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Sociocultural factors influencing the use of expanded programme on immunization in the health zone of Nigeria

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SOCIOCULTURAL FACTORS INFLUENCING THE USE OF EXPANDED PROGRAMME ON IMMUNIZATION IN THE B HEALTH ZONE OF NIGERIA

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DEDICATION

I dedicate this work to the glory of the **Almighty God** for His Mercy upon me and to the blessed memory of my beloved, immediate, Senior sister **Omolayo**, whose tragedy struck few months after I started this programme. May her gentle soul rest in perfect peace (Amen).

CERTIFICATION

I certify that this work was carried out by **Ayodele Samuel Jegede** in the Department of **Sociology, University of Ibadan.**

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ABSTRACT

The overall objective of the study is to examine the influence of sociocultural factors in the use of the Expanded Programme on Immunization (EPI). Identifying certain predisposing factors (sociocultural and ecological) and enabling factors (availability and accessibility of health facilities)which may impede or promote the use of health facilities and lead to promotion of the most effective means of dissemination of information and effective utilization of EPI facilities.

The conceptual tool is based on Health Belief Model (HBM). The model assumes that prediction of health related behaviour, particularly preventive/detection health behaviour, depends mainly on two variables: (1) perceived susceptibility to a health condition, and (2) perceived seriousness of a given health problem. This varies from person to person and from group to group, and conditioned by sociocultural factors.

Three local government areas (LGAs) were selected based on their cultural and ecological diversities and level of utilization of EPI. These were: Akinyele, a Yoruba Community in Oyo State, Ika North-East LGA, an Ibo Community in the

upland area of Delta State and Bomadi LGA, an Ijaw Community in the riverine area of Delta State. Pilot study revealed that Akinyele, defined as a success area, had more than 90% coverage of EPI target population while Ika North-East and Bomadi; defined as less successful, reported under 60% coverage of EPI target population.

The study was conducted between May, 1993 and February, 1994. Data collection involved three phases: (1) an indepth interview of 120 key informants (40 from each LGA); followed by (2) 36 focus group discussions (FGDs) (6 in each LGA) with a total of 180 participants; and (3) structured interviews which involved 1,554 female household respondents; these are individuals who have given birth to, at least, a child in the last 5 years. These techniques were supplemented with clinical case study of 50 children born in each LGA in order to examine the sociocultural characteristics of mothers of well and poorly immunized children.

The study revealed that majority of children aged 12-23 months (90%) were fully immunized in Akinyele, unlike Ika and Bomadi where 54.9% and 55.6% were immunized respectively. Although statistical test shows significant relationships

between sociocultural factors and the use of EPI, nevertheless, the most striking feature of the study is the fact that where intervention programmes (enabling factors) are effected as in Akinyele, the influence of sociocultural factors as barriers was greatly reduced. Hence, there is no substantial difference between Ika and Bomadi despite their differential sociocultural and ecological backgrounds. Therefore, the formulation of appropriate intervention programme is of considerable importance for effective utilization of health facilities and for the achievement of health for all by the year 2000.

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CHAPTER ONE

GENERAL INTRODUCTION

1.1 INTRODUCTION

The World Health Organization (WHO) (1978) had defined health as "a complete state of physical, mental and social well- being, not merely the absence of disease or infirmity". This definition addresses mostly the curative aspect of medicine and there is not much concern for preventive medicine. It has been argued that the "Social well-being" dimension does not question the appropriateness of different value systems which can foster individual health (Richman, 1987). To experience a 'frequency' of illness in one's lifetime could be considered normal, for it would be a realistic outcome. But the question is, what level of frequency (for a disease or disease pattern) is within tolerable limits?

According to Richman (1987), all societies have taxonomies of disease. Although modern medicine is expanding in its scope of disease conception, it has not produced satisfactory explanations on the causes. Most explanations emphasize on the germ theory of disease. To label a disease does not necessarily mean that its

parameters are fully known. The avalanche of sick notes and death certificates only have their explanations geared more towards administrative purpose. Therefore, disease should be a matter of cultural notation for a holistic explanation of man's well-being.

However, studies (Mechanic, 1964; Verbrugge, 1976; Lewis and Lewis, 1977; Iyun, 1980; Marcus and Seeman, 1981; Igun, 1982; Jegede, 1991; Owunmi and Jegede, 1991) have shown that there are relationships between sociocultural factors and causes of disease and utilization of modern health facilities in various cultural environments. Culture has been found to play vital role in health behaviour of the people (Oke, 1993; Erinoso and Oke, 1994) especially in the developing nations of the world where majority of the people are traditionally oriented and superstitious.

The term 'illness', 'disease' and 'sickness' according to Richman (1987), are usually joined together. Weimman's (1978) distinction is useful in distinguishing between them. Disease refers to the abnormalities in the structure and functioning of the organs. These need not be culturally or individually explicit. Illness refers to a patient's experience of disease and other related conditions (Richman, 1987). Sickness can be

used interchangeably for aspects of illness and disease. When applied cross-culturally, these categories can easily be broken down. Some traditional societies locate diseases outside the body (Jegede, 1994). Industrial societies refer more to 'stress-related' diseases, also implying some external causation. The pattern of disease and treatment distinguished by each culture reveals the practical reasoning on which its wider social order is based. However, despite cultural variations in disease recognition, a number of common features are shared in that, diseases have origin, characteristic indicators and undergo stages of development. Nevertheless, diseases are perceived as affront to human existence.

Generally, people like to be well all the time. In order to remain healthy, they employ preventive and detection measures to guide against illness. These measures have been referred to as health related behaviours (HRB) (Anderson et. al., 1963).

Health related behaviour is "what the people do individually and collectively in order to maintain and/or remain in good health". What specific steps are taken (sometimes called pattern of resort) and why taken the steps?

(Scrimshaw and Hurtado, 1987).

The implication of this is that individuals will take decisions about what step to take based on the values of the society. In other words, the aim of health practice should be directed at preventive medicine rather than curative medicine which has the hospital as chief corner-stone. This is because preventive medicine is cheaper and has potenticial to prevent diseases, reduce morbidity and increase life span.

In view of the need for preventive health care (PHC), the WHO in its Alma-Ata declaration of 1978 approved a proposal for PHC of which the Expanded Programme on Immunization (EPI) is a major component. Primary Health Care is "essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individual and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination". Accepting the objective, the Nigerian government used it as the basis for its national population and health policy which aims at providing health for all by

the year 2000.

The Expanded Programme on Immunization (EPI) was set up to immunize against, prevent and eradicate the identified childhood diseases (Tuberculosis, Poliomyelitis, Measles, Diphtheria, Whooping Cough and Tetanus) by the WHO. The target population are children aged between 12 and 23 months and pregnant women. To this end, various strategies have been employed in order to achieve the 80 per cent target coverage level of the risk population by the year 1990, but the efforts yielded no commensurate results in most parts of the country (FMOH, 1991; UNICEF, 1993). The failure has always been attributed to logistic problems rather than the attitude of the users who are the key actors in the utilization process, and are conditioned by different socio-cultural values. But scholars have shown that various social and cultural factors militate against the use of EPI (Mechanic, 1964; Iyun, 1980; Igun, 1982; and Jegede, 1991). In order therefore to solve the problem of partial or non-utilization of EPI, despite all the efforts of the government and the international agencies, there is need to direct research attention to the behavioural aspect of EPI utilization in order to understand the role of

socio-cultural factors on the users, and also to investigate possible ways of alleviating the problems.

Hence, the study examines the relationship between socio-cultural factors and the use of EPI. It also investigates what action programmes may be employed to reduce negative effects of sociocultural barriers in order to promote them in areas where EPI services are poorly utilized.

1.2 STATEMENT OF PROBLEM

Inspite of the generally accepted importance of health and despite all the efforts being made to make health available to all by the year 2000 some people are still not receptive to modern health care in Nigeria. This problem also affects the use of the EPI. Inspired by the success of the smallpox eradication programme in the mid-1970s, the WHO and the United Nations Children Emergency Fund (UNICEF) launched the EPI programme for all children in the late 1970s. The United States Agency for International Development (USAID) also gave support for the global initiative in the 1980s. The goal was to achieve universal immunization by the year 1990; and to stop the transmission of the six childhood killer diseases (Tuberculosis, Poliomyelitis, Measles, Diphtheria,

Whooping Cough and Tetanus) which were then claiming over 4.5 million young lives yearly (Eugenia, et. al., 1989). But despite increased availability of EPI services, not all mothers are currently using the EPI services in Nigeria. And this has resulted in the high mortality rate of 144 deaths per thousand births, a ratio considered by UNICEF (1993) to be one of the highest in Africa. This is because EPI coverage was less than 80 percent of the target population by the year 1990 and stood at 76.6 per cent by 1991. A WHO report, however indicates that, many babies lose their lives before their first birthday to the six diseases and many who survive are maimed for life, crippled, blind or deaf, or weakened by heart and lung diseases. In fact, about 1/3 of all deaths in under-five children are attributed to these diseases.

Apart from all these, there is difference in the use of the EPI services. It has been shown that more than half of children ages 12-23 months have never been vaccinated (NDHs, 1990). The least protected are those whose mothers have no education. More than half of these children have never been vaccinated. Sixty per cent of them have received the first dose in the three dose series of DPT and polio vaccination.

Only 1/3 have completed the series. Half of this category of children in the South have completed the polio and DPT series, compared with 1 in every 6 children living in the North. Also less than 1/2 of children have been vaccinated against measles, and 28 percent received the vaccination before their first birthday. A summary of EPI coverage according to Primary Health Care (PHC) Zones reveals that Zone A (East) recorded full vaccination of 79.1 percent, Zone B (West) recorded 76.9 percent, Zone C (North East) 84.7 percent and Zone D (North West) recorded 68.1 percent (FMOH, 1991).

Presently, the problem is no longer that of getting logistic supports but that of getting the people to use the services provided. For instance, the World-wide supply of vaccines provided by UNICEF representing three quarters of all EPI vaccines supplied to developing nations has increased by almost four-fold between 1982 and 1986 (Eugenia, et. al. Ibid.). Apart from the fact that many mothers do not bring their children to be vaccinated initially, their continued participation until the child completes the appropriate doses of immunization is not ensured. As a result of this, there is need to examine the attitudes of mothers to EPI services.

From socio-behavioural perspective, a mother is influenced by a number of socio-cultural factors in making decisions about whether to use EPI or not. This is because, apart from being a mother, she is also a wife, daughter-in-law, income earner through farming or trading, a friend and neighbour, a health care seeker and giver, a processor of food and clothing, a citizen and a woman (Oppong, 1987). All these roles affect her behaviour directly or indirectly. Therefore, how best to harmonize societal expectations and her own characteristics are circumscribed by the social environment within which she lives.

The research questions are as follow:

1. What are those factors that favour the use of EPI in places where coverage is high (above 80 per cent) defined as success area?
2. What are the factors that discourage the use of EPI in places where coverage is low (below 80 per cent) defined as less successful area? and
3. How can the favourable factors be applied to improve the situation in the less successful area?

Therefore, the study sets out to answer the above

questions in the light of the following objectives.

1.3 OBJECTIVES OF STUDY

The main objective of this study is to find out those factors that favour the use of EPI and those that discourage it in order to promote the favourable factors in less successful areas. The study has the following specific objectives:

1. To examine the awareness level of the people about EPI.
2. To investigate the prevailing utilization level of EPI.
3. To examine the factors that favour the use of EPI.
4. To examine the factors that discourage the use of EPI.
5. To investigate action programmes that will promote the use of EPI regardless of socio-cultural barriers.

To achieve these objectives there is need to examine the existing literatures in order to know what have been done in this area and what new contributions our study can make.

1.4 JUSTIFICATION OF STUDY

Social anthropologists have always argued that every practice and behaviour in a sociocultural environment are interconnected with all other institutional patterns and that a careful analysis of these will reveal the reasons for their existence and the purpose they serve. In some cases, the effect of such sociocultural factors is beneficial in that it helps to maintain the social institutions, while on the other hand, they may have dysfunctional consequences either for the individuals or the institutions or both. This therefore, was the focus of this study.

The study attempted to examine and document the sociocultural factors that encourage or hinder the use of EPI. It was assumed that, apart from logistic supply, certain sociocultural factors (age, occupation, religious affiliation, location of EPI facilities, education, number of children per woman, and decision making process) may inversely affect the use of EPI. This is because immunization coverage is still low in Nigeria, far below 80 per cent target coverage by the year 1991.

This study is necessary because there has not been a broad-based study of this nature on the problem facing the use of EPI in Nigeria. Most studies have focused on how to improve logistic supply. But it was observed that supply is not the problem because in most places where vaccines are adequately supplied, people refuse to immunize their children. As a result, there is need to investigate why the potential users are not using it. Hence, the need for this behavioural study.

The Federal Ministry of health and Social Services (1991) in a pilot survey on the problem of low utilization of EPI in Nigeria, observed that rather than logistic support, the attitude of the users may likely be a great determinant, thereby suggesting that social and cultural factors will influence users attitude to EPI. For instance, a mother may be hindered from using EPI in a cultural environment like Nigeria, where mothers work outside the homes to augment family budget because there will be heavy demand on her time and this will make it difficult for her to take a trip to the EPI centre. Also, Nigeria being a patriarchal society, mother's interest in immunizing their children may be hindered

by the influence of the fathers who take final decisions in the household especially where they do not favour the EPI.

Moreover, considering the amount of money put into this programme and the high level of infant mortality and morbidity rate in Nigeria, one of the highest in Africa (UNICEF, 1993), there is need to break these barriers in order to achieve wider coverage of the target population. Achieving high coverage will restrict the movements of the causal agents of the EPI diseases and also decrease the risk of contamination from unvaccinated individuals.

Finally, it will provide baseline information for policy making and future research as well as sensitize EPI providers to the role of traditional practices and behaviours in the use of EPI so that they will deliver their services not as contradictory to the values of the society but as a complementary one.

1.5 DEFINITION OF CONCEPTS

1.5.1 Expanded Programme on Immunization

Immunization as an effective means of prevention, contributes significantly to reduction in childhood mortality and morbidity. The EPI programme covers six diseases which were created by the World Health Assembly (WHA) in 1974. The diseases are, Tuberculosis, Whooping Cough, Poliomyelitis, Diphtheria, Measles and Tetanus. This study attempted to examine ways of improving the coverage which is still low in Nigeria.

Generally, these diseases kill millions of children each year and cripple, blind or cause mental damage to may others. In the developing countries the high incidence of these diseases is linked to poverty, with all its implications on nutritional status, housing, personal hygiene etc. (Guerin, 1983).

Although immunization programmes have been going on for several years in the under developed countries, yet their courage have not been encouraging, usually very low as the case is in Nigeria. Therefore, in 1974, the Expanded Programme in Immunization (EPI) was launched covering the six

communicable diseases mentioned above. The goal of this programme was to immunize all children aged between 0-23 months, especially in the developing world, by the year 1990. The eradication of smallpox gave an impetus to the programme. Therefore, in 1978 it was approved as a major component of the Primary Health Care (PHC) at the Alma-Ata declaration.

In 1982, the WHA reviewed the EPI and urged the number states of WHO to minimize all their children by the year 1990. The 35th WHA resolved at a five-point action programme on which it urged its member states to take action in order to achieve a more rapid improvement of immunization coverage. According to the Director-General's report, call was made for the promotion of the expanded programme on Immunization within the adequate primary health care, the investment of adequate human and financial resources in the Expanded Programme on immunization, the continuous evaluation and adaptation of immunization programmes, and the pursuit of appropriate research (WHA, 1982). The diseases are discussed below.

1.5.2 Measles: This is a highly contagious and eruptive disease. It is commonly contracted at some time after the age of 6 months by those children who have not been vaccinated.

Infants are normally protected, for at least the first six months of life, by the antibodies transmitted through the placenta by those mothers who themselves had measles as children.

Generally, measles affects children at a vulnerable time, the weaning period, when they are often malnourished as a result of the change from breast milk to adult diet. The disease is of a long duration, causing fever, diarrhoea, pulmonary complications, and eventually, death. The vaccine is administered in single injection at the age of 12 or, preferably, 15 months, because by this time, the protection transmitted by the mother, which would decrease the vaccine's effectiveness, has completely disappeared. A week later, the child may develop slight fever, and in some cases have mild rash, which disappears quickly. The vaccine is highly effective but when it is exposed to heat it destroys its potency.

1.5.3 Pertussis (Whooping Cough)

This disease is very contagious and is characterized by fits of coughing, the child struggling to catch his breath and often vomiting at the end of the fit. The disease is more

severe, more complicated and risky in younger children. Most Whooping Cough occur in children under 1 year old. Vaccination should begin at the age of 8 weeks at least 3 doses are required at intervals of at least 4 weeks.

A hard ball often forms in the tissue at the injection site and is slow to disappear. Sometimes, the vaccination causes fever and in rare cases neurological complications. Nevertheless, it is so frequently effective that all infants, and especially those exposed to contacts with groups of other children, should be vaccinated after the age of 3 months.

1.5.4 Tetanus

This is not a contagious disease. It results when the infectious pathogens are able to enter the body through a wound. There are many possibility for infection, including obstetrical, surgical, medical, and ritual interventions. The incidence of the disease is related to sanitary conditions and the prevalence of the pathogens in the soil, rather than to population density. Infection causes muscular contractions over the entire body, and swallowing and breathing become difficult. All cases occur under 1 year of age.

The first dose of early childhood vaccination must be followed throughout life by boosters every 10 years. Tetanus immunization is very effective. Deaths may be avoided by immunizing pregnant women who thus develop an immunity which they transmit to their infants through the placenta, and by training traditional birth attendants (TBAs)

1.5.5 Poliomyelitis

This is usually referred to as infantile paralysis. The disease cripples the affected parts of the body. The paralysis is permanent, retards the child's growth, and makes the child to walk with braces.

There are two types of poliomyelitis vaccines: (1) the one discovered by Salk in 1954 must be injected, and (2) the other type developed by Sabin in 1957 is given orally on a lump of sugar, with a spoon, or with a dropper. They are both equally effective. They have no side effect and they may be given in association with the other vaccinations usually administered during maternal and child consultations.

1.5.6 Tuberculosis

This is an infectious disease caused by the Koch bacillus. It is highly contagious as it is capable of being

transmitted from one person to another. It affects people of all ages and it is often fatal.

The BCG is administered by injection into the skin on the arm. Following the vaccination, a small blister forms which heals up by itself after several weeks, and leaves a small scar. Occasionally an underarm ganglion may swell, but generally no treatment is required. The immunization is particularly valuable when the child lives in an under privileged environment or in contact with contagious patients.

1.5.7 Diphtheria

This disease begins with pharyngitis, then membranes form deep in the throat threatening the child with asphyxiation. Heart, kidney, or neurological complications cause the death of one patient out of 10, a proportion which has not varied in the recent years (Guerin, 1983). This therefore justifies the limits of treatment despite medical advances, and proves the need for vaccination. The vaccine was discovered by G. Ramon in 1923, but became widely used only after 1945.

Diphtheria is usually common among children who are not immunized. It mostly affects children aged between 1 and 5 years. Infants are protected by antibodies transmitted by the

mother until the age of 6 months, while adults are protected by natural immunity due to past occurrence of the disease or to unnoticed naso-pharyngeal or skin infections.

1.5.8 Sociocultural factors: This is a compound word - Social and Cultural. These are institutionalized aspects of society by which the day-to-day problems are solved. They are complex aggregates through which the individual members of the society interact and achieve their desired goals. They are the basic determinants of ways of life and health related behaviours. These factors are: age, education, occupation, religious affiliation, location of EPI facilities, number of children and decision making process. These factors are defined below.

1.5.9 Age: This is the age of the study population in years calculated from the day of birth. The age of mothers range between 15 and 49 years and that of children between 0 and 5 years.

1.5.10 Education: Two types of education are used in this text.

1. **Formal Education:** This is defined as socialization process through an established institution called school,

which is guided by learning curricula, and teaching is done by trained and specialized personnel called teacher. This type of education ranges from primary to tertiary levels.

2. **Health Education:** This is a socialization process through an informal means by which knowledge about health care techniques and procedures are disseminated to potential users for effective utilization of EPI services. It does not involve any established institution but it is carried out by trained and specialized personnel called health worker.

1.5.11 Occupation: This is defined as the main day-to-day economic activity a respondent does. It is that economic activity from which a respondent derives the largest proportion of his or her income.

1.5.12 Religious Affiliation: This is the doctrine a respondent practices by which she worship and venerate the supreme being and which determines her mode of health belief.

1.5.13 Location of EPI Facilities: This is the distance of EPI facilities from users place of residence. The EPI facilities should normally be within 5 km from users place of

residence for it to be considered available and accessible.

1.5.14 Number of Children: This is the number of children born and cared for by a mother as at the time of interview

1.5.15 Decision Making Process: This is the process by which important decisions are made at the household level. It focuses on the involvement of female members and the degree of male dominance in the study area.

1.6 LITERATURE REVIEW

Many strategies have been used to improve the use of EPI in Nigeria. Such strategies include Community Mobilization, National Immunization Days (NIDs) and House to House Visit (HHV). However, these seem to have no commensurate result with the effort and money expended on them. During the 1980s, immunization programmes only extended their reach from approximately 10% to 50% of the children in developing nations (UNICEF, 1988), Nigeria inclusive. This shows that many people are not using the service and consequently, the problem of high infant mortality.

Despite the increased availability of EPI services, non-utilization and partial utilization of EPI by certain groups and in certain areas continue to be a matter of serious

concern. In 1988 only, 40% of children in countries of Africa who are less than one year of age, were fully vaccinated (UNICEF, 1988). It is in sub-saharan Africa that the steepest decline has occurred. Overall, the immunization level fell by approximately 10% in 1991, with coverage falling below 50% for polio, measles, and DPT. Most of this decline is accounted for by low coverage in 1991 in Cameroon, the Central African Republic, Ethiopia, Ghana, Mozambique, Nigeria and Sierra-Leone, where health systems are generally weaker or have been disrupted by social and political unrest (UNICEF, 1993).

Sometimes some mothers fail to complete the required doses. In fact, data have shown that one half of the children receiving the first dose fail to return for the required second dose (UNICEF, 1988). The problem of not using EPI or not completing the required doses has become a critical issue for programme planners and health workers. Several countries are encountering difficulty with maintaining present levels of immunization coverage, while many others are facing an unnoticeble barrier at around the 70% mark (UNICEF, 1988). It has been argued that there is danger in using a single approach for information dissemination and motivation in that

depending on the target audience, some methods are more effective than others in promoting service utilization (Rosenstock et. al., 1959; Ogionwo, 1973; Henderson et. al., 1973; Riddiough et. al., 1981 and Gingarimbum et. al., 1986).

In this respect, a renewed recognition has emerged that decision on children's health and resulting actions are usually made by the mothers, who are not always free to choose what they would like to do. From a socio-behavioural perspective, a mother is influenced by a number of kin and non-kin relationships over the choice she is likely to make with respect to having her child vaccinated (Eugenia, et. al., 1989).

Heggenhougen and Clements (1987) in their extensive review of the immunization literature concluded that there is no single set of generalizable reasons for low acceptability which is valid across regional, national, cultural, or socio-economic boundaries. Factors associated with acceptance are related to the health status of the child and immunization services provided, as well as other characteristics of the target population. These differ from one place to the other, and from group to group (Eugenia, et. al., 1988). However,

Heggenhougen and Clements (1987) advocated the complementary use of social science theories in health services research to examine why some people use, or do not use, available immunization services. They argued that there is need for a mixed qualitative and quantitative research methods to serve as check and balance in the validity of the data collected, and to generate comprehensive results which could not only identify non-immunization group but also to determine why people fail to use it. Therefore, this section will deal with the sociocultural factors that are likely to influence mother's ability to use immunization services.

1.7 SOCIOCULTURAL FACTORS

1.7.1 Cultural Factors

It has been argued that the essence of cultural factors in the utilization of health care services is that, behaviours are distinctive and are especially appropriate within cultural circumstances (Robert, 1985; Raharjo and Corner, 1991; Basu, 1991; Caldwell et. al., 1991; Obermeyer, 1993 and Omorodion, 1993). There is the belief that different cultural orientation affects the acceptance or rejection of health programmes. In this case, the major factors influencing the

acceptance of health programmes may depend on how people perceive diseases. Acceptance will therefore, be influenced by conception of such diseases as regards causes, diagnosis, therapy, and prognosis. The essence of a community's belief about disease causation determines the nature of health care services to utilize (Lasker, 1981; Odebiyi, 1989; Oke, 1993; Erinoso and Oke, 1994). In their work, Erinoso (1976) and Oke (1982) observed that the Yoruba of Western Nigeria, conceive illness from three etiological perspectives, that is, preternatural, supernatural or mystical and natural. The preternatural cause of diseases is based on the practice of witchcraft or sorcery. The Yoruba also attribute illness to the wrath of ancestors and supernatural forces. From the natural perspective they further explained the importance of such variables as nutrition, insect bites, worms, as well as hereditary factors affecting the health of the people. This is referred to as natural causation. In Yoruba belief systems certain categories of children are forbidden from using cold water to birth and eating a particular food item (Odebiyi, 1989). Any violation of this belief will lead to the death of such a child. Erinoso (1976) and Oke (1982) also pointed out

that the belief in natural causes of diseases may, in fact, be interpreted as having supernatural and preternatural dimensions depending on the duration and circumstances under which the patient is suffering.

Also, traditional concept of diseases among various groups appears to influence health behaviours. The decision to accept and utilize health services, therefore depends on how diseases are perceived in different societies. The role of sub-culture factors and practices have been considered as important in health care utilization. Goertseen et. al. (1975) posit that sub-culture factors and practices along with socioeconomic status are the underlying factors in seeking medical help. Within this general framework, knowledge of disease and cultural factors affect health care utilization. The influence of these twin factors are two-fold. First, they help to determine whether or not health conditions will be recognized as a problem attention and second, they help to determine what kind of action to be taken. Usually, such decisions are not devoid of cumulative medical experiences of the individual. These experiences influence the knowledge of subsequent skepticism about care. The health belief system

will influence whether people will decide to use EPI or not.

1.7.2 Health Belief Model

Rosenstock (1974) explains the role of health belief in health decision making. He suggested some steps which people should undertake in order to prevent illness. He said that they will respond to symptoms in specified ways and/or will follow professional recommendations if:

(a) They exhibit at least moderate health motivation.

(b) They believe they are vulnerable to or currently suffering from serious problems.

(c) They believe the potential or existing problems could be prevented or controlled or is controllable.

(d) Their suggestive time horizon (expected life span) are long enough for them to justify taking immediate action to 'ward-off' future threat or impacts.

(e) Their social group sanctions the use of particular health treatment or providers.

(f) They are willing to overcome barriers (such as social, religious, economic and cultural) involved in taking certain personal health actions, entering the professional delivery system and remaining there, and

(g) They are willing to follow professional advice.

All these propositions are important determinants of utilization of preventive/detection medical services. Bice et. al. (1969) also emphasize the points mentioned above. In fact, studies have shown the importance of sociocultural factors (Lambert, 1969; Richardson, 1971; Steele and Mcbroom, 1972). Using this frame, it is imperative to discuss the aspects of sociocultural factors of health utilization. Since belief system depends on the experience and socialization process it has direct bearing on factors such as age, religious affiliation, education, occupation, ethnic factor, decision-making, number of children a woman bears and location of health care facilities.

1.7.3 Age of Mothers

Since children are too young to make health decisions for themselves, they depend on their parents. Eugenia et. al. (1989) have argued that mother's personal dispositions do influence health seeking behaviour for their children. Whether a child will be taken for immunization or not depends on the mother whose action depends on so many factors she is predisposed to. In their study, Rabin et. al (1977) concluded

that age is positively related to the use of drugs. Use of drug is a function of age. It is functionally related to prescribed use of drug but negatively related to unprescribed drug use. Bush (1976) observed that older people take more drugs than younger people.

Although, these studies explain drug use, they have direct explanation for health service utilization because the more one is predisposed to the use of drugs, the more he or she is likely to make use of health facilities. Steele and Mcbroom (1972) have, however, argued that the factor of age is important in the use of preventive health care.

Two points are significant in these studies. First, it can be inferred that the use of immunization may increase as mothers grow older. And second, they show that as one is growing old, he or she tends to attach importance to health matters and this may be extended to the care of the infants. Age is the basis of experience and degree of socialization in the society. The belief of the people about the cosmological order thus depend on the type of socialization they pass through. The cumulative effect of their experiences may later influence health behaviour. Because of the mystery of life,

religion tends to influence the conception of people especially as they grow old.

1.7.4 Religious Affiliation

It has been argued that perception of illness is affected by religious affiliation in the African societies (Ojo, 1966). Magico-religious belief system does influence how people perceive diseases. In traditional religion, there are cults or movements which focus on sickness and healing. In the Ika Local Government Areas of Delta State, Bourdillon (1991) observed that the members of Olokun cult are believed to become possessed by water spirits. Prominent members of the cult have important roles of divining and healing, as well as performing rituals on behalf of the whole community. Recruitment into the cult is almost invariably through sickness, usually a long and lingering sickness, during which the patient may have made several attempts to be cured by western medicine. Ultimately, the patient is believed to be called by the water spirit, and is healed when he or she accepts the spirit and becomes possessed. Also, there is a cult which is responsible for prevention of smallpox (Sopona) in Yoruba land. It could be argued that the function of

traditional religion is to 'ward off' evil occurrences such as sickness and in most critical periods to heal the victims (Osunwole, 1989). As a result, in the traditional societies, people depend mostly on traditional healing processes. Erinoso (1981) has however shown that most Nigerians have preference for the services of traditional healers. Oke (1993) has also argued that most people all over the country respond to illness in accordance with their culture. Among the predominantly rural populace, ill-health is commonly believed to be due to the evil machination of witches, sorcerers, deities and angered ancestors. This belief influences the health seeking behaviour of the people. Today, things are changing due to the influences of christianity and western education (Omorodion, 1993).

It has been argued that people whose lives have changed little from traditional ways may seek healing from traditional healers. Those who have broken from traditional ways, through school and work, often no longer have sufficient confidence in traditional healers for these to be of any help. It thus leads to eclectic pattern of health care use (Obermeyer, 1993). But some have not been sufficiently incorporated into

a modern type of society which may find impersonal and scientific treatment for sorting out their health problems. To these people, spiritual healing churches provide a hope of healing and understanding, which does not involve reverting to a past they have thrown out (Bourdillon, 1991). It is significant that healing churches even attract a significant number of conversions from Islam in communities where Islam is a dominant religion (Asuni, 1973). In time of special stress, anyone may find attractive the support of the tightly knit and enthusiastic community of a healing church, and accept their confidence in the powerful symbols of their preaching and their rituals.

Churches have rites of healing, which in some cases, are central to the ritual of the churches, and many churches pay a lot of attention to healing. Christian missionaries have for long condemned traditional healing as dealing with the devil. Some of the basis for such condemnation, Bourdillon (1991) argued, comprises the experiences of medical missionaries who have come across cases in which traditional healers did more harm than good to their patient. But the condemnation goes beyond a simple judgement of efficacy. A

healing service usually forms the climax of a revival meeting of the Pentecostal Church, and preachers in this church often emphasize the healing powers of faith in Jesus Christ. Other churches such as the Mount Zion, Full Gospel Church, focus on healing. Recruitment to these churches is primarily by healing and its rituals always contain healing rites. Talk of healing miracles are prominent in the propaganda with which these churches try to attract members, as they are in other churches which diverge from orthodox christianity, such as the Brotherhood of the Cross and Star in Calabar, and Aladura Churches and other similar churches elsewhere in Nigeria (Bourdillon, 1991).

The question of healing in Islam involves a tradition of miracles and wonders performed through saints and their shrines, and the inter-play between Islam and non-Islamic traditions of healing (which is very different from the interplay between christianity and traditional healing (Bourdillon, 1991). Quite unlike Christianity, Islam encourages the use of traditional medicine (Abdalla, 1979). Islamic ideology is integrated in precapitalist social formation and this influences its health belief system. There

is no clear break-off of Islamic religion from traditional medicine. So the adherents believe strongly in traditional medicine which they support with sections of the Koran. Many Scholars (Nadel, 1954, Last 1967; Abdalla, 1979, 1981), have discussed different aspects of Islam and medicine and show the pattern of health seeking behaviour.

However, whether Christianity or Islam, religion is concerned with cosmology, that is, the nature of the universe, the spirits that may control it, beliefs about life and death, and life after death, morals, and how people should behave towards one another. Therefore, a decision to seek treatment does not depend simply on the physical nature of the disease and its symptoms (Mechanic, 1978). It is a person's perception of disease which counts, and this perception is based partly on the physical symptom, and that it is also influenced by a number of environmental factors (Bourdillon, 1991). These environmental factors include the social environment within which a person acts and thinks.

In most cases, majority of the people shuttle between orthodox traditional and spiritual healing services (Lambo 1969 and Obermeyer, 1993). Bourdillon (1991) has argued that

there are variety of possibilities from which people could choose when they require relief from sickness. He said that we should notice that these are possibilities within the society. Not all people have equal access to all of them, and some people reject some of them on the ground that they are not real or realistic possibilities. The different possibilities involve different systems of thinking about disease, and commitment to one system may exclude others. For members of the Mount Zion Church for example, faith-healing is theoretically the only possibility for curing illness. The plural situation, which to an outsider, offers a wide range of equal choices, may be rejected by members of a community who accept only one of the systems as correct, and the rest as erroneous or even evil. But the possibilities are there, even those members of the community who reject a certain system are aware that others may accept it, and the rejection must be made each time the choice arises. In practice, ordinary people may try a variety of the systems in turn (Bourdillon, 1991). Nevertheless, modern medicine is the most widely used in Nigeria. In most cases, this is combined with other sources of healing. For instance, Bourdillon (1991), in his

study among the Efik and Ibibio people of Cross Rivers State of Nigeria, reported that people are often not consistent in their choices of methods of healing. Also Obermeyer (1993) found the same thing in his study on culture, material, health and women status in Morocco and Tunisia.

These choices are apparently independent of any overall belief system. It may depend on other socio-cultural factors which may break the barriers of religious belief system. One of such factors is education.

1.7.5 Education

Findings from numerous studies on infant and child mortality conducted in developing countries over the last decade, show a nearly universal and positive association between maternal education and child survival - a relation which has persisted in many societies even when the household's socioeconomic status has been held constant (Cochrane, Ottara and Lasley, 1980; Rutstein, 1984; United Nations, 1985; Cleland and Van Ginnekan, 1988, 1989). As a result, the study of the pathways through which female schooling exercise its positive leverage has become of increasing interest to researchers in recent years (Cleland

and Van Ginnekan, 1988, 1989; Barrera, 1990; Singarimbum, Steatfield and Singarimbum, 1986).

Education of women has been suggested to alter the traditional resources because of increase in family size, leading to changes in decision-making and allocation of resources in the household (Caldwell, 1979; Caldwell, Reddy and Caldwell, 1983). Education modifies women's beliefs about disease causation and cure and thus influence both domestic child-care practices and the use of modern health care services (Caldwell, 1979; Caldwell, Reddy and Caldwell, 1983). Also, schooling enhances a woman's knowledge of modern health care facilities, improves her ability to communicate with modern health care providers and, by increasing the value she places on good health, results in heightened demand for modern health care services (Caldwell, 1979; Schultz, 1984; Caldwell and Caldwell, 1988). Maternal schooling also reflects a higher standard of living and access to financial and other resources, because better educated women are more likely to marry wealthier men or because of their own increased earning capacity (Schultz, 1984; Ware, 1984).

One linkage between women's education and child health is

that, education gives women the power and confidence to make decisions (Ware, 1984). In addition to providing specific knowledge, education of women also induce changes - beliefs and values by encouraging receptivity to new ideas, competitiveness and self-confidence (Curtin, 1982). Women's education may reduce infant and child mortality in several ways ... (Widayatun, 1991) because an improved understanding of the role played by women education can assist in the design of health interventions and, at the same time, advance our knowledge of the association between maternal education and child mortality (Elo, 1992). Educated mothers are more likely to detect in good time when their children are ill, to seek appropriate treatment and understand and follow the medical advice given (Santow, 1983). Both Barrera (1990) and Caldwell et. al. (1979, 1990) have argued that educated mothers are more likely, than uneducated mothers, to take advantage of modern medicine and comply with recommended treatment because education changes women's knowledge and perception of the importance of modern medicine in the care of her children. In a study of child nutrition in the Philippines, Barrera (1990) reported that access to health care services benefited

children of educated mothers more than children of mothers with less education. This finding suggests that educated mothers are more likely to take advantage of the available public health care services than uneducated mothers. In Nigeria, Orubuloye and Caldwell (1975) and Caldwell et. al. (1979) found that educated women benefited more from available public health care services than uneducated mothers.

Rozenzweig and Schultz (1982) have however, argued that female education and health care services are partial substitutes for information regarding knowledge of diseases, treatment of illness and child care practices. They posited that, the effect of education on child health becomes less important as access to public health care services improves. In areas where such services are easily accessible, they are used by both educated and uneducated women, thus the advantage conferred by schooling on health outcomes is narrowed (Widayatun, 1991). Using data from Columbia, Rosenzweig and Schultz (1982) observed partial support for their hypothesis. Their findings are consistent with the findings of other studies that have shown that differentials in child mortality by maternal education are less pronounced in countries with

strong public-health programmes, such as Costa Rica and Cuba (Behm, 1979; Palloni, 1981; Schultz, 1990). However, education may determine the type of occupation an individual will have. The length of training is usually the prime factor of occupation. The type of occupation an educated woman will have will be different from the ones the uneducated will have and this may affect utilization of modern health care services.

1.7.6 Occupation of Mothers

Women's entry into the labour force may have both negative and positive effects on infant and child mortality. The negative effects may result from the reduced time available for child nurturing, although place of work, family size and the existence of extended family may ameliorate such effects. Women in the labour force spend less time on child-rearing compared with mothers who are not in the labour force. Lack of maternal time devoted to child-rearing might be expected to have direct impact on infant and child through loss of specific elements in a desirable child-care regimen, and indirect impact through degradation of maternal health. The positive effects may result from increase in household

income and improvements in mother's knowledge of child care through the greater contact of working mothers with modern ideas (United Nations, 1984).

Hoppe and Heller (1975) examined the influence of familism and occupational stability on alienation and health care utilization among lower class Mexican-Americans. It was found that familism and occupational stability were positively related to timing of parental care, but negatively related to consulting a physician when ill.

Separation of place of work from place of residence may be a key factor in identifying the impact of employment upon fertility. It has been argued that, "the work status of women has affected perception of the value of children, husband-wife communication and decision-making" (Cheng, 1991). Women in the formal sector are more likely to use modern health care services than those in the informal sector. This is because women in the formal sector have better access to health care services as well as have more access to health education programmes than those in the informal sector (Orubuloye et. al. 1991). They can make health decisions regarding themselves as well as their children because they have

economic resources to meet the cost independent of their husband unlike those full-time housewives. The predicament of dependent women which forces them into relative seclusion within their own household compound also denies them access to economic opportunities outside the homestead.

Division of labour among household members has evolved whereby women specialize in work outside the home. This division of labour itself engenders a powerful element of men's control over women, enforcing female dependence on men by denying women direct access to income-earning opportunities (Cain, 1984). The sexual division of labour applied to all women in the rural areas and the costs, in terms of abuse and loss of status, of engaging in types of work that require movement outside the homestead are very high indeed (ESCAP, 1987).

Although occupation of mothers may affect the rate of health care service utilization in various societies, the contrary may be the case among the Yoruba speaking tribe of Western Nigeria. For instance, Mabogunje (1961) cites the findings of Hugh Clapperton and other 19th Century travellers that as many Yoruba women as men were trading as early as 1825

on the caravan routes which came southward of Oyo, Ibadan, Abeokuta and Badagry (in Orubuloye et. al., 1991). Pulme according to Orubuloye et. al., (1991) after her edited survey of women of Tropical Africa indicated that women are independent in many ways and closer to their children than their husbands. This may have positive effect on health seeking behaviour.

In conclusion, occupation of mothers may not necessarily inhibit their use of health care services directly, the inhibition may be as a result of the dominant values of women's subordination to men's superiority. Regardless of the degree of economic independence of a woman in a patriarchal society, she still gives allegiance to her husband (Rene, 1993). Though some of them are in the labour market, yet, they still maintain the balance between their jobs and their homes so that they do not lose the favour of their husbands (Jegede, 1989). Therefore, a woman's action is constrained by the socio-cultural value of her society regardless of the type of occupation she may engage in. This suggests that all decisions made by a woman as affecting her family must be with the knowledge of the husband. But the type of occupation she

does may determine her economic status.

1.7.7 Economic Status of the Mothers and Decision Making Process

It has been argued that majority of children's sickness is probably first identified by the mothers (Orubuloye et. al., 1991) who later inform the fathers before any action is taken for treatment. Since treatment depends on the ability to pay, mothers who depend economically on their husbands would not be in a position to take their children for treatment. In the study of an Ekiti village, Orubuloye et. al., (1991) observed that mothers cannot rush a sick child to the hospital just because she has a unified family budget behind her husband over which she has some rights and which will meet the cost. This may usually result into delay in treatment when a child is sick. Caldwell, et.al (1989) have indicated that low mortality rate may be as a result of the promptness with which medical assistance is obtained anytime an illness is suspected.

But since treatment costs are usually borne by family members, it may not be a burden on women who depend economically on their husbands to bear. It has been argued

that, among the Ekitis, men play a greater role than one might infer from the literature, meeting the cost in over half the identified treatments for both their children and their wives (Orubuloye et. al., 1991). The evidence from this village is that, men usually earn more income than women, largely because of their control of land. Husband's income have greater margin in the study area than in most areas reported in the literature, because it is reported that the area is a cocoa growing one.

Although user charges may discourage people from using modern health facilities, the question is, why is it that people still don't make use of free health care services like the EPI? This may be due to the reason given by Orubuloye et. al. (1991) that the health centres may not give adequate publicity about it. They stated that, a reduced rate for the needy or penurious, as is the case in Nigeria, is certainly one approach, but many of the most needy may remain unaware of such concessions, and health centres may be reluctant to give them too much publicity because of the potential meagre revenue that will accrue from them. Apart from this constraint, it becomes difficult for nursing mothers to

divorce vaccination card from treatment charges. Many women stay away because of their inability to pay for the vaccination cards, especially when they have to pay for new cards after they have lost the former one or forget it at home (Eugenia et. al. 1989).

Generally, one cannot divorce mothers economic status from societal value of submission to their husbands who are traditionally regarded as the bread winners. Even where services are free, mothers still need to obtain the approval of the fathers before going for EPI. This hinges mostly on the cultural value of patriarchal societies where men's domination is jealously guided. For better understanding of this, we shall then discuss the process of decision making at the family level to show the role and involvement of fathers and how this may affect health care utilization.

1.7.8 Decision-Making at the Family Level

Women's status vis-a-vis men's may affect infant and child mortality in several ways. First, women who are more involved in decision-making are generally more likely to use maternal and child health care services than those who are not usually involved. Second, women who have equal opportunity in

decision-making and control over resources may initiate decisions about health care use and health care expenditures. Women's autonomy and access to the use of their own income and assets will influence their options to purchase and consume food as well as make health care expenditures (Widayatun, 1991).

Education may increase communication between marriage partners and enables women to be decision-makers as well as implement decisions regarding their lives (and also their children's welfare). Furthermore, the significance of the independence of women in the household is supported by evidence that, the greater the resources a woman brings into marriage, (in comparison with those of her husband including her education and income), the more significant her role within the family (Widayatun, 1991). "Relative equality in decision making and control over resources in relation to child health (mortality) between men and women may depend partly on their levels of education and income ..." (Widayatun, 1991). Women's income is the most important aspect of their freedom in decision-making, life options and control over resources (Blumberg, 1976).

Orubuloye et. al. (1991) explained that Yoruba women distinguished their economic activity and its products from that of their husbands. Yoruba women earn money from both farming and trading. They have access to land through their husbands and rights to some of the products. Also, because most cultures in West Africa exhibit some aspects of a double lineage system, they have some claim on the use of land from their own families of origin (Beier, 1955 in Orubuloye et. al., 1991). In a study on the sources of Yoruba household income, Flin and Zuckermann (1981) revealed that 70 per cent of households reviewed depend on farming income and 30 per cent depend on trading income (Orubuloye et. al., 1991). Also, Sudarkasa according to Orubuloye et. al. (1991) in a study in Awe village near Oyo and in the North of Ibadan, shows that women's incomes were at least as high as men's incomes. The question here is, does this income earning ability of the mothers enable them to make independent decisions about the health of their children?

Regardless of the degree of involvement of women in decision-making about family matters, the final decision will still be subject to the husband's decision. It has also been

shown that even when treatment was less costly, Ibadan men often described their wives as increasingly disobedient. By this, they mean that the women sought treatment for their children and themselves without consulting their husbands, although formerly, they always used to ask their husbands about such important matters (Orubuloye et. al. 1991).

Generally, women are constrained to make unilateral decisions about their children without the approval of their husbands even where they (women) are highly educated and have high economic status. Since fathers are regarded as the head of the family, regardless of their economic status in relation to their wives, it is expected that they make final decisions about their family including the number of children the family will have. Hence, decision making at the family level reduces the power of women to make independent decisions on any matter relating to children's health. Decision-making may hinder mothers who live far away from the health care centres since they may not be able to go out without the approval of their husbands.

1.7.9 Place of Residence and Location of Health Care Facilities

Residence and proximity to medical facilities tend to influence the use of EPI services. Okafor (1984) has argued that location of hospitals, health centres, clinics and so forth too distant away from the population affects the level of utilization. Well spaced hospitals, clinics or health centres of different categories with different areas in a population distribution to serve the community tends to attract higher utilization of services.

In a study in Togo (Eugenia et. al. 1989), distance of health clinic was cited as a barrier to accessibility, but only by mothers who lived in villages along a road that was impassable during the rainy season. All villages included in the study were not more than five kilometers away from the nearest health clinic providing immunization services. In location theory, emphasis is placed on minimizing travel distance by patients in the use of health care services. Okafor (1982) has argued that the idea of travel cost has serious implications on the location and use of health care services.

Most potential users do not want to spend much money on transport. According to Owumi and Jegede (1991), health facilities in the rural areas of former Bendel State (now Edo and Delta) were under-utilized due to the fact that they were located very far away from users residences. Also, most of the health facilities were not accessible due to poor road networks and poor transportation service. However, greater access to health care after child birth has been related to lower rates of infant and child mortality in such developing countries as Nigeria (Orubuloye and Caldwell, 1975), India (Smucker et. al., 1980) and Costa Rica (Haines and Avery, 1978).

In their study in Gambia, Hanlon et. al. (1988) discovered that there is no significant difference in the distance mothers of well and poorly vaccinated children had to walk to the health centres. This may be the same for Nigeria. In fact, Orubuloye et. al. (1991) has observed that distance of health care facility may not play a significant role in a situation where people embrace the usefulness of modern health care service. They may prefer to travel long distances and incur much costs to obtain the services. Regardless of the

setting (rural or urban), adequate health education can negate the effect of long distance and persuade the hypothetical users to patronize health facilities.

Generally, a survey of literature reveal that in some places the use of health care facilities may be affected by some sociocultural factors. But in other places the effect of these barriers may have been reduced through health education and general awareness programmes. Regardless of the setting (rural or urban) awareness programmes may play significant role in enhancing increase use of health care services such as EPI services. Extensive health education programmes are likely to negate the effects of these sociocultural factors.

The points that emerge from this review are:

(1) that mothers are expected to act individually in response to health status of their children,

(2) that their action is constrained by some sociocultural variables,

(3) that these sociocultural values may have either negative or positive effects on mothers' use of EPI, and

(4) that mothers may be influenced by the sociocultural factors if there is no extensive health education

programme on the use of EPI.

Following from this, it will be most relevant to employ the Health Belief Model (HBM) as the theoretical background for this study with a slight modification about the rational behaviour of the mothers.

1.8 THEORETICAL FRAMEWORK

This section deals with the theoretical orientation of the study. It discusses the Health Belief Model (HBM) and its relevance to this study. Weberian social action theory is integrated to the model so as to enhance prediction of users behaviour and their pattern of choosing between alternative therapeutic measures in the face of sociocultural influences. Integrating the action theory would help to predict users behavioural pattern in choosing between means and end which is the primary objective of health researches.

1.8.1 The Health Belief Model (HBM)

Health seeking behaviour can be explored from three perspectives, (1) those which utilize mainly psychological processes and variables to explain decisions; (2) those which utilize individual demographic characteristics and health care delivery system to explain decision; and (3) those which

explain decisions as a result of social psychological processes (Igun, 1982).

Of those that predicate decisions mainly on individual psychological variables, the most well known example is the health belief model. This model was suggested by Rosenstock (1966) and modified by Gochman (1972) and Becker et. al. (1975). The model was designed originally to explain preventive health behaviour, but it has since been applied to illness behaviour.

The model assumes that the beliefs and attitudes of people are crucial determinants of their health related actions. The model holds that, when cues to actions, such as assumptions are present, the variations in utilization behaviour can be accounted for by beliefs concerning four sets of variables. These are:

(1) the individual's view of his own vulnerability to illness;

(2) his belief about the severity of the illness - this may be defined in terms of physical harm or interference with social functioning;

(3) the person's perception of the benefits associated with

actions to reduce the level or vulnerability;

(4) and his evaluation of potential barriers associated with the proposed action (this may be physical, psychological or financial).

In other words, the mother who is the actor in this study should believe that her child is not protected against attack of the six childhood diseases. She must believe that the episode of the disease attack may either be severe or not. As a result, she must consider the benefits of preventing the disease by immunizing the child against the disease. She must also take into consideration the cost or inconveniences involved in going for immunization.

The model can be subsumed under two broad headings, that is:

(1) health-seeking behaviour, and

(2) decision-making process.

For a child to remain healthy the mother must take positive decisions and act upon them. Decision-making depends on:

(1) human nature,

(2) culture, and

(3) nature and pattern of health related behaviours.

For a mother to make health decision about her child she must first believe that the child is susceptible to that particular disease and that the degree of susceptibility may either be severe or mild. In his study, Rosenstock (1974) observed that susceptibility is at three levels, that is:

(1) High Susceptibility - a situation in which a person expresses a feeling that he is in real danger of contracting a disease,

(2) Medium Susceptibility - a situation in which a person believes that even though he is immune to the disease, yet, at a particular moment, he is likely to be adversely tormented, and

(3) Low Susceptibility - a situation in which an individual completely denies any possibility of his contracting a disease.

It is possible for someone to feel highly susceptible to diseases but his willingness to seek preventive and detection health care constitutes an important factor. The action an individual would take depends on the perceived effects and consequences of such disease. Marshall (1974) argued that

although one may feel highly susceptible, yet, the seeker's response - potential is enormous. The individual may not probably take action unless he believes that becoming ill would result in serious organic or social impairment.

Ability to take action depends on several factors regardless of the level of susceptibility and these factors have been identified and categorized as (a) personal dispositional factors such as age, sex and marital status, and (b) personal enabling factors such as income, place of residence, transportation, occupation, education and insurance scheme.

Although this model is relevant to this study, it is more of an anthropological than sociological paradigm. It only explains user's perception of diseases, belief system and choice of therapeutic means without explicit explanation of behavioural pattern of users and how this can be predicted for group process, which is the primary aim of any sociological research on EPI. Researches on EPI tend to examine why users may use it in certain situations and why they may not use it in some other situations. EPI researchers tend to establish a longitudinal effort for the production and administration of

vaccines. This model does not adequately answer the question of prediction for this study. In order to alleviate this problem, it has been considered wise to integrate Weberian action theory into this model so that we can explain the rationale behind users behaviour and predict to a certain extent their future actions or responses to EPI programmes.

1.8.2 Weberian Action Theory and the Health Belief Model

According to Weber (1947), action is a unit act. For action to take place there must be an actor. To him, action starts with the individual. Action is subjective and in order to make it social it must involve, at least, two persons in the interaction process. The individuals react to one another's behaviour and take care of the emerging pattern of behaviour within the group. The actor takes subjective meaning of the situation which he evaluates and acts upon. Before an actor's behaviour can be understood, one must understand not only the explicit meaning of the action but also the implicit. For example, one must not assume that a mother takes her child for immunization and therefore she has acted out of her personal volition. There may be some underlying reasons and factors that may have influenced her

decision to use immunization.

A rational action involves a utilitarian consideration between competing alternatives for specific ends. This emphasizes a choice between means and ends. For instance, a mother may accept both the means and the ends, that is, she may accept that EPI is the best means to protect her child against the diseases and thus use it. Another may only accept the fact that it is necessary to protect children against the diseases but not necessarily through EPI. She has accepted the end but not the means.

To Weber, an actor must have a goal and perceived means of achieving the goal. Therefore, in choosing a means to achieve the goal the actor's action can be influenced by social and cultural environments and his personal cognition.

Integrating this theory therefore, it will help to determine how users of EPI can create cues about using it. Thus, using EPI will not only depend on vulnerability of diseases as emphasized by the HBM but on the mother's goal of providing good health for her child, her own interpretation of the programme having being exposed to health education about it and the behavioural pattern or reaction of her social

environment or the significant others towards it. In this wise, it becomes easier to determine who will use EPI service and why they will use it. It will also be easier to know why some people may not want to use it. This thus classifies them into rational and non-rational users.

If a mother takes these factors into consideration, she is rational and will therefore accept EPI as the best optimal means of combatting the diseases whereas a non-rational mother will not accept this fact because she will always believe that there is alternative means which is rooted in her culture. Many scholars have found out that some people do not usually take rational action even though their condition calls for it.

Zola (1964) has found that some people whose condition demanded a rationally positive action refused to take such action even when their lives were seriously in danger. He concluded that "there is something about these people or in their background which has disturbed their rationality, otherwise they would naturally seek aid". Blackwell (1963) and Green et. al. (1974) revealed that people delay seeking cure because of conflict between a strong feeling of susceptibility to disease and a feeling that there are no

efficacious methods of preventing or controlling the disease.

Health Belief Model (HBM) posits that for anybody to take action there must be a limit about how to behave and what to do. That is, one must take cue from others, observe what they do as guide for one's own action. Cues may be created through awareness programmes. In a situation where deliberate attempts are made to create cues through the mass media to motivate a population to use health services, behaviours so emitted varies with the intensity of the message received. Fearful messages are found to be positively correlated with beliefs about severity and preventability than do fearless messages (Hochbaum, 1958; Leventhal, 1959; Guskin, 1965; Kegeles, 1965 and Becker, et. al., 1974). This implies that mothers will act depending on the emphasies laid on the degree of susceptibility and the degree of severity of EPI diseases. This thus exacts pressure on mothers to go for immunization and therefore, their choice is influenced by the perceived benefits of the EPI services.

1.8.3 Modified Health Belief Model

The Health Belief Model (HBM) view human beings from the following dimensions:

(1) Biological - that is, emotional effects, stature etc..

(2) Interactional System - that is, man's relation with others.

(3) Phenomenological System - this enables man to perceive the interplay of different parts of his body. It enables man to define and monitor behaviour of his health as well as recognize deviations from what he has come to regard as the normal functioning of his body.

(4) Man possesses experiential capacity. That is, man lives by experience. He has historical antecedents.

(5) Man operates within a socio-physical environment.

For the purpose of EPI utilization, this model can be reformulated so as to enhance predictability and awareness. As a result of this, it is assumed that (1) mothers will perceive illness as undesirable, (2) they will perceive their children as vulnerable to diseases, (3) they will perceive episode of disease as severe, (4) they will act upon their experiences, (5) they will consider both personal and social significances of diseases, (6) they will respond to awareness programmes on EPI, (7) they will choose to use EPI, (8) they

will take into consideration the benefits of using EPI, (9) they will evaluate the potential barriers associated with proposed action of using EPI, and (10) they will make rational choice of using EPI. The basis of these assumptions is the rational choice made by the users. Rationality here means making utilitarian considerations to reach decision in the light of data available to the mothers in terms of their experiences about the efficacy of EPI as best optimal means of preventing and eradicating the diseases. This is possible with EPI because it does not involve any financial cost and it is endowed with proven success track record for preventing the childhood diseases.

In order to be able to make rational decisions, four stages must be fulfilled by the mothers; (1) They must be exposed to the EPI programme, (2) they must evaluate the messages received from the awareness programme, (3) they must take definite decision about whether they will use EPI or not, taking into consideration the advantages and disadvantages as well as the potential barriers of using it, and (4) they must act upon the decision they have taken. What is most important is the 'end and the 'means' of achieving the end.

Rationality implies that mothers accept both the end and the means, that is, they accept that EPI (means) is the best optimal therapeutic measure for preventing the childhood diseases (end or goal). With this belief, they will choose to use EPI always. But non-rational mothers will accept the goal of preventing their children from diseases but may be skeptical about EPI as the only appropriate means of achieving the goal. Mothers in this category may likely accept that children should be prevented against diseases but may not accept EPI as the only means. This category of mothers may have been influenced by many sociocultural factors.

Using this model it will be possible to classify EPI users into four categories. These categories are (1) those who used EPI immediately after awareness (2) those who used it later (3) those who used it early and dropped it later and (4) those who refused to use it at all. While some will use it immediately after an awareness programme is concluded some others will wait and take cue from those who have used it earlier. As a result of this, whatever cue is taken, some may continue to use it while others may decide not to use it. Also, due to such reasons as side-effects of vaccines, health

workers' arrogant behaviours and perceived time waste at immunization centres, mothers may not be receptive to it. Another group will be those who do not accept the means at all and who will not use it for any reason. This category of mothers may be more inclined to home remedies and other alternative medical care. It must be emphasized that since preventive health care does not involve diagnostic measures or symptomatic conditionalities the desire for good health will motivate mothers to take positive cues about EPI during awareness programmes and act upon them.

Using this model, it will be possible to predict various categories of potential users of EPI in any society. It will also be possible to device various action programme strategies targeting different categories of people in every community. Finally, it will be possible to explain why EPI coverage may be low in some areas and high in others. Hence, for the purpose of this study, certain hypotheses are stated to guide the research.

1.9 HYPOTHESES

The general hypothesis is that certain sociocultural factors, such as education, age, religion, decision making,

ethnicity, occupation, location of health facilities and number of children under 5 years, will influence the use of EPI. The specific hypotheses are stated as follow:

(1) The higher the age of mothers the lower the use of EPI.

(2) The higher the level of education of mothers the higher the use of EPI.

(3) Religious affiliation of mothers will positively influence their use of EPI.

(4) The type of occupation a mother engages in will positively influence her use of EPI.

(5) The nearer the location of EPI facilities to mother's place of residence the higher the use of EPI.

(6) Every additional child in a family will reduce the use of EPI.

(7) Mothers who are more involved in household decision making will use EPI more than those not involved.

CHAPTER TWO

RESEARCH DESIGN AND METHODOLOGY

2.1 PILOT STUDY

A pilot study was carried out in the B zone of the Primary Health Care (PHC) which comprises Lagos, Oyo, Ogun, Ondo, Osun, Edo and Delta States to find out the utilization rate of EPI. This was informed by the inability of the zone to meet the 80 per cent target by the year 1991 with only average coverage rate of 76.9 per cent (UNICEF, 1993). During the survey, it was observed that EPI utilization was high in some areas and low in others. It was discovered that Akinyele local government area of Oyo State had almost 100 per cent success while Bomadi and Ika Northeast LGAs of Delta State had 50 per cent success rate. Hence, we chose the three LGAs for comparison.

During the survey it was noted that utilization may vary with cultural and ecological backgrounds. It was also observed that certain factors may favour the use of EPI while some may hinder it.

2.2 PRETEST SURVEY

In order to sharpen the study instruments, we carried out a pretest survey. During the survey it was discovered that the instruments have some irregularities which were noted and rectified in the final version of the study instruments. It also helped to determine the response rate and strategies to be employed in administering the study instruments.

2.3 THE STUDY AREA

The study was carried out in the B zone of the PHC. Three LGAs were used as study sites. They were Akinyele in Oyo State, Bomadi and Ika North-East in Delta State. The choice of the LGAs was informed by their performance rate in EPI coverage as well as cultural and ecological differences.

Akinyele LGA, (a model LGA for EPI in the zone) has a population of 139,587 (males = 69,576 and females = 70,011). The LGA is located in the Northern part of Ibadan, the capital of Oyo State. It is bounded in the east by Lagelu LGA, in the north by Afijio LGA, in the west by Ido LGA and in the south by the Ibadan North-West LGA. Because the area is not far away from Ibadan it has become a satellite area to the city. Therefore, the people are urbanized in attitude. The people

are predominantly farmers with a considerable proportion engaging in trading and white collar jobs. The population consists mainly of Yoruba ethnic group with other ethnic groups making up a substantial minority. Health Care Facilities are evenly located in the area with adequate outreach programmes.

Bomadi LGA is located in the southern part of Delta State. It has a population of 140,436 (males = 70,100 and Female = 70,336). It has its headquarter at Bomadi about 350km from Asaba, the state capital, across river Focados. Most of the towns and villages are located on water. The people are Ijaw (Izons) who are predominantly fishermen and women. Although they engage in farming and other economic activities, fishing is a hobby for all. They are usually trained in swimming from childhood. Health Care facilities are poorly located in the area. The outreach programmes are hindered by poor transportation system. Boats are the major means of transportation in the area.

Ika North-East LGA is located in the upland area of Delta State with its headquarter at Owa-Oyibu, about 70 kilometres from Asaba. It has a population of 110,576 (males = 52,820

and females = 57,696) according to 1991 census. The people are predominantly farmers. Although some of them engage in some other occupations, yet, farming is a supplementary source of livelihood in the area. The people are Ibos. They lack social amenities like light, water and health facilities. Bicycles are the major means of transportation in the area. Health Care Facilities are poorly located.

2.4 JUSTIFICATION FOR THE CHOICE OF STUDY SITES

Akinyele LGA was chosen because of its outstanding success record. As a model LGA for EPI, it has logistic supports from donor agencies and the government. The health facilities are evenly located with easy accessibility and qualified staff. Also, because it is a Yoruba community with different ecological background, it thus enhances objective comparative analysis with other non-Yoruba communities within the B health zone in order to examine the cultural and ecological differences between them.

On the other hand, Bomadi and Ika were chosen because of the low coverage of EPI in the areas. Apart from this they lack functional health care facilities and the available ones are poorly staffed quite unlike what obtains in Akinyele.

They have poor outreach programmes and lack logistic supports.

The main concern of the study is to identify sociocultural factors that promote or impede the use of EPI. The choice of study areas was purposive because the areas are within the same PHC zone but with cultural and ecological diversities and differential health care facilities.

2.5 PROCEDURE FOR DATA COLLECTION

Data collection was by a combination of field techniques which include indepth interview, focus group discussion (FGD) and structured interview and case study. These provide information on knowledge, attitude, belief and practices (KABP) related to the use of EPI. They enhance validity of instruments as well as increase the degree of reliability of data collected which might not have been guaranteed if only one technique had been employed. According to Knodel (1984), Caldwell (1987) and Ringham (1993) cultural attitude and behaviour studies can best be explored by using ethnography and the focus group discussion.

The study was in three phases. The first phase was the indepth interview. This was followed by the FGDs and finally the structured interview. The preliminary result of the

indepth interview provided information for preparing FGD instrument, while the result of both indepth interview and FGDs were used to prepare the instrument for the structured interview. The techniques are discussed below.

2.5.1 Indepth Interview

Indepth interviews were conducted simultaneously in the three locations within the first four weeks of data collection between May 1st and 30th, 1993. Informants were chosen randomly from certain categories of people in the study areas such as policy makers, paramount rulers, opinion leaders, herbalists, health implementers (Health Workers) and the community people. Two separate study guides were used. One was administered at the community level to key informants and the other at the household level. The study guides centered around the theme of the study (see Appendix II and III).

The interviews were conducted by two trained Research Assistants (RAs) in each LGA. They were trained on how to use the instruments and they participated in the pretest survey as rehearsal. The researcher himself conducted personal observation of the study areas one after the other and took notes. At the end of each day's work, the interviewers

reviewed and compared notes. At the end of the interviews, a preliminary analysis was made before proceeding to the next phase of the study.

Forty informants were interviewed in each of the LGAs. The distribution is as follows - 30 community members (20 male and 10 females) who were randomly selected. The remaining 10 informants comprise 1 policy maker, 2 paramount rulers, 3 opinion leaders, 2 herbalists or traditional birth attendants (TBAs) and 2 health workers. The key informants were identified by the researcher.

2.5.2 Focus Group Discussion

Focus group discussion (FGD) technique was used to complement the indepth interviews. This was a group interview of between 6 and 12 participants at a time. The participants have common social characteristics. They were organized to discuss the theme of the study with the aid of a study guide administered by a moderator (see Appendix IV). Six FGD sessions were conducted in each LGA among the following categories of people - literate nursing mothers, illiterate pregnant women, illiterate nursing mothers, literate male adults, illiterate male adults and literate pregnant women.

Each discussion lasted for a minimum of 30 minutes and a maximum of one hour depending on the response rate of the participants and new insights from their discussions. An eligible participant is an adult who is married and has a child aged between 0 and 5 years as at the time of the interview.

The FGD sessions were conducted by the researcher who moderated the discussion sessions with the assistance of a Research Assistant (RA) who served as recorder by recording the responses of the participants verbatim. Also a magnetic tape was used to record the discussions in order to enhance accurate reporting. Discussion sessions were conducted under conducive atmosphere in borrowed apartments. Participants, who were selected randomly, were notified in advance. The notice included the aim of the discussion, venue and time. They were usually brought to the venues by the researcher in his personal car, at least 10 minutes before the start of every meeting. At the start of the meeting the moderator introduced the members of the panel as well as the participants who normally introduced themselves. He usually informed the participants of the need to record their

responses in tapes and in writing. Refreshments were provided during the sessions and gifts were given to the participants at the end of each session. They were usually taken back to their residences. The researcher served as moderator in all the FGD sessions for the LGAs.

At the end of each session, the recorder usually updated the note before submission to the researcher who normally reviewed the note. Tape recordings were transcribed by the researcher himself at the end of the exercise. The FGDs were carried out between July 1st and August 30th, 1993. This precedes the last phase. In all, 180 participants took part in the FGDs.

2.5.3 Household Survey

Household survey was conducted between December 1st, 1993 and February 28th, 1994. This followed immediately the FGD. The survey covered a wider population than the indepth interviews and the FGDs. Questions were both pre-coded and open-ended. Questions were asked about sociodemography of respondents, use of EPI, sources of information about EPI and decision-making process about EPI at the household level. The questions were drawn in such a way that they were not too long

very simple to understand. The questionnaires were administered by RAs, who understand the local languages and were able to interpret the questions in local languages of the respondents from the original format of English. As a result of this the RAs were recruited directly from the communities. This was to enhance adequate interpretation of the questions. Therefore, secondary school teachers were employed as RAs.

In all, 1,600 respondents were interviewed. Forty-six questionnaires were not valid due to inconsistency in the responses, bad completion of questionnaires and ambiguity in most of the responses. Hence, a total of 1,554 questionnaires were found valid and were processed for all the three local government areas. Four Research Assistants conducted the interviews in each LGA.

2.5.3 Case Study

Case study of immunization status of children in the study areas was carried out. This was carried out among 50 children aged 12 to 18 months in each of the study areas. These category of children are expected to have completed immunization schedules. Result from this study revealed sociocultural characteristics of mothers of well and poorly

immunized children. This was used to corroborate the ethnographic data.

2.6 THE UNIT OF STUDY

The unit of study for the survey was the household. A household was defined as a family unit comprising the parent(s), children and maids living together and eating together. Samples were drawn using the enumeration area (EA) maps of the National Population Commission (NPC) for the areas. The sampled EAs were selected randomly from the list of EAs in each of the study areas. Therefore, 30 EAs were selected from each of the LGAs.

In each LGA 600 households were selected with an average of 20 households per EA. In all, 500 responses were processed and analysed for Akinyele, 504 for Bomadi and 550 for Ika. The samples were representative of the female population who are the respondents. In Akinyele and Bomadi, 1 out of every 140 women was interviewed while in Ika 1 out of every 104 women was interviewed.

An eligible household was any household where a female member had given birth to, at least, a child in the last 5 years. The female member must also be resident in the

household. In any household with more than one eligible female member simple balotting system was used to pick one out of them as respondent. Also in some places the method of choosing the first identified eligible female member was employed. The methods were applied depending on the circumstances prevailing in each case.

2.7 SAMPLING TECHNIQUE

Selection process was at three levels. First was the selection of the LGA purposively for reasons earlier stated above. Secondly, having identified the EAs a random selection was made. In each of the selected EAs all the structures (houses) within the EAs were numbered serially and listed in the house listing sheet (HLS) provided (see Appendix VIII). From the list of structures, all households in each residential housing unit were identified and listed out serially for random selection of 20 eligible households using the fisher and Yates statistical table of random sampling. In any EA where there were less than 20 eligible households, all identified eligible households were automatically surveyed. Only one household was surveyed in any building with more than one household inhabitants.

2.8 PROCEDURE FOR DATA ANALYSIS

Preliminary analysis of both the indepth interviews and the FGDs were made. The analysis was however an integration of all the techniques used in the study. Household survey questionnaires were collated, edited, coded and re-edited to correct the errors before transferring them into the computer for analysis. Chi-square statistical method was used to test hypotheses, while percentage frequency distribution was used to interpret the data. Due to the nature of data collected, interpretation was both inferential and descriptive. Frequency tables were constructed to highlight the variables according to categories.

Information from the qualitative data (indepth interviews and FGDs) were used to substantiate and corroborate the quantitative data. Where necessary, certain responses from the indepth interviews and FGDs were quoted verbatim to either support or refute quantitative data.

CHAPTER THREE

THE COMMUNITY SETTING

3.1 THE PEOPLE - AKINYELE LGA

The inhabitants of Akinyele LGA are predominantly Yoruba. The composition of the population is not different from any other Yoruba community with the Yoruba people forming the largest ethnic group (about 90 per cent). But a mixture of other ethnic groups make up a substantial minority.

Like any other Yoruba community the people in the area have traditional marks similar to that of Ibadan. This is very common with the elderly people but less common with the youths as the practice is gradually dying out. They speak pure Yoruba language usually referred to as 'Oyo' dialect. The people are mostly dark in complexion with the exception of very few ones. They are between 5ft and 6ft with broad nose and moderate head.

The people usually dress in traditional attires. Men usually dress in an embroidered flowing material called 'Agbada' put over a lower garment known as 'Dansiki' or 'Buba' all over a pair of trousers called 'Sokoto' with cap to match, 'Fila'. Occasionally, they complete their dressing with a

walking stick called 'Papa'. Usually chiefs wear necklaces made of beads as paraphernalia of office, 'Akun'. Women on the other hand wear an upper garment known as 'Buba' tucked into a wrapper called 'Iro' with headgear to match 'Gele' and a piece of clothing material for decorating the shoulder 'Iborun'. Also, female chiefs usually wear 'Akun' as paraphernalia of office. Although many young people tend to wear English dresses especially those working in the offices, the traditional dresses still remain the most valuable in the society especially for important occasions like marriage ceremony.

The staple food of the people are mostly 'amala' and 'eko'. Although they eat other variety of food items, these two remain the dominant food which are usually served on important occasions like funeral, naming and wedding ceremonies. While 'amala' is usually served with 'ewedu' type of vegetable soup, 'eko' is served with 'moinmoin' made from beans.

3.1.1 Residential Unit

The basic traditional residential units are compounds, compactly discrete fenced areas, each accommodating about one

to ten families. Housing within the area varies but is typically constructed with mud and bricks and roofed with corrugated iron sheets.

Each compound accommodates an extended family with the eldest male being the head, 'baale'. Each compound maintains a distinct boundary with its neighbour. A combination of such compounds makes up a quarter which is normally headed by a chief known as 'Mogaji'. And a combination of this makes a village or town normally headed by a 'Baale' or 'Oba'. Like any other Yoruba community the people live in towns and villages.

Although majority of the residential units are occupied by extended families, there are a few flat system accommodating nuclear families especially in Moniya, the LGA headquarter.

In a large compound with adequate rooms, husband and wife live in separate rooms usually next to each other but in a small compound they live together. Children who have come of age are accommodated separately according to sex.

3.1.2 The Family Setting

Extended Family unit is the basis of kinship relationship. Every individual has social obligations to his

or her extended family. The right of the individual is embedded in the functions of the extended family system. Being a patrilineal society the head of the family (agbo-ile) who is usually male hold in trust, the immovable property (especially land) on behalf of other members. He has the right to allocate land to needy members of the family.

Marriage is usually the responsibility of the extended family. It is responsible for the consummation and payment of the bride wealth. They operate a patrilocal system of residence with the wife leaving her family house to reside in her husband's family compound. All children born to the marriage are under the direct authority of the husband. Generally, grand-parents usually have unchallengeable control over their grand children and the entire family. The in-law's avoidance rule is still very much in practice because respect is expected from a wife to every member of her husband's family regardless of age. Nevertheless, the husband is usually the head of his family and he is the 'breadwinner'. He is expected to care for the wife and the children and at the same time to protect her. The wife on the other hand, is expected to respect her husband.

Women do not always have the right of inheritance in the family. Rather, women are shared along with other properties at the demise of their husbands. But their (wife's) properties are inherited by their husbands at their demise.

Like any other Yoruba society, it is their custom that a child should receive the name given it by the oldest male member of that family, parents and relatives at birth. It is not uncommon for a Yoruba child to have many names, but only about two or three of these are normally used. The rest are usually discarded. In the course of the ceremony, it is customary that certain materials such as sugar, salt, kolanut, dry fish, alligator pepper, palm oil, water and gin are made to touch the child's lips as a symbol of starting point of his/her journey through life.

Polygyneous marriage is very common among the people. An average man is expected to have at least four wives. Children procreation and survival becomes the basis of competition and jealousy among the co-wives, while a male child consolidates women's position in her matrimonial home as well as increases her favour before the husband and the relatives. Monogamous marriage is also practiced but not as common as polygyny.

Divorce is allowed. Either of the couple can initiate divorce on grounds of infertility, lack of adequate care, quarrel and so on. Generally, marriage is stable among the people. In the case of a divorce, the new husband of the divorced woman would off-set all the bills covering the expenses which the former husband had expended on her and be made payable to the man in the customary court. After divorce, marriage can be recontracted if the woman still wishes to come back and the man is ready to take her back and vice versa.

Husbands have two rights over their wives, that is the jural right and rights in unicem. Marriage is usually endogamous. Occasionally, people do marry outside their group. The younger generations nowadays do engage in inter-ethnic marriage.

3.1.3 Political Organization

The LGA comprises autonomous communities with a centralized political system. There is usually the head of a town or village known as king (oba) in the town and 'Baale' in the villages. There is also the council of chiefs which comprises all sectional or quarter heads. These chiefs, in

close relationship with the head, see to the day-to-day administration of their towns and villages.

Each village or town is divided into streets and quarters usually headed by a chief. The administration of a particular street or quarter is done by the sectional head in consultation with his chiefs and head of families known as 'Baale'.

Information is passed down from the town or village head through the sectional heads to the chiefs and finally to the family heads and association heads who usually mobilize their members.

Succession to the headship is usually by inheritance through male line. Usually, the first son (aremo) becomes the next head at the demise of his father. A female child, usually the first daughter after ascending the throne, is normally appointed the 'regent' when the head or father is dead pending the installation of a new head which usually should not be longer than three months.

The head usually exercise political authority over his subjects. He holds land in trust for the community and he is responsible for the settlement of land disputes and similar

disputes among the subjects. He sees to the welfare and security of the people. Therefore, before anything can be introduced to the people his mandate is usually sought. He mobilizes his people for community development as well as discharging their civic responsibilities. As a result of the authority reposed in him any information passed through him is considered authentic. The people pay obeisance to the head.

3.1.4 Economic Activity

The people are predominantly farmers who produce food and a few cash crops like kolanuts, palm oil and cocoa. Apart from this occupation, there are also a good number of professional artists and craftsmen who are skilled in the art of casting, carving and pottery. Also, there are a good number of traders and government workers. Generally, the greatest majority of the people are in the unskilled labour working as labourers.

The average income of the majority of the people is generally low, usually below ₦4,000 per annum. This income usually come from sales of farm products, petty trading and handcrafts. What is significant here is that this low level of income does not affect the practice of polygamy. The

reason is that they grow their own food crops such as cassava and yam. They spend little money on food. Most of their expenses go to health care service and education of their children.

Like any other Yoruba community, the women are economically independent. Despite the fact that they don't own land, they engage in some income generating activities such as trading and they have absolute control of their income. Only very few join their income to their husbands and these people do it in a situation where there are no competing co-wives or do it to seek the favour of their husbands. Although husbands usually bear the household budget in many cases this is supplemented by the wives especially in polygamous families where a woman and her children remain the economic unit. Irrespective of the contribution of the wife the husband still takes final decision on any matter at home. Regardless of the economic prosperity of a woman she still regards and submits to the authority of her husband.

Marketing activities are usually done by women while men cultivate the land. Though few women do cultivate land yet, these are few and are exceptional cases. Women assist their

husbands to sell their farm products.

In the area, there is a market day system during which all sorts of articles and products are brought to the market for sale. On these days (market days) almost everybody, especially women attend to sell or buy. The market days are five days interval. Markets are located in the frontage of the traditional head's residence. Market in these communities perform many functions. Important information are passed to the people on market days. It is a day that such information can best be disseminated. The market also serves as an avenue to performing religious functions because sacrifices are made to gods in the market for the peace and security of the community. Also, judicial functions are performed there because disputes between members of the community and sections of the community are settled at the market square with a covenant following it. Its social function includes gathering at the market square during festivals and public meetings such as for EPI programme on immunization days.

3.1.5 Belief Systems

Although their religion is characterized by a wide diversity of belief systems and ritual forms, they believe in

the supreme being known as "Olodumare". Their religious beliefs and practices shaped and were shaped by the livelihood of the society such as the hunting and agricultural activities and by the scale of social and political organization.

Central to religion was the concept of power of vital force through prayers, invocation, sacrifices, witchcraft and sorcery. The people seek like other Yoruba people to activate, increase or diminish that vital force which lay within themselves and within animate and inanimate objects.

Ancestor worship is commonly practised by the people and it serves as a stablising social force. Also, belief in a non-spiritual force called magic is an important part of their religion. Magic is used to promote good or evil to help and to cure and to harm. The chief categories in the traditional religion are priests, diviners and rainmakers.

Priests are intermediaries between individual deities and the people. They serve a particular god or spirit and they watch over the behaviour of the adherents.

Diviners serve their clients as both doctors and ascertainers of the unknown.

Rainmakers not only ensure sufficient rainfall but also stop rain if flood threatens. They were called upon during the 1980 Ogunpa flood disaster which ravaged many parts of Ibadan city and its environment.

However, it would be wrong to assume that the people are pagans, majority of them are muslims and christians. Only very few practise the traditional religion but majority still shuttle between Christianity or Islam and traditional religion especially the veneration of ancestor worship. Most cure to health problems are being sought through the ancestors. The diviners most of the time refer people back to their ancestors or idols in times of trouble. So, there is still widespread belief and practise of ancestor worship among the people and this influences their health seeking behaviour.[1]

3.2 THE PEOPLE - IKA NORTH EAST

The people are predominantly Ibo. The composition is not different from the other communities with the Ibos forming the largest ethnic group but a mixture of other ethnic groups makes up a substantial minority.

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[1]Source: Personal communication with Chief Olomowewe, a traditional healer in Moniya and the Women Leader in the area on 10th November and 15th December, 1993 respectively.

They speak Ika-Ibo which is a bit different from eastern Ibo. Thus, a person from eastern Ibo area is not likely to understand the real Ika dialect. The dialect has some features with other western Ibo. 'Pidgin English' is widely spoken in the area. This is irrespective of educational background. It serves as the official language among the people used in communicating with people from other cultures.

They usually dress in a thick hand-woven cloth called 'mpe' for the women which they use to tie round their waist. Men also tie theirs around the waist and knot it on the left hand side. This is called 'mpolu'. This is usually worn by the commoners. But the wealthy use 'Ogbe apani'. 'Ibe ato' - a three piece material - which is for the men which they normally throw over their shoulder. 'Ibe-nabi' is the material for women. It has two pieces. These are usually tied one at the waist, the other around the chest - 'Ike-obi'.

The staple food is "Nniji" - pounded yam, 'akpu' or "fufu" and "garri". The local soup is 'ose-ani' usually prepared in flat mortar without cooking it. This is occasionally alternated with 'banga soup', 'egusi', 'agbono' and 'nsala soup', - a black soup without oil.

3.2.1 Residential Unit

The basic residential unit is the compound house which may or may not be fenced. Each compound may accommodate between 1 and 10 families with a house built with mud and roofed with thatched-leaves or wood. The houses are scattered and surrounded by a large acreage of farm land with thick forests. The eldest man in the family is called the 'Diokpa', who is the head of the family. Extended family unit is the basis of kinship relation which has the obligation of providing and protecting the members. They reciprocate by giving corporate support to the family.

A young man who has just married lives within the family compound with his wife. As a result of this a wife living among the extended family member usually receive child caring assistance from other family members.

3.2.2 Political Organization

Towns and villages are divided into quarters or family groups, that is, the descendants of a common ancestor. The various quarters are more or less distinct geographical entities; though a quarter may extend over quite a large area usually called 'Ogbe'.

In each town, there are title holders who mostly inherit their titles from their ancestors. Inheritance is along the male line. The title holders are known as 'Ndi Olinzene' and such people usually participate in the governance of the town. At times, they are put in charge of administration of quarters or distant villages by the 'Pere'. The more important titles are peculiar to certain families and certain quarters.

The traditional head is the Obi who is at the helm of affairs of his town. He oversees several clans under his domain. The Obi is always appointed from the royal family. The oldest son of a departed Obi always succeeds him. The Obi lives in a palace usually built by the community.

The Obi makes laws and adjudicates in disputes among his subjects. He carries out executive functions relating to the laws and customs of the community. His court is the final appellate in the traditional setting.

Age-grade system is very important in the political organization. They are allocated responsibilities according to age. For instance, age-grades of between 0 and 12 years are the innocent group who are used for purification rites or activities on special occasions. Age-grades of between 13 and

20 years known as 'Igbogbo' are responsible for cleaning the community and age-grades of between 21 and 60 years called 'Iche' which is categorised into 21 and 39 years and 40 and 60 years are the armies. At the age of 60 and above known as 'Olinzele' one can be conferred with a honourary title by the Obi in recognition of one's contributions to the development of the town.

Using the political organization as a strategy for EPI mobilization, the Obi will be in the best position to influence his people through the chiefs and the various age-grade systems.

3.2.3 Economic Activity

The major economic activities in the area are farming and hunting. These are mostly done by men especially hunting. The females do some farming too but mostly their traditional occupations are weaving and trading. Also, there is division of labour by age. Children learn domestic and expected social roles under their parents by observation and imitation. Instruction is highly informal. The boys follow their fathers to the farm.

As agriculturists, land is the basis of the Ibo material

existence. Communities and their sub-divisions are very largely defined in terms of ownership of land which is governed by three cardinal principles:

(a) that land belongs to the community and cannot be taken away from it without its consent;

(b) that within the community, the individual shall have security of tenure for land he requires for his compound, his gardens and his farms; and

(c) that no member of the community shall be without land.

The seasonal farming activities determine the people's festival calendar. Most of the annual festivals are held after the harvest and before the new farming season begins. EPI mobilization programmes will be most effective during these periods.

The people have an organized market system. The market day is synonymous with the 'rest day' (known as 'Iken') of an Ibo community. This is a particular day of the week which has been earmarked as 'rest day' when everybody always stays at home. Public and age-grade meetings are held on this particular day as well as communal labour. This is another opportunity for EPI mobilization in the area. EPI can thus be

incorporated as part of communal activities for the 'rest day'(Iken).

3.2.4 Belief System

The people believe in a supreme being known as 'Osanobuluwa' whose power supercedes all other powers in the universe. They also believe in lesser gods who are the intermediaries between man and the supreme being. They have gods for different purposes such as 'Adugbe' - goddess of the sea, 'Ani'; - god of the earth, 'Uhuchi' - god of women, 'Ogwugwu' - god of health. They also believe in ancestral worship. They believe that man is composed of body which is physical, temporal and mortal, and of a soul which is invisible and immortal.

Beside these gods, they also believe in mystical powers such as magic, charms and supernatural powers like witchcraft and sorcery. They attribute all misfortunes (including health problems) to these forces. Therefore, the religious belief of the people can influence the perception of diseases and subsequently influence the use of EPI.[2]

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[2]**Source:** Personal communication with the Obi of Mbiri, His Royal Highness Obi I. Alekwe II (J.P.), on the 9th of October, 1993 in his palace. I also talked to two opinion Leaders, Mr.

3.3 THE PEOPLE - BOMADI

The Bomadi people are mostly Ijaws (Izons) living in the riverine area. They speak Ijaw language. Communication is also symbolic among the Ijaws. Drumming is a form of symbolic means of communication among the Ijaws. When a drum is beaten in a particular way it gives message which can only be understood by the people. It can be used to summon people or announce important events. This can be an effective means of propagation of EPI programmes in the area.

Ijaw names reflect both their environment and their historical antecedents. Suffixes are used in combination with real names. The suffix usually denotes the size and significance of the settlement when it was named or hopes of the founder. For example, 'ama' is used for large settlements and 'gbene' for smaller ones. Therefore, the name of any settlement with any of those suffix are easily categorized e.g. 'Kaima', 'Opuama' and 'Sagbama' for large settlement and 'Akugbene' and 'Turubene' for smaller ones. This is relevant to this study because, for any health provider the knowledge

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Bernard Okputa and Mr. Johnson Onu on different occasions and at different locations on the 12th and 13th October, 1993 respectively.

of this concepts will help him/her to know the type of community in which he/she is to work and make adequate preparation.

The Ijaw people mostly dress like the Itsekiris who are their neighbours. The women wear silk or damask wrappers over local blouses. They also use gold and coral beads, ear-rings, bracelets and necklaces. The men wear long-sleeved white or colourful shirt over a richly embroidered wrapper. They also wear straw hats with feather stuck into it and local coral necklaces, wristlets and carry walking sticks.

The people are known for their music and dance performed at traditional ceremonies. The canoe dance usually involves more than one hundred fast moving boats.

3.3.1 Residential Unit

The residential unit sometimes accommodates between 1 and 3 families but mostly a family. The house is usually built with bamboos, raffia palms and thatched leaves. The bamboos and raffia palms are worn together before they are supported with mud. The floor is made of wood and planks because of the marshy nature of the environment. With houses built off shores, strong woods are planted before the floor is laid with

planks. The reason for this type of building technology is that the area is marshy and always flooded. Also the mud available is not strong. So, this makes the housing unit to be so small. Most buildings are temporary structures and this has implication for EPI programmes.

Although wealthy individuals are now building with blocks, the cost is enormous because of transportation across the rivers and the cost of constructing it. So, this type of building is not commonly built.

The implication of this type of structures which are not permanent is that it may hinder monitoring of the EPI activity. It will become difficult to follow up a child whose parents might have moved away from their former house. This movement usually comes up when a house is becoming dilapidated. And this is more often due to the nature of the materials used which usually becomes weak within a short period.

3.3.2 Belief System

The Izon people believe in the supreme being called 'Tamaran' who is believed to be a female. They also believe in ghosts and witchcraft. The practice of traditional

medicine and magic is common. It is traditionally believed that witchcraft is inheritable. A child can inherit witchcraft from either of the parents but mostly from the mother. It can also be purchased or acquired by inflicting the spirit on another person. The people believe in curse. It is generally believed that curse is infectious and contagious, and it is inheritable. All these beliefs have implication for EPI utilization. This is because an average Ijaw woman may attribute diseases to evil forces and, therefore, seek traditional source of prevention than EPI.

In fact, the Izons have strong belief in water spirits. There are legends of people who have visited the water spirits. The spirits have priests and priestesses.

Rituals are a common phenomena among the Ijaws. There are different types of rituals for different purposes. Hence, ancestor worship is widely practised.

Taboos are held with awe among the Ijaws. Sacrifices are offered to appease the gods in case of violation of taboos. These types of sacrifice are known as 'ango-pomo'. Ritual cleanliness is very imperative in Izon sacrificial practices.

3.3.3 Political Organization

Kingship has been a long tradition among the Izons with King Jaja of Opobo occupying a prominent position in their tradition. Succession to kingship is usually by inheritance through the male line. The heir apparent is known as 'barrawon'. The official title of Ijaw kingship institution is 'Pere' or 'Amanananowu'.

The king performs both spiritual and political functions. The 'Pere Akugbene' oversees a number of villages under his domain and he exercises tremendous influence on the people in the area. He adjudicates in disputes. He is represented by a subordinate chief in every community under his domain. Each community has a number of chiefs who administer the communities in trust for the 'Pere'.

On important occasions the 'Pere' usually represents the interest of the communities under his jurisdiction. He usually delegates some of his powers to his subordinates and so he can be represented. Towns are administered by dividing them into quarters with a chief as the administrator of each quarter who is directly responsible to the head chief of the community who himself is also directly responsible to the

'Pere'.

Therefore, for effective EPI programme the 'Pere' will be the appropriate contact person to penetrate the Izons through his chiefs.

3.3.4 Economic Activity

The major economic activities of the people are fishing and farming. Several others engage in petty trading. There is division of labour by sex as well as age. Women mostly engage in mat weaving, processing of food like garri and selling local gin called 'Ogogoro'. Men usually engage in fishing in a large scale as well as farming. Small children always accompany their parents to farm. Also men engage in harvesting of palm fruits which are processed into oil by women.

The market system is systematically organized in this area. This is due to the harsh ecological environment which poses hardship to the people. Markets are usually held along the river sides. The market day is once a week. On this day people come to attend the market from neighbouring villages. This is a very important period to make outreach programmes about EPI in the area. Market place is usually the only place

where people gather regularly and can be reached easily.

In summary, it is important to note that EPI programmes can best be carried out in these areas taken into consideration the peculiar situations of the communities. Generally, EPI programmes will be properly propagated by taking into consideration the political organization, belief system, economic system, and the social organization of the people. Since the communities have market days EPI outreaches will be better carried out on these days known as 'Ojo-Oja' in Akinyele and 'Iken' day in Ika. Apart from the fact that it will help to acheive a wider coverage of the population it will also becomes a routine programme for the people. In places like Ika and Bomadi, the community leaders will be very adequate for information dissemination. The EPI providers should first make contact with the traditional rulers as open gates to the communities.

There is need for EPI providers to understand the belief system of the people in order to be able to develop appropriate strategies for service delivery. It is important that EPI programme should be made culture relevant and acceptable. Knowledge of the community setting will help in

this direction. This is because traditional beliefs and birth practices have been argued to increase the risk of both mortality and infection for both the woman and her infant (Belsey, 1992). Therefore, knowledge of the community setting will be of immense advantage to the EPI providers.[3]

[3]**Source:** Personal communication with the Pere Akugbene, the traditional ruler of the area on 12th February, 1994 and Chief (Mrs.) Ebozi Amangele on 14th of February, 1994 at Akugbene and Bomadi.

CHAPTER FOUR

KNOWLEDGE, ATTITUDE, BELIEFS AND PRACTICES RELATED TO EPI

4.1 SOCIAL CHARACTERISTICS OF RESPONDENTS

One thousand five hundred and fifty four (1,554) responses were analysed. The distribution is as follows: Akinyele 500, Ika Northeast 550 and Bomadi 504. The percentage distribution frequency is shown on Table 1 below.

Table 1: Frequency Distribution of Respondents According Their Social Characteristics By LGA

SOCIAL CHARACTERISTICS	AKINYELE	IKA NE	BOMADI	TOTAL
AGE	%	%	%	%
Below 30 Years	33.6	29.4	57.1	40.0
30 -49 Years	66.4	70.6	42.9	60.0
Total	100	100	100	100
EDUCATION				
No Formal Education	21.6	46.2	22.2	30.5
Primary Education	44.6	33.0	34.5	37.3
Secondary Education[1]	21.8	12.0	29.8	20.7
Post Secon. Education[2]	12.0	8.8	13.5	11.5
Total	100	100	100	100
RELIGION				
Christianity	38.2	79.6	87.2	68.7
Islam	54.8	0.4	-	17.9
Traditional	3.2	18.8	8.0	9.7
No Religion	3.8	1.2	4.8	3.7
Total	100	100	100	100
LOCATION OF EPI FACILITIES				
Less than 5km	85.6	0.4	42.4	42.8
More than 5km	14.4	99.6	56.6	56.3
Total	100	100	100	100

SOCIAL CHARACTERISTICS	AKINYELE	IKA NE	BOMADI	TOTAL
OCCUPATION				34.2
Unemployed	1.2	6.1	8.4	13.6
Farming	13.8	75.4	13.5	5.9
Fishing	-	-	44.9	7.2
Civil Service	9.6	5.1	3.2	25.8
Teaching	7.8	7.6	6.4	6.1
Trading	61.4	3.3	12.7	
Others	6.0	2.1	10.4	
TOTAL	100	100	100	100

1. Secondary Education includes technical education which do not lead to diploma.

2. By Post Secondary Education in this study we mean all those who have completed a course of study leading to OND, NCE, Nursing, HND, B.A/B.Sc. and Post-graduate diploma and degree.

The data reveal that majority of the respondents in Akinyele and Ika North-East LGAs are between 30 and 49 years of age (66.4% and 70.6% respectively). More than half (57%) of the Bomadi respondents are below 30 years. This is due to the problem of early marriage among the Ijaws. It may also be due to time of the day the interview was conducted because the interviews were conducted when people were mostly at home. At a particular period of the day usually between 8a.m. and 5p.m. younger mothers are likely to be away from homes for economic activities. Therefore, if any interviewer comes around that period he is not likely to meet a good number of them. This is when they normally go for economic activities. To alleviate this problem appointments were usually made in advance with respondents against evenings and very early in the mornings. We also meet them on Sundays after worship.

The level of education is generally low. Majority of the respondents in Akinyele and Bomadi (44.6% and 34.5% respectively) have primary education while majority of Ika respondents (46.2%) have no formal education. Education is much more lower in Ika than Akinyele and Bomadi. This may be due to the fact that parents often prefer to send male children to school than their female counterparts. It may also be due to the category of people who are eligible for interview in the area at the time of the study since the study

targeted female members who have given birth to at least a child in the last five years.

Majority of the respondents in Ika and Bomadi are christians (79.6% and 87.2% respectively). But more than half (54.8%) of Akinyele respondents are muslims. The only respondent who indicated to be a muslim in Ika is likely to be an immigrant. There are more traditional religious practitioners in Ika than Akinyele and Bomadi.

Trading is the major occupation in Akinyele (61.4% of the respondents) whereas 75.4% of Ika respondents are farmers and 44.9% of the Bomadi respondents engaged in fishing. Although these occupations are well represented, respondents also indicated that they engage in other occupations. In Akinyele, a considerable proportion of the respondents (13.8%) engage in farming, 9.6% work in the civil service, 7.8% teach in schools and 6.0% are in other occupations. Only a few proportion of the respondents, 1.2% are unemployed. Other jobs performed by respondents in Ika include Civil Service (5.1%), Teaching (7.6%), Trading (3.3%) and others (2.1%), only a few respondents 3.2% are unemployed. Also, in Bomadi, 18.5% are farmers, 3.2% are civil servants, 6.4% are Teachers, 12.7% are Traders, 10.4% engage in other jobs and 8.4% are unemployed.

In terms of accessibility to health care facilities, majority of the respondents in Akinyele live very close (less

than 5km)[4] to the nearest health care facility; on the contrary, almost all respondents in Ika (99.6%) indicated that they live far away from the nearest health care facility (more than 5km). This shows that health care facilities are not evenly located in Ika. Although majority (56.6%) of the respondents from Bomadi indicated that they live far away from the nearest health care facility, but a considerable proportion (42.4%) indicated that they live very close to the nearest health care facility. This includes mobile clinics which are not commonly available in Ika. The data show that health care facilities are better located in Akinyele than in the two other LGAs. Akinyele being a model LGA for EPI programme has all the logistic supports for EPI while Ika and Bomadi which depend mainly on the local and state governments meagre supports have poor availability and accessibility to EPI services.

4.2 CASE STUDY OF IMMUNIZATION STATUS OF CHILDREN

During the survey, some children who were living in the communities, (50 in each of the local government areas) and who were born in the area and were between 12 and 18 months, were identified. Their health cards were examined to know the

[4]5km is the recommended travel distance by the World Health Organisation as acceptable distance within which consumers should commune to receive health care delivery.

vaccination status of each of them as it had been on his or her first birth day. Usually, every child is expected to receive 9 vaccinations, as shown in table 2 below, by the age of one year.

Table 2: Immunization Schedule for Nigerian Children

TYPE OF VACCINE	AGAINST WHAT DISEASE?	AGE GIVEN	DOSES	HOW MANY?	MINIMUM INTERVAL	HOW GIVEN?
BCG	TB	At Birth 0-11 Month 12-24 Months	0.05ml 0.1ml 0.1ml	1 Dose		Intral-Dermal
DPT	Diphtheria Whooping Cough Tetanus	6 Weeks 10 Weeks 14 Weeks	0.5ml per Dose	3 Doses	4 Weeks	Intra-Muscular
POLIO	Poliomyelitis	6 Weeks 10 Weeks 14 Weeks	2 or 3 Drops	3 Doses	4 Weeks	Oral
MEASLES	Measles	9 Months	0.5ml	1 Dose		Subcu-taneous
FOR PREGNANT WOMEN TETANUS TOXOID (TT)	Tetanus	From 4 Months	0.5ml	2 Doses	4 Weeks	Intra-Muscular

SOURCE: Federal Ministry of Health and Human Services, Lagos, 1993.

Therefore, a score of 0 - 9 was calculated for each child reflecting the number of vaccinations he or she had received. The children were then ranked according to their vaccination score and two groups selected for further investigation. The first group comprises 10 children who were fully immunized, and so had scores of 9, while the second was made up of 5 poorly immunized children with scores of 5 or less. The study shows no significant difference in the socio-cultural characteristics of mothers of well and poorly vaccinated children in Akinyele but there are observed differences in this respect in Ika and Bomadi. It shows that such factors as education, occupation, belief system, number of children, decision making and age may influence the use of EPI.

The data show that of the mothers of 10 children who were fully immunized in Akinyele 70 per cent could read and write, more than half (60 per cent) were muslims, 60 per cent were traders, 50 per cent have between 3 and 4 children, 70 per cent aged between 30 and 49 years with mean age of 35 years and 60 per cent take a joint decision on whether or not to immunize their children, with their husband. And of the poorly immunized children, 70 per cent of the mothers could read and write, 60 per cent were muslims, 60 percent aged between 30 and 47 years with mean age of 36 years and only 20 per cent took part in decision making.

On the contrary, data from Ika show that 60 per cent of the mothers of well immunized children could read and write, 90 per cent were christians, 70 per cent were office workers, 80 per cent aged between 30 and 49 years with mean age of 32 years and 90 per cent took part in decision making. But none of the mothers of poorly immunized children could read nor write, 60 per cent were traditionalists, 70 per cent were farmers, 60 per cent aged above 40 years and 20 per cent participated in making decision on whether or not to immunize their children.

And in Bomadi 80 per cent of mothers of well immunized children could read and write, 90 per cent were christians, 70 per cent were office workers, 70 per cent aged below 40 years and 70 per cent participated in EPI decision making. While none of the mothers of poorly immunized could read and write, 80 per cent were traditionalists, 80 per cent were fishermen, 60 per cent aged above 40 years and 20 per cent participated in making decisions on whether or not to immunize their children.

For the purpose of this study, six cases are presented below.

4.2.1 Case 1: This was a mother of a well immunized child from Akinyele who can read and write, a trader, a muslim, 34 years of age and a mother of three who participated actively

in taking decision on matters affecting the welfare of her child. This woman indicated that she did not miss any of the doses for her child. She revealed that she always check the vaccination card to know the date for the next appointment. The decision to immunize her child was jointly taken by herself and her husband.

4.2.2 Case 2: This was a mother of a poorly immunized child in Akinyele who can neither read nor write, a trader, a christian, aged 35 years and a mother of three who did participate actively in making decisions about her children's welfare. She stated that she did not miss any dose of the vaccination for her child. According to her she always ask her neighbours about the next immunization appointment. Although her husband took most decisions in the family but the man usually allowed her to get her child immunized. This means that the man himself is receptive to immunization.

4.2.3 Case 3: A mother of a well immunized child in Ika who can read and write, an office worker in the local government, a christian, aged 32 years and a mother of three. She revealed that she immunized her child. According to her, the decision to immunize the child was jointly taken by her and her husband. Although the EPI facilities are very far from the village she always endeavour to get there and get her child immunized at all cost.

4.2.4 Case 4: This was a mother of a poorly immunized child in Ika who can neither read nor write, a traditionalist, a farmer, aged 41 years and a mother of five. She revealed that she could not complete the doses for her child because she didn't know the next appointment. Also sometimes she always found it difficult to go because there was nobody to take care of the other children while away because the immunization centre is very far away from her place of residence.

4.2.5 Case 5: This was a mother of a well immunized child in Bomadi who can read and write, a christian, a school teacher, aged 30 years and a mother of two. She indicated that she did not miss any immunization doses for her child. she made reference to the vaccination card in order to remember the next appointment. According to her she has no barrier of immunizing her child from her husband because it was a joint agreement between them. Although the EPI facilities are not easily accessible, she tried to get her child immunized at all cost.

4.2.6 Case 6: This was a case of a mother of a poorly immunized child in Bomadi who can neither read nor write, a traditionalist, aged 43 years, a mother of six and a fisherman. She stated that she does not believe in EPI because she has more faith in home remedies than EPI. She also complained about the side effects of the injection and

concluded that traditional methods of immunization are better. She revealed that the tradition of her people does not allow the use of modern medicine. According to her every child born in the family house is usually dedicated to the water spirit. If the child is sick "we always make sacrifices to the water spirit" She said. The woman acknowledged the supremacy of her husband's authority in any decision in the family.

4.3 KNOWLEDGE AND AWARENESS OF EPI PROGRAMME

Generally, there is high level of awareness of EPI programme in the study areas. The respondents have adequate knowledge of the programme. They are able to define what EPI is all about and they are able to identify its usefulness. They are able to explain vividly immunization schedules. But there is observed differential in the source of information between the study areas. Tables 3 and 4 below show the responses when asked whether or not they have heard health messages about EPI in the past and from what source?

Table 3: Frequency Distribution of Respondents According to Whether they have heard EPI Messages Before Now By LGA

Ever Heard of EPI Messages Before Now?	AKINYELE %	IKA NE %	BOMADI %	TOTAL %
Aware	99.8	82.2	94.8	88.5
Not Aware	0.2	17.8	5.2	11.5
TOTAL	100.0 N = 500	100.0 N = 550	100.0 N = 504	100.0 N = 1,554

Table 3 shows that majority of the respondents (88.5%) have heard about EPI before. There is no significant difference in the level of awareness between the LGAs except that there is more awareness in Akinyele and less in Ika than Bomadi. Only a few respondents indicated that they have not heard EPI messages before now.

The FGD data revealed that most participants were aware of the EPI programme in the study areas. At least more than 90 per cent of the participants in Ika and Bomadi stated that they have heard about the EPI before while all the participants in Akinyele revealed that they have heard about

it. It was observed that the very few participants who indicated that they have not heard about EPI were confusing it with other medical systems. For instance, a participant in Ika who later indicated that she immunized her child also stated that she did not hear nor know anything about the EPI programme. According to her:

> "I don't know what you are talking about. I know that when I born my child they gave her one injection. You know when you are in the hospital they will treat you but you don't know what you get."
>
> (Illiterate Nursing Mother, 27 years, Farmer, 1 Child, Traditionalis, Ika)

Another woman in Bomadi who was of the same opinion stated that:

> "Anyway, I have seen people going around talking about one injection but I don't know what it is all about. There was a time they brought it to the village here but I didn't take it because my child was not sick then."
>
> (Illiterate Nuring Mother, 28 years, Housewife, 1 Child, Christian, Bomadi)

This problem was more common with the illiterate category. All the literate categories in the study area showed that they are aware of EPI Programme but they have no adequate knowledge of it. Majority of the participants from Akinyele (whether literate or illiterate) indicated that they have heard about EPI and have adequate knowledge of it. We found that there is difference in the awareness level between

Akinyele and Ika and Bomadi. This is discussed below.

Table 4: Frequency Distribution of Respondents According to Information Source By LGA

SOURCE OF INFORMATION	AKINYELE	IKA NE	BOMADI	TOTAL
Radio	27.4	24.3	13.1	21.6
Television	-	2.2	7.6	3.3
Radio & Television	71.0	-	-	23.7
Health Centre	0.6	28.7	34.5	21.3
Newspaper	-	-	-	-
All of the Above	0.8	-	-	0.3
Community Leaders	0.2	44.8	44.8	29.8
TOTAL	100.0 N = 500	100.0 N = 550	100.0 N = 540	100.0 N = 1554

Table 4 shows that there is difference in the source of information about EPI between the LGAs. Respondents in Akinyele have more access to Radio and Television than respondents in Ika and Bomadi. While 71% have access to radio and television in Akinyele, only 24% have access to radio and 2.2% to television in Ika, and 13.1% have access to Radio and 7.6% to television in Bomadi. Community leaders are major sources of information in Bomadi and Ika (44.8% and 44.8% respectively). A considerable proportion of the respondents, 34.5% indicated that they heard about EPI in the health centre in Bomadi. Only a few proportion of Ika respondents (28.7%)

heard about EPI in the health centre. None of the respondents in the study area show that they read about EPI in the newspapers. A very negligible proportion of Akinyele respondents (0.2%) indicated that they depend on community leaders for EPI information. The reason for this sharp difference is due to the differential in programme implementation. While Akinyele LGA is served with electricity which aids the use of radio and television, there is no such opportunity in Ika and Bomadi. The very few ones who have radio operate them with batteries and those who have television sets operate them with generators as indicated by FGD participants. A participant stated that:

> "I used to buy batteries to operate my radio but now that batteries are expensive, I buy it only when I have the money."
>
> (Literate Nursing Mother, 30 years, Teacher, 3 childen, Christian, Bomadi).

Another participant in Ika said that:

> "I only watch television when I travel out of this village and occasionally, when they bring mobile cinemas."
>
> (Literate mother, 31 years, Typist, 3 children, christian, Ika).

In an indepth interview with the Obi of Mbiri (a village in Ika North East LGA) he reported that:

> "My subjects rely very much on the palace for any information because the palace is the only reliable source of information

since we have no light to listen to radio and television, and I have been playing that role very well".

There is differnce in the source of information about EPI betwen men in Akinyele and men in Ika and Bomadi. More of the Akinyele male participants revealed that they heard about EPI through the radio and television compared to most male participants in Ika and Bomadi who indicated that they heard about EPI through the palace and their wives. According to a participant in Ika:

> "I first heard about EPI in the palace. The Obi always call the meeting of the village anytime there is something for the town."
>
> (Illiterate, Male Adult, 39 years, Farmer, 4 children, Christian, Ika)

A participant in Bomadi stated that:

> "I first heard about EPI from my wife. You know that women always get this information from the clinic."
>
> (Illiterate Male Adult, 40 years, fisherman, 5 children, Christian, Bomadi).

The study support an earlier finding by Renne (1993) that women are more predisposed to maternal and child health (MCH) care information because they attend clinics where they receive the information. On the contrary men in Akinyele indicated that they heard about EPI through the radio and Television. According to a man:

> "I heard about EPI through the radio and television. so when my wife told me again it was not new to me."
>
> (Illiterate Male adult, 38 years, Mechanic, 3 children, Muslim, Akinyele).

Most pregnant women in Ika and Bomadi revealed that they heard about EPI form the health centre than pregnant women in Akinyele. According to a woman:

> "I heard about the injection from the clinic. They always tell us about it anytime we go to from the clinic."
>
> (Literate pregnant woman, 30 years, Tailor, 3 children, Christian, Ika).

But a woman from Akinyele indicated that:

> "I have heard about EPI through the radio and on the television before I went to the health centre. Also when I got to the clinic for antenatal care they told us about it."
>
> (Illiterate pregnant woman, 32 years, Trader, 3 children, Muslim, Akinyele).

There is no difference between literate and illiterate participants in Akinyele in their source of information about EPI unlike in Ika and Bomadi. For instance a literate woman in Ika revealed that:

> "I read about EPI in the newspaper long time before I heard about it in the clinic when I was pregnant."
>
> (Literate Nursing Mother, 31 years, Civil Servant, 3 children, Christian, Ika).

Data generally reveal differential in the source of information about EPI between the study areas and this affects their knowledge of the programme.

4.4 RESPONDENT'S PERCEPTION OF EPI DISEASES

Table 5: Frequency Distribution of Respondents According To Perceived Causes of Latest EPI Disease Episode By LGA

PERCEIVED CAUSE OF EPI DISEASES	AKINYELE %	IKA NE %	BOMADI %	TOTAL %
Natural Cause	52.0	0.7	13.9	21.3
Evil Spirit	-	2.2	5.6	3.5
No Knowledge	48.0	97.1	80.6	75.2
TOTAL	100.0 N = 500	100.0 N = 500	100.0 N = 504	100.0 N = 1554

Table 5 reveals differences in the perception of EPI diseases among the LGAs. This was due to the differences in the awareness level. While majority of the Akinyele respondents (52.0%) perceived the cause of EPI diseases as natural, only a negligible proportion (0.7%) in Ika and 13.9% in Bomadi have the same opinion. Rather, majority of the respondents from Ika 97.1% and Bomadi 80.6% have no knowledge of the causes of EPI diseases. Although a considerable proportion of Akinyele respondents 48% have no knowledge of the causes, none of the respondents attributed the causes to evil spirits compared to 2.2% in Ika and 5.6% in Bomadi LGA.

Akinyele respondents mostly attributed illnesses to improper feeding, lack of medical care and too much exposure to cold. This is similar to the findings of Erinoso (1976) and Oke (1982) in their studies among the Yoruba-speaking ethnic group of Western Nigeria.

For instance, a mother remarked that:

> "Children always become sick when they are not properly taken care of. If they are fed with dirty food and not properly clothed they can become sick. I always make sure that my child is not exposed to cold and I make sure that I give her clean food as we were told in the clinic."
>
> (Illiterate Nursing Mother, 30 years, Trader, 3 children, Muslim, Akinyele).

Another woman narrated her experience during the last disease episode of her baby. According to her:

> "When my baby was stooling last month, I took her to the hospital. The doctor asked about how we feed the baby. I told the doctor how I used to force-feed her. The doctor said that it is not hygienic and that could have been responsible for the sickness. Throughout our stay in the hospital for four days I was not allowed to force-feed her. But I didn't know that can cause disease until then and the baby became well."
>
> (Illiterate Nursing Mother, 31 years, Trader, 3 children, Christian, Akinyele).

Although the proportion of respondents that attributed the cause of EPI diseases to evil spirits are very few, yet, it has a significant implication for whether they will use EPI

or not. This is revealed by the indepth interview where about half (48%) of the informants indicated that certain diseases cannot be treated with modern medicine because modern medicine cannot treat any disease caused by evil spirits. Among the Ika informants, majority of them who indicated that they know the cause of the diseases stated that certain diseases defy modern medical treatment. Diseases frequently mentioned include measles. They even indicated that EPI diseases are particularly dangerous.

According to some FGD participants in Ika and Bomadi most diseases are caused by evil spirits and cannot be treated by modern medicine. According to a participant:

> "There is little the hospital can do about these diseases because they are caused by evil spirits. For example, a woman confessed in our house last year that she was a witch and that she normally give diseases to children."
>
> (Illiterate Nursing Mother, 40 years, farmer, 5 children, Christian, Ika).

A pregnant woman in Bomadi narrated her ordeal with evil attack few days before the interview. According to her:

> "About four days ago when I slept in the night I saw a cow with a big horn. The cow headed towards my direction and it knocked me down. The second day I became sick and my husband had to take me to a herbalist who gave me some treatment and something to use as prevention."
>
> (Illiterate pregnant woman, 33 years, Farmer, 3 children, Traditionalist,

Bomadi).

A Male participant in Ika indicated that:

> "Most of the diseases the government is making noise about cannot be treated by modern medicine. Last year a boy was sick of measles and was taken to the hospital and two days later he died. I think hospital can only take care of ordinary diseases but not the ones caused by evil spirits. Witches are too many here and you can be free from them only if you get prevention from traditional healers. They are wicked."
>
> (Literate male Adult, 36 years, Teacher, 3 Children, Christian, Ika).

In fact, there is not much difference in disease perception between literate and illiterate women. This affects their choice of therapeutic measures.

The study reveals that more people patronized modern health care facilities during the last disease episode (49.2%) in Akinyele compared to 14.2% in Ika and 27.0% in Bomadi; majority of the respondents 70% in Ika and 65.9% in Bomadi used home remedies. Data show that more people used traditional medicine in Bomadi than Ika and Akinyele. While none of the Akinyele respondents combined traditional medicine with modern medicine, a considerable proportion of the Ika and Bomadi respondents (3.1%) indicated that after attempts of traditional medicine had failed, they changed to modern medicine.

For instance a woman state that:

> "When my baby was sick I first took her to the herbalist who gave us some concoction. A few days later, when the sickness did not go I took her to the hospital when she became well."
>
> (Illiterate Nursing Mother, 32 years, Farmer, 3 children, Christian, Ika).

Another woman indicated that:

> "What people do here mostly, when somebody is sick, is to go to the herbalist first but if the sickness does not go then one can start thinking of hospital. Hospital is far from here. You have to go to Ugheli or Warri and that will cost a lot of money."
>
> (Literate pregnant woman, 30 years, Teacher, 3 children, Christian, Bomadi).

On the contrary, participants from Akinyele indicated that they used hospital most of the time. According to a woman:

> "People use hospital regularly here. we have good hospitals here and if the sickness is becoming serious we always go to Adeoyo hospital or Orita-mefa Hospital (i.e.University Teaching Hospital UCH) Ibadan."
>
> (Illiterate Nursing Mother, 33 years, Trader, 4 children, Muslim, Akinyele).

In conclusion the study reveals that perception of diseases is very important in the choice of health care. Respondents in Akinyele, where majority believe in natural cause of disease used EPI more than Ika and Bomadi. This

shows that EPI utilization is a function of how mothers perceive the diseases among other factors.

4.5 USE OF EPI SERVICES

Table 6: Frequency Distribution of Respondents According to Use of EPI Service By LGA

USE OF EPI	AKINYELE %	IKA NE %	BOMADI %	TOTAL %
Fully Immunized	89.2	54.9	55.6	66.6
Partially Immunized	9.6	1.1	0.8	2.8
Not Immunized At All	1.2	44.0	43.7	30.6
TOTAL	100.0 N = 500	100.0 N = 500	100.0 N = 504	100.0 N = 1554

Table 6 shows differences in the use of EPI services among the three LGAs in the coverage level of their risk population. This is because Ika and Bomadi LGAs have low utilization (54.9% and 55.6% respectively) while Akinyele LGA recorded 89.2% full immunization. A considerable proportion (44.0% and 43.7% of the respondents in Ika and Bomadi respectively) are not immunized at all. Only 1.2% of the Akinyele respondents are not immunized.

Data from the indepth interviews and the FGDs explain this sharp dichotomy in EPI coverage. Although informants from both settings indicated that EPI is good, most people have no access to the service in Ika and Bomadi. For instance, a participant from Ika North-East LGA indicated:

> "we travel a long distance before we can get to the nearest health centre and our roads are very bad, there are no vehicles".
>
> (Illiterate Nursing Mother, 37 years, Farmer, 5 children, Christian, Ika).

A participant from Bomadi also stated that:

> "we don't have health centres here because there is no land to build them. What the government is doing is to bring the injection by boat but this is not regular and it is in 'a blue moon'. In fact, they have not brought it this year".
>
> (Illiterate prganant woman, 36 years, Housewife, Christian, Bomadi).

Others even complained of other factors apart from accessibility. An informant from Ika indicated that:

> "mothers complain of certain side effects of the injection such as pain at the point of injection, fever, sore and sickness".
>
> (An opinion Leader, Male)

Generally, the rate of EPI utilization is very high in Akinyele. This has been attributed to the nature of outreach programmes operated in the LGA. The outreach programme has

been able to modify the perception about EPI in the area. A participants indicated that:

> "apart from the fact that we can get the injection in the hospitals they still bring it to the communities where people who cannot go to the hospital take it".
>
> (Illiterate Nursing Mother, 38 years, Trader, 5 Children, Muslim, Akinyele).

Also, adequate and regular supply of vaccines have also been mentioned as a contributing factor to the success rate in Akinyele. Most participants revealed that their children always receive vaccination any time they get to the hospital, whereas in Ika and Bomadi the case is contrary. Majority of the informants in Ika and Bomadi complained about non-availability of vaccines. Also, some of the participants mentioned a very important point that makes people to run away from being immunized as the attitude of the health workers. An informant from Ika also complained bitterly about the inhuman attitude of the health workers. Also, some participants from Bomadi expressed a similar view. From the qualitative data it is concluded that health workers in the urban environment are more refined in character and conscious of their working environment and so tend to be more humane in terms of their interaction with the people. This is probably because they are under close monitoring and supervision quite unlike the rural health workers who are the alpha and omega in

their domain with little or no without occasional supervision. As a result of this low level of utilization of EPI in Ika and Bomadi, it is assumed that there will also be a significant difference in the prevalence of EPI diseases between Akinyele and the other LGAs.

4.6 PREVALENCE OF EPI DISEASES

Table 7: Frequency Distribution of Respondents According to Whether a Child has had an EPI Disease in the Past By LGA

CURRENT DISEASE EPISODE	AKINYELE %	IKA NE %	BOMADI %	TOTAL %
Episode	4.0	75.8	60.7	43.5
No Episode	96.0	24.2	39.3	56.5
T O T A L	100.0 N = 500	100.0 N = 550	100.0 N = 504	100.0 N = 1554

Table 8: Frequency Distribution of Respondents According to the type of EPI Disease a child has ever had By LGA

	SUCCESS LGA (AKINYELE LGA)						LESS SUCCESS LGAS (IKA NE AND BOMADI LGAS)					
Children Ever Had EPI Diseases	Measles %	Polio %	TB %	Tetanus %	Whooping Cough %	Diphtheria %	Measles %	Polio %	TB %	Tetanus %	Whooping Cough %	Diphtheria %
Yes	26.0	0.5	4.5	1.5	11.5	1.5	65.0	45.0	59.4	50.1	44.2	37.0
No	74.0	99.5	95.5	98.5	88.5	98.5	35.0	55.0	40.6	49.9	55.8	63.0
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100

Table 7 shows that most of the children in Ika and Bomadi LGAs have had, at least, one of the EPI diseases one time or the other in the last five years compared to Akinyele where only 4.0% of the respondents indicated that their children have had at least one of the diseases in the last five years. About 75.8% and 60.7% from Ika and Bomadi respectively indicated that their children have had at least one of the diseases.

Table 8 shows that more than half of the respondents in Ika and Bomadi indicated that their children have had measles (65%), TB (59.4%) and Tetanus (50.1%). These three diseases appear to be the most prevalent. Also, a considerable proportion indicated that their children have had polio (45%), whooping cough (44.2%) and diphtheria (37.0%). Although there is still incidence of these diseases in Akinyele, the rate is drastically low. In terms of mortality rate, while respondents from Ika and Bomadi reported some deaths resulting from the attacks none of the Akinyele respondents reported any death. The study shows that EPI activities in Akinyele have crippled the severity and prevalence of the diseases. Both the informants and participants revealed that immunization exercises has reduced children diseases than what it used to be. An FGD participant stated that:

> "abiku is not common as it used to be here since immunization came. Only those

> children who are not immunized do have the attack of the diseases".
>
> (Illiterate Nursing Mother, 35 years, Housewife, 4 children, Muslim, Akinyele).

A mother noted that:

> "only measles is common occasionally but the attack is not as severe as it used to be especially for children who have taken the injection".
>
> (Illiterate Pregnant Woman, 34 years, Trader, 4 Children, Christian, Akinyele).

When asked about the treatment of the diseases during the last episode, majority of the Ika and Bomadi respondents (76.9%) used both traditional medicine and home remedies to treat the diseases as opposed to only 25.2% of the Akinyele respondents. A considerable proportion of Ika and Bomadi respondents combined traditional medicine with modern medicine and this is usually when traditional medicine has failed to cure the diseases. The choice of treatment is thus a reflection of how they perceived the diseases. The study reveals in table 5 above that majority of the Ika and Bomadi respondents did not know the actual cause of the diseases. FGD and indepth interviews revealed that most of them believe that evil spirits are the causes of the diseases and so they can only be treated with traditional medicine. A participant revealed that:

> "witches are the causes of these diseases and if you go to the hospital you will go there to kill your child".
>
> (Illiterate Nursing Mother, 37 years, Farmer, 5 Children, Traditionalist, Ika).

Another participant also indicated that:

> "Oyinbo medicine cannot prevent disease permanently, it will only work for some time".
>
> (Illiterate Nursing Mother, 33 years, Housewife, 4 Children, Traditionalist, Bomadi).

There is not much difference in perception of diseases between Literate and Illiterate participants in Ika and Bomadi except that some of the Literate mothers linked the reduction in the EPI diseases to mass immunization programme. According to a nursing mother:

> "Immunization has done a lot of good for the children. Now the diseases that used to kill children are not common again since they bring the immunization. I think it is good for children to take it."
>
> (Literate Nursing Mother, 33 years, Typist, 3 Children, Christian, Bomadi).

Also a pregnant woman in Ika Expressed the same view when she stated that:

> "Children survive more now than in the past. That is why people can talk about family planning. One is sure that her child will live now because immunization has removed the risk of contacting diseases that used to kill children in the past."

(Literate pregnant woman, 31 years, Teacher, 3 children, Christian, Ika).

Generally, data show that EPI diseases are still more prevalent in Ika and Bomadi than Akinyele. This is explained by the influence of sociocultural factors which hinder the use of EPI in Ika and Bomadi than Akinyele. The problem can also be explained by differential in the level of community involvement in the EPI programmes between the study areas.

4.7 COMMUNITY PARTICIPATION

Table 9: Frequency Distribution of Respondents According to their Level of Participation in EPI Activities By LGA

LEVEL OF PARTICIPATION	AKINYELE	IKA NE	BOMADI	TOTAL
No Involvement at all	0.4	15.3	25.8	13.8
Involved Occasionally	3.6	-	-	1.2
Involved Often	95.6	1.1	8.7	35.2
No Response	0.4	83.6	65.5	49.8
TOTAL	100.0 N = 500	100.0 N = 550	100.0 N = 504	100.0 N = 1554

Table 9 shows that majority of the Akinyele respondents indicated that they participated often in EPI activities in the area, very negligible proportion of the respondents in Ika (1.1%) and Bomadi (8.7%) indicated that they participated often in their areas. A considerable proportion from these two rural LGAs (Ika 15.3% and Bomadi 25.8%) indicated that they have not been involved in EPI activities as opposed to 0.4% in Akinyele.

FGD data revealed that people were more involved in the EPI programme in Akinyele than Ika and Bomadi. According to a participant in Akinyele:

> "Here, in this town, we have a committee made up of members of this community. The committee is responsible for mobilizing women to go for immunization. The committee serves as link between the people and the health workers. They help the health workers to announce the programme."
>
> (Literate Nursing Mother, 33 years, Trader, 4 Children, Muslim, Akinyele).

But on the contrary, Ika and Bomadi people were not involved in the EPI programme. For instance, a pregnant woman indicated that:

> "The people here do not know what is happening. We don't have our people there. We always see the health workers anytime they bring the injection."
>
> (Literate pregnant woman, 30 years, Teacher, 3 children, Christian, Ika).

Another woman expressed the same opinion in Bomadi. According to her:

> "I don't know of any member of this community who are working with the EPI people except the gardeners. No member of this village is there."
>
> (Literate Nursing Mother, 31 years, Civil Servant, 3 Children, Christian, Bomadi).

When asked about the type of participation they are mostly involved in Akinyele, respondents frequently mentioned community mobilization, building of health centres, financial contributions and health meetings. An opinion leader, opined:

> "I belong to the Health Committee of my ward. We always mobilize the mothers to take their children for immunization on immunization days".

On the contrary, the Ika and Bomadi respondents could not mention any type of participation they had been involved apart from health meetings.

The study however shows that, community members in Akinyele are more involved in EPI activities than those in Ika and Bomadi. Indepth interviews reveal that various health committees like the Village Health Committee (VHC) and District Health Committee (DHC) are well established in Akinyele. Also many Voluntary Health Workers (VHW) and Traditional Birth Attendants (TBAs) have been trained and well integrated to the PHC system unlike in Ika and Bomadi where none of these are put in place. All the DHC, VHC, VHW and

TBAs help in mobilizing mothers for EPI. In fact, this may explain the high level of utilization in Akinyele than in the other studied LGAs.

CHAPTER FIVE

SOCIOCULTURAL FACTORS AND PATTERN OF EPI UTILIZATION

5.1 INTRODUCTION

This chapter presents the analysis of sociocultural factors - age of mothers, educational background of mothers, occupation of mothers, religious affiliation of mothers, location of health facilities, number of children aged between 0 and 5 years, decision - making process about EPI and ethnic background of mothers. These are independent variables while the use of EPI is the dependent variable.

The study propose that there is a relationship between sociocultural factors and the use of EPI. The relationship can either be positive or negative.

In the analysis, effort was made to compare Akinyele which is a success LGA with Bomadi and Ika, the less successful LGAs on the one hand, and also compare Bomadi and Ika on the other hand. The reason for this comparison is to find out the factors that may encourage high utilization of EPI in the success area and those that discourage high utilization of EPI in the less successful areas. It will also help us to know the similarities and differences that exist between the less successful LGAs. At the same time, the stated hypotheses are tested using the Chisquare Statistical Measure and Correlation Co-efficient. Using data from the

three field techniques, below are the findings.

5.1.1 Age of Mothers and the Use of EPI

Table 10: Frequency Distribution of Respondents According to Use of EPI By Age of Mothers and LGA

	AKINYELE LGA (1)		IKA NE LGA (2)		BOMADI LGA (3)		TOTAL	
AGE OF MOTHERS	IM M. %	NOT IMM. %	IM M. %	NOT IMM. %	IM M. %	NOT IMM. %	IM M. %	NOT IMM. %
Below 30 yrs	100	-	58.7	41.3	70.3	29.7	76.3	23.7
30 - 40 yrs	98.6	1.4	56.0	44.5	59.0	41.0	71.2	28.8
40 yrs +	85.5	13.5	47.1	52.9	39.4	60.6	57.7	42.3
TOTAL	98.8	1.2	54.9	45.1	55.6	44.4	69.8	30.2

1. $x^2(2) = 85.24$ $P<.05$
2. $x^2(2) = 48.86$ $P<.05$
3. $x^2(2) = 32.39$ $P<.05$

Table 10 shows that age of mothers has some influence on the use of EPI. There are differences in the utilization rate between Akinyele and the other two LGAs (Bomadi and Ika). Although data reveal that there is a decline in the use of EPI as mothers grow old, the difference is not significant in the case of Akinyele because the marginal decrease is small. This is probably due to comprehensive programme on Immunization (EPI) embarked upon in the area. In Akinyele, there are functional outreach programmes which bring the service to the

doorstep of users unlike the other two LGAs. Also, availability of logistic supports must have had great influence in this area. Most education and campaign programmes in the area may be responsible for the success rate.

But in the case of the other two LGAs the marginal decrease is large. This shows that as mothers grow old they are not likely to use EPI. This may be as a result of their experiences in child caring. A nursing mother stated:

> "EPI is meant for the young ones who are just entering the child caring fold because they have no experience and not for people who have been doing it for a long time".
>
> (Illiterate Nursing Mother, 40 years, Farmer, 5 Children, Ika).

Also another woman in Bomadi indicated that:

> "It is not all the time you go to the hospital. In those days our grand parents always take care of their children without the assistance of any external person. There are better home remedies than the Oyinbo medicine".
>
> (Illiterate Nursing Mother,42 years farmer, 6 children, Christian Bomadi).

Similar opinions were expressed by pregnant women in both areas. For instance, a participant from Ika noted:

> "I don't even think that by now 1 should be running up and down for this thing. The traditional methods of immunization are better than this. This one always make children to be sick".

> (Illiterate Pregnant woman, 39 years, trader 4 children Christian Ika).

Also in Bomadi a participant stated:

> "I can't waste my time because of this thing. I can easily use herbs and concoction to keep my baby healthy."
>
> (Illiterate pregnant woman, 40 years, Farmer, 5 children, Christian, Bomadi).

The literate women expressed contrary opinion. It shows that educated mothers were more receptive to EPI regardless of their age. For instance, a participant from the literate group indicated that:

> "I think EPI is very good. Everybody should use it. It keeps baby healthy and reduce the threat of diseases. I always make sure I immunize my children."
>
> (Literate Nursing Mother, 38 years Teacher, 4 Children, Bomadi).

There was divergent opinions between male participants. While the literate males were more receptive to EPI the illiterate categories show some level of hostility. According to a participant:

> "I will not allow my wife to go and get that injection that can kill for my child. My father had a way of caring for his children and I too know most of these things. As old as I am I think I should know what is good for my children."
>
> (Illiterate Male Adult, 50 years, Farmer/Mechanic, 10 children, Ika).

But on the other hand, a literate man supported the use of EPI. He argued:

> "Although I am not a doctor but I know that since EPI came the rate at which children die has reduced. Such diseases as smallpox that used to kill children in the past are no more. Measles is no more common as it used to be. I think it is a good thing the government has done by immunizing the children."
>
> (Literate Male Adult, 38 years, Civil Servant, 4 Children, Bomadi).

In Akinyele most women who did not use EPI indicated that they substituted it with home remedies but what is most interesting is that majority of these women who indicated that they did not use EPI (83.3 per cent) aged above 40 years which constitute 13.5 per cent of the age category. For instance, a nursing mother indicated:

> "I have learnt to prepare some medicines at home which I use for my children. I have tried on several occasions and it has worked. Therefore, I don't think I should waste my time to go and queue in the hospital. That one is for young mothers."
>
> (Illiterate Nursing Mother, 42 years, Trader, 5 Children, Akinyele).

Generally, data reveal that the use of EPI is a function of age. Both the quantitative and qualitative data show that elderly mothers tended to rely on experience and use more of home remedies than hospital care in the rural areas. Although we noted that educated mothers were not actually affected by

the age barrier but the proportion of this category of women were few in the study areas.

The fact that younger mothers use EPI more than older ones was articulated by an FGD participant when she indicated that:

> "when a mother is still young she always falls prey of every idea that have something to do with child caring because they have no experience".
>
> (Illiterate Nursing Mother, 41 years, Fisher, 5 Children, Bomadi).

Hypothesis: The higher the age of mothers the lower the use of EPI.

Chisquare test of the hypothesis shows that there is significant relationship between age of mothers in Akinyele, Ika and Bomadi LGAs as shown in the table above ($P<0.05$). Data reveal that the higher the age of mothers the lower the use of EPI services. Therefore, we accept the hypothesis and conclude that age of mothers will influence the use of EPI.

5.1.2 Mothers' Level of Education and the Use of EPI

Table 11: Frequency Distribution of Respondents According to Uses of EPI By Mothers' level of Education and LGA

LEVEL OF EDUCATION	AKINYELE (1)		IKA NE (2)		BOMADI (3)		TOTAL	
	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %
No Formal Sch.	97.2	2.8	47.7	52.3	43.5	56.5	62.6	37.4
Primary	98.6	1.4	51.1	48.9	49.3	50.7	66.2	33.8
Secondary	98.5	1.5	66.7	33.3	74.1	25.9	80.0	20.0
Post Second.	100	-	73.7	26.3	76.5	23.5	83.4	16.6
TOTAL	98.8	1.2	54.9	45.4	55.6	44.4	69.8	30.2

1. $x^2(3) = 33.24$ $P<.05$

2. $x^2(3) = 32.86$ $P<.05$

3. $x^2(3) = 57.53$ $P<.05$

Table 11 shows that there is a relationship between mother's level of education and the use of EPI. However, there is

differntial in the level of utilization between Akinyele LGA, and Bomadi and Ika LGAs. The difference shows that education has no strong effect on the use of EPI in Akinyele unlike in Bomadi and Ika where utilization increases with level od education. This is likely due to the degree of exposure and accessibility to EPI programmes and facilities in Akinyele which is not the case in Bomadi and Ika. It has been argued that in areas where such public health care facilities are readily accessible, they are used by both educated and uneducated women, thus the advantage of schooling on health outcomes is narrowed (Widayatun, 1991).

On the other hand there is a difference between Ika and Bomadi, which are of different cultural and ecological backgrounds, in the use of EPI in relation to mothers level of education. It thus shows that EPI utilization increases with increase in the level of education. This is largely due to the fact that the people are not really exposed to EPI programmes in both areas and at the same time do not have good access to EPI services. Also, it is likely due to the fact that people's perception of EPI tend to change from the traditional belief to a more rational perspective as mothers' education improve. This shows that educated mothers are likely to perceive their children as susceptible to EPI diseases and as a result take them for immunization. But the

less educated ones and those without formal education are likely to be caught in the web of cultural perception of diseases which attributes causes of diseases to mystical and supernatural forces as some of the informants indicated during the indepth interview. As a result of this, they are not likely to be rational in the use of EPI because their perception of diseases will influence their health seeking behaviour. Although they may perceive their children as being vulnerable to the EPI diseases, their knowledge about EPI as potential preventive measure may not be strong enough to influence rational use of EPI. This is similar to findings of Caldwell (1979), Schultz (1984), and Caldwell and Caldwell (1988) that schooling enhances a woman's knowledge of modern health care facility, improves her ability to communicate with modern health providers and, by increasing the value she places on good health, results in heightened demand for modern health care services. It has also been argued that education modifies women's beliefs about disease causation and cure which influences domestic health care practices and the use of modern health care services (Caldwell, 1979; Caldwell, Reddy and Caldwell, 1983).

It can therefore be argued that, modification of women's beliefs about causes of diseases and cure depends on the type of health education received. Most educated mothers have

access to health magazines and can easily read and comprehend health information through posters and handbills.

Also, as mentioned earlier, communication gap can create obstacle for the use of EPI between the uneducated mothers and the health care providers. Educated mothers are more likely to be confident in communicating with health care providers than uneducated mothers. Also, some of the providers are likely to be their school mates or related educationally in one way or the other and this may increase their level of interaction which may be an open gate to the use of EPI. An key informant from Ika indicated that:

> "the nurses are difficult to approach. They only attend to their friends".

This view suggests that the health care providers are likely to belong to the same social class with educated mothers in the community. This will increase their opportunity to patronise immunization centres because education usually provides social networks which are mostly useful later in life, formally or informally.

The FGD data reveal that educated women were more receptive to EPI than uneducated ones. In fact, there is no difference in this regard between the study areas except that more of the uneducated mothers in Akinyele are receptive to EPI than uneducated mothers in Ika and Bomadi. But generally, in most FGD sessions receptivity to EPI was more pronounced

and observed among the literate categories. For instance, a participant stated that:

> "I learn about EPI through UNICEF publications. There are many ways one can prevent diseases but this EPI programme seems to be the best. Reports have shown that it is effective."
>
> (Literate Nursing Mother, 35 years, Teacher, 3 Children, Christian, Akinyele).

While another participant from Akinyele acknowledged the role of health education, which bridged communication gap between the EPI providers and the users, more emphasis was laid on accessibility to EPI facilities. According to a participant in Akinyele:

> "The way the EPI programme is being announced in this area helps people to know it. Even if you don't know how to read or write you will know through radio and television."
>
> (Illiterate pregnant woman, 28 years, Trader, 2 children, Muslim, Akinyele).

The situation is not the same in Ika and Bomadi where inability to read or write was a great hinderance to the use of EPI. According to a nursing mother:

> "I missed the last EPI appointment because there was nobody to remind me about the next date. My friend who always remind me was not around and since I cannot read the immunization card the day has passed before I got to know."
>
> (Illiterate Nursing Mother, 36 years, Farmer, 4 Children, Christian, Ika).

But for the educated mothers this was not a problem. For instance, a nursing mother stated that:

> "I always checked the immunization card to make sure that I did not miss it. What I normally do was to keep it in my bag so that I can see it every day."
>
> (Literate Nursing Mother, 30 years, Teacher, 3 Children, Christian, Bomadi).

Also according to a pregnant woman:

> "I usually kept the immunization card in my hospital bag. I looked at it every week whenever I was to go for antenatal clinic. That is why I did not miss any of the vaccination."
>
> (Illiterate pregnant woman, 29 years, Tailor, 3 children, Christian, Ika.)

Generally, the qualitative data revealed that educated mothers used EPI more than uneducated ones. We also noted that health education broke the barrier of illiteracy in places where health education was adequately provided like Akinyele. As indicated by a participant:

> "I learn about EPI through the television."
>
> (Illiterate pregnant woman, 31 years, Trader, 4 Children, Muslim, Akinyele)>

Also, a participant from Bomadi stated that:

> "Before the boat had an accident they always come to the village to talk to the people and announce when they are coming to give the injection. That makes many people to stay and get the injection for their children."

(Illiterate Nursing Mother, 36 years, Trader, 5 Children, Christian, Bomadi).

Differential in perceptions of EPI was also revealed by the FGD data. While literate mothers believe that EPI is very effective in all the areas only some illiterate mothers in Akinyele shared the same opinion. According to a participant:

> "People say that EPI can make a child to be sick but from what I have read about it I don't believe that story. It is good for children."
>
> (Literate Nursing Mother, 27 years, Civil Servant, 2 Children, Christian, Akinyele).

In Ika another literate nursing mother expressed the same opinion. According to her:

> "I don't listen to all the bad stories about EPI. What I know about it is that it is good for a child to be immunized so that the child will not be exposed to diseases."
>
> (Literate Nursing Mother, 29 years, Teacher, 3 children, Christian, Ika).

On the contrary, an illiterate nursing mother from Bomadi stated:

> "I refused to take my child for immunization because whenever the injection is taken it makes my baby to be sick. In fact, a child can contact another disease though it. It is not a lie that the injection can make children sick. I know of many children in this place who took the injection and became sick.
> (Illiterate Nursing Mother, 33 years, Fisher, 5 Children, Christian, Bomadi).

We also noted differential in the responses between literate and the illiterate men. While the literate men were receptive to EPI the illiterate ones, especially in Ika and Bomadi, were not receptive to it. According to a man:

> "How can I allow my wife to take my child for that type of injection. It is a risk. Before we were born people have been taking care of children."
>
> (Illiterate Male Adult, 43 years, Farmer, 5 Children, Traditionalist, Ika).

On the contrary, a literate man indicated that:

> "Immunization is a big relief from the problem encountered in child rearing. Now there is no more problem of 'abiku' (born-to-die children). It is a good thing the government has done."
>
> (Literate Male Adult, 40 years, Contractor, 6 Children, Christian, Bomadi).

But in Akinyele there was no difference in the level of receptivity to EPI between literate and illiterate men. This is because they are more exposed to the EPI programme than those in Ika and Bomadi. According to a man:

> "The EPI programme is not a new thing here. I think everybody knows that a baby must get the injection so that the baby will not be sick. I make sure all my children get immunized."

(Illiterate Male Adult, 35 years, Farmer, 4 children, Muslim, Akinyele).

Education is vital to the acceptance of EPI. Formal education backed up with health education in Akinyele remove the sociocultural impediments that could have hindered the use of EPI. Formal education thus enables respondents to have adequate knowledge about EPI regardless of the sociocultural setting.

Hypothesis 2: The higher the level of education of mothers the higher the use of EPI.

The data on table 11 above show that there is significant relationship between mothers' level of education, in areas where EPI programme is less successful, and the use of EPI than in areas where people are not exposed to EPI programme. Thus, the chisquare values show significant relationship ($P<.05$) in the LGAs. But the strength of the relationship is weak when tested with correlation co-efficient. Nevertheless, we accept the hypothesis and conclude that the more educated mothers will use EPI than the uneducated one.

5.1.3 Religious Affiliation and the Use of EPI

Table 12: Frequency Distribution of Respondents According to Use of EPI By Mother's Religious Affiliation and LGA

RELIGIOUS AFFILIATION	AKINYELE LGA (1)		IKA NE LGA (2)		BOMADI LGA (3)		TOTAL	
	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %
Christianity	96.9	3.1	58.9	41.1	55.5	45.5	65.6	34.4
Islam	100	-	100	-	-	-	100	-
Traditional	100	-	39.2	60.8	50.0	50.0	63.1	36.9
No Religion	100	-	50.0	50.0	66.7	33.3	72.2	27.8
TOTAL	98.8	1.2	54.9	45.1	55.6	44.4	69.8	30.2

1. $x^2(3) = 75.53$ $P<.05$
2. $x^2(3) = 23.56$ $P<.05$
3. $x^2(3) = 4.28$ $P>.05$

Table 12 shows that there is a relationship between religious affiliation of mothers and the use of EPI but the effect is minimal in Akinyele than Ika and Bomadi. Data reveal that regardless of religious affiliation of mothers they still use EPI in Akinyele. The very few respondents (3.1%) who indicated that they did not use EPI among christians belong to Pentecostal Churches where belief in faith healing is enormous. This is similar to Bourdillion's (1991) finding in his study among the Efik and Ibibio people of Eastern Nigeria where he observed that members of such spiritual churches are more likely to choose church healing as their first preference. Even one of them revealed that her church does not encourage hospital treatment. He stated that "we believe in prayer". However, all other religious practitioners are more rational about EPI utilization in Akinyele. On the other hand, some religious practitioners, tend to be more rational in Ika than others. For instance, traditional religious practitioners show some degree of apathy towards EPI. Less than half of them (39.2%) indicated that they used EPI. This may be due to the fact that the people patronise traditional healers in the area. The traditional

healers in this area enjoy high patronage. The situation is different in Bomadi where utilization of EPI according to religious affiliation of mothers is relatively the same. This shows that there is cultural difference between the Ika and the Bomadi. Data have earlier shown that Ika respondents patronise traditional healers more than respondents in Akinyele and Bomadi. This is likely due to the problem of inadequate provision of health care facilities in the area. Another reason may be due to the fact that the Ijaw respondents are more educated than Ika respondents according to the social characteristics data in chapter 4 above. Regardless of religious affiliation of mothers, educated mothers tend to be more rational than the uneducated mothers and as a result, they tend to use EPI services more. Generally, religion has no strong influence on the use of EPI, nevertheless, data show that it has some considerable effect on the use of EPI.

The FGD data revealed that religion played more significant role in the use of EPI in Ika and Bomadi than in Akinyele. Regardless of the type of religion a mother practices she has a good inclination for EPI in Akinyele.

Only very few christians who belonged to the Pentecostal Churches indicated that they did not use EPI in Akinyele. According to one of them:

> "It is not always encouraging that people should go to hospital in our church. We believe in the power of prayer and this has always being effective."
>
> (Illiterate Nursing Mother, 30 years, Trader, 4 Children, Christian, Akinyele).

This is regardless of the level of education because according to a woman:

> "Although I believe that people should go to the hospital, especially when your faith cannot carry you. The Word of God says 'His stripes has made us healed'. All you need to do is to claim it. The promise is for you. I don't vaccinate my children yet they are healthy. Everything is by the power of God."
>
> (Literate Nursing Mother, 36 years, Teacher, 4 Children, Christian, Akinyele).

The case was not the same in Ika and Bomadi where traditional practices are still prevalent. Majority of the FGD participants in Ika (52 per cent) complained that they have rituals which would not allow them to get their children immunized. Also another 49 per cent of the Bomadi participants expressed the same opinion. According to a

pregnant woman:

> "In our house, there is a particular ritual we usually perform when a child is born. Once the ritual is performed within the first seven days of birth the child is delivered from sickness."
>
> (Illiterate pregnant woman, 34 years, Farmer, 4 children, Traditionalist, Ika).

Another woman in Bomadi stated that:

> "Immediately a child is born here we usually throw the child inside the river. If the child get drown then it is not fit to live but if otherwise the child is capable of living. This is one of the rituals here for child rearing. I don't really believe in this EPI thing."
>
> (Illiterate pregnant woman, 30 years, Trader, 3 Children, Traditionalist, Bomadi).

Generally, data revealed that in places where EPI programme is not well pursued like Ika and Bomadi religion will have adverse effects on how users make decisions about immunization unlike Akinyele where EPI services are well provided. According to a few of the traditionalists in Akinyele:

> "This is not a matter of rituals. Most of us here have seen that immunization injection is good. That does not disturb us from using the traditional ones. It also strengthen the child further."

the same opinion. According to her:

> "Although I am a christian but that does not disturb me from going to hospital. It is not against the Bible."
>
> (Literate pregnant woman, 29 years, Teacher, 2 children, Christian, Ika).

Nevertheless, religious affiliation of mothers influences their use of EPI.

Hypothesis 3: Religious affiliation of Mothers will influence the use of EPI.

The data on table 12 show that there is significant relationship between religious affiliation and use of EPI in Akinyele and Ika ($P<.05$). It shows no significant relationship in Bomadi ($P>.05$). Though religious affiliation influenced perception of disease causes and preventive measures to take, the influence was weakened where there was appropriate health education and mobilization programmes as the case in Akinyele. Hence, we conclude that some mothers of certain religious affiliation will not use of EPI.

5.1.4 Mothers' Occupation and the Use of EPI

Table 13: Frequency Distribution of Respondents According to Use of EPI By Occupation of Mothers By LGA

OCCUPATION OF MOTHERS	AKINYELE (1)		IKA NE (2)		BOMADI (3)		TOTAL	
	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %
Unemployed	100	-	52.9	47.1	52.2	47.6	68.4	31.6
Farming	100	-	52.9	47.1	55.9	44.1	68.6	31.4
Fishing	-	-	-	-	65.2	37.5	65.5	34.5
Civil Servant	98.0	2.0	78.6	21.4	60.0	40.7	78.6	21.4
Teaching	100	-	52.4	47.6	52.9	44.1	70.5	29.5
Trading	98.7	1.3	88.9	11.6	60.4	39.0	79.4	20.6
Others	94.1	5.9	60.0	40.0	51.9	48.1	68.7	31.3
TOTAL	98.8	1.2	54.9	45.1	55.6	44.4	69.8	30.2

1. $x^2(6) = 159.24$ $P<.05$

2. $x^2(6) = 62.13$ $P<.05$

3. $x^2(6) = 20.49$ $P<.05$

Table 13 reveals that there is significant relationship between occupation of mothers and the use of EPI but the relationship is not strong enough in Akinyele where there is no significant difference in the use of EPI among different occupational groups unlike in Ika and Bomadi. This is likely due to the aggressive nature of EPI programmes in the area. Because EPI facilities are easily accessible, mothers may use it regardless of occupational barrier. An opinion leader however, indicated that:

> "the government is trying by bringing the service to the community on routine basis."

In Ika and Bomadi there is a significant difference among the occupational groups. Data reveal that civil servants and traders used EPI more in both LGAs than other occupational groups. This may be as a result of outreach programmes in the areas because activities usually take place on market days. According to a community leader in Ika:

> "We have told them to always bring this injection on Iken days - market days. This is the best time they can meet many people at home."

Also, civil servants tend to have better access to health care facilities than others. This may be due to the fact that they are educated. Also, fishing, is another occupation that favours the use of EPI in the riverine area. This shows an ecological difference between Bomadi and Ika. The reason for the disparity between fishermen in Bomadi and farmers in Ika may be due to the fact that EPI activities in Bomadi are usually carried out with outreach facilities because of inability to build health facilities on water. Such outreach programmes are not available in Ika where there are no good road networks. According to a health worker in Bomadi:

> "we always organise outreach programmes on routine basis here until when the boat capsided on an outreach mission about two years ago."

Also, it may be as a result of the nature of the job itself. This is because it is easier for farmers to go to farms with their children than for fishermen to go for fishing expedition with their children. Therefore, the children are more likely to be met at home during such outreach programmes in Bomadi than in Ika.

Generally, this finding points to the fact that certain occupations may hinder mothers from taking their children for

immunization. Quite unlike Bomadi more traders used EPI in Ika. The reason for this may be due to the cultural practices in Ika whereby they are associated with their traditional 'resting day' (Iken). Market day is a special day of the week when everybody stays at home. The day is known as the "resting day" (Iken). This is also a day for various age-grade meetings and communal labours. Since there are no good roads and EPI facilities to carry out outreach programmes on routine basis, it is likely that the few outreach programmes usually target the market days.

It has been argued that certain occupations are more time demanding than others. Such occupations are not likely to favour the use of EPI especially where there is no house-help. This supports Hoppe and Heller's (1975) finding that familism and occupational instability influence alienation and health care utilization among lower class Mexican-Americans. They also argued that familism and occupational stability are positively related to timing of parental care, but negatively related to consulting a physician when ill. Therefore, in Akinyele people are more likely to have assistance of the extended family members in child caring than in Ika and

Bomadi. According to an informant in Akinyele:

> "mothers receive help and cooperation from members of their family who always look after their children and business anytime they want to go for immunization."

Data on table 13 support Mueller's (1984) argument that work in agriculture and other jobs in the traditional sector, especially works at or near home, are comparable with child care.

Data from the FGD revealed that relationship occur between occupation and the use of EPI as some of the participants indicated that they could not go for EPI due to the nature of their jobs. According to a participant in Ika:

> "I couldn't go for the last immunization because there was nobody to take care of my shop while I would be away."
>
> (Literate Nursing Mother, 30 years, Tailor, 3 Children, Christian, Ika).

Although the woman was receptive to EPI service, she was handicapped by the nature of her job. But for most participants, this was not a problem especially in Akinyele where there are apprentices. For instance, a participant indicated:

> "Anytime I want to go for immunization or any other important thing like this I will make sure that my apprentices come early. I have about eight of them who are learning from me. The senior one will take care of the shop. They have been doing that very well."
>
> (Literate Nursing Mother, 33 years, Tailor, 4 Children, Muslim, Akinyele).

But for some occupations it becomes very difficult for most women to leave their jobs and go away for a long period. For instance, a woman working with a private firm in Akinyele explained that she was unable to complete the required doses for her baby because her boss refused to grant her leave of absence during the last immunization day. According to her:

> "When I got the chance I always make sure that I get my child immunised especially when my boss is not around. But for some time now I have not been able to do so because my boss refused to allow me to go and there was nothing I can do because I am working in a private company and I am the secretary."
>
> (Literate Nursing Mother, 28 years, Typist, 2 Children, Muslim, Akinyele).

It was observed that while some mothers have people to help them when they are away from their places of work, others don't have. For instance, a woman in Ika stated that:

> "I stay most of the time on the farm and

> any time I am going I have to go with my child. There is nobody to help. I lost my husband two years ago and I have to feed myself and the children. Most of the time I stay on the farm for two weeks. Therefore, how do I know when immunization is going to take place."
>
> (Illiterate Nursing mother, 35 years, Farmer, 4 children, Traditionalist, Ika).

Also some women in Bomadi expressed similar opinion. One of them even stated that:

> "It is easy to do all these things when there are people around to help. It is women that always farm here. Therefore, it makes it difficult for people to help because during the planting and harvesting periods you hardly can find anybody in the village. I think that is when most people find it difficult to go for this injection. I am not saying that it is not good but not many people usually go for it during the planting and harvesting periods. That is what I am saying."
>
> (Illiterate Nursing Mother, 36 years, Farmer/Fisherman, 5 Children, Christian, Bomadi).

Some women indicated that they face hostility in their place of work as soon as they get pregnant and therefore they find it difficult to go to antenatal clinics during which they suppose to get tetanus toxoid vaccination (TT). According to a Civil servant in the Ika North-East Local Government

Council:

> "I can tell you that I missed the tetanus injection I supposed to take when it was due because my boss refused to grant me permission to go. I later took it when I went for my leave."
>
> (Literate pregnant woman, 29 years, Clerk, 2 children, Christian, Ika).

But a pregnant woman who is a trader in Bomadi indicated that:

> "I always make sure that I reduce my activities as soon as I am pregnant. I don't travel when the pregnancy is three months. I always make sure that I tidy up my business before the pregnancy rises. As a result, I have time to attend the clinic."
>
> (Illiterate pregnant woman, 32 years, Trader, 4 children, Christian, Bomadi).

Generally, occupational differences between participants results in differences between the study areas as shown above. Availability and accessibility to EPI facilities have reduced the effect of occupation on the use of EPI in Akinyele unlike in Ika and Bomadi where EPI services are inadequate.

Hypothesis 4: The type of occupation a mother engages in will influence her use of EPI.

The hypothesis is tested with Chisquare statistical

measure. It shows that there is a significant relationship between occupation and the use of EPI in Akinyele, Ika and Bomadi ($P<.05$). There is significance relationship between occupation and the use of EPI in Bomadi. Data show that there is important relationship between occupation and use of EPI. However, the strength of the relationship is weak when tested with correlation coefficient. In any case, regardless of the strength of the relationship, we accept the hypothesis and, therefore, conclude that occupation of mothers will influence their use of EPI in places where mobilization is weak. This means that occupation will hinder the use of EPI services if appropriate intervention programme is not put in place.

5.1.5 Study Areas and the Use of EPI

Table 14: Frequency Distribution of Respondents According to the Use of EPI and Place of Residence By Mothers

TRIBE	IMMUNIZATION	NOT IMMUNIZED	TOTAL
Akinyele (Yoruba)	98.8	1.2	100
Ikane (Ibo)	54.9	45.1	100
Bomadi (Ijaw)	55.6	44.4	100
T O T A L	69.8	30.2	100
	N = 1071	N = 483	N = 1554

Table 14 reveals that there is difference in the use of EPI between the study areas. Data show that EPI utilization depends on where the mothers are living. Although majority of the respondents who indicated that they used EPI were from Akinyele (98.8%), there is no significant difference in utilization rate between Ika and Bomadi respondents. This shows that the high utilization in Akinyele does not result

from its being a Yoruba ethnic group but mostly due to the level of exposure to the programme in the area through which they know the benefit of the immunization. This is true of the observation of Raharjo and Corner (1989) who stated that "the demand for preventive health care is weaker than the demand for curative care". This is because the need for curative medicine is very obvious to clients and the potential benefits are always immediate. The need for preventive health care on the other hand, is usually not so obvious to most people and the potential benefits are not usually certain. This is because potential users may not be exposed to the disease against which they are being protected. This shows that the use of EPI may depend much on how the people perceive it and their perception may depend on their level of exposure to the effect of the diseases it tends to prevent. However, in some cases, people may be exposed to the diseases but may be influenced by cultural perception of diseases' causes, and therefore they may not use EPI. But data gives no such inference.

Qualitative data revealed that differential in EPI utilization between Akinyele and Ika and Bomadi is a factor of

cultural difference as well as knowledge of the programme in relation to its potential benefits. An informant indicated that:

> "people in this community (Mbiri in Ika) do not want to use EPI because they look at it as something that can add disease to the body".

This is corroborated by an FGD participant in Bomadi who stated:

> "most women run away from EPI because of the side effects on the children".
>
> (Illiterate Nursing Mother, 32 years, Farmer, 4 Children, Christian, Ika).

Even FGD participants in Bomadi gave such side effects as fever, sore, hotness and weakness of the body. Most evidences from qualitative data support this and as a result, there is a fear of using EPI.

Although culture and attitudes among other factors have been argued to be an important influence on both the extent to which exposure to information results in knowledge and the way in which behaviour is related to knowledge (Raharjo and Corner, 1990), where new information conflicts with, or contradicts existing knowledge, it is more likely to be rejected. For instance, qualitative data revealed that some

respondents believe that diseases are caused by witchcraft and can only be prevented with traditional medicine. An informant stated that "measles results from the wrath of the gods and in order to prevent it, the gods must be venerated and appeased". But these views are not commonly expressed in Akinyele. This shows that health education programmes can overcome this phenomenon by introducing new information in culturally sensitive ways that complement, rather than contradict, the existing views of the target population. For instance, outreach programmes have made positive impact in Akinyele.

The inability of modern medicine to wipe out traditional belief completely does not only arise from the tenacity of traditional beliefs but also because the arrival of modern medicine has been argued to be "incomplete" (Omorodion 1993). Besides, modern medicine has not been able to cure all diseases e.g. Cancer and AIDS. For instance, EPI services are distantly located in Ika and Bomadi and transport facilities are unavailable, health personnel are not evenly available to the population and in most cases, they are arrogant in attitude. But in Akinyele, the study provides strong evidence for the approach advocated by UNICEF of trying to reach every

village and household with immunization programmes for children. Qualitative data reveal that immunization exercises are carried out in the communities. An informant indicated that:

> "there is always regular visits, usually every Wednesday of the week, by the EPI people when they do immunize the children".

Another informant confirmed this and also FGD participants have consensus of opinion about the assertion. Following from the foregoing, our data support the finding of Obermeyer's (1993) study among Moroccans and Tunisians that cultural factors appear not as major obstacles to better health but rather as defining the normal course of action to be taken in the absence of compelling reasons to do otherwise.

The FGD data revealed that inadequate provision and inaccessibility of EPI facilities remain the major obstacle in Ika and Bomadi areas. According to participants there are no EPI facilities, even the available ones are not accessible due to poor road networks. For instance, a participant noted that:

> "The major problem facing us in this community is inadequate provision of the EPI facilities. One has to travel long

village and household with immunization programmes for children. Qualitative data reveal that immunization exercises are carried out in the communities. An informant indicated that:

> "there is always regular visits, usually every Wednesday of the week, by the EPI people when they do immunize the children".

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> "The major problem facing us in this community is inadequate provision of the EPI facilities. One has to travel long

> distances, to get injection and the roads are bad."
>
> (Illiterate Nursing Mother, 30 years, Farmer, 3 Children, Christian, Ika)

Another participant in Bomadi stated that:

> "It is very expensive to go to the health centre here because you have to go to Bomadi and this costs as much as ₦20.00. You know the boats are very expensive. It is ₦10.00 from here to Bomadi. But if they bring it people will take it."
>
> (Illiterate Nursing Mother, 33 years, Trader, 4 Children, Christian, Bomadi).

But this is not the same condition for Akinyele where facilities are well provided. According to a woman:

> "Health Centre is not far from here and people always go there. When you cannot trek you go by boat or taxi. It costs only ₦4.00 to and fro."
>
> (Illiterate Nursing Mother, 34 years, Trader, 4 children, Muslim, Akinyele).

In fact, most pregnant women in Ika and Bomadi complained about the attitudes of the health workers as one of the reasons why people usually refuse to go to hospital. For instance, a woman stated that:

> "The way the nurses treat people is very bad. I have decided to stay at home rather than going to the hospital. They don't have manners."

(Illiterate pregnant woman, 33 years, Trader, 4 children, Christian, Bomadi).

Another woman narrated her ordeal as follows:

"I decide not to go to the hospital again because during my last pregnancy I was humiliated by the nurses. One day I went to the hospital and I did not bring my card. When they asked of it I told them I can't find it. They started abusing me. They didn't treat me that day. They said I should pay for another card and I said I have no money. Since then I have not been interested in going to the hospital. Now I go to a herbalist and the man is good."

(Illiterate pregnant woman, 36 years, Farmer, 5 Children, Traditionalist, Ika).

On the contrary, Akinyele participants revealed that they have good relationship with health workers. According to a woman:

"The Nurses are trying. They teach us everything we need to know, before and after delivery. Sometimes they send somebody to look for us anytime one fails to come to the clinic on clinic days."

(Illiterate pregnant woman, 30 years, Trader, 3 Children, Christian, Akinyele).

Generally, data show that differences occur in EPI utilization between the study areas due to differential in availability and accessibility of EPI facilities. But it was

noted that attitudes of health workers conflict with the ways of life of the people and this resulted in negative attitudes to EPI in Ika and Bomadi. Therefore, in order to have a high coverage there is need for health workers to understand the people and behave in ways that will not conflict with their culture. Behaviour of the people can be changed without any conflict with proper health education.

5.1.6 Distance of EPI Facilities and the Use of EPI

Table 15: Frequency Distribution of Respondents According to Use of EPI By Location of EPI Facilities and LGA

DISTANCE	AKINYELE (1)		IKA NE (2)		BOMADI (3)		TOTAL	
	IMM. %	NOT IMM %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %
Less than 5km	98.8	1.2	100	-	94.4	5.6	89.4	10.6
More than 5km	98.8	1.2	54.6	44.7	54.5	45.5	54.6	45.4
TOTAL	98.2	1.2	54.9	45.1	55.6	44.4	69.8	30.2

1. $x^2(1) = 194.18$ $P<.05$
2. $x^2(1) = 3.29$ $P>.05$
3. $x^2(1) = 28.08$ $P<.05$

Table 15 reveals that there is a relationship between distance of EPI facilities and use of EPI in Ika and Bomadi

unlike Akinyele. Data from Akinyele show no differential between short distance residents and long distance residents. This is due to the high level of awareness of EPI in Akinyele as a model LGA coupled with the availability of EPI facilities in the area. Quantitative data reveal that facilities are evenly distributed in Akinyele than Ika and Bomadi. It also shows that those who indicated that they live far away from the nearest EPI facilities stated that they used EPI. This is contrary to the conventional finding that if health facilities are located far away from users' place of residence they are not likely to use them (Okafor, 1984; and Eugenia et. al., 1989). The reason for such difference might be due to cultural differences between the study areas. Eugenia et. al. (1989) study was conducted in Togo. It may also be due to time difference between the two studies. Okafor's study was carried out in 1984. So there could have been drastic changes over the period.

On the other hand, data show significant relationship between location of EPI facilities and use of EPI. It shows that mothers who live close to EPI facilities used it more than those living far away. This finding supports Okafor's

(1984) and Eugenia et. al.'s (1989) findings as stated above. The data show no cultural or ecological differences between the two areas Ika and Bomadi. The reason for this kind of relationship is likely due to inaccessibility to EPI facilities in the areas because EPI facilities are not evenly distributed as the case is in Akinyele. Therefore, this may arouse the problem of travel cost as argued by Okafor (1984) who stated that the idea of travel cost has serious implications on the location and use of health care services. This is true as confirmed by an FGD participant in Ika who stated that:

> "transport is our problem here. There are no taxis. We always trek long distances to get EPI. So it always discourages people most of the time especially when the sun is high and during raining season".
>
> (Illiterate Nursing Mother, 29 Years, Trader, 2 Children, Christian , Ika).

Another participant indicated that:

> "transport cost is enormous in Bomadi because there are no motor vehicles and the boat services are very costly".
>
> (Illiterate Nursing Mother, 30 Years, Farmer, 3 Children, Christian, Bomadi).

Also, the low level of utilization of EPI in these areas

among people living far away from EPI facilities may be due to poor outreach programmes in the area. One of the health providers in Bomadi in an indepth interview indicated that:

> "we cannot continue our outreach programmes since 1992 when the only boat for the programme capsided during an outreach mission with all the people inside dead".

In Ika, another health provider stated that:

> "lack of EPI vehicles is responsible for poor outreach programmes. All vehicles are grounded and no money to repair them".

Nevertheless, data suggest that inspite of long distance some of those who indicated that they live far away from EPI facilities still use EPI. This is probably due to the level of awareness of EPI among this category of people. It is likely that high level of awareness about EPI will make mothers to be more rational than those who are not aware. Thus, they perceived diseases as contagious and believe that there is need to prevent them. This supports the argument made by Orubuloye et. al. (1991) that distance of health facility may not play significant role in a situation where people embrace the usefulness of modern health care services. This is true of Akinyele where the concept of immunization has

been well accepted as beneficial preventive health care delivery.

Hypothesis 5: The nearer the location of EPI facilities to mothers place of residence the higher the use EPI.

Statistical measure shows that there is positive relationship between location and use of EPI. But in Akinyele LGA data revealed that regardless of the distance, users always use EPI. The relationship is significant ($P < 0.05$). Location of EPI facilities will influence the use of EPI and this is actually and practically true of Bomadi study area but not statistically significant for Ika. Generally, data showed that distance of EPI facilities is a very important determinant of EPI utilization in both Ika and Bomadi. Hence, we conclude that location of EPI facilities will play significant role in the use of EPI services. It will hinder the use of EPI in places where mobilization effort is not sustained.

5.1.7 Number of Children Aged 0 - 5 years and the Use of EPI

Table 16: Frequency Distribution of Respondents According to Number of Children Aged 0-5 Years and the use of EPI By LGA

NUMBER OF CHILDREN AGED 0 - 5 YEARS	AKINYELE (1)		IKA NE (2)		BOMADI (3)		TOTAL	
	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %
One	100	-	80.3	19.7	83.3	16.7	87.9	12.1
Two	100	-	60.0	40.0	76.4	23.6	78.8	21.2
Three	95.6	4.4	53.8	46.2	65.1	34.9	71.5	28.5
TOTAL	98.8	1.2	54.9	45.1	55.6	44.4	69.8	30.2

1. $x^2(2) = 43.49$ $P<.05$
2. $x^2(2) = 18.93$ $P<.05$
3. $x^2(2) = 20.39$ $P<.05$

Table 16 shows that there is a relationship between the number of children aged between 0 and 5 years which a mother

has and the use of EPI. Although data reveal that use of EPI reduces with increase in the number of children in the household, the effect is not noticeable in Akinyele unlike in Ika and Bomadi. The strength of the relationship is weaker in Akinyele than Ika and Bomadi. This may likely be due to the effective EPI programmes in the area. It may also be due to the kinship system in the area. Nursing mothers may usually enjoy the support of family members. The old woman of the extended family may take care of the grand children. It may also be as a result of availability of day care services which reduce the burden of child caring on nursing mothers. In Ika and Bomadi, day care facilities are not available at all, it is not within the reach of the common people unlike in Akinyele where there are uncountable number of them at affordable costs. Akinyele women are more likely to have access to house-helps and house-maids most of whom may be relatives who have come to live in towns unlike women in Ika and Bomadi who are rural dwellers. Also, grown up children of the family may be of immense assistance to the mothers; apart from the fact that they can take care of themselves, they may also look after the younger ones while mothers are away to get

the nursing baby immunized. This lends support to Davanzo and Lee's (1978) finding that other family members can help in large families.

On the other hand, the strength of the relationship is considerably strong in Ika and Bomadi where data reveal that mothers' motivation to use EPI reduces with an additional child. Thus, this suggests that every additional child will reduce the chance of mothers to use EPI. This is similar to Bouillier's (1976) finding that a baby adds more to the mother's child care time in the household. Most qualitative data support this. For instance, an FGD participant in Akinyele who is a mother of three children remarked:

> "it is very difficult to combine child care with other things especially when they are still young".
>
> (Literate Nursing Mother, 30 years, Civil Servant, 3 Children, Christian, Akinyele).

This shows that age of the children can have significant effect on whether a mother will be able to use EPI or not. This is because while grown up children can help their mothers in household chores, younger ones require the full attention of their mothers. Qualitative data reveal that grown up

daughters in the households usually help in taking care of the younger ones. In fact, this act may be a process of socializing the girls to mothering role.

Also, the time available to mothers with more than one child is very crucial. It is more likely that mothers who work outside the households would be hindered by the time allocated to a programme like EPI which may not have a specific time. Mueller (1984) has argued that time devoted to housework decreases slightly with 2-3 children over smaller households and in larger families children may do some housework thus supplementing mothers' time input. Davanzo and Lee (1978) also express the same opinion in their finding. There is no difference between Ika and Bomadi, responses show that every additional child hinders mothers' chance of going for immunization.

According to the FGD participants, it becomes very difficult to leave the other children at home and go out especially when there is nobody to look after them. For instance, a woman stated:

> "Most of the time I found it difficult to leave home for anywhere because of my children. They are still young and I can't leave them alone."

(Illiterate Nursing Mother, 31 Years, Housewife, 4 Children, Christian, Ika).

Another woman indicated that:

"When children are too young to take care of themselves it is a big job for the mother. But when they grow up the problem is reduced. Sometimes when they are still young and there's nobody to help in looking after them one may not be able to do what is expected of her. It is real work during this period."

(Illiterate Nursing Mother, 37 Years, Housewife, 5 Children, Christian, Bomadi).

Also some educated women in Ika and Bomadi expressed the same opinion. For instance, a woman stated that:

"Child caring is difficult especially when you are working in the office and there is nobody to help. I am facing that problem now. The children are still young and they cannot take care of themselves. I do almost everything for them except sleep and now I am pregnant."

(Literate Pregnant Woman, 30 Years, Civil Servant, 3 Children, Christian, Ika).

But in Akinyele the situation is different. According to a participant:

"Although I don't have any house-help but I take my children to the day care very close to our house. In fact, if not for the day care it would have been very

> difficult for me because I work at the secretariat in Ibadan."
>
> (Literate Nursing Mother, 33 years, Civil Servant, 3 Children, Muslim, Akinyele).

A pregnant woman also stated that:

> "I think I am lucky enough, I have two of my younger sisters who are staying with me. They come to Ibadan to learn trades. They do not go to their places of work the same time. As a result, we do it like shift duty. While I am away to my place of work, at least one of them will be at home. This is a big relief for me because my children are still very young.
>
> (Literate Pregnant Woman, 32 years, Civil Servant, 3 Children, Christian, Akinyele).

Another reason was due to mothers' previous experience with EPI as some of them complain of side effects. It should be noted that utilization declines with second child in Ika and Bomadi. This is explained by qualitative data as a mother of three children in Bomadi indicated that:

> "I stopped going for the immunization exercise because any time I get the injection for my children they always become sick with high fever".
>
> (Illiterate Nursing Mother, 32 years, Farmer, 3 Children, Christian, Bomadi).

Another woman from Ika also expressed similar opinion and

stated that she has stopped going for immunization. In fact, most FGD discussants expressed the same fear of side effects and therefore they attributed low utilization of EPI to the problem of side-effects of the vaccine. They also mentioned the problem of inadequate supply of logistic supports in the areas.

The study suggests that though respondents in Ika and Bomadi are quite aware of EPI services and that they are aware of the probability of their children being vulnerable to the diseases, they have the problem of using the EPI services due to the reasons mentioned above. Mothers of one child tend to be more receptive to EPI in Ika and Bomadi than in Akinyele where such dichotomy is not visible. This shows that the number of children a mother has will influence her use of EPI services.

Hypothesis 6: Every additional child in a family will reduce the use of EPI.

Chisquare statistical test shows a significant relationship between the number of children a mother has to care for and her chance of using EPI. Although there is not much difference between mothers of one child and mothers of

many children in Akinyele there is a significant difference in Bomadi. There is also statistical significant difference in Ika. Therefore, every additional child in a family shows reduction in the rate of EPI utilization in the area.

However, the strength of the relationship is weak but data reveal that marginal increase in the number of children in a family may reduce the rate of EPI utilization. Hence, we conclude that all other things being equal, EPI utilization will reduce as the number of children a mother has to take care of increases. Thus, we accept the hypothesis when we hold health education and mobilization factors constant.

5.1.8 Decision Making About EPI and the Use of EPI

Table 17: Frequency Distribution of Respondents According to Mothers' Involvement in Decision Making About EPI and the Use of EPI By LGA

DECISION MAKING	AKINYELE (1)		IKA NE (2)		BOMADI (3)		TOTAL	
	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %	IMM. %	NOT IMM. %
Father Only	75.0	25.0	54.6	45.4	36.7	63.3	55.2	44.8
Mother Only	99.7	0.3	66.7	33.3	63.6	36.4	76.7	23.3
Father + Mother	95.7	4.3	-	-	54.6	45.4	75.2	24.8
Family Member	-	-	16.1	84.9	-	100	58.1	41.9
None Response	-	100	60.5	39.5	61.8	38.2	80.9	19.1
TOTAL	98.8	1.2	54.9	45.1	55.6	44.4	69.8	30.2

1. $x^2(4) = 112.91$ $P<.05$
2. $x^2(4) = 62.13$ $P<.05$
3. $x^2(4) = 32.39$ $P<.05$

Table 17 above reveals that there is a relationship between decision-making process about EPI and utilization of it. The relationship is more pronounced in Ika and Bomadi than in Akinyele. The relationship may be attributed to the influence of many factors. Women education may likely play an important role in interaction between husband and wife.

Educated women are more likely to have better opportunity to discuss with their husbands than the uneducated ones who always remain subservient to their husband. Generally, data show that more mothers used EPI where they make decisions alone or where they are involved to some extent. This also suggests gender differential in decision-making about EPI. It has been argued that education may increase communication between partners and enables women to be decison-makers as well as to implement important decisions regarding their lives (including their children's welfare) (Windayatun, 1991).

According to FGD participants in Ika, their husbands take most decisions at home. For instance, a woman remarked:

> "There is little one can do about bringing a child for this injection because the decision to take the injection lies with the father."
>
> (Illiterate Nursing Mother, 30 Years, Trader, 4 Children, Christian, Bomadi).

In Ika, a pregnant woman indicated that:

> "I can decide on my own where to deliver the baby. I will go to where my husband says I should go."
>
> (Illiterate pregnant woman, 26 years, Farmer, 1 Child, Christian, Ika).

But on the contrary, some literate mothers revealed that

Educated women are more likely to have better opportunity to discuss with their husbands than the uneducated ones who always remain subservient to their husband. Generally, data show that more mothers used EPI where they make decisions alone or where they are involved to some extent. This also suggests gender differential in decision-making about EPI. It has been argued that education may increase communication between partners and enables women to be decison-makers as well as to implement important decisions regarding their lives (including their children's welfare) (Windayatun, 1991).

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In Ika, a pregnant woman indicated that:

> "I can decide on my own where to deliver the baby. I will go to where my husband says I should go."
>
> (Illiterate pregnant woman, 26 years, Farmer, 1 Child, Christian, Ika).

But on the contrary, some literate mothers revealed that

they tried to prevail on their husbands whenever they want to discourage them from taking the child for immunization. According to a woman:

> "I tried to convince my husband last month when he wanted to discourage me from taking the baby for immunization because he was not happy when the baby became sick after the first immunization."
>
> (Literate Nursing Mother, 30 years, Caterer, 3 Children, Christian, Ika).

Another woman from Bomadi stated that:

> "Myself and my husband always discuss things together. Even the decision for antenatal care is our joint decision. I don't do anything without him and he too. He doesn't force his opinions on me."
>
> (Literate Pregnant Woman, 29 years, Teacher, 2 children, Christian, Bomadi).

But we observed that some women who did not immunize their children fully or did not immunize their children at all in Akinyele were prevented by their husbands and they are uneducated. One of them even revealed that:

> "I like to take my child for the injection but my husband would not allow me. What I do is to go secretly without his knowledge. That is why I could not complete the injection for my baby."
>
> (Illiterate Nursing Mother, 30 years,

Housewife, 3 Children, Muslim, Akinyele).

We also observed a differential between educated men and uneducated men as regards receptivity to EPI. The FGD data revealed that majority of the illiterate male adult participants in Ika and Bomadi were not receptive to EPI. According to some of them it will introduce their wives to family planning, while others complain of side effects. According to a participant:

> "I am not interested in family planning. That is where you make women to be corrupt. When they give the child injection they also give the mother. I don't like it."
>
> (Illiterate male adult, 45 years, Farmer, 3 Children, Christian, Ika).

This shows the extent to which some of the illiterate participants displayed ignorance of EPI. But on the contrary educated men, though few, show some high level of receptivity to EPI in the areas. For instance, a man stated that:

> "Yes I like EPI because it helps to prevent diseases. Children are not dying as it used to be in the past. It is a good effort which must be commended."
>
> (Literate Male Adult, 40 years, Teacher, 5 Children, Christian, Ika).

Another man even remarked:

> "Since they bring this immunization, things have changed. There is no more problem of 'Ogbanje' (Born-to-die). I make sure that all my children are immunized."
>
> (Literate Male Adult, 43 years, Civil Servant, 5 Children, Christian, Bomadi).

But some illiterate men in Akinyele are very receptive to EPI. According to them EPI is a good thing. For instance:

> "Though I cannot read or write but from what I hear about this injection I think it is a very good thing."
>
> (Illiterate Male Adult, 46 years, Farmer, 5 Children, Christian, Akinyele).

Another man also stated that:

> "I think this injection is very good. I have heard much about it on the radio and television. I make sure that my children are immunized."
>
> (Illiterate Male Adult, 40 years, Farmer/Mechanic, 4 Children, Muslim, Akinyele).

From this, one can conclude that intervention programme like health education has removed the problem of illiteracy in Akinyele. This is because formal education can only help an individual in getting access to information about EPI as an innovation but the use of it can only be induced by health

education about it. This is obvious in Akinyele where health education about EPI has removed the constraints of uneducated potential users.

Another reason why women can influence decision about EPI is because it is a free service. It has been found that when treatment was less costly, Ibadan men often described their wives as increasingly disobedient, by which they mean that the women sought treatment for their children and themselves without consulting them, while formerly they always used to ask their husbands' permission about such important matters (Maclean, 1976). This is supported by qualitative data which revealed that more women did not consult their husbands before they take their children for immunization. Data show high degree of apathy to EPI. This is likely due to the fact that family members may suggest family rituals e.g. where they believe in evil spirits and the practice of traditional religion and home remedies especially the aged members.

Generally, the data show that when fathers are highly involved in decision-making about EPI, rate of utilization becomes reduced. The difference between Ika and Bomadi is that there is no response indicating that fathers and mothers

make joint decisions about EPI in Ika. It may be because male dominance is more predominant in Ika than Bomadi and Akinyele. Also, more of the Ika fathers are receptive to EPI than Bomadi fathers. It shows cultural difference between the two areas, in that, Ika men are more likely to be liberal in decision-making than Bomadi men. This is why the data is not practically significant for Bomadi.

Hypothesis 8: Mothers who are more involved in making decisions about EPI will use EPI more than those not involved.

Chisquare test shows significant relationship between the two variables. It shows that the more mothers are involved in making decisions about EPI, the more the use of EPI. However, the strength of the relationship is not so strong because of the influence of mobilization prorammmes which reduces the effect of apathy. Hence, we conclude that adequate health education programme will promote the use of EPI regardless of mothers' rate of involvement in decision making about EPI at the household. This is because the fathers who usually take final decisions about EPI may take cue about the use of EPI from health messages received and therefore become receptive to it. They will become rational about EPI as a preventive measure for the childhood killer diseases.

CHAPTER SIX

SUMMARY, CONCLUSION AND IMPLICATIONS

6.1 SUMMARY

The study proposed that certain sociocultural factors will influence the use of EPI. Consequently, it aimed at examining the extent of such influence on utilization of EPI. It also investigated the level of EPI utilization as well as awareness programmes about EPI. And lastly, it examined the factors that are likely to encourage the use of EPI regardless of the prevailing sociocultural barriers.

The main respondents of the study are mothers who have given birth to at least a child in the last five years. A combination of field methods were used. These were indepth interview, focus group discussion and the structured interview techniques. Indepth interviews were conducted with key informants in the study areas. Forty informants were interviewed in each LGA. The focus group discussions elicited information from certain categories of people organized to discuss the theme of the study. Each discussion session comprised between 6 and 12 participants who have common social characteristics, and the structured interview method was used

to gather information from eligible female members at the household level. A case study of 50 children was conducted in each LGA to determine the immunization status of well and poorly immunized children.

Sample selection was at four levels. The first was the purposive selection of Oyo and Delta States from among the seven states constituting the B Zone of the PHC. The second level was the purposive selection of three LGAs - Akinyele - being a success area and a Yoruba community in Oyo State, and Ika and Bomadi, Ibo and Ijaw communities respectively in Delta State both of which are considered less successful areas. The third level was statistical random selection of 30 EAs from each of the LGAs for sampling. Lastly, 20 eligible households were randomly selected in each EA. Before embarking on the selection process, pilot and pretest surveys were carried out.

About 1,600 eligible mothers were interviewed at the household level. Not all the questionnaires returned were valid for analysis. One thousand five hundred and fifty four (96.2%) questionnaires were considered valid and analysed. The distribution is as follows - 500 in Akinyele, 550 in Ika and 504 in Bomadi. The questionnaire contained attitudinal

and behavioural variables designed to examine the attitudes of mothers towards EPI as well as their perception of diseases. The responses are combined into composite indices of knowledge, attitude, beliefs and practices related to EPI. In addition, information were obtained on mothers' age, educational status, religious affiliation, number of children 0 - 5 years, distance of EPI facilities from mothers' residence, and mothers' involvement in decision making process about EPI in the household. Also, we examined the sources of information for EPI, disease episode and treatment plans, community participation as well as strategies for overcoming the sociocultural barriers inhibiting the use of EPI.

Results from the study show that majority of the respondents (60.0%) are between 30 and 49 years of age. More than 2/3 are christians and a considerable proportion are muslims (27%). Majority of the respondents have low education usually below secondary school (37.3%) and a considerable proportion (30.5%) have no formal education. Only 20% have secondary education and about 11.5% have post-secondary education. However, respondents in Akinyele and Bomadi are more educated than respondents in Ika. Majority of Ika

respondents (46.2%) have no formal education in contrast to Akinyele (21.6%) and Bomadi (22.2%).

Farming is the major occupation of the people. However, several other occupations are also practised. More than half of the respondents (56.3%) live more than 5km away from the nearest EPI facility. This is however contrary to the WHO recommendation for acceptable location of health facilities from consumers' place of residence.

One hundred and twenty key informants were interviewed for the indepth interview. In each LGA, 40 informants were interviewed. About 180 people participated in the 36 FGD sessions conducted in the study areas.

The study used the health belief model (HBM) as the theoretical framework. A number of hypothesis were stated and tested. Chisquare statistical measure was used to test the hypotheses. It shows the relationship between the dependent variable (the use of EPI) and the independent variables (sociocultrual factors).

The study revealed that respondents were quite aware of EPI in Akinyele than Ika and Bomadi. Generally, awareness level was very high in the study areas. But there was no

adequate knowledge of EPI in Ika and Bomadi like Akinyele. There was no significant difference between sociocultural characteristics of mothers of well and poorly vaccinated children in Akinyele but such difference exists in Ika and Bomadi. Information sources about EPI differ among the study areas. Nearly all respondents in Akinyele have access to radio or television apart from other public enlightenment programmes (PEP) by health providers. Only very few proportion of Ika and Bomadi respondents have access to either radio, television or public enlightenment programmes (PEP).

Perception of EPI diseases also differ among the study areas. Most respondents in Akinyele attributed the diseases to natural causes while majority of the Bomadi respondents indicated that they have no knowledge of the cause. However, the use of EPI was higher in Akinyele (98.8%) than in Ika (54.9%) and Bomadi (55.6%). Disease episode was greater in Ika and Bomadi than in Akinyele. Apart from occasional episode of measles and whooping cough in Akinyele - (34%) and (15.8%) respectively, almost all the EPI diseases are still prevalent in Ika and Bomadi as indicated by respondents.

More respondents in Akinyele participated in EPI

programmes than Ika and Bomadi respondents. Their participation include, getting involved in mobilization programme, building of health centres and contribution of money.

The study revealed that sociocultural factors hinder the use of EPI irrespective of cultural and ecological diversities. Age of mothers and number of children are inversely related to EPI utilization. We observed a relationship between education, religious affiliation, occupation, decision making about EPI, and location of EPI facilities and the use of EPI. Hence, we conclude that the effects of sociocultural factors may be reduced or eliminated if adequate health education and mobilization programmes are put in place. Also, we observed that sociocultural factors have no significant effect in places where EPI facilities are adequately present and easily accessible. Generally, majority of the mothers are very receptive to EPI.

6.2 CONCLUSION

The study confirms the assumption that sociocultural factors are barriers to the use of EPI. The role of health education and mobilization programmes is very important. The

study shows that people will use EPI if EPI facilities are available and easily accessible. However, regardless of the availability of and accessibility to EPI facilities some people will still not use EPI. This, perhaps, may be explained in terms of differential sociocultural factors or differential personal characteristics.

Health education and mobilization programmes have been identified as potential catalysts to reduce the influence of sociocultural factors on the use of EPI. Also, social support to help women incorporate the task of having their children immunized into their daily activities is desirable. One suggestion from an informant is that neighbourhood meetings be called regularly in which women who have had their children vaccinated would be invited to tell other women about what they learned and experienced at the clinic - "mothers will enlighten other mothers". In addition, the suggestion made by another informant from Ika area is that:

> "the health workers should come to the villages often and often and call women together to speak to them about the benefits of immunization and remind them of the immunization days".

This shows that group meetings will create social support

and motivation among women who face the difficulties of using EPI services better than individual home visits.

It is also noted that "husband dominating opinion" is also a barrier to decision-making process. It is therefore suggested that, husbands should be sensitized to the programme. This means that, health education talks on EPI should not only be designed for mothers alone but also for fathers who play significant roles in family health decision-making. Thus, the need for research in this area.

It is also suggested that health workers should go into the communities to record every single infant in need of vaccination. This can be done through birth record which can be established with and kept by Ward Heads, Voluntary Health Workers (VHW) and health workers in the various health centres. This will enable the goal of immunization to reach the real customers and not the people who merely walk through clinic doors only. It will also enhance ordered and regular contact between health services and every family.

6.3 IMPLICATIONS

6.3.1 Theoretical Implication

In this study, a combination of health belief model (HBM) and Weberian Social Action Theory were used to explain the data. This study has demonstrated that mothers perceive children as vulnerable to the childhood killer diseases and that their children may fall victim. The theory helps to explain the process of therapeutic choice among the mothers. This has implication for the process of evaluation of various preventive health care options open to them. What is significant is that, their action is not only subjective but also modified by the sociocultural environment. This shows that, any theory which will explain the use of preventive health services will not only focus on the user alone but also the sociocultural context within which he/she interacts.

The study also reveals that, although users may reflect on their life experiences but such experiences are likely to be influenced by the degree of cosmopolitness of the individuals through which they had been exposed to adequate information sources.

6.3.2 Methodological Implication

A combination of field techniques were used in this study. They are indepth interview, focus group discussion, structured interview and the case study. These techniques afforded the researcher to have close interaction with the community to share their experiences and problems in connection with the EPI programme. They also afforded us to examine why there is high coverage of EPI target population in Akinyele and low coverage in Ika and Bomadi. The techniques help to show the relationships between sociocultural variables and the use of EPI which might not have been possible if only a single technique was used.

Apart from the fact that the techniques elicited information from respondents, they also afforded the researcher the opportunity to observe and take note of important and relevant covert behaviours of respondents. The techniques are able to synthesize the predictive behaviour of users. We are able to discover that if EPI services are to be utilized, then, adequate attention must be given to importance of social, structural and behavioural factors, apart from logistic supports, which shape the perception of the users and

the relationships between the providers, consumers and the community members. The implication is that, to help find solution to the problem of low utilization of EPI, health planners should be sensitized to the need for complementarity of research methods in exploring social and behavioural characteristics of the users.

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APPENDIX II

STUDY GUIDE

INDEPTH INTERVIEWS WITH POLICY MAKERS AND OPINION LEADERS

1. In what ways do you think a community can participate in any matter relating to the health of its people?
2. Which of these has this community been involved in?
3. When the EPI programme was introduced into this community, was there any attempt to involve the community?
4. If Yes, in what way(s)?
5. What was your opinion of this attempt then?
6. Have you ever been involved in community participation?
7. Please tell us what actually happened when you were there?
8. Can you say that people in this community use EPI services very well? If not, why? And if Yes, how?
9. Can you say that EPI programme is fulfilling its objectives in this community? If not why?
10. Do you think there are some illnesses that cannot be cured by modern medicine? Name them and tell us the cause, prevention and treatment plan in this community?
11. How do people in this community get information about health programmes?
12. Which one do you think is the best to use to propagate health messages in this community?
13. What do you think are the major constraints to utilization of health services in this community?

14. Is the community ready to remove the constraints? How?

15. What do you think can be done to improve utilization of EPI services here?

16. What do you think the community can do to improve mother and child health welfare in this community?

17. What has the community done before to help health programme in this area?

18. What can the government do to improve health care delivery services in this area?

APPENDIX III

INDEPTH INTERVIEW WITH IMPLEMENTATORS

Name of Community: _____

Local Government: _____

Name of Respondent: _____

Date of Interview: _____

1. The Federal Government and UNICEF have given much support to the propagation of EPI in this country. How far have you gone in this LGA?

2. What have been the major constraints to implementation?

3. What is the present management structure for Health? (Obtain Organogram).

4. Is there any organized health committee in the LGA; at the district and community level?

5. Which interest group do members represent? (Please list them).

6. Please list the activities of the health committee.

7. Please list the past and on-going EPI programmes?

8. What are the major constraints on programme implementation? What have you achieved?

9. Is there a health plan for this LGA? (Obtain a copy and compare it with submit Goals and new programme of co-operation)

10. In what ways has this LGA mobilised the Communities for health development?

11. In what ways do you think that the current programmes

can be improved?

12. Can health development be achieved through a cost recovery programme in the LGA?

13. How best can such a programme be organized?

14. What are the major health needs of the communities in this LGA?

15. What are the major requirements for meeting these needs? Specify the following requirements:

    Personnel

    Training

    Equipment (Type, Quality and Purpose)

    Finance

    Social Sector Support.

APPENDIX IV

FOCUS GROUP DISCUSSION STUDY GUIDE

Moderator: We are visiting your community on behalf of a team of researchers at the Department of Sociology, University of Ibadan to find out People's health problems and health practices. it is important for us to document your experiences in order to provide the right assistance. We will also like to know how your Community has been contributing to its own development and the roles it can play in future. We humbly request that you give us some time for this discussion.

1. How do people here know when a child is healthy?
2. How do they know when a child is ill?
3. How do people here keep a child healthy, protect or prevent him/her from illness.
4. What are the most common illnesses of children here? For each illness, record the following information:
   (a) Name of illness, its variants and other names.
   (b) Occurrence (usual time of year when it occurs)
   (c) Symptoms
   (d) Causes

(e) Treatment (what is usually done and by whom)

(f) Prevention

(g) If Measles, Tuberculosis, Diphtheria, Tetanus, Whooping Cough, Tuberculosis and Tuberculosis are not mentioned, then ask and record the above information requested in 4(a) -(f) for each one).

5. What are the common illnesses of women? (Record 4(a) - (f) for each one).

6. How often do people use Public Health Facilities for children's illnesses and for pregnant and nursing mothers?

7. What are the problems associated with the free use of the facilities?

8. In what ways can this community improve the health of women and children?

9. What do people know about Expanded Programme on Immunization (EPI)?

10. Do people believe that immunization vaccines do prevent childhood diseases? if not, what is their believe about it?

11. What are the major problems facing children from getting immunized here?

12. How do you think these problems can be solved?

13. What do people like most about Immunization?

14. What do people hate most about Immunization?

15. Which medium is generally used for disseminating information?

16. Which one would be best for EPI programmes?

17. What is your opinion of the new population policy of four children per mother?

18. Please tell us the health projects that have been supported by this community (not one man projects) (Ask the group to identify other community projects e.g. government initiated projects).

19. In what ways can your community contribute to its own health development during the next few years or so?

20. What general comment do you have on immunization?

APPENDIX V

HOUSEHOLD SURVEY QUESTIONNAIRE SCHEDULE

Department of Sociology,
University of Ibadan,
Ibadan.

Dear Respondent,

C O N S E N T L E T T E R

I am a research student in the Department of Sociology, University of Ibadan. I am carrying out a study on "The Use of Expanded programme on Immunization (EPI)" this Local Government Area. It is directed at women aged 15 and above who have given birth to at least a child in the last 5 years. I request that you answer the following questions truthfully. Information given would be treated as strictly confidential and will be used for academic purpose only.

Thank you for your co-operation in advance.

JEGEDE, A.S.

HOUSEHOLD SURVEY

Name of Town/Village: _____

Enumeration Area Number: _____

Household Number: _____

SECTION ONE: SOCIODEMOGRAPHIC DATA

NOTE: (Please tick { } or fill the appropriate space for correct answer for the following questions.)

1. How old are you now? _____

2. What is your religion?

   (a) Christianity { } (c) Traditional { }

   (b) Islam { } (d) No Religion { }

3. If you are a Christian, then what is your denomination?

   _____

4. What is the highest school level you completed?

   (a) No School { } (e) OND/NCE { }

   (b) Primary School { } (f) HND/B.Sc/B.A { }

   (c) Some Secondary { } (g) Higher Degree(s) { }

   (d) Completed Secondary { }

5. How many wives does your husband have?

   (a) One { } (b) More than one { }

6. What is your occupation?

   (a) Unemployed { } (e) Civil Service Job { }

   (b) Farming { } (f) Artisan { }

   (c) Trading { } (g) Professional { }

   (d) Teaching { } (h) Other (Specify) _____

7. How old is your marriage now? _____

8. What is your income per year from all sources?

   (a) Less than ₦2000 { } (d) ₦6000-₦8000 { }

   (b) ₦2000-₦4000 { } (e) ₦8000-₦10000 { }

   (c) ₦4000-₦6000 { } (f) ₦10000 and above { }

9. Is any of your household member old enough to work apart from you and your husband?

(a) Yes { } (b) No { }

10. What ethnic group do you belong to?
    (a) Yoruba { } (c) Hausa { }
    (b) Igbo { } (d) Others (Specify) _____

SECTION TWO: MATERNAL AND CHILD HEALTH CARE (MCH)

11. Did you use maternal and child health care services when you were pregnant?
    (a) Yes { } (b) No { }
12. Did you use maternal and child health care services after child birth?
    (a) Yes { } (b) No { }
13. Who assisted you during the last birth?
    (a) Doctor { } (d) Friend/Neighbour/Relative { }
    (b) Nurse/Midwife { } (e) Others (Specify) _____
    (c) Traditional Birth Attendant { }
14. How long did you breastfeed your last baby? _____
15. Did you use ORT/ORS for children with diarrhoea?
    (a) Yes { } (b) No { }
16. At what age did you have your first child? _____
17. Have you heard of child spacing before?
    (a) Yes { } (b) No { }
18. How many children have you given birth to?
    (Both living and dead) _____
19. How many of these children are still alive? _____
20. How many died before their 1st birthday? _____
21. What was the cause of the death? _____
22. At what age does your child eat other food? _____

23. When do you wean your child? _____

SECTION THREE: USE OF EXPANDED PROGRAMME ON IMMUNIZATION (EPI)

24. Are you immunized against Tetanus?
    (a) Fully immunized { }
    (b) Partially immunized { }
    (c) Not immunized at all { }

25. Has your last baby received the following vaccines?

BCG	POLIO	DPT_3	MEASLES

(Please record as for 24 for each vaccine).

26. Has any of your children had any of the following diseases?
    (a) Measles (i) Yes { } (ii) No { }
    (b) Polio (i) Yes { } (ii) No { }
    (c) Tuberculosis (i) Yes { } (ii) No { }
    (d) Tetanus (i) Yes { } (ii) No { }
    (e) Whooping Cough (i) Yes { } (ii) No { }
    (f) Diphtheria (i) Yes { } (ii) No { }

27. If yes for any of them where did you get treatment for the latest case?
    (a) At home { }
    (b) PHC/CHC { }
    (c) Private Hospital { }

(d) General/State Hospital { }
(e) Traditional Medicine { }
(f) Spiritual Church { }

28. What do you think was the cause of the last episode?
(a) Natural Cause { }
(b) Supernatural Cause { }
(c) mystical Cause { }

29. If you did not complete your doses for immunization, Why didn't you complete them?
---

30. Why don't you immunize your child at all?
---

31. Do you think immunization is useful?
(a) Yes { } (b) No { }

32. What do you like most about immunization?
---

33. What do you hate most about immunization?

SECTION FOUR: INFORMATION PROCESS ABOUT EPI

34. Have you heard of health messages in the last few months?
(a) Yes { } (b) No { }

35. What was your source of information?
(a) Radio { }
(b) Television { }
(c) Both A & B { }
(d) Newspaper and Magazine { }
(e) Public Address System Van { }

(f) Community Meeting { }
(g) House to House Visit { }
(h) Health Centre { }
(i) All of the above { }

36. How often do you listen to Radio?
(a) None { } (c) 2 or 3 times a week { }
(b) Once a week { } (d) Everyday { }

37. How often do you watch television?
(a) None { } (c) 2 or 3 times a week { }
(b) Once a week { } (d) Everyday { }

38. How often do you read Newspaper?
(a) None { } (c) 2 or 3 times a week { }
(b) Once a week { } (d) Everyday { }

39. Do you have a radio or television in your house?
(a) Yes { } (b) No { }

40. Have you attended any meeting where they discuss health matters before?
(a) Yes { } (b) No { }

41. Has the health messages you heard influenced how you manage the health of your household?
(a) Yes { } (b) No { }

SECTION FIVE: HOUSING UNIT FACILITIES

42. With what type of material was your house built of?
(a) Cement Block { } (c) Wooden Material { }
(b) Mud Block { }

43. Do you have electricity in the house?
(a) Yes { } (b) No { }

44. What is the source of water supply to the housing unit?

(a) Pipe Borne Water { } (c) Borehole { }
(b) Well { } (d) Stream { }

45. Do you have toilet in your house (Pit or Water Closet)?
(a) Yes { } (b) No { }

46. How many rooms do your household occupy?
(a) One room { } (c) Flat { }
(b) Room & Parlour { } (d) Duplex { }

SECTION SIX: DECISION-MAKING SCALE OF MARITAL POWER

47. How often do you get involved in deciding on health matters of your household?
(a) None { } (c) Very Often { }
(b) Occasionally { } (d) Often { }

48. Who makes the ultimate decision in the following health related issues?

Husband always	Husband more than wife	Husband and wife exactly the same	Wife more than husband	Wife always
(1)	(2)	(3)	(4)	(5)

Note: (Tick the appropriate one for the correct answer for questions A to I below)

A. Where to see a doctor

1 2 3 4 5

B. Where to go for treatment

1 2 3 4 5

C. When to change a doctor

1 2 3 4 5

D. Type of food to eat on special occasion such as christmas/salah day

1 2 3 4 5

E. Whether or not to continue to breastfeed a child

1 2 3 4 5

F. When to have the next baby

1 2 3 4 5

G. The ultimate number of children to have

1 2 3 4 5

H. Whether or not to inoculate a child

1 2 3 4 5

I. Whether or not you should be inoculated during pregnancy.

1 2 3 4 5

49. Who takes the final decision in any matter in your household?

(a) The husband { } (c) A & B together { }

(b) The Wife { } (d) Family Members { }

SECTION SEVEN: GENERAL

50. How far is the nearest health facility from your house?
---------- (record in km)

51. What type of health facility is it?
---

52. Do you practice child spacing at all?
(a) Yes { } (b) No { }

53. If Yes, what method of birth spacing do you use?
---

54. What is your opinion about the population policy of four children per woman in Nigeria?

BS/HL/1 APPENDIX VI

E.A. MAP INFORMATION SHEET FORMAT

STATE: ..... SECTOR (Urban=1, Rural=2 { }

LGA: ..... LOCALITY: .....

EA: .....

BOUNDARY DESCRIPTION

SKETCH MAP

Source: Adapted from Baseline Data for FGN/UNICEF 1991/95 Country Programme of Co-Operation, January, 1992 Working Manual for Interviews.

BS/HL/2

APPENDIX VII

STRUCTURAL LISTING SHEET FORMAT

Sheet { } of { }

STATE: ..... SECTOR (Urban=1, Rural=2 { }

LGA: ..... LOCALITY: .....

EA: .....

S/N (1)	Address/Description (2)	Use (3)	Remarks (4)

Source: Adapted from Baseline Data for FGN/UNICEF 1991/95 Country Programme of Co-operation, January, 1992 Working Manual for Interviewers.

APPENDIX VIII

HOUSEHOLD SELECTION SHEET FORMAT

STATE: ..... SECTOR (Urban=1, Rural=2 { }

LGA: ..... LOCALITY: .....

EA: ..... Total No. of HHS

Sampling Int. (S.T)

S/N (1)	Address/Description (2)	Name of Head of HH (3)	KAP Sample (4)
01			
02			
03			
04			
05			
06			
07			

08			
09			
10			
11			
12			
13			
14			
15			

16			
17			
18			
19			
20			

Source: Adapted from Baseline Data for FGN/UNICEF 1991/95 Country Programme of Co-operation. January, 1992. Working Manual for Interviewers.

APPENDIX IX

CODING MANUAL

VAR NO	QTY NO	CARD COLUMN	VARIABLE NAMES	CATEGORIES	CODES e.g.
1.	-	1 - 3	Serial Number	(Code Actual	001
2.	-	4	Study Area	Urban Rural	1 2
3.	1	5	Age	15 - 19 20 - 24 25 - 29 30 - 34 35 - 39 40 - 44 45 - 49 50 +	1 2 3 4 5 6 7 8
4.	2	6	Religion	Christianity Islam Traditional No Religion No Response	1 2 3 4 9
5.	3	7	Denomination	Catholic Protestant Pentecostal Spiritual Other NA NR	1 2 3 4 5 0 9
6.	4	8	Highest Level of Education	No School Primary Some Secondary Completed Secondary OND/NCE HND/B.Sc/B.A. Higher Degree(s) NR	1 2 3 4 5 6 7 9

7.	5	9	How many wives does your husband have?	One More than One NR	1 2 9
8.	6	10-11	Occupation	Unemployed Farming Trading Teaching Civil Service Artisan Professional Others NR	1 2 3 4 5 6 7 8 99
9.	7	12	How old is marriage?	Less than 5 yrs 5 - 10 yrs 10 - 15 yrs 15 - 20 yrs 20 - 25 yrs 25 yrs and above NR	1 2 3 4 5 6 9
10.	8	13	Income per year	Less than ₦2000 ₦2000 - ₦4000 ₦4000 - ₦6000 ₦6000 - ₦8000 ₦8000 -₦10000 ₦10000 and above NR	1 2 3 4 5 6 9
11.	9	14	Is any member of household in labour force?	Yes No NR	1 2 9
12.	10	15	Ethnic Group	Yoruba Igbo Hausa Others NR	1 2 3 4 9
			SECTION TWO		
13.	11	16	Did you use MCH care services when pregnant?	Yes No NR	1 2 9
14.	12	17	Did you use MCH care services after child birth?	Yes No NR	1 2 9

15.	13	18	Who assisted during last child birth?	Doctor Nurse/Midwife Trad. Birth Attendant Friend/Neighbour/-Relative Others NR	1 2 3 4 5 9
16.	14	19	How long did you breast-feed last baby?	Less than 6 Months 6 - 12 Months 12 - 18 Months 18 - 24 Months 30 - 36 Months 36 Months and Above NR	1 2 3 5 6 7 9
17.	15	20	Did you use ORT for children?	Yes No NR	1 2 9
18.	16	21	When did you have first child?	15 - 19 20 - 24 25 - 29 30 - 34 35 and above NR	1 2 3 4 5 9
19.	17	22	Have you heard of child spacing?	Yes No NR	1 2 9
20.	18	23	How many children given birth to?	1 2 3 4 5 and above NR	1 2 3 4 5 9
21.	19	24	How many are still alive?	(as above)	-
22.	20	25	How many died before first birthday?	(as above) NA	- 0

23.	21	26	Cause of death	NA Measles Tetanus Tuberculosis Diphtheria Poliomyelitis Whooping Cough Others NR	0 1 2 3 4 5 6 7 9
24.	22	27	At what age does child eat other food?	Less than 6 mths 6 - 12 mths 12 - 18 mths 18 - 24 mths 24 - 30 mths 30 - 36 mths 36 mths and above NR NA	1 2 3 4 5 6 7 9 0
25.	23	28	When do you wean child?	(as above)	-
			SECTION THREE		
26.	24	29	Are you immunized against tetanus?	Fully Immunized Partially Immunized Not Immunized at all NR	1 2 3 9
27.	25	30	Has last bay received BCG?	Yes No NR	1 2 9
28.	25	31	Has last baby received Polio?	(as above)	-
29.	25	32	Has last baby received DPT_3?	(as above)	-
30.	25	33	Has last baby received Measles?	(as above)	-
31.	26	34	Has any of your children has Measles	Yes No NR	1 2 9

32.	26	35	Has child had Polio?	(as above)	-
33.	26	36	Has child had Tuberculosis?	(as above)	-
34.	26	37	Has child had Tetanus?	(as above)	-
35.	26	38	Has child has Whooping Cough	(as above)	-
36.	26	39	Has child had Diphtheria?	(as above)	-
37.	27	40	Where did you treat latest case?	At home PHC/CHC Private Hospital Gen/State Hospital Trad. Medicine Spiritual Church NR NA	1 2 3 4 5 6 9 0
38.	28	41	What caused last episode?	Natural Cause Supernatural Cause Mystical Cause Don't Know NR NA	1 2 3 8 9 0
39.	29	42	If you didn't complete doses of immunization, why?	Mother too Busy No Faith in EPI Fear of Side Effect Unaware of Other Doses Place of Immunization too far Vaccines not available Others NA NR	1 2 3 4 5 6 7 0 9
40.	30	43	Why don't you immunize child?	(Code as above)	-

41.	31	44	Do you think it is useful?	Yes No NR	1 2 9
42.	32	45	What do you like most about immunization?	NA It prevents Diseases It reduces Mother/Child death It encourages Family Planning It improves Mother/Child Health It is cost free NR	0 1 2 3 4 5 9
43.	33	46	What do you hate most about immunization?	NA Herbs are more effective It has side effects Place and time not known Attitude of Health workers NR	0 1 2 3 4 9
44.	34	47	Have you heard of health messages in the last five months?	Yes No NR	1 2 9
45.	35	48-49	What was your sources of information?	Radio Television Both A & B Newspaper Public Address System Community Meetings House to House Visit Health Centre All of the above NR	1 2 3 4 5 6 7 8 9 99

46.	36	50	How often do you listen to Radio?	None Once a week 2 or 3 times a week Everyday NR	1 2 3 4 9
47.	37	51	How often do you watch Television?	(Code Actual as above)	
48.	38	52	How often do you read Newspaper?	(Code Actual as above)	
49.	39	53	Do you have Radio or Television in your house?	Yes No NR	1 2 9
50.	40	54	Have you attended any meeting where they discuss health matters before?	Yes No NR	1 2 9
51.	41	55	Has the health messages you heard made any change to how you manage the health of your household?	Yes No NR	1 2 9
52.	42	56	With what type of material was your house built?	Cement Block Mud Block Wooden Material NR	1 2 3 9
53.	43	57	Do you have electricity in the house?	Yes No NR	1 2 3
54.	44	58	What is the source of water supply to the housing unit?	Pipe Borne Water Well Borehole Stream NR	1 2 3 4 9
55.	45	59	Do you have toilet in your household?	Yes No NR	1 2 9

56.	46	60	How many rooms do your household occupy?	One Room Room and a Palour Flat Duplex NR	1 2 3 4 9
57.	47	61	How often do you get involved in deciding on health matters of your household?	None Occasionally Very Often Often NR	1 2 3 4 9
	48		Who makes the ultimate decision in the following health related issues?		
58.	A	62	When to see a Doctor?	Husband Always Husband More than wife Husband & Wife exactly the same Wife more than Husband Wife always NR	1 2 3 4 5 9
59.	B	63	Where to go for treatment?	As above	
60.	C	64	When to change a Doctor?	As above	
61.	D	65	Kind of food to eat on special occasion such as christmas	As above	
62.	E	66	Whether or not to continue to breastfeed a child?	As above	
63.	F	67	When to have the next baby?	As above	
64.	G	68	The ultimate number of children to have?	As above	
65.	H	69	Whether or not to inoculate?	As above	

66.	1	70	Whether or not you should be inoculated during pregnancy?	As above	
67.	49	71	Who takes the final decision in any matter in your household?	The Husband The Wife A & B together Family Members NR	1 2 3 4 9
68.	50	72	How far is the nearest health facility from your house?	Less than 1km 1 - 2km 2 - 3km 3 - 4km 4 - 5km More than 5km NR	1 2 3 4 5 6 9
69.	51	73	What type of health facility is it?	Dispensary Maternity Health Clinic/Centre Comprehensive Health Centre General Hopital Specialist Hospital Teaching Hospital Private Hospital NR	1 2 3 4 5 6 7 9
70.	52	74	Do you practice child spacing at all?	Yes No NR	1 2 9
71.	53	75-76	If yes, What method of birth spacing do you use?	Condom Oral Contraceptives Injection IUDs Vasectomy Female Sterilization Creams/Foams Rhythm Withdrawal Abstinence Any Method NR	1 2 3 4 5 6 7 8 9 10 11 99

72.	54	77	What is your opinion of the population policy of four children per woman?	It is a good idea It is a bad idea NR	1 2 9

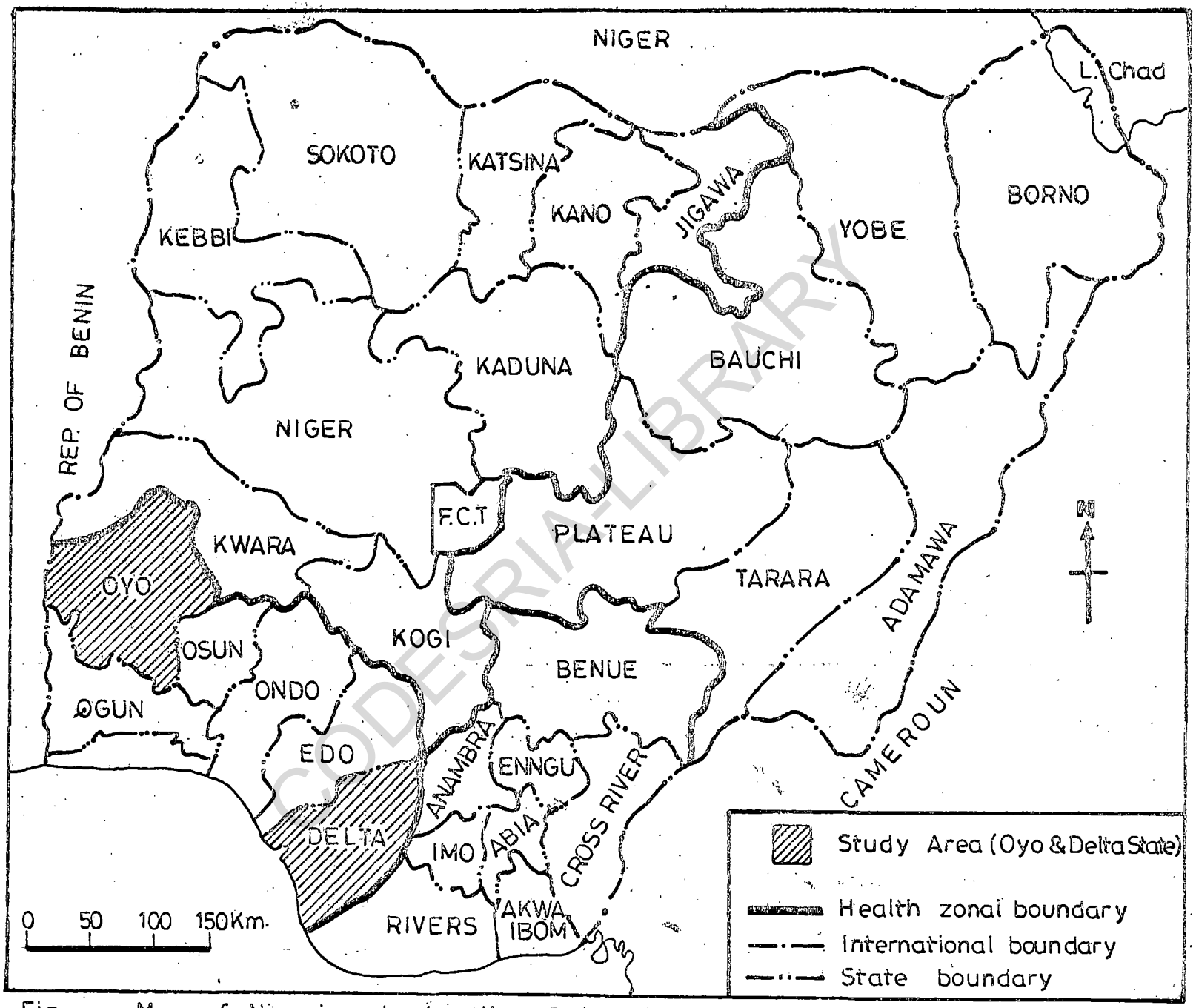

Fig. : Map of Nigeria showing the B health zone and the sampled areas

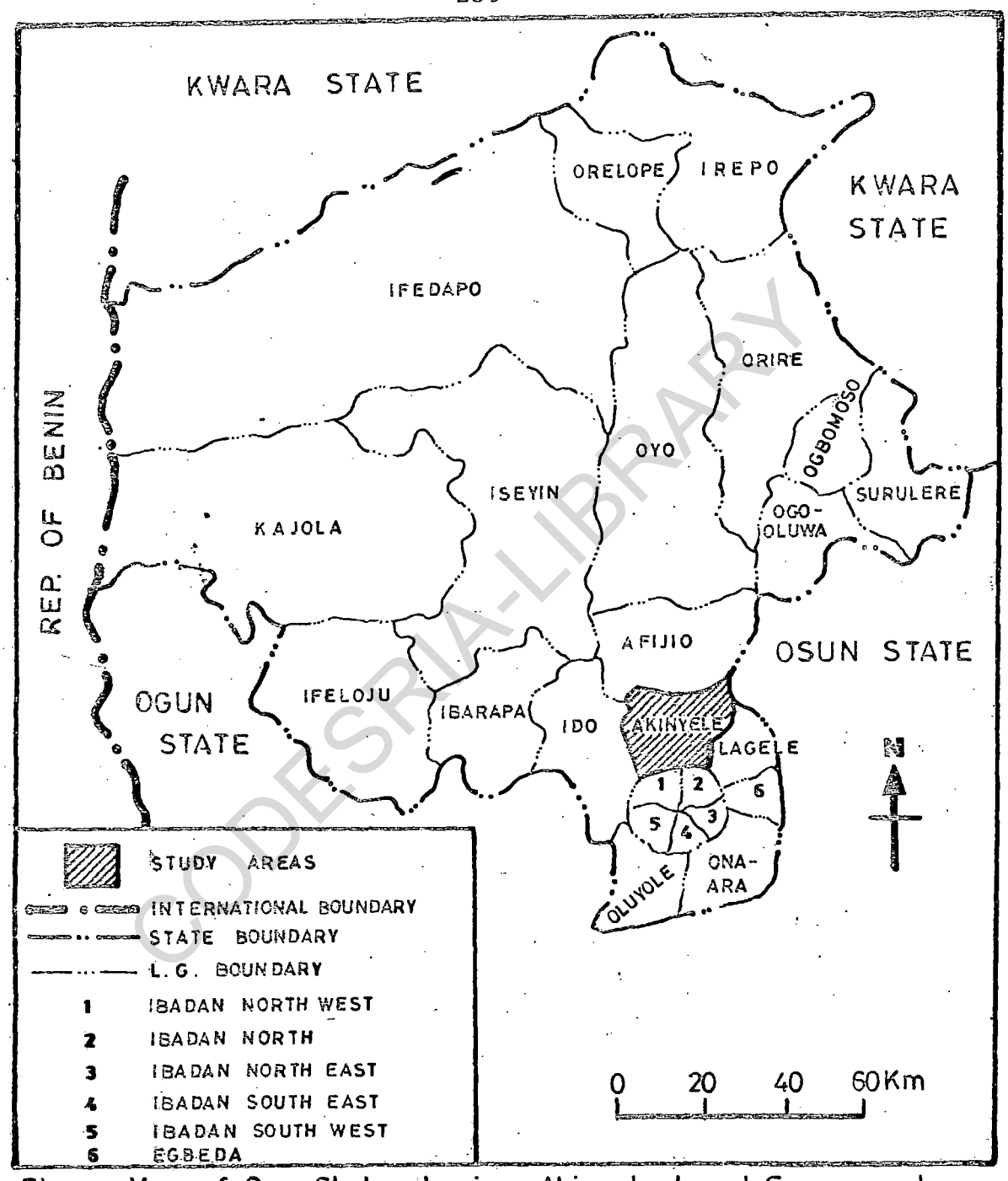

Fig : Map of Oyo State showing Akinyele Local Government Area

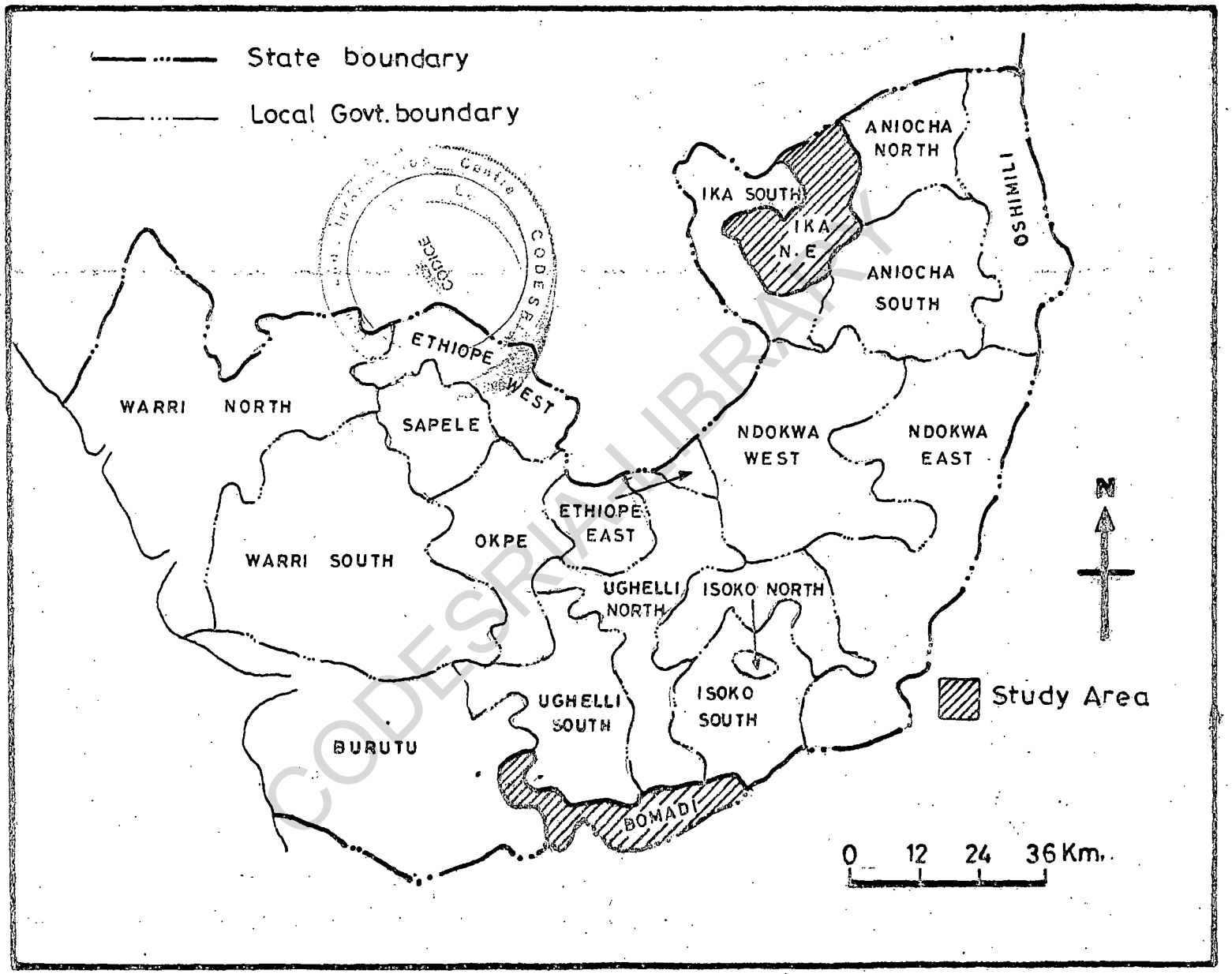

Fig. : Map of Delta State showing Bomadi and Ika N.E. Local Government Area