the nutritional status of a child, Lynn (1989) believes that there are many factors to look for. Besides a steady gain in height and weight in conformity with individual patterns, there should be good bone and tooth development, good posture, shiny hair, firm muscle turgor, clear skin and eyes, plus alertness and curiosity – all indications of good health and proper nutrition. Nutritional status affects children's behavior. Well-nourished children are more alert and attentive and are better able to benefit from physical activity and learning experiences (Lynn 1989). Poorly-nourished children may be quiet and withdrawn, or hyperactive and disruptive during class activities.

Guthrie (1986) opines that children's resistance to infection and illness is also definitely influenced by their nutritional status. Children who are well-nourished are less likely to become ill; they also recover more quickly when they are sick. Poorly-nourished children are more susceptible to infections and illness. Weiser (1982) shows that there are a few basic facts about food and nutrition that every provider of child care must know and put into practice. These include information about the essential nutrients and recommended meal patterns and practices for very young children. The total nutrient needs of very young children are relatively low, but for children from 1 to 3 years of age, the requirements for protein, calories, a number of minerals and vitamins A, B, and F are about half dose of adults, while calcium and vitamin C needs are about the same.

Onyezili (2005) revealed that energy balance could be attained either by eating as much as is needed, or by reducing activity to the level of intake affordable, with no pathological manifestations but without the satisfaction of need. Yet, the satisfaction of needs at desired activity levels is, as is well known now, critical for early childhood psychosocial

development. Similarly, it has been demonstrated that socio-economic factors are more significant causes of poor growth than ethnic or geographical differences.

2.2.3 Nutrition and Health in Nigeria

Health like weather or fortune may be good or bad and may have varied definitions. Health is defined by Webster's Dictionary as "a state of bodily or mentally well-being; normal condition of mind or body in which all parts and facilities perform their functions dully, easily, satisfactorily; freedom from disease, disorder, pain or weakness." There are various definitions of health but the only definition that is widely accepted and adopted by the member nations of the World Health Organization (WHO) is the one which defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".

WHO describes health in terms of a state or quality of total physical, mental and social well-being. Each element is assumed to make an equally important contribution to health. Furthermore, factors affecting the quality of one element are known to have an effect on the others. For example, a stressful home environment may lead to frequent illness, such as stomachaches, headaches or asthma in children. Also, the presence of a chronically ill child in the home can have profound effects on the state of the parent's mental health.

Lynn (1989) believes that this broader concept of health also recognizes that children and adults do not exist in isolated settings. Rather, they are important members of a variety of social groups, including families, peers, community and society. The quality of their social interactions and contributions to these various groups often affects, and is affected by their state of health. Health status is determined in part, by specific biological materials that are inherited at conception and influenced by numerous factors in the environment.

Encyclopedia of World Problems and Human Potentials (1991) state that huge inequalities characterize the current picture of global health. In a third world country like Nigeria, health problems are related to malnutrition, poverty, and lack of access to basic

needs. Health depends on adequate food supply and this in turn on a sound agricultural policy and a good system of food distribution. It is pertinent to note that the social, economic and agricultural factors that determine food supply also determine the state of health and the incidence of disease amongst a population.

Health ought to be understood in a wider sense than its conventional meaning (and especially as embracing primary health care) – an integrated approach to health that also spans food production, education, water and sanitation (World Bank, 1980). The way people live, eat and believe affects their individual and collective health. For instance, in some societies essential food items like meat, snail and other proteinous foods are not eaten because of cultural beliefs. This affects health because the people are undernourished and their resistance to disease is low. Expectant mothers may not be permitted by culture to eat balanced diets/meals which may include snails, and eggs. They may also not take ante-natal drugs like iron tablets and vitamins to avoid having oversized babies which may lead to surgical operation at the time of delivery.

The African record on health is one significant progress, but one also of monumental problems, because health benefits are unevenly spread and the majority of people in rural areas still have no easy access to modern medical facilities (World Bank, 1980). Infant mortality rates are still very high, compared to those in developed countries. Medical personnel are still in short supply and mostly concentrated in urban areas. Only a minority (25 percent) has access to clean water supply, which is problematic even in big cities with modern facilities because of massive growth in urban population (World Bank, 1985).

2.2.4 Child Malnutrition

According to Pliner (1983) malnutrition occurs when there is a prolonged imbalance between the nutrients that are required and the nutrients that are actually eaten. The author maintained that malnutrition may be the result of (a) under-nutrition – an inadequate intake of one or more nutrients and (b) over-nutrition – over-consumption of one or more nutrients by

children. Protein – Calorie malnutrition is the most serious and widespread form of deficiency disease in the world today and occurs most frequently in children during the years of rapid growth (Scrimshaw, 1997). Protein-Calorie malnutrition manifest as kwashiorkor and marasmus. Kwashiorkor results from a diet inadequate in protein but generally adequate in calorie, while marasmus results from a diet inadequate in protein and calories. It is important that both of these conditions be avoided in the infant and young child. Adequate intake of all required nutrients is most critical during early periods of active growth and development

Scrimshaw (1997) emphasizes that the quality and quantity of protein as well as all nutrients must be considered in the treatment and prevention of protein – calorie malnutrition. For infants, the ideal diet should include a liberal supply of fresh milk or if necessary, dried skim milk, fortified with vitamins A and D, and accompanied by adequate non-protein calories and other nutrients. In several countries where P.C.M. is recognized as a public health problem and where milk is not easily available, palatable vegetable protein mixtures have been developed using locally grown and familiar products. In Nigeria, this mixture is composed of peanut flour and some milk casein (fish meal). This mixture could also be composed of corn meal, ground sorghum, cotton seed flour, torula yeast and leaf meal blended according to a formula that provides the best amino-acid balance and fortified with calcium and vitamins.

Malnutrition never occurs alone. It occurs in conjunction with low income, poor housing, familial disorganization, climate of apathy, ignorance and despair (World Bank , 1986). As earlier on noted, the prevention of malnutrition in the world today requires the efforts of various disciplines and also depends on awareness of the complexity of the issue, and on the foresight and political will to include appropriate nutrition as an objective in formulating and implementing social and economic development strategies.

Weiser (1982) opines that a more correct concept of malnutrition includes any functional impairment or physical condition that can be prevented or cured by improved nutrition. When so defined, instances of malnutrition exist in every society, whether it is technically advanced or newly developing. There is an increasing amount of evidence from many parts of the world, conclusively showing both direct and indirect relationship of nutritional factors to intelligence and learning. There is even evidence that poor or "picky" eating during the first year of life is related to a depressed IQ score.

Malnutrition and death are manifestations of interactions in which inadequate dietary intake and disease are but just immediate causes, interactions in which inadequate food security is only one of three underlying causes for which there were basic causes hinged on other larger societal processes (Onyezili, 2005). Political, social, and ideological superstructures, economic structures and our potential resources as a nation, bear importantly on our nutrition status. Inadequacies of factors of household food security, basic health services, good sanitation and provision of adequate care for mother and child, all underlie manifestations of malnutrition and affect child development as well as eradication of disease.

A study conducted in India 1993, shows that about half of the child mortality and much of the growth retardation in developing countries appears to be caused by synergism between malnutrition and common infections. Synergism between malnutrition and infection is responsible for excess mortality among infants and preschool children in less developed regions (WHO 1988).

Programs to reduce such synergistic interactions would profoundly improve health status among the children of the poor. In the past, improvement in the health and nutritional status of children occurred spontaneously as a result of general socioeconomic development; (Arnfried and Taylor, 1983). It is not necessary now to wait for general development, since measures are available that contribute directly to improving the quality of children's lives. A selective approach is needed in health planning, to put together appropriate combinations of

interventions that will produce the greatest health and nutrition improvement at the least cost for children.

One of the most obvious clinical manifestations of serious malnutrition in infancy is a dramatic combination of apathy and irritability. (Weiser, 1982). The infant is grossly unresponsive to his surroundings. This unresponsiveness characterizes his relation to people, as well as to objects. Behavioural regression is profound; and organization of his functions are markedly infantilized. In children who are under-nourished, one notes a reduction in responsiveness and attentiveness. In addition, the sub-nourished child is easily fatigued and unable to sustain either prolonged physical or mental effort. Improvement in nutritional status is accompanied by improvements in these behaviours as well as in physical state.

2.2.5 Factors Associated with nutritional practices

Poverty

According to Salau (2008) poverty and malnutrition in Nigeria are widespread and severe, and therefore continue to be at the center stage of the development discourse. Sixty-four percent of all rural Nigeria have a consumption level below the basic-needs poverty line, while 43 percent of rural children under five years of age are stunted in growth. Thus, many rural Nigerian women live under conditions of extreme vulnerability, both economically and physically, with limited abilities to cope with shocks and safeguard their current level of well-being. This affects their children's nutritional practices. Also according to Appoh and Krekling (2005) the amount of money a woman has will determine the type of weaning food that she will introduce to her child. Most often, women lack financial control over household resources which increase inability to give their children the kind of food they need.

Maternal Education

Women's education is recognized by all the major international development agencies as crucial for developing countries. For example the UNICEF report 'State of the World's Children 2004' advocates the vital importance of improving girls' education as it benefits

both boys and girls, helps lower infant and child mortality, improves nutrition and health, raises economic productivity and reduces poverty around the world (UNICEF 2004). Apart from being an important end in itself, education is viewed as a key element in the overall strategy for reducing poverty and malnutrition in the developing world (OXFAM 2001). Mother's education is closely linked child nutritional practices.

According to Mishra and Retherford (2000) maternal education is a strong determinant of child nutritional status. Women with secondary education and above were found to have better knowledge of child nutritional status then their counterparts with lower educational level. They also found that women's knowledge of health and nutrition, including their perceptions of child growth and ability to detect growth faltering, are important determinants of children's nutrition practices.

2.2.6 Need for Immunization Services

A healthy child is the dream of every mother. Therefore, every mother strives to provide their infants, with foods which they believe can give the children adequate nutrients that will enable them grow. But the spiraling effects of inflation on daily basis, and other factors such as ignorance and cultural beliefs leave some mothers, especially the low income earners at loss on how to adequately offer children proper nutrition. While mothers know that health and nutrition are important to the growth and development of their children, they do not necessarily know that the drastic reduction in infant mortality rate in the country cannot be easily achieved without the support of immunization services. This is because no matter the amount of nutrients or balanced meals/diet given to an infant, without immunization, the child still stands the risk of dying of other preventable communicable diseases such as whooping cough, measles, tuberculosis, tetanus, etc.

When full-term babies are born, they have a natural protection from many diseases. But this protection does not last. It wears off anywhere during the first 6 to 12 months of life. When that happens, there is only one thing to do: get special "shorts and drops" to take the

place of the natural protection which has worn off. These shots and drops are vaccinations, inoculations or immunizations (Weiser, 1982). Immunization doses are made from very small amounts of the virus that causes a specific disease. Immunizations doses are injected into the body (shots) or taken by mouth (drops). The body reacts to the vaccine by producing antibodies, which build up in the body and guard it for a long time. It takes different kinds of disease-fighters to keep away different kinds of diseases.

According to Ebrahim (1990), the objective of immunization is to produce in an individual a degree of resistance equal to that which follows natural infection. This is achieved by introducing into the body viruses or bacteria which have been made non-virulent, but at the same time retaining their antigenic properties. In those cases where the ill effects of the infections are due to toxins, the modified toxin called toxoid is used for vaccination as in the case of tetanus or diphtheria. On the other hand, where a living organism is used for antigenic stimulation as in the case of smallpox or B.C.G., one administration may be satisfactory.

Whereas the immunity of an individual can be built up against many of the common infectious diseases by administering the appropriate vaccine, the incidence of that disease in the community will depend upon the number of persons susceptible to the disease in the community. The larger the number of immunized people in the community, the less easy is the spread of the disease from one person to another.

Immunization is the most powerful cost-effective means of preventing some of the deadly diseases of childhood as well as being one of the eight components of primary health care (Obionu, 2001). The prevention of diseases by immunization, a conventional public health measure is today the best known, practical, low-cost, community based way of protecting children against the major killer childhood diseases. Thanks to the World Health Organization (WHO), who in 1974 formulated and launched the Expanded Programme on Immunization (EPI). In 1977 the organization reaffirmed its commitment to achieving

universal immunization by 1990, with the objective of reducing drastically the incidence of death among children from preventable diseases.

By launching the programme, WHO has the aim of assisting all nations to carryout immunization of their 0 – 2 years child population against vaccine preventable communicable and dangerous diseases of childhood. These diseases which are six in number are tuberculosis, whooping cough, diphtheria, measles, poliomyelitis and tetanus.

WHOOPING COUGH (peruses):- Whooping cough, most likely strikes children under the age of 7 months. Whooping cough is spread through the air and can lead to pneumonia (lung infection) and convulsions. These conditions are most likely to occur in the very young. Whooping cough can cause death in babies under 6 months of age.

DIPHTHERIA – This is an infection that usually develops in the throat, with early symptoms of sore throat, chills, slight fever, and headache. It can spread through coughing and sneezing.

MEASLES: Measles is one of the most serious of the childhood diseases. Measles spreads easily through coughing, sneezing, or even talking. Measles begins with symptoms like severe cough, cold, chills, watery light-sensitive eyes and a temperature that may rise as high as 105 degrees.

POLIOMYELITIS – Polio is a very serious disease that can cause permanent loss of use of the muscles (paralysis). It is spread by contact with people who have the disease and it starts with fever, headache, vomiting, sore throat, and sometimes severe muscle pain and stiffness in the neck, back and legs. There is no cure for polio (Weiser, 1982).

TETANUS (Lockjaw) – Tetanus can strike people of any age who have not been immunized whenever they have a dirty wound. Tetanus germs are about everywhere, mostly in soil, dust, dog saliva and animal manure. Tetanus is spread by germs coming into the body through a cut or other open wound – sometimes as small as a pinprick, but more commonly in deep cuts such as those made by nails and knives.

MUMPS – Mumps is a common, usually mild childhood illness that is most likely to affect 5 to 10 year olds. It tends to be more serious and painful in teenagers and adults. Mumps is spread by contact with persons who may have mumps and by eating or drinking from articles they have used e.g. cups, silverware, soda bottles. Its symptoms include fever, headache, painful swelling of glands – the glands swell so much that air passages are blocked, making it hard to breathe. Mumps may cause infection of the testicles which could result in sterility.

TUBERCULOSIS - Tuberculosis is a transmittable disease that has public health implications. It normally affects the lungs, causing chronic, progressive symptoms of cough, weight loss and malaise. The disease is normally curable with a six-month course of appropriate anti-biotics. Most deaths occur early in treatment.

Contributing to the importance of children's immunization, (Obionu 2001) stressed that a continuing programme of immunization is needed against the major communicable diseases in young children. Immunization as presented through the WHO Expanded Programme on Immunization (EPI) includes preventive activity against tuberculosis, measles, whooping cough, diphtheria, tetanus and poliomyelitis. Other diseases of public health importance can be included in this programme. Recently in Nigeria, yellow fever and cerebrospinal meningitis have been integrated into the EPI in view of the epidemiological prevalence of these diseases in some parts of Nigeria.

In the developing world, less than 40% of infants receive a third dose of DPT or polio vaccines, and coverage with measles vaccine in only about half that for DPT or polio (WHO, UNICEF, UNDP and World Bank, 1986). These coverage levels is the reason that over 3 million children die annually from measles, neonatal tetanus and whooping cough, and over a quarter of a million are be crippled by poliomyelitis.

Clearly, it is only by making vaccines available at hospitals and health centres, and by using all available resources to mobilize, educate, encourage, remind and even pressurize

mothers and families to take children to the vaccination centres on scheduled times and dates, can these challenges be overcome (Obionu, 2001). The first priority has been to strengthen immunization services in existing health facilities. Many simple things remain to be done. These include, health facilities should be clean and inviting; clinics need to be managed so as not to impose long waiting times, clinics should be held at times and places convenient to the community; all health facilities should provide information about immunization and communities should be more involved in the planning and delivery of immunization services (WHO, 1986).

To be effective, immunization services must be continuously provided to a high proportion of children in their first year of life and to others who are susceptible (such as women of child-bearing age) for tetanus toxiod. Immunization should be offered by all curative and preventive health services, even to children suffering from malnutrition or minor illness.

2.2.8 SOCIAL WORK AND CHILD HEALTH EDUCATION

The first hospital Social Work Department was established in 1905 at Massachusetts General Hospital (MGH) in Boston (Minaham, 1987). The purpose of social work in child health is to improve a child's environment so as to maximize the child's independent functioning.

To understand the needs of children in the health care system, the social worker must comprehend the nature of childhood diseases or infections and consider a multitude of psychological, social and physiological factors relevant to the causation of such diseases. The effectiveness of social work in health setting depends on the understanding of social, cultural and psychological factors in health and illness behaviours (Minaham, 1987).

Brieland, Costin and Atherton, (1980) are of the view that social workers can play preventive as well as therapeutic roles. Through an understanding of implications of the various high-risk situations, the social worker can aid children and families to anticipate

problems and cope more effectively. The social worker's role is to emphasize the functioning capacities of mothers and child care givers, help reduce pressures, promote rehabilitation and prevent unnecessary dysfunction.

In all the eight identified components of primary health care in Nigeria, social work plays important roles in such important areas as clean water, health education concerning prevailing health problems, methods of preventing and controlling them, promotion of food supply and proper nutrition, maternal and child health including family planning, counselling on immunization against the major infectious diseases, and control of endemic diseases. They also give advice on sanitation and the appropriate treatment of common diseases and injuries.

It is therefore, the concern of social workers to counsel mothers to heed recommendations such as returning their children to the clinic for periodic check-ups, re-entering the hospital for needed treatment, undergoing specialized diagnostic procedures or following directions for diet. Social workers can use all available reasons to mobilize, educate, encourage, remind and even pressurize mothers and families to take children to the vaccination centers on all scheduled times and dates.

Social workers are also involved in community education which aims at discouraging unsafe traditional practices such as using dangerous herbal concoctions, applying or putting pressure and encouraging pregnant women from taking variety of foods (fruits, vegetables, milk, eggs) for fear that these may cause some damage to their health or the health of their babies.

According to Ashman (2003) social workers in health setting render many services such as counselling, mediating, advocacy, discharge, planning, teaching/education, rehabilitation, linkage services, home visits and mobilization. They work in public health clinics and private physicians' offices providing counselling and referral services to people who have sought medical treatment related to family planning, prenatal care, child growth and development, venereal disease, and physical disability. They also play an active role in

health maintenance, and disease prevention programmes in local communities (Morales and Sheafor 2002).

Social work involvement with children is not limited to the direct service level. Many national organizations – including the Child Welfare League of America play an active advocacy role for children (Minahan ,1987). As a profession, social work must continue to play a dual role in relation to children, providing direct service primarily aimed at special needs of children and advocating and forming health policies to improve the lot of all children.

Some of the challenges of social work, according to Obionu (2001) in community health include the following: (i) mobilizing the community so that everyone spreads the word about immunization. (ii) Getting the health authorities to ensure constant availability of vaccines in the community. (iii) Educating and convincing parents to demand immunization for their children. (iv) Motivating mothers to act, to go back repeatedly until full dose of DPT is completed.

Education in community health by social workers has been shown to greatly enhance an individual's understanding of what is required for the family to develop a positive nutritional attitude, and so help in creating the right kind of demand. WHO (1988) also recognizes that education facilitates awareness in the whole community about what health and social services are available, and how to make use of them. Health education is particularly rewarding when women are the beneficiaries. It encourages them to take care of their own health, to avoid risks during pregnancy and childbirth, to deliver healthy babies, to follow healthy practices when they buy and prepare food for the family and to take good care of the family's immediate environment. These women in turn become educators of their children by actively passing on the information they receive.

According to Ebrahim (1990) the 'under-fives clinic' is an ideal place for the education of the parents in methods of care and in the improvement of feeding habits. Where

possible, fathers, grandfathers and other child care-givers should be included. Health education lessons may be provided when mothers assemble in groups-at the start of the clinic. In every clinic, there are mothers with special problems, e.g. mothers with twins or low birth weight babies or those with social problems. These mothers need individual health education, that is, each of them is taught separately about her own social problem. Mothers also learn by overhearing, and sometimes this is the most effective form of health education.

Onyezili (2005) states that nutrition education needs to emphasize the superiority of breast milk on the basis of overwhelming scientific proof. Optimal breastfeeding practice is the best intervention to reduce child morbidity and mortality in the first 2 – 3 years of life. Going by the reports in the most recent NDHS surveys in 2003 more than 96% of Nigerian women breastfeed their babies at least to some extent. However, the median duration of exclusive breastfeeding is half a year. So our infants are mostly still fed other foods or drinks in addition to breast milk before the recommended age of six months. Incidentally, the NDHS Survey noted that women with higher education exclusively breastfed their babies for 2.5 months.

Clearly, actions need to continue to be taken to empower all women to breastfeed their children exclusively for six months, and to continue breastfeeding with adequate complementary foods for up to two years or longer (UNICEF, 2005). Breastfed babies have at least six times greater chances of survival in the first months because breast milk has nutrients that protect the mucous membranes of gastrointestinal and respiratory tracts, and cells and immune factors that actively fight infections, shielding babies from diarrhea. (SOWC 1998). Exclusive breastfeeding increases the chance of survival many times more, and may also lower the chances of an HIV – positive mother passing on the virus via breastfeeding. The victims of sub-optimal breastfeeding practices are the children who pay with their lives through frequent infections triggered by inappropriate use of substitutes, and

their mothers whose more frequent pregnancies (in the absence of the birth – spacing effects or sustained breastfeeding are detrimental to both their health and socio-economic well-being.

2.2.9 REVIEW OF RELEVANT THEORIES

The following theories which are relevant to the study were reviewed. They include: Behavioral Counseling Theory, Ecological Approach, Health Belief Model, and Psychosocial Theory.

BEHAVIORAL COUNSELLING

Several names emerge as contributors to behavioural counseling, including Ivan Pavlov, John B. Watson, Edward, L., Thorndike, Edward C. Tolman, Clark, L. etc. However, the name that is best known to the general public, as well as most controversial, is Skinner (Thomson, 1992:157). Skinner, though, he did not develop new principles of behaviorism, did the most to translate the theories and ideas of other behaviorists into applied and useful technology.

Behavioral counseling according to Thomson (1992) is a re-education or relearning process. Adaptive or helpful behavior is reinforced, while maladaptive or unhelpful behavior is extinguished. A broad statement of the behaviorist view of the nature of people is probably best summarized by Skinner's (1971) belief that children are influenced and changed as biological entities by the things that happen to them. He believed the idea that the child of our past is still contained within us was a form of animism that served no useful purpose in explaining present behavior.

Behaviorists contend that people can make only those responses they have learned, and they make them when the stimulus conditions are appropriate. Individuals then are viewed by behavioral counselors as products of their conditioning. The stimulus response paradigm is the basic pattern of all human learning. People react in predictable ways to any given stimulus according to what they have learned through experience.

Skinner (1971) believed that a person is a member of a specie shaped by evolutionary contingencies of survival, displaying behavioral processes which bring him under the control of the environment in which he lives, and largely under the control of a social environment which he and millions of others like him have constructed and maintained during the evolution of a culture.

Since human behaviour is learned, any or all behaviors can be unlearned and new behaviours learned in its place. As with most counseling especially in this study, the ultimate goal of behavioural counseling is teaching mothers how to become their own counselors for changing their behavior to better meet their needs. The emerging knowledge and practice of behavioral counseling are relevant to casework simply because social workers are also intimately involved in the business of modifying behaviours.

It has been noted in Ebrahim (1990) that the under-five clinic is an ideal place for the counseling of mothers in methods of childcare and in the improvement of feeding habits. Counseling may be provided where mothers assemble in groups. These mothers need individual health counseling, that is, each of them is counseled separately about her own social problem.

ECOLOGICAL APPROACH

Sundberg, Snowden and Reynolds (1978) proposed the notion of ecological competence and indicated that an adequate consideration of competence should take into account all relevant personal dimensions, such as someone's skills, qualities and expectations and their interaction with environmental stimuli and situational expectations. This view of competence is consistent with the approach to social work practice, since it reflects the person – environment configuration that is paramount in our efforts to understand and help client systems (Mallucio, 1981).

The perspective of ecological competence can sensitize us to the importance of what is happening between people and their environments and the interplay between (1) the

person's needs, qualities and coping patterns and (2) the properties of the impinging environment. The major components of ecological competence are capacities and skills, motivational aspects and environmental qualities.

Capacities and skills include capacities of the person in diverse spheres such as cognition, perception, intelligence, language and physical health. Motivational aspects refer to the human beings motivation to deal with the environment, to seek stimulation, to cope with challenges, to master, to feel competent and to seek self-determination. Environmental qualities focus on the qualities that are impinging on a person's functioning at any given point. Examples include environmental resources and supports such as social networks, environmental demands and institutional pressures and supports.

The ecological emphasis on competence as a transactional concept rather than as a fixed property or trait of the individual can help the practitioner to appreciate more deeply the significance of the context of human behaviour and guide them in identifying, understanding and manipulating environmental obstacles. In ecology, human beings are seen as engaged in dynamic transactions with their environment and specifically in a continuing struggle to maintain a "moving equilibrium" while faced with complex challenges. According to Maluccio, (1981), "we survive through competence, we grow through competence, we become self-actualizing through competence". Competence is a key concept in the life model, since the thrust of intervention is to promote the person's capacity to interact effectively with the environment.

Using this conceptualization in this study will be difficult to translate into action principles or practice approaches. For instance, when we are engaged in assessing the situation of a malnourished child, we automatically think in terms of the effectiveness of the mother's behaviour as a measure of her personal or social competence. While we may pay attention to the impact of the environment, we do not generally think about assessing the

quality of person – environment transactions as a way of forming judgments concerning competence.

THE HEALTH BELIEF MODEL

A group of social psychologists developed the Health Belief Model (HBM) in the early 1950s in an attempt to understand the widespread failure of people to accept disease prevention or early response to disease (Rosenstock, 1974). The basic components of the health belief model are derived from a well-established body of psychological and behavioural theory whose various models hypothesize that behaviour depends mainly upon two variables, namely, the value placed by an individual on a particular goal; and the individual's estimate of the likelihood that a given action will achieve that goal (Maimman and Becker 1974). When these variables were conceptualized in the context of health-related behaviour, the correspondences were (1) The desire to avoid illness and (2) the belief that a specific health action will prevent (or ameliorate) illness (i.e. the individual's estimate of the threat of illness and of the likelihood of being able, through personal action, to reduce that threat).

Rosenstock (1974) notes that the combined levels of susceptibility and the severity provided the energy or force to act and the perception of benefits (less barriers) provided a preferred path of action. However, it was felt that some stimulus was necessary to trigger the decision making process. According to Rosenstock (1974), this is called "Cue to action" and might be internal or external e.g. health education and campaigns from the mass media communications.

THE PSYCHOSOCIAL THEORY

The psychosocial approach is often traced to Mary Richmond's (1953) formulations. Today the psychosocial view is essentially a systems theory approach to casework. The major system to which diagnosis and treatment are addressed is the person-in-situation gestalt or configuration (Roberts and Robert 1970). The person to be helped or treated must be

understood and must be seen in the context of his interactions or transactions with the external world. And the segment of the external world with which he is in close interaction must also be understood. This may be his family or particular members of it, his social group, his educational milieu, his employment milieu or some other social system of which he is a part.

It has been recognized throughout, that changes in one part of the person-in-situation configuration bring changes in other parts and that interchanges between the various components are continuously in process with mutual modifications occurring as a moving equilibrium is – sometimes precariously maintained. The frame of reference found most useful for understanding the dynamics of the individual's personality system in the psychosocial approach is Freudian personality theory with emphasis upon ego and its adaptive capacities. According to Roberts and Robert (1970) another emphasis of psychosocial approach is that treatment must be differentiated according to the need of the child or client.

2.2.10 THEORETICAL FRAMEWORK

The psychosocial approach of Mary Richmond (1953) and behavioural counseling of Thomson (1992) provided the analytical framework for this study. The psychosocial approach provides a fuller perspective from which to determine the strategies required to address the problems. For instance, it provides a more comprehensive explanation on the important source of encouragement to a thorough and disciplined approach to the gathering of relevant information and to the drawing of relevant conclusions as the basis for planned and appropriate treatment of the condition or problem diagnosed.

Since the major system to which diagnosis and treatment is addressed is the person-in-situation configuration. It requires the social workers' attempt to understand the child's need and respond to him in an individualized way according to his understanding of that need. Butrym (1967:20) posits that relationship plays a focal part in the psychosocial therapy

process, and this includes the recognition of the element of mutuality in it. It is assumed that the nature of relationship between mother, child and social worker is the major determinant of the degree to which the child is helped.

The objective of this therapy is to foster healthy growth pattern in children. The greater the mother's active involvement in the change process, the greater her mastery of the interadaption process is likely to be. Psychosocial therapy helps us to understand potentials of human beings. Thus, the psychosocial approach will be complimented with the behavioural counselling theory in this study. Behavioural counseling will provide a change of attitude in parents' deep-rooted habits of not immunizing their children and address the lack of knowledge on proper utilization of food.

Dietary inadequacies may be caused by poor choices in buying the right food or by mothers having too little time to prepare food and feed their children. Using behavioural counseling for women who are the main managers of family food will have a definite impact on how well their children are nourished. Through counseling, parents especially mothers learn from the emphasis placed on the prerequisite doctor's examinations, intake interviews, required immunizations, and other health measures, that such activities are important for their children. Therefore, psychosocial approach and behavioural counseling were adopted as the most suitable theories that provided the theoretical base for the study.

2.2.11 STUDY HYPOTHESES

1. Respondents who do not have knowledge of infant nutritional needs are more likely to have children that fall sick more often than those who have the knowledge.
2. Respondents with higher level of education are more likely to support exclusive breastfeeding than those who have lower level of education.
3. Females are more likely to have better knowledge of infant nutrition than their male counterparts.
4. Urban dwellers are more likely to have knowledge of infant nutrition than rural dwellers.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN AND SCOPE:

A cross-sectional survey design, which aims at collecting information on certain variables in the study population at one point in time, was used in this research. A sample survey was adopted where a proportion of the population was studied and the selection was made such that the sample was a representative of the whole population. According to Eboh, (1998:26) a sample survey is useful for development and planning purposes. A sample survey was also adopted because any reports from any good sample can be generalizable.

The study was limited to the influence of health services for children on nutrition and health education for the under – 5 children in Enugu State, using data from five (5) Local Government Areas (LGAS) in Enugu State – (three rural and two urban).

3.2 STUDY AREA AND POPULATION

The study was located in Enugu State of South Eastern Nigeria. Enugu State was created out of the old Anambra State in 1991. The State shares boundaries with Ebonyi State to the East, Anambra State to the West, Kogi and Benue States to the North and Imo and Abia States to the South. Enugu State occupies a surface area of about 800 square/km within the West African tropical rainforest region between attitudes 5^0 55^1 and 7^0 11^1 North and 6^0 50^1 and 7^0 55^1 East. The State has seventeen (17) local government areas and four hundred and twenty five (425) autonomous communities. Enugu State has unique socio-economic and cultural characteristics that informed her choice for this kind of study. Enugu State is found in the South Eastern part of Nigeria with Igbo as the dominant ethnic group and the people are predominantly Christians.

Enugu State has as a result of these unique characteristics attracted tremendous socio-economic activities over time. Enugu was a major centre for the mining of coal but since the Biafra war, Coal production has greatly declined. Thus in the recent years the city's economy

has diversified and is largely dominated by trading, commerce and small scale industry (Wikipedia 2007). Most of the rural inhabitants engage in subsistence farming and produce such crops as cassava, maize, coco-yam, rice, potato, yam, local black beans, garden eggs, yellow-pepper etc.

Enugu State is chosen for strategic reasons. The researcher resides within the state so it was cheaper for him and his research assistants to travel to the various parts of the state especially during the time of data collection.

The population of Enugu State in the 2006 census exercise was 3,257298 (FGN, official Gazette 2007). The population distribution of the State is 39% urban and 61% rural inhabitants. The study population consisted of married women of reproductive ages (18 – 49 years) and their husbands aged 18 yrs and above.

The following LGAS – Enugu North, Nsukka, Udenu, Isi-Uzo and Igbo-Eze South – were selected for this study. These LGAS have their different number of autonomous communities with indigenous leadership.

The target population for this study was households with children aged between 0-5 years and in the chosen households, children above 5 years during the stated period, were excluded. A total of two (2) respondents were interviewed in each household. These were the mother and the father whose ages ranged from 18 years and above.

However, this study was limited to the population of persons aged 18 years and above. This is the segment of the population that can articulate themselves and contribute meaningfully to the study.

3.3 SAMPLE SIZE AND SAMPLING PROCEDURE: -

SAMPLE SIZE

A total of ten communities and twenty villages were sampled from the study population and a sample size of one thousand, one hundred (1100) respondents was chosen for this study. This sample size was considered large enough for the needed statistical

calculations and tabulations. It was also considered appropriate because of the time and cost associated with this kind of academic investigation.

The sample size was made up of four hundred respondents from the two urban Local Government Areas and six hundred respondents from the three rural Local Government Areas.

SAMPLING PROCEDURE:

The multi-stage sampling approach was adopted in order to select the local government areas, communities, villages, households as well as respondents for the study. The seventeen (17) local government areas in Enugu State were stratified into rural and urban areas and purposive sampling was used in selecting two urban local government areas and three rural local government areas. The reason of selecting three rural and two urban LGAs is that Enugu State has more of rural LGAs than urban LGAs.

The five local government areas were clustered into communities and from these clusters; two communities were selected from each of the (5) LGAs through simple random sampling. Ten communities were therefore chosen and these communities were divided into villages/streets where twenty (20) villages or streets were selected through balloting and purposive sampling technique.

To get at the dwelling units or households from where the actual respondents were contacted, households within the villages or streets were counted and numbered, using the systematic sampling method. Fifty respondents were selected from each of the twenty (20) villages/streets, bringing the total number of questionnaire respondents to one thousand. Then, thirty (30) respondents were allocated to the In-depth interview and the remaining seventy (70) respondents were assigned to the Focus Group Discussion, thereby bringing the over all total to one thousand, one hundred (1100) respondents. The system of selection in this study was through the process of balloting in all the stages involving the systematic

random sampling procedure where a blind folded person drew the desired number of villages or households that were written or listed on pieces of paper and put in a bag.

To trace the final respondents in this study, village routes were randomly selected from a junction. The final respondents were actually reached through the village pathways connected to the households under study in each village. The randomly selected routes were followed and all the households along these routes were listed and numbered. This method was used until the desired number of one thousand (1000) respondents was achieved. The researcher ensured that no street/road or village was unduly over represented as shown in the sampling scheme for both urban and rural areas in table 1 below.

Table 1: Sampling scheme for both urban and rural areas:

LGAS	**TOWNS/COMMUNITIES**	**STREETS/ROADS/VILLAGES**	**SAMPLE SIZE**
Nsukka	Nru	Iheagu Road	50
		Umuoyo road	50
	Ihe/Owerre	Enugu road	50
		Aku road	50
Enugu North	Ogui	Moorehouse street	50
		Carter street	50
	Asata	Ilukwe street	50
		Udi street	50
Udenu	Orba	Umudiale village	50
		Amube village	50
	Imilike	Uwani village	50
		Uwaenu village	50
Isi Uzo	Eha-Amufu	Isu village	50
		Agamede village	50
	Ikem	Ikemogo village	50
		Umuaram village	50
Igbo-Eze South	Ibagwa Aka	Ndioke village	50
	Aka	Amebo village	50

	Ovoko	Ibeku village	50
		Amadim village	50
Total	10 communities	20 village/streets. Roads	1000

Source: Field data (2009)

For the number of FGD and IDIs respondents interviewed-see table II

Table II: Audience segmentation on FGD and IDIS

LGAS	**TOWNS/COMMUNITIES**	**NO OF FGD RESPONDENTS**	**NO OF IDIs RESPONDENTS**	**TOTAL**
Nsukka	Nru	7	3	10
	Ihe/Owerre	7	3	10
Enugu North	Ogui	7	3	10
	Asata	7	3	10
Udenu	Orba	7	3	10
	Imilike	7	3	10
Isi Uzo	Eha-Amufu	7	3	10
	Ikem	7	3	10
Igbo-Eze south	Ibagwa Aka	7	3	10
	Ovoko	7	3	10
Total	10 Communities	70	30	100

Source: Field data (2009)

3.4 INSTRUMENTS AND METHODS FOR DATA COLLECTION

Three instruments of data collection were adopted in this study. These were the questionnaire, focus group discussion guide and in-depth interview methods. The major instrument chosen for collecting data for the study was the questionnaire which was complemented with the focus Group Discussions (FGDs) and in-depth interview methods. The essence of augmenting the former was to ensure reliability and quality of the

information. For the purpose of reliability and validity, ten (10) field assistants were recruited and trained on the methods and objectives of the study. Two of the field assistants were in charge in each of the local government areas under-study.

The questionnaires consisted open and close-ended questions and were related to the topic of study. A uniform set of questionnaire was administered to all respondents but where the respondents were not literate, the questionnaire was other – administered. The questionnaire was translated into vernacular for those who cannot read or write. To ensure the collection of valid data set, the questionnaire was subjected to some necessary tests or checks. The researcher randomly selected respondents from the population and administered the questionnaires to them. This pre-test exercise revealed that certain questions were complex or ambiguous, redundant, overloaded, or out of place.

The questionnaires sought to collect information on the socioeconomic status of parents, educational status of parents, childhood mortality, breastfeeding and nutrition.

For the qualitative data, a total of ten (10) FGD sessions were conducted with seven (7) persons in each group. Four FGDs were held with 6 groups of mothers comprising 3young groups (18-35years) and 3old groups (36years and above). For the fathers, FGD was held with four groups of fathers comprising 2 young, (18-38years) and two old (39years and above). Four FGD sessions were conducted in two urban Local Government Areas and six FGD sessions were carried out in the remaining three rural local government areas. Respondents that formed the FGD teams were purposively selected from persons who were not involved in the questionnaire study and included specific target groups, preferably of the same sex, age groups and socioeconomic background, whose ideas and experiences are germane to the study. To get these respondents, new communities in the study Local Government Areas were randomly sampled, and participants were chosen. The aim of the FGD here was to find out more about the feelings of the respondents, their knowledge, attitudes and behaviour pertaining to health services for children in Enugu State. During the

FGD sessions, instruments like tape recorders, cameras and notebooks were used, with permission granted by the FGD teams. Note taking and tape recording were the main instruments used to record the focus group discussion sessions.

In-depth interviews were conducted with community leaders who are well versed with traditions and norms of the community. The president of the town union, one titled man and one woman leader were interviewed in each community included in the study. Qualitative information was received from this category of leaders who are usually too few to constitute any distinct discussion group. In-depth interviews enable a researcher to ascertain the more important research variables and topics to be covered by the questionnaire survey and to develop rapport with local people, for subsequent phases of the fieldwork. (Eboh, 1998:75).

The focus groups and in-depth interview discussion sessions were moderated and facilitated by the researcher himself with the help of his research assistants who were specifically trained for that purpose. The focus group discussion sessions were conducted after the questionnaire administration was concluded.

In the rural areas, information concerning the research was disseminated through announcements in the villages by the town criers. Similarly, in the urban areas, public announcements were made in the local churches.

3.5 METHODS OF DATA ANALYSIS

Data processing is an integrated series of data management activities designed to prepare raw research data for statistical analysis and presentation. During the processing, the checking of data was employed to ensure that all the information had been collected and recorded. This also ensured that problems detected were corrected as early as possible. The data collected from the questionnaire were computer processed and analyzed using statistical package for the social sciences (SPSS).

The responses obtained from the questionnaire were presented and analyzed using tables and relative measures such as percentages and cross tabulations as well as graphic

illustrations. This process allows data to be subjected to varying levels of mathematical and statistical manipulations in order to find out the underlying features, characteristics, and relationships inherent in the body of data.

Chi-Square (X^2) was used in testing hypotheses in this study. This helped to determine the nature and the strength of the relationships between the dependent and the independent variables stated in the hypotheses. Finally, binary logistics regression analysis was used to predict future perceptions of infant nutritional needs.

The data yielded from FGDS and the in-depth interview through audiotape and note taking was retrieved, transcribed and analyzed. This acted as a complement to the statistical data from the questionnaire.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 MAJOR CHARACTERISTICS OF THE STUDY

Table 3 below examines the distribution of respondents by some selected socio-economic variables such as place of residence, sex, age, marital status, religion, highest educational attainment, occupation, status in the family and monthly income bracket.

SUMMARY OF THE STUDY'S SOCIO-DEMOGRAPHIC DATA

Table 3: Location of Respondents and Educational Attainment

Location	Highest educational attainment					
	Primary Uncompleted	**Primary-completed**	**Secondary Uncompleted**	**Secondary Completed**	**Diploma/University Degree**	**Total**
Urban	1616 50.0%	47 50.5%	47 31.3%	137 36.4%	219 67.4%	466 47.7%
Rural	16 50.%	46 49.5%	103 68.7%	239 63.6%	106 32.6%	510 52.3%
Total	32 100.0%	93 100.0%	150 100.0%	376 100.0%	325 100.0%	976 100.0%

Source: Field Data (2009)

The study shows that the greater proportion of our respondents 510 (52.3%) reside in the rural areas of Enugu state while 466 (47.7%) reside in the urban areas. For those respondents residing in urban areas, 50% of them did not complete primary education, 51% completed primary education, 31% did not complete secondary education; 36% completed secondary education, and 67% completed their Diploma/ University degree. Out of the total number of respondents residing in rural areas, 50% of them did not complete primary education 50% completed primary education, 69% did not complete their secondary education, (64 %,) completed their secondary education and Diploma/ University degree (33%). This study shows that most of the respondents (67%) who had their Diploma/ University degree reside in the urban area while 69% of the greater proportion of respondents who had their secondary uncompleted reside in the rural areas.

Table 4: Sex of Respondents and Educational Attainment Cross Tab

Sex	Highest educational attainment					Total
	Primary Uncompleted	Primary-completed	Secondary Uncompleted	Secondary Completed	Diploma/University Degree	
Male	17 53.1%	44 47.3%	73 48.7%	146 38.8%	109 33.5%	389 39.9%
Female	15 46.9%	49 52.7%	77 51.3%	230 61.2%	216 66.5%	587 60.1%
Total	32 100.0%	93 100.%	150 100.0%	376 100.0%	325 100.0%	976 100.0%

Source: Field Data (2009)

Table 4 above shows that the study is not gender sensitive. Thus, the study reveals that males constituted about 39.9% of the sample population as against the female respondents who constituted 60.1% of the total sample size. Approximately 40% of the respondents were males and out of this, 53% of them did not complete primary education, , primary completed (47%), secondary uncompleted (49%) secondary completed (39%) and Diploma/University degree (34%). For the 60% of the female respondents, 47% of them did not complete their primary education while 53% had their primary education completed, and secondary uncompleted (51%), secondary completed (61%) and 67% had their Diploma/University degree. The findings from this study show that a greater percentage of male respondents (53%) had their did not complete their primary education as against the female respondents (47%) who did not complete their primary education. The study also shows that 67% of the female respondents had their Diploma/University degrees as against their male counterparts (34%) who possess Diploma/University degrees.

Table 5: Age of Respondents and Sex Cross Tab

Age Range	Sex		Total
	Male	Female	
18-28years	77 19.8%	237 40.4%	314 32.2%
29-39year	156 40.1%	179 30.5%	335 34.3%
40-50years	109 28.0%	144 24.5%	253 25.9%
51 years and above	47 12.1%	27 4.6%	74 7.6%
Total	389 100.0%	587 100.0%	976 100.0%

Source: Field Data (2009)

The study reveals that most of the respondents fall within the age bracket of 29 – 39 years. This group thus constituted 335 (34.3%) while those between the age range of 18 – 28 years were 314 (32.2%) of our sample. Those between the age range of 40 years and above, constituted about 327 (33.5%) of the sample population. For those between the age range of 18-28 years, 20% and 4% of them were males and females respectively. Out of those that fall within the age range of 29-39 years, 40% were male and 31% of them were females. 28% of males and 25% of females were between the age ranges of 40-50 years. Lastly, 12% (males) and 5% (females) were 51 years and above. The findings show that out of the younger respondents (18-39yrs), 60% were males and 71% were females while the older respondents (40yrs and above) had males (40%) and males 29% females.

Table 6: Marital Status of Respondents and Sex Cross Tab.

MARITAL STATUS	Sex		Total
	Male	Female	
Single	55 14.1%	149 25.4%	204 20.9%
Divorced	22 5.7%	21 3.6%	43 4.4%
Widowed	18 4.6%	22 3.7%	40 4.1%
Married	281 72.2%	385 65.6%	666 68.2%
Separated	13 3.3%	10 1.7%	23 2.4%
Total	466 100.0%	510 100.0%	976 100.0%

Source: Field Data 2009

With respect to the marital status of our respondents, table 6 shows that greater proportion 68.2% (666) respondents were married while 6.8% were either separated or divorced from their partners. A small proportion of 4.1% were widowed.

For those respondents who were single, 14% and 25% were males and females respectively and those who divorced were males (6%) and females (4%). For widowed respondents, 5% and 4% were males and females respectively. 72% of married respondents were males while 66% were females. The study shows that a greater proportion of 281(72%) respondents were married males and 385(66%) were married females.

Table 7: Respondent's religious denomination

Religion		
Catholic	875	89.7
Anglican	19	1.9
Pentecostal	59	6.0
Muslim	15	1.5
Traditionalist	8	.8
Total	976	100.0

Source: Field Data 2009

More respondents from Catholic Church dominated the sample population (875 ie 89.7%). Other Christian religious denominations had 101 (10.3%). For instance, muslims constituted (1.5%) while traditionalists constituted about one percent (1%) approximately.

Table 8: Educational Level of Respondents and Location Cross Tab.

Educational Attainment	**Location**		**Total**
	Urban	**Rural**	
Primary –Uncompleted	16 3.4%	16 3.1%	32 3.3%
Primary-Completed	47 10.1%	46 9.0%	93 9.5%
Secondary-Uncompleted	47 10.1%	103 20.2%	150 15.4%
Secondary-Completed	137 29.4%	239 46.9%	376 38.5%
Diploma/University Degree	219 47.0%	106 20.8%	325 33.3%
Total	466 100.0%	510 100.0%	976 100.0%ss

Source: Field Data 2009

The findings of the educational qualifications of the respondents show that most of the respondents (38.5%) fall within the range of those who completed their secondary school education while those who possess diploma/university degrees constituted about 33.3% of the sample population. In addition, those who had their primary-uncompleted and primary-completed were only 32 (3.3%) and 93 (9.5%) respectively. Out of those who had their primary-uncompleted, 3.4% and 3.1% reside in urban and rural areas respectively. 10% and 9% of those who completed their primary education reside in urban and rural areas of the state respectively. For those who completed their secondary education, 29% and 47% of them were living in urban and rural setting respectively while 47% and 20% of those who possess Diploma/ university degree reside in urban and rural areas. The findings show that the greater percentage of those respondents (47%) who completed their secondary education reside in rural areas while the greater proportion of those who possess Diploma/university degree (47%) reside in urban areas.

Table 9: Occupation of Respondents and Sex Cross Tab.

Occupation	**Sex**		
	Male	**Female**	**Total**
Civil Servant	124 31.9%	181 30.8%	305 31.3%
Petty trading	62 15.9%	157 26.7%	219 22.4%
Business	65 16.7%	27 4.6%	92 9.4%
Farming	132 33.9%	220 37.5%	352 36.1%
Student	6 1.5%	2 .3%	8 .8%
Total	389 100.0%	587 100.0%	976 100.0%

Source: Field Data 2009

The study shows that the greatest numbers of respondents were farmers. They constituted 352 (36.1%) of the sample. Notable among the other groups in the sample were civil servants (31.3%) and petty traders (22.4%). In addition, business men and women constituted about (9.4%) and less than one percent (.8%) of the respondents were students. For those

respondents who were engaged in civil service, 32% of them were males and 31% were females. 16% and 27% of males and females were petty traders' respectively. Those who were engaged in business constitute 17% of males and 5% of females whereas those respondents who were farmers constitute 34% (males) and 36% (females). 2% and .3% of student respondents were males and females respectively. The study shows that the greatest numbers of females (38%) were farmers, followed by their male counterparts (34%)

Table 10: Respondent's family status

Status in the family		
Husband	324	33.2
Wife	424	43.4
Caregiver	47	4.8
Daughter	142	14.5
Son	39	4.0
Total	976	100.0

Source: Field Data 2009

More of the respondents from the married women dominated the sample population (43.4%) more than the men who were married (33.2%). More than fourteen percent (14.5%) of the respondents were daughters. Caregivers constituted (4.8%) and sons (4.0%).

Table 11: Monthly Income and Sex Cross Tab

Monthly income bracket	**Sex**		**Total**
	Male	**Female**	
N10,000	50 12.9%	164 27.9%	214 21.9%
N11,000-N20,000	103 26.5%	206 35.1%	309 31.7%
N21,000-N30,000	123 31.6%	127 21.6%	250 25.6%
N31,000-N40,000	70 18.0%	69 11.8%	139 14.2%
N41,000 and above	43 11.1%	21 3.6%	64 6.6%
Total	389 100.0%	587 100.0%	976 100.0%

Source: Field Data 2009

The table above reveals that majority of the respondents (53.6%) fall within the low-income bracket and the respondents in the medium income bracket constitute about (39.8%) of the

sample size while the respondents in the high income bracket constitute about (6.6%) of the sample. From the table above, it shows that the respondents whose income brackets fall within ₦10, 000.00 were males (13%) and females (28%). Then, 27% and 35% constituted the sample of males and females respectively whose monthly income bracket fall between ₦11,000.00-₦20,000.00. Those respondents whose monthly income range from ₦21,000.00 to N30,000.00 were males (32%) and females (22%) while those who received between N31,000.00 and 40,000.00 were males (18%) and females (12%). 11% (males) and 4% (female) belong to the category of those respondents who received N41,000.00 and above as their monthly income. The findings in this study show that majority of the female respondents (35%) received from ₦11,000.00 to ₦20,000.000 as their monthly income as against their male counter parts (27%) who received the same amount. The study also showed that males (11%) and females (4%) received the highest amount of monthly income ie ₦41,000 and above.

4.2 KNOWLEDGE OF INFANT NUTRITIONAL NEEDS

The following variables were used to measure the knowledge of infant nutritional needs in Enugu State: perception of respondents on infant consumption of meat/egg, awareness of protein content in meat and egg, how often the mothers feed their children with such foods, knowledge of medicinal fruits and food mashing for children.

Table 12 : Respondents' knowledge of infant nutrition

Variables	**Frequency**	**Percentages**
Eating of meat/eggs by infant is wrong		
Strongly agree	217	22.2
Agree	136	13.9
Strongly disagree	412	42.2
Disagree	179	18.3
Don't know	32	3.3
Total	**976**	**100.0**
Knowledge of meat/eggs as sources of infant protein		
Yes	728	52.4
No	204	27.0
Not sure	34	16.8
No answer	10	3.8

Total	**976**	**100.0**
How often they give their infant proteineous food		
Often	511	52.4
Rarely	264	27.0
Not at all	164	16.8
No answer	37	3.8
Total	**976**	**100.0**
Knowledge that fruits protect infant from diseases		
Yes	547	56.0
No	176	18.0
Not sure	244	25.0
No answer	9	.9
Total	**976**	**100.0**
Knowledge of food mashing for infants		
Strongly Agree	228	23.0
Agree	339	35.0
Strongly disagree	39	4.0
Disagree	30	3.0
Don't know	339	35.0
Total	**976**	**100.0**

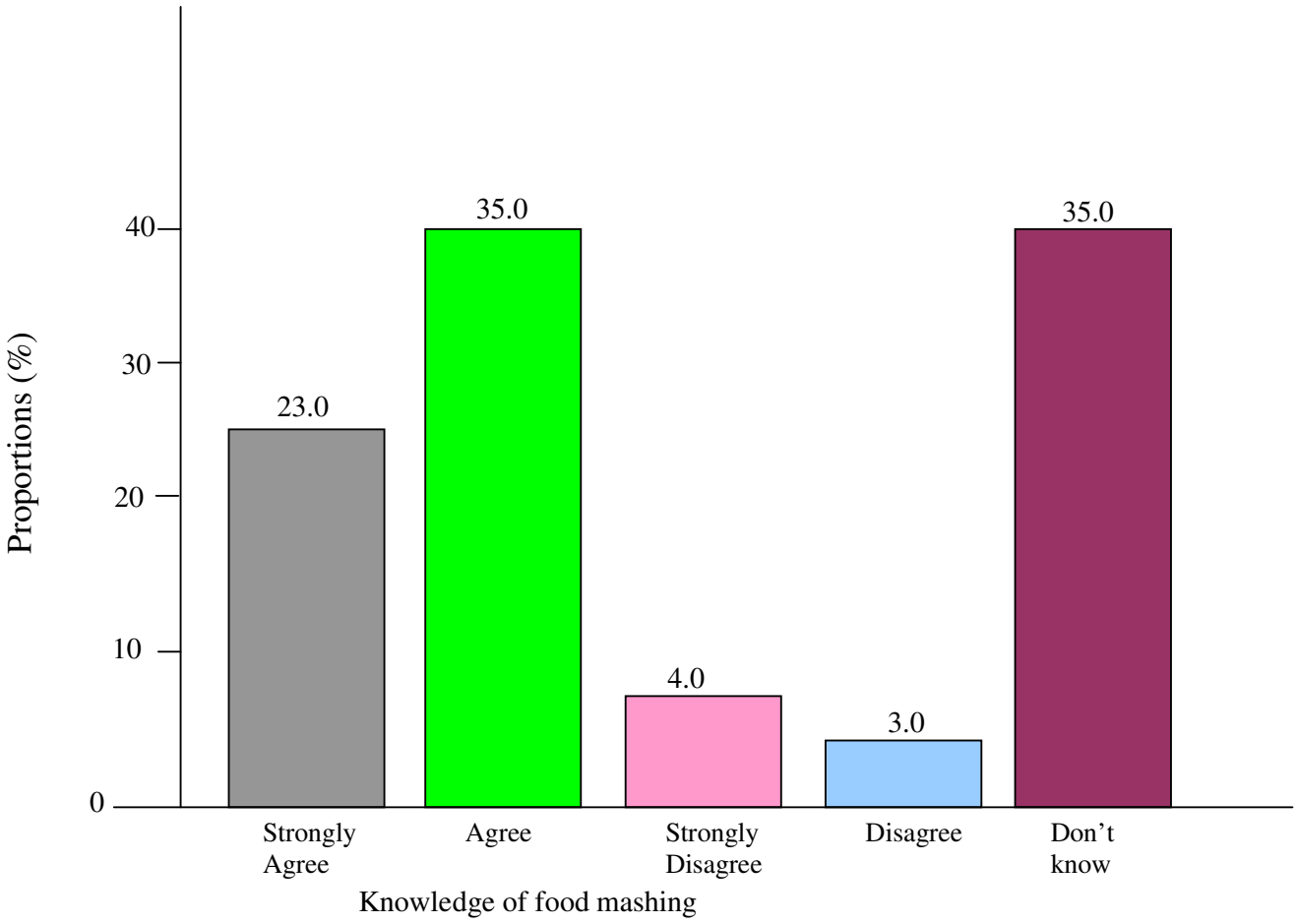
Source: Field Data (2009)

The study investigated the respondents' perception of infant consumption of meat/eggs and how often the infants were fed with such foods. The findings revealed that over 60% of them agreed that it is not wrong for a child to eat meat/eggs. To understand the respondents' awareness of the protein content of meat/eggs, they were asked to state whether meat/eggs are sources of protein for infants. Most respondents (74.6%) affirm that they are aware that foods such as meat/eggs are sources of protein for children, and that they often give such foods to the under-(5) five children while only 16.8% of the respondents had never tried or attempted to give meat/eggs to their under – five children. This group of respondents believe that it is wrong for a child to eat meat/egg because according to them it is against their culture/beliefs and makes a child a glutton. Others in this group are knowledgeable enough about the importance of meat/egg but there is insufficient money to purchase enough quantity of the required food. In order to make ends meet, most of the wage earners are forced to buy cheap food leading to over reliance on few high-yielding staples that are usually cheap to procure

In this manner, the way people live, eat and believe affect their individual and collective health. This leads to undernourishment and low resistance to disease. Undernourishment and malnutrition lead to high infant mortality especially in our rural communities. This is the result of lack of knowledge concerning infant nutrition.

The study also seeks to understand the respondents' awareness of certain fruits that can protect children from infectious diseases. The findings revealed that over 50% of them agree that they are aware that fruits such as oranges, paw-paw, carrot, banana etc can protect children from infectious diseases while 43% are not aware.

Figure 1: Distribution of respondents on knowledge of food mashing



The knowledge of food mashing was sought from the respondents and it was discovered that majority of them (58.2%) are aware that they can mash potato, carrot, cucumber and mix with meat broth and spoon feed their children while only 41.8% of the respondents are not aware of food mashing. Although, there is a relatively high level of knowledge of nutritional needs in Enugu state especially in the urban areas, more efforts are needed in awareness creation to reach at this group of people.

4.3 AWARENESS OF HEALTH NEEDS OF CHILDREN

To measure the awareness of health needs of children, variables such as the awareness of respondents on the existence of health care services and the availability of services as well as the respondents' reasons of providing health care services were used in this analysis.

Table 13: Respondents' awareness of health needs of children

Variables	Frequency	Percentages
Awareness of health care services		
Strongly aware	309	31.7
Aware	389	39.9
Strongly disagree (unaware)	29	3.0
Not aware	126	12.9
Don't know	123	12.5
Total	**976**	**100.0**
Knowledge of health care service s		
We know	425	43.5
We don't know	463	47.4
Not sure	66	6.8
No answer	22	2.3
Total	**976**	**100.0**
Reasons for providing health care services		
To eradicate kwashiorkor	192	19.7
To grow tall and fat	183	18.8
To prevent morbidity and mortality	601	61.5
Total	**976**	**100.0**

Source: Field Data 2009

To understand the respondents' level of awareness on the health needs of children, they were asked if they were aware of the existence of health care services for children in their communities. More than three quarter (71.6%) of the total numbers of respondents were aware of the existence of health facilities in their various communities while only (28.4%) were not aware. One thing here is to know about the availability of health care services and another is to utilize such services.

In Enugu state, poverty, ignorance and beliefs have led to under-utilization of health facilities. Still on the awareness of health needs of children, some of the respondents (43.5%) remarked that they were aware of the available health care services for children while (56.5%) of the sampled population had no knowledge on some of these health care services.

One of the FGD participants in Ihe/owerre in Nsukka LGA had this to say, concerning the reasons for providing health care services for children:-

> *'Health care services for children help them to survive, grow well and develop in many ways that their normal life activities will continue to go on without much hindrance', (female, 30).*

The IDI respondent from Ovoko community in Igbo-Eze South LGA in collaboration with the opinion of the FGD respondents above asserts that the reasons of providing health care services for children among other things include:

> *'To save the life of children so that they will not die and to prevent them from falling sick.'*

The study also sought to know the respondents opinions on the major reasons of providing health care services for children. Majority of the sampled population (61.6%) affirmed that the major reason was to prevent morbidity and mortality. However, 18.8% and 19.7% of the respondents believed that the reason was to grow tall and fat and to eradicate kwashiorkor. The aim of infant care is to allow children to enjoy good physical and mental health and to achieve their full genetic potentials. Many factors contribute to this end; infant feeding is one of them, but others are important too, and may have even greater effects.

4.4 ISSUES ON EXCLUSIVE BREAST FEEDING

The issues on exclusive breastfeeding will be discussed and measured, using the respondents' support for exclusive breastfeeding and whether exclusive breastfeeding is negatively perceived or not in their communities.

Table 14: Respondents' views on exclusive breastfeeding:

Variables	Frequency	Percentages
Do you support exclusive breastfeeding?		
Yes	681	69.8
No	181	18.5
Not sure	90	9.2
No answer	24	2.5
Total	**976**	**100.0**
Knowledge of duration of exclusive breastfeeding		
1 – 3 months	365	37.3
4 months and above	467	47.7
No answer	129	13.5
Don't practice	15	1.5
Total	**976**	**100.0**
Whether exclusive breastfeeding is negatively perceived		
Strongly agree	183	18.8
Agree	238	24.4
Strongly disagree	350	35.9
Disagree	100	10.1
Don't know	105	10.8
Total	**976**	**100.0**

Source: Field Data 2009

Table 14 revealed that more than two-thirds (69.8%) of the sampled population affirmed that they support exclusive breastfeeding. A small proportion (18.5%) did not support exclusive breastfeeding while 9.2% and 2.5% was not sure about exclusive breastfeeding.

However, it could be asserted that breastfeeding including exclusive breastfeeding remains the one single practice that provides food, health and care simultaneously to infants. It is believed that the constraints to exclusive breastfeeding especially for those who failed to support it in this study are on the following reasons:- availability of infant formulas, social/cultural beliefs, poverty, not having enough time and laziness.

One of the IDI respondents (adult male, 48) in Nru in Nsukka LGA also identified among the above reasons why mothers are not interested in exclusive breastfeeding. According to him,

> *Career women of working mothers shy away from this practice because of their regular absence at home. Mothers who are HIV positive do not breastfeed their children for the fear of mother-to-child transmission. Grandmothers at times do not allow their daughters to breastfeed exclusively because of their social/ cultural beliefs. Some mothers do not want their breasts to be floppy. They want to retain their breast shapes and this is due to their poor ideology. Some of them are ignorant and do not know the importance of exclusive breastfeeding. Moreover, some of them feel that they are not fit enough to breastfeed exclusively for six month.*

On the issue of how long mothers breastfeed their children exclusively, table 6 above revealed that more than one-third (37.3%) of the respondents breastfeed their babies exclusively from one to three months. The greater proportion in this group (47.7%) breastfeed exclusively from four (4) months and above. Only 12.9% had no answer to offer while 1.5% disagreed on the practice of exclusive breastfeeding. The reasons for their refusal to practice exclusive breastfeeding has been ascertained and discussed above. However, it is vital to promote, protect and support exclusive breastfeeding because it increases the chance of survival many times more in children.

The study also sought to know whether exclusive breastfeeding is negatively perceived in Enugu state. Table 4 revealed that majority of the respondents (46.0%) affirmed that exclusive breastfeeding is not negatively perceived in their communities. This level of understanding could be understood against the background that majority of them in this group come from urban setting where mothers receive training on health education, and often listen to radios and TV announcements on breastfeeding. Those who felt that exclusive breastfeeding is perceived negatively in communities constitute (43.2%) of the sample. As noted earlier, the negative perceptions of mothers could be attributed to social/cultural practices of the people.

4.5 PERCEPTION OF RESPONDENTS ON IMMUNIZATION

Table 15: Respondents' perception on immunization

Variables	Frequency	Percentages
Did you immunize your last child?		
Yes	698	71.5
No	196	20.1
Not sure	57	5.8
No answer	25	2.6
Total	**976**	**100.0**
Ever demanded for immunization?		
Yes	648	66.4
No	248	25.4
Not sure	65	6.7
No answer	15	1.5
Total	**976**	**100.0**
Is immunization important?		
Yes	737	75.5
No	156	16.0
Not sure	73	7.5
No answer	10	1.0
Total	**976**	**100.0**

Source: Field Data 2009

Immunization services must be continuously provided to a high proportion of children in their first year of life and to others (such as women of child-bearing age for tetanus toxiod). Immunization is the most powerful cost-effective means of preventing some of the deadly diseases of childhood. This is typified by the argument of a woman from Asata in Enugu North in an FGD session. According to her

> *Immunization prevents children against the "seven" killer diseases and it raises the immunity of children. It also makes them to be happy and grow well.*

More than two-thirds of the sampled population (71.5%) indicate that they immunized their last children as and when due. Immunization should be offered by all curative and preventive health services, even to children suffering from malnutrition or minor illness. A small proportion of the respondents (20.1%) did not immunize their last children while (5.8%) were not sure whether they immunized their last children or not. The respondents were also asked to indicate if they had ever demanded for immunization. Almost two-thirds

(66.4%) of the total number of respondents admitted that they demanded to have their children immunized before this study while (25.4%) had never demanded immunization. 6.7% of them were not sure whether they have ever demanded to immunize their children or not while (1.5%) could not provide any answer to this. Meanwhile, the high level of demand above is corroborated with the UNICEF (2001) which asserts that mothers are aware that childhood diseases could cause disability and death and they mostly perceive childhood immunization as a beneficiary and a necessary practice. This was partly because the experiences about the consequences of the vaccine preventable diseases are still fresh in the minds of these mothers. Although, with regards to the negative ways in which some mothers see immunization, they believe that immunization is not necessary practice for their children. In one of the FGD sessions in Ibagwa-Aka in Igboeze South L.G.A, a woman had this to say,

> *Many mothers in the rural areas believe that 'Ogwu Ngbochi buzii Ogwu Nkpuye" – meaning that immunization no longer prevents diseases but exposes their children to illness. Many of us in this community were not immunized when we were born and we have not died of any known disease.*

To this group of women, immunizing their children can bring the disease about though mildly, rather than prevent the disease itself. This belief, as indicated in the study, is associated with illiteracy or ignorance. Some mothers allege that immunization causes sterility, death of children, infertility, paralysis and abscess. Some of them believe that government uses it to control birth; therefore they will not bring their children for immunization and some when they do they some times, refuse to complete the immunization does.

The respondents were also asked to indicate whether they consider immunization very important to their children. Majority of the respondents (75.5%) considered immunization very important to their children whereas only (16.0%) failed to consider that immunization is important to children. However, the attitude of most mothers towards immunization services is positive. They see immunization as necessary for their children especially those that are

educated. They believe and rely on the efficacy of the vaccine to protect their children against diseases and help them to escape from polio, measles, and small pox attack etc.

4.6 AWARENESS AND RELEVANCE OF SOCIAL WORK SERVICES

Table 16: respondents/ awareness on social work services

Variables	Frequency	Percentages
Do social work services exist here?		
Yes	492	50.4
No	280	28.7
Not sure	192	19.7
No answer	12	1.2
Total	**976**	**100.0**
Social work prevents infant death rate		
Strongly agree	209	21.4
Agree	354	36.2
Strongly disagree	62	6.4
Disagree	39	4.0
Can't say	312	32.0
Total	**976**	**100.0**
Relevant areas in social work services		
Social problems	387	39.7
Rehabilitation problems	180	18.4
Counseling problems	409	41.9
Total	**976**	**100.0**
Integration of social work will improve infant growth & development		
Yes	598	61.3
No	160	16.4
Not sure	218	22.3
Total	**976**	**100.0**

Source: Field Data 2009

About 50% of the respondents in table 16, above affirmed that social work services exist in their communities while 49.6% were not sure or did not affirm the existence of social work services in their various settings. Respondents' awareness of the existence of social work services in these communities could be attributed to the fact that social work students were posted to many rural communities for their field work practice where these students engage in solving social problems, thereby creating awareness among the rural dwellers. Though, social work is partially new in the country, it is one of the fastest growing

professions in the recent times and it has not permeated into all the nooks and crannies of Enugu State.

More than half of the sampled population (57.6%) agreed that social work contribute to prevent infant mortality in the state. Another (10.4%) indicated that social work cannot contributes in the prevention of infant death rate while (32%) could not say or suggest whether social work can prevent the incident of infant mortality in our communities. From the analysis of data, there was an observable evidence of contribution of social work to the prevention of infant mortality rate in the state. This shows that people are now beginning to perceive more of the positive sides or aspects of social work services in Nigerian communities.

To understand the respondents' awareness on the relevance of social work services, they were asked to state the area of social work services they find most relevant. A significant percentage of those sampled (41.9%) asserted that the most relevant area was the aspect of counseling while39.7% remarked that their own area of interest bordered mainly on the social problems. Only (18.4%) concerned themselves with rehabilitation problems. The percentage distribution of respondents as shown above supports the claims made by Butrym (1976) which stated that social work is similar to other helping professions which aim at promoting human welfare through the prevention and relief of suffering. In other words, the implication of this claim is that social work services have been considered relevant in the treatment process of clients.

The study went further to investigate whether the integration of social work services into the health care delivery system will improve children's growth and development. From the analysis of data in table 16 above, it was observed that majority of the respondents (61.3%) affirm that integration of social work services into the health care delivery system will improve children's health. 38.7% of the sampled population did not see the integration of social work as a way out of improving the children's growth and development. From the

findings of this study, it can be said that social work services have been integrated into the health care delivery in the state. It can also be asserted that there is now more awareness of social work services in both urban and rural communities. The belief of some respondents that social work has not been integrated could be attributed to the fact that many people especially those within the health settings are yet to recognize the importance of social work services in health institutions. It therefore borders on the motivation of the people within and outside health settings to accept social work, since the purpose of social work among other things is in the restoration of maximum social functioning to the individual who is ill, and also in the development of the services required to achieve that goal.

4.7 VIEWS ON POVERTY AND INFANT MORTALITY

Table 17: Respondents' perceptions on poverty and infant mortality

Variables	Frequency	Percentages
Poverty contribute to infant mortality		
Strongly agree	603	61.8
Agree	219	22.4
Strongly disagree	45	4.6
Disagree	14	1.5
Can't say	95	9.7
Total	**976**	**100.0**
Was there a time a sick child was not treated?		
Yes	513	52.6
No	401	41.1
Not sure	42	4.3
No answer	20	2.0
Total	**976**	**100.0**
Reasons of not treating a sick child		
No money for treatment	334	34.2
Treatment bill is costly	164	16.8
Treatment drugs are fake	15	1.6
Not applicable	463	47.5
Total	**976**	**100.0**

Source: Field Data 2009

In table 17 above, the study shows that majority of the respondents (84.2%) were in support that poor financial condition of parents contributes to infant mortality rate in Enugu state, while (6.1%) were not in agreement. Only 9.7% of the respondents could not say whether poor financial condition of parents contribute to infant mortality or not. In the above data analysis, the findings are in line with the assertion of Brieland (1980) which states that

good health and high income are positively related. Without the financial resources to pay for the medical care of children, poor people tend to postpone seeing a doctor until their condition is serious. It has earlier been noted that the poor have higher rates of illnesses and higher rates of untreated illnesses partly because they cannot afford private, high quality medical care. The poor cannot afford to eat properly, so inadequate diet makes them more susceptible to illnesses. In support of the above stated facts, it is more likely that poor financial condition of parents contribute to infant mortality in Enugu state.

To understand the respondents' actions when their children were sick, they were asked to state whether such children were taken to the hospitals/chemists or herbalists for treatment. Slightly above 50% of the sampled population indicated that there was a time they noticed that their children were sick and they did not take them to any hospital or herbalist for treatment. A little above 40% of the respondents said, that they had never failed to take their sick children to the hospital. Only 4.3% of the respondents were not sure on what answer to give while 2% had no answer to give at all.

Distribution of respondents on whether a sick child was treated or not

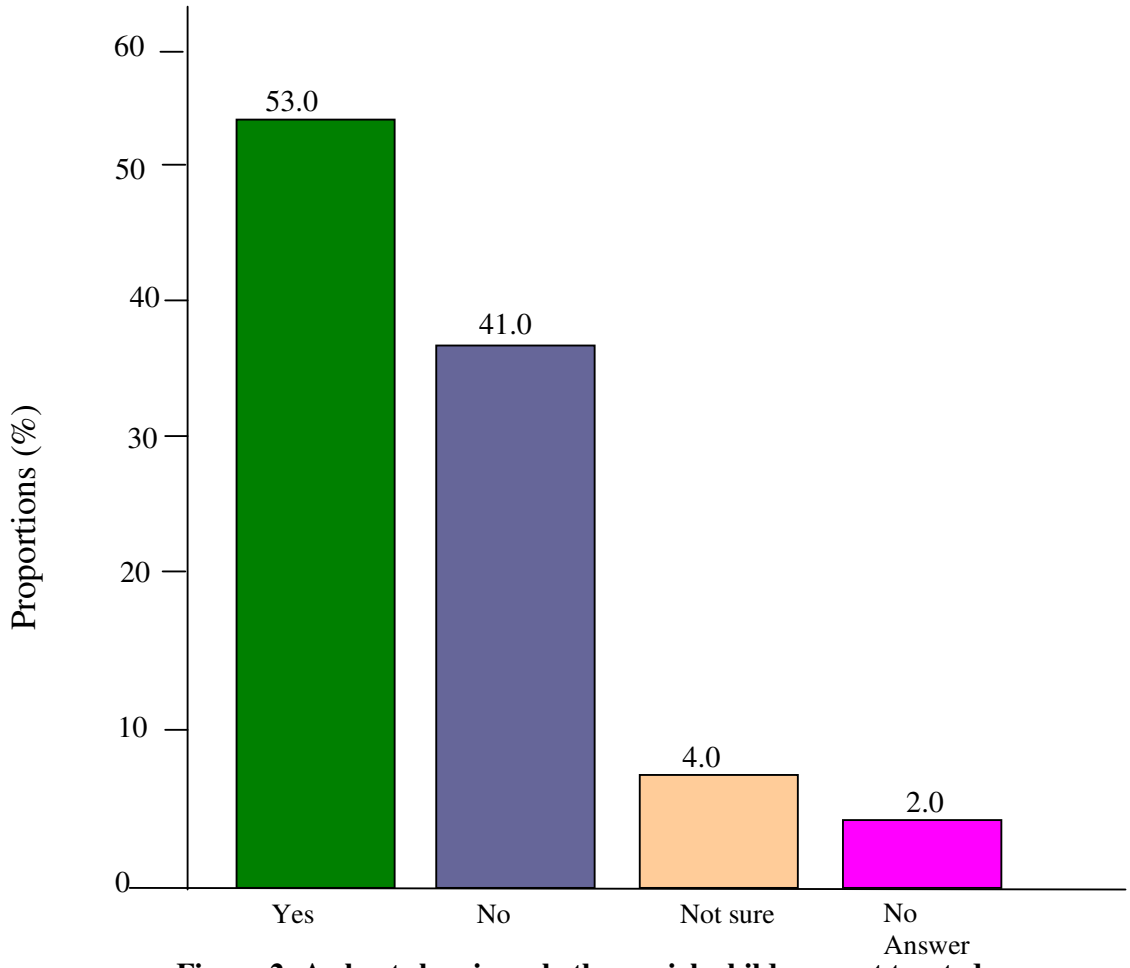


Figure 2: A chart showing whether a sick child was not treated.

From all indications, the investigation here shows that medical care of children and high income of parents are twin brothers – they are positively related. If not, who wouldn't seek for treatment for their sick child?

On the issue of where they take their children to, whenever, their children are sick; a male participant at Ikem-Ogo community in Isi-uzo LGA had this to say:

> *"Where we take our children to, when they are sick really depends on the seriousness of the sickness. If a child is seriously sick, we take such child to the hospital but if not all that serious, we make use of first aids at home or we take the child to chemist. Though, some do take their children to the herbalist depending also on the nature of illness".*

In furtherance to this discussion, the respondents were asked to state the reason(s) why they failed to seek for treatment when they noticed that their children were sick. Out of the total number of respondents (52.6%) who indicated that they did not seek for treatment when their children were sick, it was observed from the analysis of data above, that majority of the respondents (34.2%) gave the reason that there was no money for treatment while 16.8% based their reason on the treatment bill, which they said, was costly. Only 1.6% failed to seek for treatment because of the fear of fake drugs in our hospitals or treatment centres. Children and women have been the worst victims of poverty and disease. In this study, it shows that poverty played a significant role in the death of children in Enugu state because majority of these children were not taken to the hospital/chemist when they were sick and the result was infant mortality.

According to Onyezili (2005), in Nigeria, two-thirds of the population live below poverty line and household food security, quality care, health services, as well as environmental sanitation are inadequate. Even though medical resources vary in quality and quantity for the more affluent, the poor suffer acute deficiencies in health care. The poor people or families have higher rates of infant mortality, yet services are not distributed equitably. WHO (2004) states that Nigeria is gripped by both income and food, poverty and poor access to means of supporting rural development. Nigeria has recorded less progress in reducing under-five mortality rate than any country in sub-Sahara Africa since its independence in 1960 (UNICEF 2001).

4.8 RELATIONSHIP BETWEEN SOME DEMOGRAPHIC VARIABLES AND MAJOR RESEARCH ISSUES

The main objective of this study was to examine knowledge of infant nutritional needs in Enugu state. The socio-demographic variables used in correlating the knowledge of infant nutrition are the independent variables which include:- location, age, sex, level of education, income level, marital status, health status and status in the family. The dependent

variables used are "the knowledge of nutritional needs", support of exclusive breastfeeding, and importance of immunization. Chi-square was conducted to determine if there were any significant relationships between the independent variables and the dependent variables.

Table 18: Place of residence and exclusive breastfeeding.

Location:	Exclusive Breastfeeding		Total
	Support exclusive breastfeeding.	No support of exclusive breastfeeding	
Urban	328 (48.2%)	138 (48.8%)	466 (47.7%)
Rural	353 (51.8%)	157 (53.2%)	510 (52.3%)
Total	681 (100.0%)	295 (100.0%)	976 (100.0%)

X^2 (1, N = 976 = .153, P≤ .372.

Table 18 shows that rural respondents (51.8%) support exclusive breastfeeding more than their urban counterparts (48.2%). This result may be because urban respondents are mainly career women of working mothers who would not support exclusive breastfeeding because of their regular absence at home. Another reason could be that career women may like to retain breast shapes. Though the relationship is not statistically significant, X^2(1, N = 976 = .153, p ≤.372, it will be necessary to carry out further research on this issue, so that one can ascertain the main reason for this difference.

Table 19: Place of residence and the perceived importance of immunization

Location	Importance of Immunization		Total
	Perceived as important	Perceived as not important	
Urban	355 (48.2%)	111 (46.4%)	466 (47.7%)
Rural	382 (51.8%)	128 (53.6%)	510 (52.3%)
Total	737 (100.0%)	239 (100.0%)	976 (100.0%)

X^2 (1, N = 976) = .215, p ≤.349.

On the issue of perceived importance of immunization, rural respondents (51.8%) seem to have considered immunization more important than the urban respondents (48.2%) (See table,19). One would have thought that urban respondents would more likely to perceive immunization as more important than the rural respondents, because they seem to be more enlightened or educated. Maybe, the urban respondents believe that many of these preventable diseases have been eliminated and are, therefore, no longer anything to worry about. Also, the knowledge of the efficacy of modern medicines has created a more relaxed feeling about infections and disease in general.

Lynn, (2001) argued that some parents are unconcerned about obtaining immunization for their children, because they do not realize how life threatening some communicable illnesses still are. Based on the foregoing, one may conclude that place of residence appears to have no effect on the perceived importance of immunization. In other words, there is no significant difference in the way urban and rural respondents think about immunization issues ($X^2(1, N = 976) = .215, p \leq .349$)

Table 20: Sex of respondents and their support of exclusive breastfeeding.

Sex	**Exclusive Breastfeeding**		**Total**
	Support exclusive breastfeeding	**Don't Support exclusive breastfeeding**	
Male	238 (34.9%)	151 (51.2%)	389 (39.9%)
Female	443 (65.1%)	144 (48.8%)	587 (60.1%)
Total	681 (100.0%)	295 (100.0%)	976 (100.0%)

X^2 (1, N = 976) = .22.641, p ≤.000.

Gender has always been regarded as an important determinant of reactions, opinions and attitudes towards the knowledge of nutrition. Table 20, above sought to know the difference between the male and female respondents on exclusive breastfeeding. The results, however, show that there is a significant difference between sex of respondents and the support of exclusive breastfeeding. For those who support exclusive breastfeeding, 65.1% of them were

women while only 34.9% were men, indicating that there was a significant difference between them (X^2 (1, N = 976) = 22.641, p ≤.000). The reason for this result may be clear; many mothers through nutrition education have learnt that exclusive breastfeeding increases the chance of child survival. Optimal breastfeeding practice is the best intervention to reduce child morbidity and mortality in the first 2 – 3 years of life. According to Koletzko and Von Kries (2001) breastfeeding provides simple preventive strategies that exploit putative long-term imprinting mechanisms and present little risk of potentially adverse effects.

Table 21: Sex of respondents and importance of immunization

Sex	Importance of Immunization		Total
	Perceived as important	**Perceived as not important**	**Total**
Male	276 (37.4%)	113 (47.3%)	389 (39.9%)
Female	461 (.62.6%)	126 (52.7%)	587 (60.1%)
Total	737 (100.0%)	239 (100.0%)	976 (100.0%)

X^2 (1, N = 976) = 7.277, , p ≤.00.

This study also investigated the perception of males and females on the importance of immunization. The findings revealed in table 21 above shows that female respondents (62.6%) perceived immunization as very important to their children as against their male counterparts (37.4%). In other words, more female respondents perceived immunization as a good practice. With this result, one can conclude that there is a relationship between sex and perceived importance of immunization (X^2 (1, N = 976) = 7.277, p ≤.005). During the focus group discussion, both the male and female groups accepted the idea of immunizing a child but the female groups showed that they were more knowledgeable about immunization than the male groups. Women are very good in methods of child care and this includes immunization issues. The objective of immunization is to produce in an individual, a degree of resistance equal to that which follows natural infection (Ebrahim, 1990). The scheme for

immunization in a particular area will depend upon the prevalence of disease, the age groups involved and the willingness with which people accept immunization.

Table 22: Status in the family and knowledge of nutritional needs

Status in the family	Nutritional Needs		Total
	Have knowledge	No knowledge	
Husband	247 (31.1%)	77 (42.3%)	324 (33.2%)
Wife	339 (42.7%)	85 (46.7%)	424 (43.4%)
Caregiver	36 (4.5%)	11 (6.0%)	47 (4.8%)
Daughter	135 (17.0%)	7 (3.8%)	142 (14.5%)
Son	37 (4.7%)	2 (1.1%)	39 (4.0%)
Total	794 (100.0%)	182 (100.0%)	976 (100.0%)

X^2 (4, N = 976) = 29.156, p ≤.000.

Not many studies have been done to determine the relationship between status in the family and the knowledge of infant nutritional needs. However, a major factor in determining nutrition knowledge in poor households is the use of available resources, especially for providing food and maintaining of health in the face of unsanitary conditions (Ene-obong, 2008). This applies particularly to children and mothers. Given certain level of household food security, healthy environment and access to services, much depends on how the individuals in the household, especially the women cope with the situation. The tables 22 above shows that, of all the members in the family, wives or married women (42.7%) ranked highest in the knowledge of infant nutrition than their male counterparts (31.1%). The results, however, show that there is a significant difference between status in the family and the knowledge of infant nutrition (X^2 (4, N = 976) = 29.156, p≤.000). A good understanding of one's own nutrient needs is essential for good personal dietary practices. The ability of women to apply knowledge of nutrition depends on this basic understanding of nutrient

needs. Women demonstrated superior knowledge of all areas of nutrition as has been found in most studies on nutrition knowledge.

Table 23: Status in the family and Exclusive breastfeeding

Status in the family	Exclusive Breastfeeding		Total
	Support Exclusive Breastfeeding	Don't support Exclusive Bf.	
Husband	202 (29.7%)	122 (41.4%)	324 (33.2%)
Wife	293 (43.0%)	131 (44.4%)	424 (43.4%)
Caregiver	33 (4.8%)	14 (4.7%)	47 (4.8%)
Daughter	127 (18.6%)	15 (5.1%)	142 (14.5%)
Son	26 (3.8%)	13 (4.4%)	39 (4.0%)
Total	6.81 (100.0%)	295 (100.0%)	976 (100.0%)

X^2 (4, N = 976) = 34.782, p ≤.000.

In table 23, the opinions or attitudes of family members were sought on the exclusive breastfeeding. The question on whether they support the practice of exclusive breastfeeding or not was asked. Results show that status in the family does in fact have a relationship with views about exclusive breastfeeding. The study revealed that married women or wives (43.0%) support exclusive breastfeeding more than their husbands (29.7%), showing that there was a significant relationship between status in the family and the support of exclusive breastfeeding in both urban and rural areas of the state. X^2 (4, N = 976) = 34.782, p ≤.000. The result here is not surprising since mothers have known about the benefits of exclusive breastfeeding and consequences of not practicing it. From one month to 6 months, breast milk is the sole or prime source of nutrients and optimal breastfeeding practice becomes a critical factor in child survival and development (Onyezili, 2005). In this regard, women require more social support to enable them fulfill their productive and reproductive role. As such child care should be compensated as an acknowledged contribution to social and economic development.

Table 24: Status in the family and importance of immunization

Status in the family	Importance of Immunization		Total
	Perceived it as important	Perceived it as not important	
Husband	229 (31.1%)	95 (39.7%)	324 (33.2%)
Wife	314 (42.6%)	110 (46.0%)	424 (43.4%)
Caregiver	33 (4.5%)	14 (5.9%)	47 (4.8%)
Daughter	128 (17.4%)	14 (5.9%)	142 (14.5%)
Son	33 (4.5%	6 (2.5%)	39 (4.0%)
Total	737 (100.0%)	239 (100.0%)	976 (100.0%)

X^2 (4, N = 976) = 34.782, p ≤.000.

This study tried to investigate the relationship between the status in the family and the importance of immunization. Existing studies generally find positive associations of status in the family with the perceived importance of immunization. Many studies support a continuing programme of immunization because it is needed against the major communicable diseases in young children. In table 16 above, it was observed that there was a significant relationship between status in the family and accepting immunization as important (X^2 (4, N = 976) = 23.474, p ≤.000. In this study, more of the married women (wives) (42.6) perceived immunization as more important than their husbands (31.1%). The reason for this may be because the married women are more knowledgeable about immunization and bear the pains of infant deaths than their husbands.

Women feel obligated to take care of children by immunizing them appropriately to avoid death and the pains that might follow. Following the responses of the question posed to the FGD participants in Enugu North, LGA, which sought to know the benefits of immunization, some of the participants enumerated so many things, children, families and society stand to gain from immunization.

Table 25: Level of income and nutritional needs

Level of income	Nutritional Needs		Total
	Have knowledge	Have no knowledge	
Low income	425 (53.5%)	98 (53.8%)	523 (53.6%)
Medium	311 (39.2%)	78 (42.9%)	389 (39.9%)
High income	58 (7.3%)	6 (3.3%)	64 (6.6%)
Total	794 (100.0%)	182 (100.0%)	976 (100.0)

X^2 (2, N = 976) = 4.138, p ≤. 126.

This study examined the relationship between level of income and the knowledge of nutrition. In this study, level of income was grouped into three; namely: Low income, medium and high income. The low income groups comprised of those respondents whose monthly income bracket fall between N10,000.00 to N20,000.00. The medium income groups were those respondents whose monthly income bracket fall within N21,000.00 to N40,000.00 while the high income groups were those respondents whose monthly income range from N41,000.00 and above. From the table above, the findings indicate that low income groups seem to have more knowledge of infant nutrition than the medium income groups, though, this relationship is not statistically significant, X^2 (2, N = 976) = 4.138, p ≤. 126. One may conclude that the level of income appears to have no effect on the views held by the parents/respondents.

Table 26 Level of income and exclusive breastfeeding

Level of income	Exclusive Breastfeeding		Total
	Support Exclusive Breastfeeding	**Don't support Exclusive Breastfeeding**	**Total**
Low income	383 (56.2%)	140 (47.5%)	523 (53.6%)
Medium income	255 (37.4%)	134 (45.4%)	389 (39.9%)
High income	43 (6.3%)	21 (7.1%)	64 (6.6%)
Total	681 (100.0%)	295 (100.0%)	976 (100.0%)

X^2 (2, N = 976) = 6.454, P≤ . 040.

On the issues of relationship between the level of income and exclusive breastfeeding, the study revealed that there is a significant relationship between them; table 26 shows that more of the low income group (56.2%) support exclusive breastfeeding more than the medium and high income groups (37.4% and 6.3%) respectively. This result is unexpected because the low income groups are poor people who always complain that they may not sustain the six months duration of exclusive breastfeeding. According to literature (Brieland, Costin and Atherton, 1980) good health and high income are positively related. Without enough food and financial resources to take care of breastfeeding, mothers tend to drop the idea of practicing exclusive breastfeeding for longer periods. Studies also show that the poor (low income group) cannot afford to eat properly, so, inadequate diet makes them more susceptible to illnesses.

Table 27: Level of education and nutritional needs

Level of Education	Nutritional Needs		Total
	Have Knowledge	No Knowledge	
Low education	103 (13.0%)	22 (12.1%)	523 (53.6%)
Medium education	400 (50.4%)	126 (69.2%)	389 (39.9%)
High education	291 (36.6%)	34 (18.7%)	64 (6.6%)
Total	794 (100.0%)	182 (100.0%)	976 (100.0%)

X^2 (2, N = 976) = 24.211, P ≤ . 000

Table 27 examined the difference between the level of education and the knowledge of infant nutritional needs. Studies have been done to determine the relationship or associations of education level with the knowledge of infant nutrition.

Education level in this study was grouped into three, namely low, medium and high education. The low education group comprised those respondents who completed or did not complete their primary education. The medium group was made up of those respondents who completed or did not complete their secondary school education, while the high education group included those respondents who had diploma or university degree.

According to Mirowsky and Ross (2003) education acts as a structural variable, sorting individuals into socio-economic strata with graduated rates of economic accumulation as measured by factors such as occupational status and authority, earnings, household-income and wealth. People who are better educated may also be better able to make use of written material like newspaper articles and leaflets, to gain information and implement it in their lifestyles. It also seems likely that more educated people would be better able to understand sometimes complex information about diet-disease links.

Table 28: Level of education and perceived importance of immunization

Level of Education	Importance of Immunization		Total
	Perceived it as important	Perceived it as Not important	
Low education	89 (12.1%)	36 (15.1%)	125 (1.8%)
Medium education	377(51.2%)	149 (62.3%)	526(53.9)
High education	271 (36.6%)	54 (22.6%)	325 (33.3%)
Total	737 (100.0)	239 (100.0)	976 (100.0)

(X^2 (2, N = 976) = 16. 342, p≤.000).

On the issue of relationship between the level of education and perceived importance of immunization, the study shows that there is a significant relationship between them. Table 28 reveals that more of the medium education groups (51:2%) perceived immunization more important than the high and low education groups (36.8%, and 12.1% respectively. The education of women has been reported as a key factor in reducing infant and child mortality. Data from NDHS (1999) revealed that lower educational levels among females were related to higher infant and under-five mortality. Similarly, rural areas had lower levels of female's literacy and consequently higher under-five mortality than urban areas.

It has been noted that immunization services, exclusive breastfeeding and nutrition are some of the intervention strategies which promote the child's chances of survival. These intervention strategies were aimed not only at reducing infant mortality as a result of common child hood diseases but also to reduce the frequency and severity thereby promoting child growth and development. The scheme for immunization in a particular area will depend upon the prevalence of disease, the age groups involved and the willingness with which people accept immunization. In spite of health education and information, mothers were reluctant to accept immunization. One female FGD participant in Ovoko in Igbo-Eze South L.G.A, had this to say

> *"Some of us are not willing to immunize our children and the reasons include: Immunization centre or health centre is very far from our homes, and not only this, children usually become feverish after the injection. And as business women, we do not normally have enough time to wait for longer periods in order to immunize our children. Most importantly, we do not have any trust on the hospital drugs these days" (female, 38).*

Some parents are unwilling to immunize their children due largely to ignorance and the fear of unknown. It should be noted that immunization protects our children against the common vaccine – preventable diseases.

Table 29: Age of respondents and knowledge of infant nutrition

Age of Respondents	**Nutritional Needs**		
	Have Knowledge	**No Knowledge**	**Total**
Younger respondents	574 (72.3%)	75 (41.2%)	649 (66.5)
Older respondents	220 (27.7%)	107 (58.8%)	327 (33.5)
Total	794 (100.0%)	182 (100.0%)	976 (100.0%)

X^2 (I, N = 976) = 64.211, P< . 000.

Table 29 examined the relationship between age of respondents and their knowledge of infant nutrition. The younger group comprised of those respondents whose age bracket falls within 18-39 years whereas the older group comprised of those respondents who were 40 years and above. Findings show that more of the younger respondents (72.3%) had knowledge of infant nutrition more than the older respondents (27.7%). The result shows that there is a significant difference between the age of respondents and the knowledge of infant nutrition. (X^2 (I, N = 976) = 64.211, P<.000).

The reason for this result may be that the younger respondents fall within the age of child bearing groups and should be eager to learn about dietary practices more than their older respondents. This group could be more knowledgeable about infant nutrition because of their inquisitiveness to utilize information which has been shown to depend on the needs, skills and attitudes of individuals. In many cases where the knowledge of nutrition exists,

there is insufficient money to buy the right kinds of food required for the under-five children. Another reason of increased knowledge of nutrition by the younger respondents could be associated with seeking out dietary information to ensure that children eat healthy foods. However, to gain a true understanding of the relationship between age and knowledge, it would be necessary to conduct longitudinal research to differentiate between cohort effects and changes in knowledge related to life stages.

Table 30 Age of respondents and their support of exclusive breast feeding

Age of	**Exclusive Breastfeeding**		**Total**
	Support	**Do not support**	
Respondents	**Exclusive BF**	**Exclusive BF**	
Younger respondents.	512 (75.2%)	137 (48.4%)	649 (66.5)
Older respondents.	169(24.8%)	158 (53.6%)	327 (33.5)
Total	681 (100.0%)	295 (100.0%)	976 (100.0%)

X^2 (I, N = 976) = 76.329, P ≤.000.

An important finding from this study is that most of the younger respondents (75.2%) acknowledge the support of exclusive breast feeding as against their older respondents (24.8%). Results of chi-square testing reveal considerable differences in age of respondents and their support of exclusive breastfeeding (table, 30). For example, younger respondents were more likely than the older respondents to support the practice of exclusive breastfeeding (72.2% Vs 24.8%). The reasons why the younger mothers/respondents were more in support of exclusive breastfeeding was cited in table 29 above on knowledge of infant nutrition. However, poverty was found to be more pronounced among younger mothers and those with low income. WHO/UNICEF (1989) recommends that children be exclusively breastfed for the first four to six months of life and thereafter introduced to appropriate and adequate complementary foods along with breast milk. Mothers should be acquainted of the

importance of breastfeeding as it provides a lot of health benefits to children compared with the commercial milk that is sold in the market.

Table 31: Age of respondents and the perceived importance of immunization

Age of respondents	Importance of Immunization		Total
	Perceived as important	Perceived as not important	
Younger respondents.	534 (72.5%)	115 (48.1%)	649 (66.5%)
Older respondents.	203 (27.5%)	124 (51.9%)	327 (33.5%)
Total	737 (100.0%)	239 (100.0%)	976 (100.0%)

X^2 (I, N = 976) = 47.987, P ≤.000)

The above table examined the relationship between the age of respondents and the perceived importance of immunization. The younger respondents' perception had a significant effect on many of these measures. 72.5% of them perceived immunization as important, while 27.5% of their older counterparts saw the program of immunization as not relevant. This, therefore, shows that there is a significant difference between the two variables. The possibility of obtaining this kind of result is based on the fact that most of these younger respondents fall within the child bearing age unlike the older respondents who may have already had the number of children they want. The older group of women may not be interested any longer in the issues of immunization. The central task of expanded programme on immunization is to make certain that eligible children within the reach of health services are identified and followed up until immunized. This situation represents a major public health gain in the space of the past 20 years.

Table 32: Health status of the child and the support of exclusive breastfeeding

Health status of the child	Exclusive Breastfeeding		Total
	Support Exclusive BF.	Do not support Exclusive BF.	
Falls sick frequently	62 (9.1%)	50 (16.9%)	11 (11.5%)
Does not fall sick	619 (90.9%)	245 (83.1%)	86 (88.5%)
Total	681 (100.0%)	295 (100.0%)	976 (100.0%)

X^2 (I, N = 976) = 12.470, P ≤.000)

On the issues of relationship between health status and exclusive breastfeeding, it has been noted in table 32 that there is a significant relationship between the two variables. The result shows that most of the respondents whose children do not fall sick often (90.9%) support exclusive breastfeeding as against 9.1% of those respondents whose children fall sick frequently. Exclusive breastfeeding is said to be positively related to child survival strategies. Literature supports the above assertion. According to Onyezili (2005), from one month to six months, breast milk is the sole or prime source of nutrients for babies and optimal breastfeeding practice becomes a critical factor in child survival and development in all countries including Nigeria.

In Nigeria, more than 50 percent of all childhood deaths have under-nutrition as an underlying factor (NPC/UNICEF, 1998). Progress in nutrition is assessed from indicators of malnutrition, breastfeeding, salt-iodization and vitamin- A supplementation for children under – five.

4.9 HYPOTHESES TESTING

This study was designed to examine the knowledge of infant nutritional needs in Enugu State of South Eastern, Nigeria. For this reason, the four hypotheses raised for the study were tested in this section.

HYPOTHESIS ONE

Studies abound on the increasing need for knowledge of infant nutrition in Nigeria and in many other developing countries in sub-Sahara Africa. Based on findings from previous studies about the relationship between the knowledge of infant nutritional needs and the health of children (Bahl, Rajiv et al 2005, FGN/UNICEF, 1994, and SOWC, 2005), this study hypothesized that respondents who do not have knowledge of infant nutritional needs are more likely to have children that fall sick often more than those who have the knowledge. To test the hypothesis, we used an index to measure the knowledge of the right kinds of food for children.

The variables include: respondents' knowledge of eggs/meat, knowledge of food that can protect infants from infections diseases and knowledge of food mashing and mixing with meat broth. Chi-square test showed that there was no significant difference (table 25). It was noted that amongst the respondents who indicated having the knowledge of infant nutrition, 88% of them reported that their children do not fall sick as against 12% who agreed that their children fall sick frequently.

Table 33: Health status of the child and the knowledge of infant nutritional needs

	Nutritional Needs		
Health status of the child	**Have Knowledge**	**No Knowledge**	**Total**
Fall sick frequently	95 (12.0%)	17 (9.3%)	112 (11.5%)
Does not fall sick	699 (88.0%)	165 (90.7%)	864 (88.5%)
Total	794 (100.0%)	182 (100.0%)	976 (100.0%)

X^2 (I, N = 976) = 1/004, P< .193

Chi – square test in table 33 above shows that no statistically significant differences exist between a sick child and the knowledge of infant nutritional needs. However, the hypothesis was not confirmed since having the knowledge of infant nutrition did not reflect statistical significant differences in the respondent's perception of sick children. One thing here is to be knowledgeable about infant nutrition and another is having the money to

purchase the right kinds of food for children. From most of the food consumption studies in South Eastern Nigeria, we found that meat/eggs and milk made little contributions to the nutrient intake of the population of children. This pattern of consumption gives rise to bulky, low nutrient and low dietary fiber diets that have serious health implications (Ene-obong; 2008)

HYPOTHESIS TWO

The second hypothesis, stated that respondents with higher level of education are more likely to support exclusive breastfeeding than those who have lower level of education: To test this hypothesis, we used an index to measure the support of exclusive breastfeeding and those who support and perceive exclusive breastfeeding positively were used as dependent variables.

Table 34: Level of education and perception of exclusive breastfeeding

Level of education	**Exclusive Breastfeeding**		**Total**
	Support Exclusive BF	**Do not support Exclusive BF.**	
Low education	83 (12.2%)	42 (14.2%)	125 (12.8%)
Medium education	348 (51.1%)	178 (60.3%)	526 (53.9%)
High education	250 (36.7%)	75 (25.4%)	325 (33.3%)
Total	681 (100.0%)	295 (100.0%)	976 (100.0%)

X^2 (2, N = 976) 11.809, p≤ . 003

The table above shows that most respondents (51.1%) within the medium educational level bracket support exclusive breastfeeding as against 12.2% and 36.7% with lower and higher level of education respectively. Therefore, the study notes a significant relationship between level of education and support of exclusive breastfeeding (X^2 (2, N = 976) = 11.809, p≤ . 003).

According to NIACE, (2008), a child whose parents have good education, occupational status or income would have higher rates of breastfeeding exclusively.

Education is a viable instrument in bringing about positive changes in the pattern of life of people (Ndu, 2002). Education being a social process is responsible for developing and cultivating various physical, intellectual and moral qualities as well as values in an individual. The NDHS survey noted that women with higher education exclusively breastfeed their babies for 2.5 months. From this observation, we can infer that in Nigeria, as in many other developing countries, exclusive breastfeeding and level of education are positively related.

However, the median duration of exclusive breastfeeding is half a month. So our infants are mostly still fed other foods or drinks in addition to breast milk before the recommended age of six months (Onyezili, 2005). The major obstacle to exclusive breastfeeding is its cultural unacceptability especially as it relates to not allowing the infant to drink water. This may be as a result of ignorance of some mothers especially those who are not educated or exposed to the benefits or importance of exclusive breastfeeding to children. Based on the foregoing, we therefore accept the hypothesis that respondents with higher level of education are more likely to support exclusive breastfeeding than those who have lower level of education.

HYPOTHESIS THREE

People with poorer knowledge of nutrition may fall into particular gender groups. As shown in table 27 below. Women had better knowledge of infant nutrition than men and knowledge tended to be better with those with higher levels of education and socioeconomic status. These findings are in keeping with other research works. For instance, Buttress (1997) found significant gender and class differences in ability to identify foods containing starch and fiber, with women performing better than men.

Table 35: Sex of respondents and knowledge of nutritional needs

Sex	Nutritional needs		Total
	Have Knowledge	**No Knowledge**	**Total**
Male	297 (37.4%)	92 (50.5%)	389 (39.9)
Female	497 (62,6%)	90 (49.5%)	587 (60.1)
Total	794 (100.0%)	182 (100.0%)	976 (100.0)

X^2 (I, N = 976) = 10.871, P ≤ .001

This study hypothesized that females are more likely to have better knowledge of infant nutrition than their male counterparts. To test the hypothesis, we used an index to measure the knowledge of right kinds of food for the infants (see table 35) Chi –square test in table35 shows that there is a significant difference between gender and knowledge of infant nutritional needs (X^2 (I, N = 976) = 10.871, p≤.001).

The table shows that female respondents (62.6%) appear to have better knowledge of infant nutrition than their male counterparts (37.4%). This is not surprising. Studies have tended to find women more knowledgeable than men in the issues of infant nutrition. This could be that mothers are usually taught how to promote and sustain the healthy growth of children under five years including nutritional surveillance based on growth monitoring, counseling on nutrition as well as advice on household food security. Men can hardly have time for all these, unlike their female counterparts. Therefore, one can conveniently conclude that there is a significant difference observed between sex and the knowledge of nutritional needs. Infants are totally dependent upon parents especially mothers to provide the necessary nutrition in a safe and usable form. The results consistently show a positive relationship between women and the knowledge of infant nutrition. In all areas of nutrition in this study, women have demonstrated superior knowledge over their men counterparts. The major demographic trend involved level of education, with more educated people demonstrating significantly better knowledge.

HYPOTHESIS FOUR

The study also examined the relationship between the urban and rural dwellers on the knowledge of infant nutrition. Food consumption in Nigeria has been very dynamic over the years. Ene-Obong (2005) suggests some of the factors that contribute to this change and they include: cultural and agricultural practices, education, improved standards of living and urbanization. In the traditional Nigeria society, farming families cultivated starchy roots, tubers, cereals, legumes, fruits and vegetable. These foods make significant contributions to nutrient intakes of the population.

Table 36: Place of residence and the knowledge of nutritional needs

Place of residence	**Nutritional Needs**		**Total**
	Have Knowledge	**No Knowledge**	
Urban	388 (48.9.%)	78 (42.9%)	466 (47.7%)
Rural	506 (51.1%)	104 (57.1.%)	510 (52.3%)
Total	794 (100.0%)	182 (100.0%)	976 (100.0%)

(X^2 (I, N = 976) = 2.143, P ≤ . 083)

The study investigated to know whether there is a relationship between places of residence and their knowledge of infant nutrition. Slightly above half (51.1%) of the rural respondents are knowledgeable about infant nutrition than their urban counterparts (48:9%).

The reason for this is not clear but it could be connected with high cost of living especially on the infant foods in our urban areas. This is unlike the rural dwellers that largely depend on their local produce and occasionally supplement the food by wild (bush) and domesticated animals. In any case, one would have thought that the urban respondents ought to have more knowledge about infant nutrition than the rural dwellers, since they are more exposed to listening to radio and TV jingles on the nutritional needs of children.

Based on these research findings, the hypothesis is hereby rejected and the conclusion is that there is no relationship between place of residence and knowledge of infant nutrition.

4.10 LOGISTIC REGRESSION PREDICTING THE INFLUENCE OF SOCIO-DEMOGRAPHIC FACTORS ON INDICATORS OF INFANT NUTRITIONAL NEEDS – EXCLUSIVE BREASTFEEDING AND IMPORTANCE OF IMMUNIZATION.

Logistic regression analysis was employed to further test the simultaneous effect of factor independent variables. The correlates of socio-demographic characteristics (such as respondent's age, sex, educational status, level of income and place of residence) and knowledge of infant nutrition, support of exclusive breastfeeding and importance of immunization were considered. We used the five independent variables to determine which of them will predict future occurrence of the above dependent variables.

According to the distribution in table 37, which predicted the future knowledge of infant nutritional needs, four variables, age of respondents, sex, educational level, and level of income were statistically significant ($p = 0.000, 0.010, 0.040$ and 0.050) respectively. Only the place of residence had no effect on knowledge of infant nutrition, while age of respondents followed by sex, educational level and income level were the best predictors of knowledge of infant nutrition.

In other words, it is more likely that the younger respondents (18 – 39 yrs) will acquire knowledge of infant nutrition especially when women are educated. There is likelihood in future that they will definitely have more knowledge of infant nutrition than the older respondents (40 years and above)

Table 37: Logistic regression predicting knowledge of infant nutritional needs

Variables	**B**	**S.E**	**Wald**	**df**	**Sig**	Exp (B)
Age of respondents	.300	.174	55.908	1	.000 **	3.671
Education	.276	.134	4.214	1	.040 **	.759
Level of income	.296	.151	3.843	1	.050 **	.744
Location	.096	.178	.292	1	.589	1.101
Sex	.462	.180	6.588	1	.010 **	.630

Significant levels are denoted as ** p<0.05.

Table 38: Logistic regression predicting the influence of supporting exclusive breastfeeding

Variables	**B**	**S.E**	**Wald**	**df**	**Sig**	Exp (B)
Age of respondents	1.182	.149	62.844	1	0.00 **	3.262
Education	.265	.116	5.236	1	.022 **	.767
Level of income	.079	.124	.407	1	.524	1.082
Location	.056	.151	.138	1	.710	.945
Sex	.533	.154	11.985	1	.001 **	.587

Significant levels are denoted as ** p <0.05

Table 39: Logistic regression predicting perception of the importance of immunization

Variables	**B**	**S.E**	**Wald**	**df**	**Sig**	Exp (B)
Age of respondents	1.030	.157	43.027	1	.000 **	2.802
Education	.324	.121	7.233	1	.007 **	.723
Level of income	.273	.135	4.091	1	.043 **	.761
Location	.081	.159	.258	1	.611	.922
Sex	.358	.163	4.831	1	.028 **	.699
Constant	.757	.578	1.713	1	.191	.469

Significant levels are denoted as ** $p < 0.05$

In table 38, we conducted logistic regression analysis using the five socio-demographic variables to determine which one could predict future support of exclusive breastfeeding. From the analysis in table 38 above, it does appear that age of respondents (.000) is the best predictor of the support of exclusive breastfeeding. This is closely followed by sex of respondents (.001). Level of education of the respondents was also found to be a strong predictor of whether exclusive breastfeeding is perceived as very important to the children or not. The findings show that the younger respondents will most likely support exclusive breastfeeding, if their poverty level is improved by the government of Nigeria.

A look at our cross tabulated data on age of respondents and perception of support on exclusive breastfeeding earlier presented in table 30, indicates that most younger respondents (75.2%), who support exclusive breastfeeding also have more knowledge of infant nutritional needs than their older respondents. Therefore the study revealed that level of income is negatively associated with the support of exclusive breastfeeding. In other words, it means that a unit change in the level of income of respondents (decrease in level of income) will bring about an increase in the support of exclusive breastfeeding. This relationship was not statistically significant.

In table 39 four variables:- age, education, sex and income level-were significant (p. 0.000, 0.007, 0.028 and 0.043) in predicting importance of immunization. The age of respondents had the most important influence on the perception of immunization, followed by the level of education which is associated with positive difference of 0.01 occurrences of importance of immunization. From the above analysis, it was observed that the place of residence is negatively associated with the perception of immunization. From the cross tabulated data on age of respondents and importance of immunization presented on table 31, the findings indicate that younger respondents (72%) perceived immunization as important and capable of preventing childhood communicable diseases.

It can then be concluded that Enugu state government needs to strengthen the expanded programme on immunization in the state with the aim of mobilizing the younger respondents of childbearing age so as to reduce drastically the number of deaths among children arising from preventable diseases.

By comparing data from the regression tables, age, sex and education are the variables which are consistent in predicting the three indicators of nutritional needs. In predicting knowledge of infant nutrition, age, sex, education and level of income were statistically significant. However, age, sex, education and income level of respondents were predictors of perceived importance of immunization. Place of residence was found to be a unique factor in that it has no relationship with the three dependent variables such as the knowledge of nutrition, support of exclusive breastfeeding and importance of immunization.

4.11 DISCUSSION

In this present study, women showed superior knowledge in all the areas of nutrition as has been found in most studies looking at the knowledge of nutrition. For instance, Gregory et al (1990) found that women were more likely to eat healthy foods like whole meal bread, fruit, vegetables, and reduced fat-milk. Men, on the other hand, reported eating more sausages, meat pies, and chips. This suggests that the poorer nutrition knowledge among men

in this study could be attributed to the less healthy eating habits. It is increasingly important for men to know how to eat healthily. So far, it appears that more men are relying on women to make decisions about their diets. This highlights the need to target men in nutrition education campaigns. It is also common knowledge that articles relating to diet are still very much the domain of women's magazines. Generally, respondents performed well with regard to the awareness that fruits can protect children from infections diseases but knowledge about food mashing for infants was poor. Many of them were inclined to disbelieve the link between mashing of food and mixing it with meat broth to spoon feed infants and healthy babies. Approximately, one in two people were still unaware of this link.

This simply shows that many of them are ignorant of these nutrition practices, which provide iron fortification for infants. Mashing of food is necessary for the infants from seven to nine months of age, since they are not developmentally or physiologically ready to ingest solid foods.

The major demographic trend involved age of respondents, with more younger respondents demonstrating significantly better knowledge and support of exclusive breastfeeding. This may be because the younger respondents belong to the group of child-bearing age who seem to be more energetic, serious and more educated and as such more eager to get information that will better the lot of their children, especially in the areas of child survival and development. It is often true, that the middle-aged group perform best, as was found in the present study. The poor scores of the older respondents probably reflect their inability to comply to the "ten steps to successful breastfeeding". It then seems understandable that older people are less receptive to new guidelines. They tend to have more attachment to cultural practices that insist on giving new born infants water or food other than breast milk. It could also be that when they were infants, the government then did not emphasize the importance of exclusive breastfeeding. Many researchers have established that breast-milk is perfectly suited to nourish infants and protect them from illness. Babies who

are not exclusively breastfed for six months are more likely to develop a wide range of infectious diseases.

Findings from the present study show that immunization services have been proven to be an efficient method of disease prevention in both rural and urban communities of Enugu state. The study also shows an increase in consideration of immunization usage and public acceptance. Greater acceptability of immunization services is likely to bring about decrease of many communicable diseases in the state.

Further analysis of the data, showed that majority of the respondents in the low income group were less ready to take their children to the hospital or clinics for treatment. The reason offered by them was that there was no money for treatment. This means that poverty has played a significant role in the death of under – 5 children. However, statistics showed that under -5 mortality is higher among people with lowest wealth/income and children with mothers who have no education. This is noticeable especially when the economics of any country falters, as is the case in Nigeria. The number of people living in poverty increases and the gap between the rich and the poor widens. The parents who are poor are aware of the value of health for their children but they lack the resources necessary to give their children the required medical attention. Poverty leaves children vulnerable to malnutrition and diseases – that are largely preventable.

Finally, the results from the study show that there is an urgent need to invest in programmes that will enhance the knowledge of infant nutrition in Nigeria. These infants today are the next generation; they represent the continuity of tradition as well as the hope for tomorrow.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

Nutritionists and other health professionals have long recognized the importance of establishing healthful nutrition practices during childhood and early adolescence. As such, diet patterns adopted during these prime developmental years set the stage for life-long habits that can mean the difference between health and infirmity in later years. According to Umeha, (2006) a healthy child is the dream of every mother. Therefore, every mother strives to provide their infants food which they believe can give them adequate nutrients that will enable them to grow well.

Some of the findings from this study are summarized thus: firstly; the study found that most of the people under-study are knowledgeable about infant nutritional needs by accepting that eating of meat/eggs by infants is not wrong in any way. For instance, the greater percentage of the respondents (60.5%) saw the practice of giving infants meat/eggs as a welcome development that can meet the nutritional needs of children. The result here shows that people now perceive the positive side of infant nutritional needs unlike in the past where some cultural practices deprived children of essential nutrients. In some parts of Igbo land, it is often heard that children are not allowed to eat meat or eggs for fear of excess use of it in their adulthood.

However, with the present study, this kind of ideology or perception is found to be fading. Similarly, the study's findings revealed that more than half of the respondents (56.0%) are aware that fruits such as oranges, paw-paw, carrot, banana etc can protect children from infections diseases. This is a positive perception of food nutrition, which if continued, will help to reduce infant morbidity and mortality in the future. To improve the healthiness of diet for children, one would require as a complement, a sharp increase in the

consumption of fruits and vegetables as many young children do not meet the dietary recommendations for fruits and vegetables.

It was also found that despite the fact that many people are aware of the importance of allowing infants to consume eggs, meat and certain fruits for protection, 41.8 percent of them are not aware that they can mash carrot, and cucumber and mix with meat broth and spoon feed their children. The percentage of people who are not knowledgeable on this issue can not be discarded, because they are many and for that, something should be done to increase their knowledge of nutrition, to avert many children from facing serious nutritional problems in future.

Fourthly, the study also found that more than half of the sampled population (56.5%) had no knowledge of health care services for children. This means that many respondents are ignorant about the existence of some of the health facilities within their areas. Poverty, ignorance and traditional beliefs have led to under-utilization of health facilities. If there is no reverse in the trend now, children will be worst hit in the future. Findings from the study also indicate that 43.2% of the respondents felt that exclusive breastfeeding is negatively perceived in their communities. The reasons they attributed this were to social cultural practices of the people. Education was found to modify the cultural barriers that discriminate against exclusive breastfeeding. Findings of the study also show that 75.5% of the respondents considered that the practice of immunization was very important for their children; 66.4 percent agreed that they had severally demanded to immunize their children without any person asking them to do so. 71.5 percent of them said that they immunized their children as and when due. The people of Enugu state still believe that immunization is very important to the survival and development of children. Majority of the respondents (50.5%) affirmed that social work services exist in their communities 61.3% of them believed that the integration of social work services into health care delivery system will improve children's health. This result shows that there is now more awareness of social work services in both

urban and rural areas of the state. The impression is that Nigerians today, even within the academics, still do not understand what social work profession is all about. The findings of the study show that the majority of the respondents (84.2%) agree that poor financial condition of parents contributes to infant mortality rate. Above 50 percent of the sampled population indicated that there were times they did not take their sick children to any hospital or chemist for treatment. The reason given by 34.2% of this group was lack of fund.

Further, the study examined relationships between various independent and dependent variables and the following were the findings. First, it was found that there is a relationship between age of respondents and various issues relating to infant nutrition. For instance, more of the younger respondents have the knowledge of infant nutrition, support exclusive breastfeeding and perceived the importance of immunization than their older respondents. Second, respondents with higher level of education perceived immunization as very important and were found to be (more) knowledgeable about infant nutritional needs than the lower educational groups. Third; a relationship was observed between sex and exclusive breastfeeding/immunization services. Females were found to be more in support of exclusive breastfeeding and immunization services than their male counterparts. Fourth; the study found that there was a relationship between status in the family and knowledge of nutritional needs. For instance, in households, mothers (wives) ranked highest in the knowledge of infant nutrition, and then supported exclusive breastfeeding both in urban and rural communities, more than any other group members of the family. However, results from the study show that only place of residence, had no relationship with any of the dependent variables.

Four hypotheses were tested and the following relationships were found to be significant: Relationship between level of education and support of exclusive breastfeeding and relationship between sex of respondents and knowledge of infant nutrition. There was no significant difference found between the respondents' place of residence and knowledge of infant nutrition and between a sick child and the knowledge of infant nutrition.

Results obtained from the logistic regression show that age of respondents, sex, level of education and income were the best predictors of knowledge of infant nutrition while age of the respondents had the most important influence on exclusive breastfeeding and the perception of immunization.

The qualitative analysis suggests the following conclusion:- First: women participants in the interview had a very strong perception on ways of improving children's growth and development. For instance, they suggested that children's health could be improved through – adequate nutrition, proper immunization, adequate personal and environmental hygiene, exclusive breast feeding and by giving them adequate recreational activities. They also recognized that a healthy effect of good care and good diet combined with smiles, cuddling and play will enhance a child development. On the issue of why parents do not take their children to hospital until they become critically ill, parents gave their reason as lack of money orchestrated by poverty. Many of them reiterated that Igbo people were known for being their brothers' keepers but now that ideology is eroding simply because when one is sick, relations hardly offer any monetary help for treatment, when the person dies the same relations will accept all the responsibilities associated with flamboyant funeral.

In the FGD discussions, it was observed that the diseases that are common among the children of Enugu State include, pneumonia, measles, diarrhea, malaria, chicken pox, cough, cholera, "ogwume" and "apupa"- stone-like in the stomach. The participants showed that they were more likely to patronize chemists whenever their children were sick, than their urban counterparts.

5.2 CONCLUSION

In conclusion, understanding the nutritional problems of children is critical for attaining the Millennium Development Goals (MDGs) set by the United Nations for education, health, nutrition and poverty. To lead a good and healthy lifestyle for children, parents ought to have some basic knowledge of what to feed them and how and when to feed

them. Knowledge of infant nutritional needs is necessary at this point in time because most parents feed their infants with inadequate nutrition due to lack of knowledge. This inappropriate system of food in-take for a long period of time has been has seen as one of the root causes of many physical ailments or illnesses in our society. More research is needed here to gain a clearer understanding of nutrition knowledge in those groups which were under-represented in our sample especially male groups and those with low educational qualification.

Given all the benefits of breastfeeding, mothers should breastfeed their babies for first six months of life, disregarding their traditional cultural beliefs such as the conviction that children require certain traditional foods for health or the difficulty of combining breastfeeding with paid work or that it is unsafe to have sex with breastfeeding women. Public enlightenment campaign directed to dissuade customers/consumers from the use of infant formula should be adopted and encouraged to do away with the cultural beliefs in breastfeeding.

The number of infants who are not fully immunized against preventable communicable diseases continues to remain high. Poverty, lack of education and poor accessibility to medical care were cited as reasons for non-compliance. In addition, some parents have expressed concern that vaccines can make children sick. Studies have shown that minor discomfort, including mild fever, achiness and pain might occur at the injection site. Vaccines are considered safe.

The study tried to elucidate why people engage in health – endangering, activities. The nutrition habits are acquired within social groups such as family, peers, the subcultures and have proven to be extremely difficult to change. For most people, personal behaviour is not the primary determinant of health status and it will not be very effective to intervene at the individual level without concomitant attempts to alter the broader economic, political, cultural and structural components of society that act to encourage, produce and support poor

health. In sum, improving the nutritional needs of children will require us to look beyond individual behaviours to broader social structural issues.

5.3 RECOMMENDATIONS

Based on the foregoing findings, the following recommendations are made:-

1. There should be an urgent need to invest in programmes that will enhance the knowledge of infant nutrition in Nigeria.
2. Public enlightenment campaigns directed at dissuading customers/consumers from the use of infant formula should be adopted and encouraged to do away with the cultural beliefs associated with breastfeeding.
3. Government should establish polices that will address the health and nutritional needs of children in Nigeria.
4. Government should implement the plan of providing one nutritional meal per day for pupils in Enugu State nursery schools.
5. Children's health should be improved through adequate nutrition, proper immunization, adequate personal hygiene and exclusive breast feeding.
6. Mashing food and mixing it with meat broth to spoon feed infants should be encouraged among mothers or child care givers since the infants are not developmentally or physiologically ready to ingest solid foods.
7. Education should be employed to correct many of these archaic cultural practices mostly found in our rural areas so that children will benefit from physical activity and learning experience through well – nourished foods.
8. A comprehensive dietary guideline for the Nigeria child should be established to address programme – activities of children.
9. There is an urgent need to overhaul the policy on breast feeding in Nigeria because breastfeeding is not only about breast milk and its effects on the survival of the child, but the long – lasting effect of creating bonding between the child and the society.

10. Children should be encouraged to accept a variety of new foods and familiar foods should be prepared in different ways.
11. It is pertinent to finally recommend that there is need for increase in the nutrition knowledge of men with regards to infant nutritional needs through seminars and workshops.

5.4 LIMITATIONS OF THE STUDY

The purpose of combining both quantitative and qualitative methods of data analysis was to minimize the error margin in the study. Despite this beautiful idea, the study still has its limitations. Some of the limitations of quantitative design are as follows:- one; the study was carried out when there was incessant report on the rising wave of child theft in Enugu state and so, most of the rural women were skeptical about the questions that bordered on their children. From the questions asked by these women, it was obvious that they probably thought that the study could be a way of identifying locations of these children for easy abduction. This may have had some form of effect on their responses.

Related to this is the fact that many of the respondents who claimed that they are literate enough to fill in the questionnaire by themselves, later on found out that the questions were many contrary to their expectations, and required more time to do so. This however could be a source of error. The questionnaire coding in the study was contracted to a person was believed to have super experience and he established categories for each question. The possibility of introducing some form of error in his coding cannot be eliminated and this might affect the results obtained, thereby leading to erroneous generalization.

Another limitation is that the study was carried out only in Enugu state and the findings may not be generalizable to other State. This is due to the fact that there are cultures or behaviours that are peculiar to Enugu state and may not be the same in other states of the federation. This may affect the findings and could lead us to wrong conclusions.

Similarly, men and women from rural business oriented communities were so committed to their business that they could only spare a little time for the survey. Their regular absence at home caused the shift in questionnaire administration to late in the evening and to obtain the best responses under this kind of tight schedule may lead to a source of error in the study.

5.5 IMPLICATIONS FOR SOCIAL WORK PRACTICE

The National Association of Social Workers (NASW) (1999) stated that the primary mission of social work is to enhance human well-being and help meet the basic needs of all people, with particular attention to the needs and empowerment of people who are vulnerable, oppressed and living in poverty. As this definition indicates, social work is an active, "doing" profession that brings about positive changes in problem situations through problem-solving or prevention. The "why" of social work practice is addressed when social work is viewed as a response to concern or need. Social work is partially known in Nigeria as one of the fastest growing professions in the recent times. Social workers have an obligation to be involved in enacting and implementing social programs to meet the nutritional needs of Nigerian children.

Findings from the study suggest the need for professional social workers to be involved in bringing about positive changes in the nutritional needs of children. However, level of education was found to be a significant variable that determines how knowledgeable parents are about infant nutrition. Social workers can help in this direction through the means of advocacy and social mobilization to introduce nutrition education programmes both at the primary and secondary school levels. The introduction of nutrition education into the curriculum of both schools, if well developed and implemented will increase the knowledge of many generations of Nigerian families in the area of infant nutrition. This will help to reduce mortality rates in Nigeria especially that of infants and children. Studies have shown

in Nigeria that under-5 mortality is higher among people with lowest educational qualification and wealth.

Education in community health given by social workers has been shown to greatly enhance an individual's understanding of what is required for families to develop a positive nutritional condition and to help in creating the right kind of demand. Social workers are involved in community education which aims at discouraging some of the cultural beliefs or practices of people which are no longer tenable /fashionable. For instance, in the study, it was observed that many people were of the opinion that infants should not be allowed to eat eggs or meat for fear of becoming thieves or gluttons in their adulthood. This is a negative perception by the people. It is all about cultural differences which may serve to create behaviors that appear to be in conflict with broader societal norms and expectations. Traditional customs and behaviors of some groups may differ considerably from the expectations of the majority group and create dissonance which results in behavior that is interpreted as maladaptive or dysfunctional (Ambrosino et al, 2005). This being, the case, there is need for social workers to work toward changing these cultural beliefs or practices of people which have continued to contribute greatly to the death of infants in Nigeria. These unacceptable cultural practices include, understanding how people's cultures shape their views about health and wellness, illness, health care providers and their roles in preventing and dealing with health-related concerns and helping to empower persons to communicate those views to others involved in their care. Social workers can also help in developing enlightenment campaigns/programmes using pamphlets, radio and TV jingles to educate people on this kind of stereotype which says that any infant who dared eat meat or eggs will definitely become a thief or glutton in his adult age. The programme continues to disabuse the minds of people especially the rural populace on certain cultural practices that could be harmful to the survival and development of children.

Results from the study show that many families do not even know that eggs or meat are sources of protein or that lack of protein is a serious health problem. This, therefore, calls for massive enlightenment of the entire populace and not just the parents. Social workers should raise awareness and increase understanding of issues affecting infant nutrition amongst policy makers and general population through advocacy and social mobilization. Social worker's effective advocacy and mobilization will help to reduce people's ignorance about infant nutrition, thereby ensuring better support for the nutrition practices.

Another finding from the study that deserves the attention of social workers is that some people are not in support of exclusive breastfeeding. In the study some of the respondents believe that if they breastfeed their infants exclusively, they will not retain their breast shapes, while others feel that they are not fit enough to breastfeed exclusively for six months. Social work intervention here is necessary because, it is an unfounded truth that women loose breast shapes in the course of exclusive breastfeeding. Social workers need to educate the general public especially mothers that whether they breastfeed exclusively or not, breasts do not retain the same shape. It is necessary that every body should be made to know about the benefits of exclusive breastfeeding. The goal of educating mothers is not only to increase their breastfeeding knowledge and skills, but also to influence their attitudes toward breastfeeding.

Social workers can develop and offer counseling services to the families who believe that social work cannot make any contributions to the prevention of infant death rates in the country. This shows that people still doubt the possibility of social workers having the power or control necessary to educate people in order to prevent infant mortality. The ultimate goal of counseling here is to develop positive knowledge, behavior and attitudes toward the relationship existing between social work services and prevention of infant mortality. Social workers counsel families on the need for children to wash hands properly, brush teeth after meal, have good dental care and live under good sanitary conditions. This is because without

these precautions, children can become infected which invariably can lead to death. The knowledge of these will help the people to know that social worker can help prevent death of infants in the urban and rural areas of the country.

Another good case for social work education emerged when a substantial number of people without any reservations, agreed that they did not immunize their last children because the children often felt feverish or sick after immunization. In this case, social workers are to educate and convince parents to demand immunization for their children even when they are sick. It is needless to withhold immunization from sick children. Denying immunization may even constitute a greater risk because access to health services is limited and the morbidity and mortality from vaccine preventable diseases are high. Social workers should also mobilize community members and spread the word about immunization and its importance to the parents. In other words, social workers are to use all available resources to mobilize, educate and encourage mothers and families to accept immunization services as very important to the life of their children.

Another finding from the study shows that many people are not aware of social work services. This finding, therefore, deserves serious attention for social workers. In Nigeria, social work is relatively new both to the academics and non-academics, yet, it is making a giant stride in providing humane and effective social services to the society. In recent years, considerable energy has been expended to institutionalize social work and develop a system of registration of social workers. Such a system will help to assure the public that qualified personnel are providing social work services and also advance the recognition of social work as a profession. However, lack of awareness of social work services makes it possible for many people not to access such services thereby suffering from problems that could have been prevented or solved. Social workers can also solve this problem through education, by giving information to families about the need for social work services and teaching them the adaptive skills on how to utilize these services which will better the lot of their children and

families. According to Barker, (1995:358) social workers help people increase their capacities for problem solving. They also help people obtain needed resources, facilitate interactions between individuals and between people and their environments, and influence social policies. Social workers need to educate the general public on the need to utilize available social work services. Studies have shown that in Nigeria, poverty, ignorance and beliefs have led to under-utilization of health facilities by the population.

5.6 IMPLICATIONS FOR SOCIAL POLICY

This study was designed to examine the nutritional needs of children in Nigeria. Many studies including those of non-governmental organizations have shown that there is a great need for championing workable programmes on the survival and development of children. One of the key findings of the study is the lack of awareness about food mashing by Nigerian families. The people who lack this knowledge are supposed to be the driving force in our policy making, who should know about infant nutritional methods so as to make policies that will favour children in future. The reduction of mortality rates especially infant and child mortality should, therefore, be considered a central facet of economic and social development in every country (UN.2001). Increased of the pathophysiological processes associated with malnutrition can guide therapies to reduce the associated morbidity and mortality, but improved access to food-providing a balance combination of energy and nutrients continues to be the key to prevention of malnutrition (Ravelli et al 1998).

The treatment of nutritional problems must begin with efforts directed towards world-wide prevention. Complex societal, economic and political factors must be overcome in order to provide effective coordinated programmes targeted at improving access to nutrition. The lack of support to exclusive breastfeeding by mothers was revealed to be one of the best predictors of frequent sickness by infants. In other words, the support of exclusive breastfeeding will help to reduce the probability of Sudden Infants Death Syndrome (SIDS). It was discovered that many mothers who breastfeed do not know the benefits of exclusive

breastfeeding. An overhaul of breastfeeding policy in Nigeria is urgently needed, since breastfeeding is not only about the breast milk and its effects on the survival of the child, but more importantly, the long lasting effect of creating bonding between child and mother and by extension, between the child and the society. If all mothers in developing countries are to be persuaded to breastfeed their babies for at least four to six months, a million children would be saved annually (Onyezili, 2005).

There are many policy implications arising from the findings of this study. There should be dietary guidelines for Nigerian children who have been facing nutritional problems. It should be a comprehensive guidelines that will address program – activities to healthy development, health protection and health promotion for children, nutrition and food services, facilities, supplies, equipment and transportation. Improved access to nutritional needs, can not only assure children of better quality of life, but also have obvious benefits for early learning (Lynn, 2001). It was also found in the study that some children are deprived of essential nutrients obtainable from eating of meat or eggs, simply because of people's cultural practices. Poor standards of nutrition are seen as significant barriers to children's ability to learn and become healthy productive adults. Children who are well nourished are less likely to become ill; they also recover more quickly when they are sick. Poorly nourished children are more susceptible to infections and illness, while illness increases the need for some nutrients.

Nigeria is naturally endowed with mineral resources – oil, yet majority of Nigerian children are living in a time and place where food is scarce/insufficient. There is increasing concern about the number of children who may not be getting enough to eat or whose diets do not include the right types of foods. Establishing policies that will address the health and nutritional needs of children are important for early childhood programs. These policies should reflect the goals and philosophy of the individual program and address important issues such as – what constitutes infant food what conditions are required in preparing infant

food what penalty awaits a person who refuses to immunize their child? what are the compensations for the breastfeeding mothers by the husbands or governments etc?

Education was also found to be a major factor that influenced people's perception of infant nutrition. This kind of relationship was also found between education and the support of exclusive breastfeeding and immunization services. The perception of people on the importance of mashing certain foods was poor and this indicates a need for the right kind of information to be given to the Nigerian people. This can be achieved through education of family members. This will definitely help the adult members of the society to fashion better policies that will alleviate the problems of infant nutrition in Nigeria. Education will also be used to correct many of the archaic cultural practices prevalent in our rural areas, so that children will be better able to benefit from physical activity and learning experiences through well-nourished foods and iron fortification supplements.

We urge the federal government to address the current economic depression and the growing impoverishment of our people which make it difficult for parents to properly feed their children with right kinds of food. To this end, government should implement the plan of providing one nutritious meal per day for an estimated 30 million pupils in Nigerian nursery and primary schools. With the growing hunger in this country exacerbated by gross unemployment, under-employment, and galloping inflation, the opportunity of one free nutritious meal a day for school children will improve the nutritional profile of children. It will significantly improve their health status and hopefully reduce the alarming child mortality statistics which are largely driven by ignorance and malnutrition.

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APPENDIX A

QUESTIONNAIRE

Department of Social Work
Faculty of the Social Sciences
University of Nigeria,
Nsukka.

Date……

Dear Respondent,

I am a Ph.D. Student in the Department of Social Work, University of Nigeria, Nsukka, conducting a research on knowledge of infant nutritional needs among mothers in Enugu State.

The research is part of the requirements for the award of the Ph.D. degree of the above university. The information elicited will be treated with strict confidence, and will only be used for the academic purposes indicated.

I will be grateful if you could give the most sincere answers to the questions below.

Thank you for your co-operation.

Yours sincerely,

Christopher Ngwu

INSTRUCTION

Please Mark (✓) with pen or pencil against any answer of your choice and supply the answer where necessary.

SECTION A

GENERAL CHARACTERISTICS

(IDENTIFICATION)

Community (Name): …….

Local Government Area: ……..

State ……..

1. Location (a) Urban ☐ (b) Rural ☐
2. Sex (a) Male ☐ (b) Female ☐
3. Age range: Between (a) 18 – 28 years ☐

   (b) 29 – 39 years ☐ (c) 40 – 50 years ☐

   (d) 51 years and above ☐
4. Marital Status: (a) Single ☐ (b) Divorced ☐

   (c) Widowed ☐ (d) Married ☐

   (e) Separated ☐
5. Religion: (a) Christianity (specify denomination) ☐

   (b) Muslim ☐ (c) Traditionalist ☐

   (d) Others please specify ……..

1. Highest educational attainment:

   (a) Primary – Uncompleted ☐

   (b) Primary – Completed ☐

   (c) Secondary – Uncompleted ☐

(d) Secondary – Completed ☐

(e) Diploma/University Degree ☐

(f) Other (Please specify)……

2. Occupation: (a) Civil Servant ☐ (b) Petty Trading ☐

(c) Business ☐ (d) Farming ☐ (d) Student ☐

(e) Others Specify ……..

3. What is your monthly income bracket? (a) less than ₦10,000 ☐

4. Status in the family (a) husband ☐ (b) Wife ☐

(c) Care-giver ☐ (d) Daughter ☐

(e) Son ☐ (f) Other specify ……..

5. In this community, are there any food exemption for children?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐ (d) No answer ☐

6. In your own opinion, do you think that it is a taboo for a child to eat egg or meat? (a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

7. Do you know that food such as eggs or meat are sources of protein for children? (a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

8. How often do you give your under-5 child such foods? (a) Often ☐

(b) Seldomly ☐ (c) Not at all ☐ (d) No answer ☐

9. Do you know that foods such as oranges, paw-paw, carrot, banana, etc. can protect your child from infectious diseases? (a) Yes ☐

(b) No ☐ (c) Not sure ☐ (d) No answer ☐

10. Why do you think some parents prefer to feed their infants with “other milk”? (a) They are rich ☐ (b) They are lazy ☐

(c) They are ignorant of the act ☐ (d) All of the above ☐

11. Do you introduce solid or semi-solid food early enough (i.e. before 6 months) to your child?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

12. Do you know that you can mash Irish potato, carrot; cucumber and mix with meat broth and spoon feed your child?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

13. Does your child reject (eating) beans or is he allergic to it?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

14. If "yes" in No 17, above, do you have any special way of preparing beans to make it more alluring or appetizing to the child

(a) Yes ☐ (b) No ☐

15. Does your child fall sick frequently?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

16. How often does he/she fall sick in a month? (a) Very often ☐

(b) Seldomly ☐ (c) Once ☐ (d) No answer ☐

17. Identify the sickness that your child normally suffers from?

(a) diarrhea ☐ (b) malaria ☐

(c) whooping cough ☐ (d) cholera ☐

(e) other, please specify ……

18. Can you describe the signs and symptoms of illness you noticed in your child recently? (a) unresponsiveness to his/her environment ☐

(b) frequent stooling ☐ (c) Loss of appetite ☐

(d) pneumonia ☐ (e) other, please specify …….

19. Have you noticed recently that your child has been feeling unconcerned about his/her surroundings?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

20. Do you think that the height of your child corresponds with his age?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

21. Are you aware of the existence of health care services for children in your community?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

22. Do you know some of the available health care services for children?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

23. Where do you take your child for health services?

(a) Hospitals ☐ (b) Health centers ☐ (c) Clinics ☐

(d) Other specify …….

24. How far is the treatment center for children in your community?

(a) Very far ☐ (b) Very close ☐

(c) Not far ☐ (d) Not sure ☐

25. Do you think that health services for children are accessible to all of them? (a) Yes ☐

(b) No ☐ (c) Not sure ☐ (d) No answer ☐

26. How would you react to the allegation that rural children are usually deprived of essential goods and services more than their urban peers?

(a) Agree ☐ (b) Disagree ☐

(c) Not sure ☐ (d) No answer ☐

27. What in your opinion is the major reason of providing health services for children?

(a) To eradicate kwashiorkor ☐

(b) To grow tall and fat ☐ (c) To prevent morbidity and mortality ☐

(d) Other specify ……l……

28. How often do you utilize health care services for children in your community? (a) very often ☐ (b) seldomly ☐

(c) Not even once ☐ (d) No answer ☐

29. What are the likely reason(s) why some mothers do not take their children to the treatment center whenever they are ill?

(a) Drugs are costly ☐ (b) Treatment center is far ☐

(c) No money for treatment ☐ (d) Lack of drugs ☐

(e) Delay in treatment ☐

(f) Other please specify …….

30. How can you assess the general health status of your under-5 child?

(a) generally healthy ☐ (b) very sickly ☐

(c) sometimes sick ☐ (d) just normal ☐

(e) other specify ……..

31. Do you support exclusive breastfeeding?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

32. How long do you exclusively breastfeed your child?

(a) 2.5 months ☐ (b) 5 months ☐

(c) 6 months ☐ (d) other specify ……

33. Would you say that six months exclusive breastfeeding is negatively perceived in this community?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

34. Why is it that some mothers are not interested in this exclusive breastfeeding?

(a) Because of poverty/hunger ☐

(b) Availability of infant formulas ☐

(c) Lack of chance ☐

(d) Because of social/cultural beliefs ☐

(e) Others specify ……..

35. How could mothers perception of exclusive breastfeeding be improved in Nigeria? Answer ……

36. How would you react to the assertion that malaria, malnutrition, pneumonia, whooping cough and measles are the major cause of infant mortality?

(a) Agree ☐ (b) Disagree ☐ (c) Not sure ☐

(d) No answer ☐

37. When you had your last child, did you immunize the child?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

38. Have you ever demanded to immunize your child?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

39. Is it true that vaccines are not always available in the hospitals/clinics/health centers?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

40. How would you describe the importance of immunization?

(a) Positive ☐ (b) Negative ☐ (c) Not sure ☐

41. In your own opinion, why do some mothers refuse to present their children for immunization? ……..

42. Do you know whether social work services exist in this community?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

43. Would you suggest that social work contribute in the prevention of infant death rate?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

44. In which area has social work services been most relevant to you?

(a) Social problems ☐

(b) Rehabilitation problems ☐

(c) Counseling problems ☐

(d) Other specify …….

45. Do you think that the integration of social work into the health care delivery system will have any improvement on children's growth and development?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

46. Does the presence of social work services in your community reduce the incidents of infant mortality?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

47. Do you agree that poor financial condition of parents contribute to the infant mortality in Nigeria?

(a) Agree ☐ (b) Disagree ☐

(c) Not sure ☐ (d) No answer ☐

48. Was there any time, you noticed that your child was sick and you did not take him/her to the hospital/clinic/chemist for treatment?

(a) Yes ☐ (b) No ☐ (c) Not sure ☐

(d) No answer ☐

49. If “yes” in No 52 above what is the reason of such decision?

(a) No money for treatment ☐

(b) Treatment bill is usually costly ☐

(c) Treatment drugs are fake ☐

(d) Other please specify ……..

APPENDIX B

FOCUS GROUP DISCUSSION GUIDE

TOPICS TO BE COVERED:

(i) The causes of infant morbidity and mortality.

(ii) The importance of health care services for children.

(iii) Social workers' roles in the prevention of infant mortality.

(iv) Ways on how to improve children's growth and development.

STUDY LOCATION ……

FGD GROUP …….

DATE …….

GENERAL INTRODUCTION

(i) Exchange of personal introductions

(ii) Aim of the exercise explained

(iii) Assurance of confidentiality

(iv) Permission to record discussion

(v) Opening remarks.

QUESTIONS TO BE ASKED DURING THE FGD SESSIONS

The following questions will be raised during the FGD sessions to tackle the issues relevant to the research exercise.

(1) In your own view, what are the reasons for providing health care services for children?

(2) Can you describe the dietary and feeding practices for children in this community?

(3) What are the diseases that are common among the children in this community?

(4) Which of these diseases are the major cause of infant morbidity and mortality?

(5) Name some of the benefits of immunization to the under-5 children?

(6) Why is it that some mothers are not willing enough to present their children for immunization?

(7) At what age of children, do mothers stop breastfeeding their infants here?

(8) Where do people take their children, when they are sick in this community?

(9) What are the roles of social workers in the prevention of infant mortality?

(10) Suggest ways on how to improve on children's growth and development.

IN-DEPTH INTERVIEW GUIDE WITH OPINION LEADERS

INTRODUTION

1. What is the reason of providing health care services to the children less than 5 years of age?
2. What are the common diseases that affect under-5 children in this community?
3. Which of these diseases are the major cause of infant morbidity and mortality?
4. Why is it that some mothers or child caregivers do not take their children to the treatment centers until they become critically ill?
5. What are the benefits of immunization to the under-5 children?
6. What causes malnutrition? How?
7. Can it be prevented? How and why should you prevent it?
8. What do you do, when you realize that a child is malnourished in this community?
9. What are the likely constraints to breastfeeding in this locality?
10. How long do mothers breastfeed their babies in this community?
11. What are the roles of social workers in the prevention of infant mortality?
12. Suggest ways on how to improve on the health of under-5 children?