UTILIZATION OF HEALTH CARE FACILITIES AMONG SELECTED COMMUNITIES IN RIVERS STATE, NIGERIA

BY

DANIEL U.S. ONYETULEM

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A THESIS SUBMITTED TO THE DEPARTMENT OF PUBLIC HEALTH, SCHOOL OF HEALTH TECHNOLOGY, FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI, IMO STATE

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MARCH, 2026

CERTIFICATION

CERTIFICATION

This is to certify that this work "Utilization of Health Care Facilities in Some Selected Facilities in Rivers State, Nigeria" was carried out by Daniel U.S. Onyetulem , Reg. Number 20094738478 in partial fulfillment for the award of MPH (Environmental Health & Safety) in the Department of Public Health, Federal University of Technology, Owerri.

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DEDICATION

This thesis is dedicated to my beloved Mother, Ezinne, Nneora Paulina N. Steven Onyetulem her prayers, words of encouragement and understanding throughout my years of academic sojourn.

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TABLE OF CONTENTS

LIST OF TABLES

Table Page

ABSTRACT

This study examined the utilization of healthcare facilities in selected rural communities of Rivers State, Nigeria, with emphasis on patterns of use, determinants of underutilization, and the influence of socioeconomic factors. A cross-sectional descriptive design was adopted. Data were collected using structured questionnaires administered to 400 respondents across 10 Local Government Areas, of which 366 valid responses (91.5%) were analyzed using descriptive and inferential statistics. Results revealed that alternative medical centres were the most commonly utilized first point of care (35.2%), followed by patent medicine stores (27.9%), while only 12.3% and 7.6% of respondents patronized basic health centres and primary health care centres, respectively. A substantial proportion of respondents reported underutilization of modern health facilities to a very large (28%) and large extent (30%). Key reasons for non-utilization included unkempt facility environments (52.9%), lack of equipment and laboratory services (50.3%), poor staff–patient relationships (39.5%), and absenteeism of doctors (35.7%). Poverty emerged as the most significant barrier to utilization (98%), followed by high cost of modern healthcare services (90%). Nearly half of the respondents (49%) earned between ₦200,001 and ₦300,000 per annum, while 38% earned below ₦200,000, underscoring the role of low income in healthcare decisions. Statistical analysis demonstrated a strong positive relationship between underutilization of health facilities and poor health status ($r = 0.98$), as well as between low income and underutilization ($r = 0.96$).The study concludes that underutilization of modern healthcare facilities in rural Rivers State is driven largely by economic constraints and systemic deficiencies. Strengthening primary healthcare services through improved infrastructure, staffing, affordability, and service quality is essential to enhance utilization and health outcomes.

Keywords: Utilization, Healthcare facilities, Communities, Rivers State, Nigeria

CHAPTER ONE

INTRODUCTION

1.1 Background information

Health is a social right, and governments should prioritize it (Dorjdagva, Batbaatar, Svensson, Dorjsuren, Batmunkh, & Kauhanen, 2017). Besides, the utilization of health care services is fundamental to healthy living, socio-economic and infrastructural development (WHO, 2014). However, health care utilization is influenced by certain characteristics including the availability of healthcare facilities (WHO, 2014; FMOH, 2015). More so, availability has a wide dimension which entails distance, accessibility, awareness, transport, language, cultural barrier, and preference. Others are the cost of health care service, and quality of service provided by health care personnel (Abdulraheem, Oladipo, & Amodu, 2012).

The World Health Organization emphasizes that attaining the highest possible level of health requires coordinated action not only within the health sector but also across multiple social and economic sectors that shape the social determinants of health, including education, housing, income, and the physical environment (World Health Organization [WHO], 2018; WHO, 2023). Furthermore, Nigeria operates a three-tier health system anchored on Primary Health Care (PHC), which serves as the first point of contact for individuals, families, and communities (Ogunyemi, Balogun, Ojo, Welch, Akeju, Onasanya, Omotayo, Shu-Ting, & Hirschhorn, 2025). PHC is designed to bring essential health services closer to where people live and work and to serve as the foundation for referral to secondary and tertiary levels of care (WHO & UNICEF, 2018). However, there are only about 20% of Nigeria's 30,000 PHC centers operational (Aregbeshola & Khan, 2017). With evidence indicating that PHC coverage in rural Nigeria remains inadequate. Shortages of skilled health personnel, poor

infrastructure, limited essential drugs, and insufficient financing have undermined effective service delivery in many rural communities (Aregbeshola & Khan, 2018; Okedo-Alex, Onwujekwe, Uzochukwu, & Eze, 2023). Furthermore, PHC delivers person-centered, accessible, and preventive care that forms the foundation of a resilient health system for the purpose of improving population health, achieving health equity, and meeting global health targets (Kruk, Gage, Arsenault, Jordan, Leslie, 2018). Moreover, most PHC centers in Nigeria cannot deliver fundamental healthcare services due to staffing, equipment distribution, quality infrastructure, and drug supply concerns (Abdulraheem, Olapipo, & Amodu, 2012). Furthermore, historically, Nigeria's health system has been characterized by structural weaknesses, including inadequate rural coverage, overemphasis on curative rather than preventive care, and limited community participation in health decision-making (Federal Ministry of Health [FMoH], 2016). These challenges have contributed to persistent poor health outcomes, as reflected in indicators such as maternal and child mortality, infant mortality, and life expectancy, especially among rural populations (National Population Commission [NPC] & ICF, 2019).

In many rural communities, particularly in low- and middle-income countries, illness is often interpreted through cultural and spiritual lenses, with health-seeking behaviour shaped by traditional beliefs, norms, and social structures (Helman, 2022). Consequently, many rural residents continue to rely on traditional healers and informal healthcare providers as their first point of contact when illness occurs. Also, studies have shown that a substantial proportion of rural Nigerians lack regular access to well-equipped health facilities, making traditional medicine a more readily available and culturally acceptable option (Onwujekwe, Obi, Ichoku, Ezumah, & Hanson, 2019; Okedo-Alex et al., 2023). This pattern contrasts with primary healthcare systems in most developed countries, where PHC typically involves early contact

with trained medical practitioners such as general physicians or family doctors rather than traditional healers.

This sociological perspective aligns with Parsons' concept of illness as a form of social disruption, where sickness affects not only the individual but also the functioning of the wider social system (Cockerham, 2021). At the global level, efforts to improve population health were reinforced through the Millennium Development Goals (MDGs), which prioritized reductions in child and maternal mortality and control of infectious diseases. These goals were succeeded by the Sustainable Development Goals (SDGs) in 2015, with Goal 3 specifically aimed at ensuring healthy lives and promoting well-being for all at all ages (United Nations, 2015). Despite these commitments, Nigeria continues to face significant challenges in achieving universal health coverage, particularly for rural and marginalized populations. Although policy frameworks such as the National Health Act were introduced to strengthen healthcare financing and governance, their impact has been uneven, and gaps in implementation persist (Akinwale, Abiodun, & Adebayo, 2022). Persistent inequities in the distribution of healthcare facilities and personnel, combined with widespread poverty, further limit the utilization of modern health services in rural areas. Many rural dwellers are unable to afford the cost of orthodox medical care and may hold beliefs that certain chronic or "diseases of affluence," such as hypertension, stroke, and cancer, are better managed through traditional or spiritual means. Given these challenges, inadequate utilization of available healthcare facilities remains a critical public health concern. Understanding the factors that influence health-seeking behaviour and utilization patterns is therefore essential for strengthening the health system. This study is designed to examine the utilization of healthcare facilities among selected communities in Rivers State, with particular emphasis on rural areas, in order to generate evidence that can inform policy, planning, and equitable health service delivery.

1.2 Statement of the Problem

Poor health care delivery is a problem in Nigeria. The reports on health indicators such as maternal and child health infant mortality rates, among others, are high, and life expectancy is still at a low level. In addition, communicable /preventable diseases are prevalent such as malaria, typhoid fever and childhood diseases and non-communicable diseases known as the disease of affluence, namely; hypertension, diabetes, heart and renal diseases etc. World Health Organization (WHO, 2007) stated that despite the success of the National Programme on Immunization (NPI) and increased Oral Rehydration Therapy (ORT), the under-five(5) mortality is still high (116/1000 live births). Pneumonia and diarrhoeal diseases are the most common causes of death, with malnutrition increasing for children underfive (5) years.

The Nigerian Demographic and Health Survey (NDHS, 2004) reported that children in rural areas in Nigeria experience a 36% higher risk of dying before age five(5) than urban children (131 vs 96 per 1000 births, respectively): The infant mortality rate is 79/1000 stillbirths (WHO, 2007). We have 91/1000 live births; in urban areas, we have 73/1000 live births. (NDHS, 2004). Every year some 12 million children die before the age of five (5); seventy percent (70%) of these deaths are caused by five common preventable or easily treatable childhood diseases: pneumonia, gastroenteritis, measles, malaria and nutritional problems. In Nigeria, malaria is the number one killer disease. It represents a high burden for the health system and is typical for consultation and admission to health facilities. Every year 148,000 children die due to malaria and Acute Respiratory Infections (ARI), mainly pneumonia (UNICEF, 2007).

The Health and Population Department of the Federal Ministry of Health (FMOH, 1998 – 2003) documented that less than 40% of the Population has primary health care (FMOH, 2003). It is evident from such records that Maternal Mortality Rate (MMR), Infant Mortality

Rate (IMR) and under 5 Mortality Rate are still at unacceptable levels. Despite the continued need for maternal and child health services in Nigeria, the utilization of public health facilities remains suboptimal, particularly in rural communities, due to factors such as cost of care, distance to facilities, perceived poor quality of services, and sociocultural influences (National Population Commission [NPC] & ICF, 2019; World Health Organization [WHO], 2022).

Maternal and child mortality remain major public health challenges globally, with the greatest burden occurring in sub-Saharan Africa. Recent estimates show that about 287,000 maternal deaths occurred worldwide in 2020, with approximately 70% of these deaths occurring in sub-Saharan Africa (World Health Organization [WHO], 2023). Nigeria remains one of the countries with the highest maternal mortality burden, accounting for a substantial proportion of global maternal deaths. National estimates indicate a maternal mortality ratio of about 512 deaths per 100,000 live births, reflecting persistent challenges in access to skilled care, quality maternal health services, and utilization of health facilities (National Population Commission [NPC] & ICF, 2019; WHO, 2023). Differences in maternal and child mortality across regions are strongly associated with inequities in access to quality healthcare services, socioeconomic conditions, and availability of skilled birth attendants, particularly in rural communities. Statistics have shown that the poor in developing areas are less likely to receive adequate health care than the rich. It was on this platform that WHO adopted the PHC and urged all governments to formulate national policies, strategies and plans of action to launch and sustain it as part of a comprehensive national health system to assure everybody a level of health that will permit them to lead a socially and economically productive life.

Before now, it has been identified that lack of community mobilization, involvement and participation, distance, costs and informal charges, poverty and misdistribution of health

facilities and personnel have been responsible for the underutilization of health facilities in rural areas (Ogunlesi, 2005). But nobody has said something about the problems affecting health facilities' utilization in rural areas.

1.3 Objectives of the Study

1.3.1 General Objective

The study's primary purpose is to determinants of utilization of healthcare facilities in some selected Local Government Areas in Rivers State.

1.3.2 Specific Objectives

The specific objectives of this Study were to:

i. Examine the extent of utilization of healthcare facilities in the rural areas
ii. Assess the effects of the high cost of modern medicine on the people in rural areas.
iii. Assess the rate and determinants responsible for the non-utilization of modern health care facilities by the people in rural areas
iv. Identify the determinants hindering modern health facilities' practical/full utilization in rural areas.

1.4 Research questions

i. What is the extent of utilization of healthcare facilities in the rural areas ?
ii. What is the effect of the high cost of modern medicine on the people in rural areas ?
iii. What is the rate and determinants responsible for the non-utilization of modern healthcare facilities by the people in rural areas?
iv. What is the determinant hindering modern health facilities practical / full utilization in rural areas.

1.5 Research Hypotheses

The following are the hypotheses formulated to carry out the Study:

i. There is no significant relationship between under-utilization of health care facilities and the poor health status of the people in selected rural areas in Rivers State.

ii. There is no significant relationship between the under-utilization of modern health care facilities and low income of the people in selected rural areas in Rivers State.

iii. There is no significant relationship between the under-utilization of modern health care facilities and patronage of alternative medicine practice by the people in selected rural areas in Rivers State.

1.6 Justification for the Study

Modern health care facilities are adjudged to be the best form to handle health problems because of their practical applicability. However, alternative medicine is helpful in some aspects, especially where modern facilities are not accessible due to cost factors and the protocols involved before attention is given to the sick.

1.6.1 Theoretical Significance

The knowledge gained from this Study will provide empirical evidence on the use of both modern and alternative medicine with a better insight into planning, implementation, monitoring and evaluation of health programmes. In addition, the Study will add to the body of knowledge in medicine, sociology, anthropology, and psychology, which in turn can advance the profession and improve the health status of the people.

1.6.2 Practical Significance

The Study shall equally be of beneficial use to government policymakers and the public sector of the economy for their planning rudiments in the area of modern health facilities. It

shall also contribute to the effective and efficient management of medical-related problems. Finally, the data will serve as baseline information for future researchers and practitioners to reference alternative medicine management and survival propensities for rural communities/dwellers.

The researcher believes that this work will provide researchers, government and policy formulators' insight into the challenges of the performance of modern health care facilities. The policy implication of this Study lies in the fact that modern health care facilities, by their scientific and informative expression nature, play significant roles in the development of human health.

1.7 Scope of the Study

This Study is limited to the description, discussion and evaluation of the utilization of Modern Health Care Facilities in selected communities in Rivers State. Therefore, the scope of the Study is limited to ten (10) LGAs of Rivers state, namely, Ikwerre, Emohua, Etche, Omuma, Khana, Okirika, Bonny, Andoni Opobo/Nkoro and Degema. This research requires relatively substantial financial resources to facilitate a comprehensive study; hence, finance was a fundamental limitation in this Study. Another real limitation faced by the researcher was the time constraint. There was not enough time to embark upon extensive field visits and surveys, data collation, data verification, conduct interviews and compile the detailed research project. The positive response from research respondents was another challenging area during the preparation of this report. Another limitation was the erratic tidal movements to research sites, which can only be navigated by water transport. Despite all these constraints, the findings of the Study are representative enough. Suggestions have been made on how to get the best in the use of both modern health facilities and alternative medicine.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual framework

2.1.1 Utilization of Health Care in Nigeria

Whereas traditional medicine continued to play an important role in Nigeria in 1990, the country made great strides in providing modern health care to its population in the years since World War II, particularly in the period after independence. Among the most notable accomplishments were the expansion of medical education, the improvement of public health care, the control of many contagious diseases and disease vectors, and the provision of primary health care in many urban and rural areas. In recent years, the Government of Nigeria has significantly expanded childhood immunization efforts and strengthened primary health care delivery through large-scale integrated vaccination campaigns and systematic primary health care reforms. For example, in 2025 Nigeria launched one of its largest nationwide vaccination initiatives targeting over 100 million children with vaccines against measles, rubella, and polio while also reinforcing routine immunization services and other essential child health interventions as part of its broader primary health care strategy. These efforts underscore government commitment to increasing vaccine coverage, closing immunization gaps, and advancing universal health goals (WHO, 2025).

Nonetheless, many problems remained in 1990. Sharp disparities persisted in the availability of medical facilities among the regions, rural and urban areas, and socio-economic classes. The severe economic stresses of the late 1980s had severe impacts on the availability of medical supplies, drugs, equipment, and personnel throughout the country. In the rapidly growing cities, inadequate sanitation and water supply increased infectious disease threats. At the same time, health care facilities were generally unable to keep pace with the rate of urban

population growth—several severe outbreaks of infectious diseases during the 1980s, including cerebrospinal meningitis and yellow fever. In rural areas, treatment or preventive immunization was often challenging to obtain. Chronic diseases, such as malaria and guinea worm, continued to resist efforts to reduce their incidence in many areas. Recent national estimates indicate that Nigeria continues to face a substantial HIV/AIDS burden, with approximately 1.9 million people living with HIV and a national adult prevalence around 1.3–1.4 percent. Despite progress in treatment and prevention services, new infections and AIDS-related deaths persist, underscoring the ongoing public health challenge posed by HIV/AIDS in the country (WHO, 2025).

2.1.2 Patterns of Utilization of Healthcare services in Nigeria

Nigerian healthcare services patterns include conventional, alternative and traditional systems of health care delivery. Nigeria recognizes and regulates these three systems. The health care system in Nigeria accommodates both private and public health care providers. In the public sector, health care providers are under the three tiers of government; federal (tertiary hospitals and some hospitals in national institutions like universities), state (state specialist and general hospitals) and local government areas (primary health care centres and health posts). In the private sector, they are broadly categorized into those that provide primary care (general practitioners), secondary care and those that offer both direct and specialist care. There are also several non-governmental organizations and donor-owned and operated facilities. Different Nigerian governments have made great efforts toward providing healthcare facilities to their populace. These efforts were the expansion of medical education, improvement of public health care systems, provision of primary health care (PHC) in many rural areas.

According to the Federal Ministry of Health (2008), the total shares of public ownership in 2004 on health facilities were 14,607, while the private sector accounted for 9,029 in Nigeria. However, public and private health care facilities are sparsely provided in many rural areas. Moreover, clinics in rural areas often lack adequate equipment or trained health personnel and require payment before providing services. With over 70% of inhabitants in Nigeria residing in rural communities, the overall health indices can only improve if sufficient health facilities/projects are attracted to such areas.

Good health is a need for all, and the choice of a particular healthcare system responds to the laws of demand and supply; the demand for health care is a derived demand. Health care is not demanded itself but for the advantages derived from being healthy. This choice is limited by factors such as availability, accessibility, affordability of services of the health facilities, cultural beliefs, the situation per time (i.e. urgency of care needed) and whether the kinds of services provided meet the user's need. In the health care system, patient satisfaction has emerged as an essential component that determines consumer choice of a product or service.

2.1.3 Factors Affecting Utilization of Healthcare services

However, after more than a century since those European explorers left the shores of Nigeria, the story seems not to have changed. There seem to be persisting challenges accessing modern healthcare services by the people. A health survey conducted in Nigeria in 2008 showed that significant individuals in the country have no health insurance coverage to cater for their health bills (NPC, 2009), which suggests that a large number of the people in the government pay for their health bills from their pocket (Out of Pocket). However, this connotes that utilization of healthcare facilities by the people in the country would depend mainly on their socio-economic status, thereby informing their choice of healthcare facility utilization.

Studies conducted in and around Nigeria have shown that healthcare facility utilization depends on the health-seeking behaviour of the people and many other factors predisposed to the people. For example, a study done in Sagamu, South-West Nigeria, reported that private hospitals, teaching hospitals, patent medicine sellers, and maternity homes were the most preferred type of health facilities due to competence, effective treatment, promptness of service and quality of service (Abiodun & Olu-Abiodun, 2014). A related study conducted in Ilorin, North-Central Nigeria, also revealed that private for-profit health facility was the most preferred healthcare facility, which was informed by the promptness of service and availability of drugs (Abodunrin et al., 2010).

Recent studies in Nigeria continue to show that patent and proprietary medicine vendors (PPMVs) remain a major source of healthcare for many households, particularly for first-line treatment of common illnesses. Evidence from rural communities indicates that households often prefer patent medicine vendors and pharmacies to primary healthcare facilities due to convenience and perceived effectiveness (Okedo-Alex, Onwujekwe, Uzochukwu, & Eze, 2022; Adepoju & Oladimeji, 2023). Similarly, cost of treatment remains a major determinant of health-seeking behaviour, especially among low-income populations, where out-of-pocket expenditure influences the choice of healthcare provider (Ahmed, Imhonopi, Fasiku, Ahmed, Osinubi, & Soyannwo, 2023). In addition, waiting time in public health facilities has been identified as an important factor influencing healthcare facility utilization, as long queues and delays discourage patients from using government-owned hospitals (Oluyemi et al., 2017; Warri & George, 2020). They argued further that long queues are found in such hospitals, affecting the turnaround time for treatment and complacency on the health workers due to having had to attend to many patients daily.

Poor quality of services and negative attitudes of healthcare workers have been identified as important factors contributing to the underutilization of healthcare facilities in developing countries (Oyebade et al., 2022). In addition, the competing nature of traditional medicine and traditional medicine practitioners with that of modern medicine and medical doctors is also a significant concern that is posing a threat to the utilization of modern healthcare facilities in the country. For example, a survey conducted in Benin City in Edo State, South-South Nigeria in 1998 revealed that, for every signpost that indicated modern healthcare facility in the city, three others showed traditional health facility (Awoyemi, Obayelu & Opaluwa, 2011). This suggests that some people seek medical attention in more traditional medicine and spiritual homes than hospitals and other modern medical facilities.

Theorists have put forward various explanations to explain the determinants of healthcare facility utilization among people. Anderson (1968), for instance, in his Healthcare Utilization Model, identified three fundamental factors that may determine the utilization of health facilities by people. The first one he identified is called the propensity factor, suggesting that an individual will likely utilize a health facility if they believeit will be helpful for their treatment. The second factor, called enabling factor, includes access to health insurance, family and community support, and the location of the individual. Finally, the third factor, called the essential need factor, which entails the perception of the need for health services, is socially evaluated.

2.1.4 History of Modern Medical Services

Western medicine was not formally introduced into Nigeria until the 1860s when Roman Catholic missionaries established the Sacred Heart Hospital in Abeokuta. Throughout the ensuing colonial period, religious missions played a significant role in supplying modern health care facilities in Nigeria. The Roman Catholic missions predominated, accounting for

about 40 percent of the total number of mission-based hospital beds by 1960. Mission hospitals somewhat exceeded government hospitals: 118 mission hospitals, compared with 101 government hospitals (Okeke, 2010).

Mission-based facilities were concentrated in certain areas, depending on the religious and other activities of the missions. Roman Catholic hospitals, in particular, were focused on the southeastern and midwestern regions. By 1954 almost all the hospitals in the midwestern part of the country were operated by Roman Catholic missions. The most prominent sponsors of mission hospitals were the Sudan United Mission, which concentrated on middle belt areas, and the Sudan Interior Mission, which worked in the Islamic north. Together, they operated twenty-five hospitals or other facilities in its northern half. Many mission hospitals remained essential components of the health care network in the north in 1990.

The missions also played an essential role in medical training and education, providing training for nurses and paramedical personnel and sponsoring primary education and advanced medical training, often in Europe, for many of the first generations of Western-educated Nigerian doctors. In addition, the general education provided by the missions for many Nigerians helped lay the groundwork for broader distribution and acceptance of modern medical care.

The British colonial government began providing legal medical services by constructing several clinics and hospitals in Lagos, Calabar, and other coastal trading centres in the 1870s. Unlike the missionary facilities, these were, at least initially, solely for the use of Europeans. Services were later extended to African employees of European concerns. Government hospitals and clinics expanded to other areas of the country as European activity increased there. The hospital in Jos, for example, was founded in 1912 after the initiation thereof tin mining.

World War I had a substantially detrimental effect on medical services in Nigeria because of the large number of medical personnel, both European and African, who was pulled out to serve in Europe. After the war, medical facilities were expanded substantially, and some government-sponsored schools for the training of Nigerian medical assistants were established. However, even if trained in Europe, Nigerian physicians were generally prohibited from practicing in government hospitals unless serving African patients. This practice led to protests and frequent involvement by doctors and other medical personnel in the nationalist movements of the period (Okeke, 2010).

After World War II, partly in response to nationalist agitation, the colonial government extended modern health and education facilities to much of the Nigerian Population. A ten-year health development plan was announced in 1946. The University of Ibadan was founded in 1948; it included the country's first entire faculty of medicine and university hospital, still known as University College Hospital. In addition, several nursing schools were established, as were two pharmacy schools; by 1960, there were sixty-five government nursing or midwifery training schools. The 1946 health plan established the Ministry of Health to coordinate health services throughout the country, including those provided by the government, private companies, and missions. The plan also budgeted funds for hospitals and clinics, most concentrated in the main cities; little funding was allocated for rural health centres. There was also a substantial imbalance between the appropriations of facilities to southern areas, compared with those in the north.

By 1979 there were 562 general hospitals, supplemented by 16 maternity and pediatric hospitals, 11 armed forces hospitals, six teaching hospitals, and three prison hospitals. Altogether they accounted for about 44,600 hospital beds. In addition, general health centres

were estimated to total slightly less than 600; available clinics 2,740; maternity homes 930; and maternal health centres 1,240.

Ownership of health establishments was divided among federal, state, and local governments, and there were privately owned facilities. Whereas most health establishments were government-owned, there were many private institutions through the 1980s. By 1985 there were 84 health establishments owned by the Federal Government (accounting for 13 percent of hospital beds); 3,023 owned by state governments (47 percent of hospital beds); 6,331 owned by local governments (11 percent of hospital beds); and 1,436 privately owned establishments (providing 14 percent of hospital beds).

The geographic misdistribution of medical facilities among the regions and the inadequacy of rural facilities persisted. By 1980 the ratios were an estimated 3,800 people per hospital bed in the north (Borno, Kaduna, Kano, Niger, and Sokoto states); 2,200 per bed in the middle belt (Bauchi, Benue, Gongola, Kwara, and Plateau states); 1,300 per bed in the southeast (Anambra, Cross River, Imo, and Rivers states); and 800 per bed in the southwest (Bendel, Lagos, Ogun, Ondo, and Oyo states). There were also significant disparities within each of the regions. For example, in 1980, there were an estimated 2,600 people per physician in Lagos State, compared with 38,000 per physician in the much more rural Ondo State. In comparing the distribution of hospitals between urban and rural areas in 1980, Dennis Ityavyar found that. Although, in contrast, approximately 80 percent of the population of those states lived in rural regions, only 42 percent of hospitals were located in those areas. The misdistribution of physicians was even more marked because few trained doctors who had a choice wanted to live in rural areas. Moreover, many of the doctors who did work in rural areas were there as part of their required service in the National Youth Service Corps, established in 1973. Few, however, remained in remote areas beyond their required term.

Hospitals were divided into general wards, which provided out-patient and in-patient care for a small fee, and amenity wards, which charged higher prices but provided better conditions. The available communities were usually very crowded, and there were long waits for registration and treatment. Patients frequently did not see a doctor but only a nurse or other practitioner. Many types of drugs were not available at the hospital pharmacy; those available were usually dispensed without containers, meaning the patients had to provide their own. The in-patient wards were highly crowded; beds were in corridors and even consisted of mattresses on floors. Food was free for indigent patients who had no one to provide for them. Most, however, had relatives or friends present who prepared or brought food and often stayed in the hospital with the patient. By contrast, in the amenity wards available to wealthier or elite patients, nutrition and better care were provided, and drug availability was more significant. The Highest Level of the Nigerian elite frequently travelled abroad for medical care, mainly when a severe medical problem existed.

In the early 1980s, because of fuel shortages and spare parts, much expensive medical equipment could not be operated. Currency devaluation and structural adjustment beginning in 1986 exacerbated these conditions. Imported goods of all types doubled or tripled in price, and government and public health care facilities were severely affected by rising costs, government budget cuts, and materials shortages of the late 1980s. Partly due to these problems, privately owned health care facilities became increasingly important in the late 1980s. The demand for modern medical care far outstripped its availability. As government hospitals deteriorated, medical personnel, drugs, and equipment were increasingly diverted to the private sector.

Government health policies increasingly had become an issue of policy debate and public contention in the late 1980s. The issue emerged during the Constituent Assembly held in

1989 to draft a proposed constitution. The original draft reported by the assembly included a clause specifying that free and adequate health care was to be available as a matter of right to all Nigerians within specific categories. The categories had all children younger than eighteen, all people sixty-five and older, and all those physically disabled or handicapped. However, this provision was deleted by the president and the governing council when they reviewed the draft constitution.

2.1.5 Primary Health Care Policies

In August 1987, the federal government launched its Primary Health Care plan (PHC), which President Ibrahim Babangida announced as the cornerstone of health policy. Intended to affect the entire national Population, its main stated objectives included accelerated health care personnel development; improved collection and monitoring of health data; ensured availability of essential drugs in all areas of the country; implementation of an Expanded Programme on Immunization (EPI); improved nutrition throughout the country; promotion of health awareness; development of a national family health program; and widespread promotion of oral rehydration therapy for the treatment of diarrheal disease in infants and children. Implementation of these programs was intended to occur mainly through collaboration between the Ministry of Health and participating local government councils, which received direct grants from the federal government.

The EPI was the most concrete and probably initially made the most significant progress of these objectives. The immunization program focused on four major childhood diseases: pertussis, diphtheria, measles, polio, tetanus and tuberculosis. It aimed to increase the proportion of immunized children younger than two dramatically from about 20 percent to 50 percent initially, and to 90 percent by the end of 1990. Launched in March 1988, the program by August 1989 was said to have been established in more than 300 of 449 LGAs. However,

although the program was said to have made much progress, its goal of 90 percent coverage was probably excessively ambitious, primarily because of the economic strains of structural adjustment that permeated the Nigerian economy throughout the late 1980s.

The government's population control program also came partially under the PHC. By the late 1980s, the official policy strongly encouraged women to have no more than four children, representing a substantial reduction from the estimated fertility rate of almost seven children per woman in 1987. No official sanctions were attached to the government's population policy, but birth control information and contraceptive supplies were available in many health facilities. The federal government also sought to improve the availability of pharmaceutical drugs. However, foreign exchange had to be released for essential drug imports, so the government attempted to encourage local drug manufacture; because raw materials for local drug manufacture had to be imported, costs were reduced only partially. For Nigeria to limit its foreign exchange expenditures and simultaneously implement the massive expansion in primary health care, foreign assistance would probably be needed. Despite advances against many infectious diseases, Nigeria's Population continued through the 1980s to be subject to several necessaryconditions, some of which occurred in acute outbreaks causing hundreds or thousands of deaths.In contrast, others recurred chronically, causing large-scale infection and debilitation. Among the former were cerebrospinal meningitis, yellow fever, Lassa fever and, most recently, AIDS; the latter included malaria, guinea worm, schistosomiasis (bilharzia), and onchocerciasis (river blindness). Malnutrition and its attendant diseases also continued to be a refractory problem among infants and children in many areas, despite the nation's economic and agricultural advances.

Among the worst acute diseases was cerebrospinal meningitis, a potentially fatal inflammation of the membranes of the brain and spinal cord, which can recur in periodic

epidemic outbreaks. Northern Nigeria is one of the most heavily populated regions in the meningitis belt of Africa, stretching from Senegal to Sudan and all areas having a long dry season and low humidity between December and April. The disease plagued the northern and middle belt areas in 1986 and 1989, generally appearing during the excellent, dry harmattan season when people spend more time indoors, promoting contagious spread. Paralysis, and often death, can occur within forty-eight hours of the first symptoms. In response to the outbreaks, the federal and state governments in 1989 attempted mass immunization in the affected regions. Authorities pointed, however, to the difficulty of storing vaccines in the harsh conditions of northern areas, many of which also had poor roads and inadequate medical facilities. They were beginning in November 1986, and for several months after that, a large outbreak of yellow fever occurred in scattered areas. The most heavily affected were Oyo, Imo, Anambra, Cross River in the south, Benue and Niger in the middle belt, and Kaduna and Sokoto in the north. There were at least several hundred deaths. Fourteen million vaccine doses were distributed with international assistance, and the outbreak was brought under control.

Lassa fever, a highly contagious and virulent viral disease, appeared periodically in the 1980s in various areas. The disease was first identified in 1969 in the northeast Nigerian town of Lassa. It is believed that rats and other rodents are reservoirs of the virus and that transmission to humans can occur through droppings or food contamination in and around homes. Mortality rates can be high, and there is no known treatment.

AIDS in Nigeria was officially confirmed in 1987, considerably later than its appearance and wide dispersion in much of East and Central Africa. In March 1987, the minister of health announced that tests of a pool of blood samples collected from high-risk groups had turned up two confirmed cases of AIDS, both HIV Type-1 strains. Subsequently, HIV-2, a

somewhat less virulent strain found mainly in West Africa, was also established. In 1990 the infection rate for either virus in Nigeria was thought to be below 1 percent of the Population.

Less dramatic than the acute infectious diseases but often equally destructive were a host of chronic diseases that were serious and widespread but only occasionally resulted in death. The most common was malaria, including cerebral malaria, which can be fatal. In addition, the guinea worm parasite, which is spread through ingestion of contaminated water, is endemic in many rural areas, causing recurring illness and occasionally permanently crippling its victims. The World Health Organization (WHO) in 1987 estimated that there were 3 million cases of guinea worm in Nigeria--about 2 percent of the world total of 140 million patients- -making Nigeria the nation with the highest number of guinea worm cases. In affected areas, guinea worm and related complications were estimated to be the primary cause of work and school absenteeism.

Virtually all affected states had campaigns underway to eradicate the disease through education and provision of pure drinking water supplies to rural villages. The government has set an ambitious target of complete eradication by 1995, with extensive assistance from the Japanese government, Global 2000, and numerous other international donors.

The parasitic diseases onchocerciasis and schistosomiasis, both associated with bodies of water, were found in parts of Nigeria. Onchocerciasis is caused by filarial worms transmitted by small black flies that live and breed near rapidly flowing water. The worms can damage the eyes and optic nerve and cause blindness by young adulthood or later. In some villages near the Volta River tributaries where the disease is endemic, 20 percent of adults older than thirty are blind because of the condition. Most control efforts have focused on a dual strategy of treating the sufferers and trying to eliminate the flies, usually with insecticide sprays. The flies and the disease are most common in the lowland savanna areas of the middle belt.

Schistosomiasis is caused by blood flukes, which use freshwater snails as an intermediate host and invade humans when the larvae penetrate the skin of people entering a pond, lake, or stream in which the snails live. Most often, schistosomiasis results in chronic debilitation rather than acute illness

2.1.6 Alternative Medicine

In other words, traditional medicine has existed before the advent of scientific medicine, which is called modern medicine. Okeke (2010) noted that modern hospitals exposed people to treatment other than the traditional ones. Before introducing the current health care system, the various communities had their indigenous health care classic or ethnomedicine. Obasi (2000) opined that rural peoples' conception of illness and therapeutic strategies were shrouded in mythology, theology and superstition. That is to say that many myths, religious explanations and superstitious beliefs existed concerning all manner of illnesses. Hence, diseases were often conceived of as visitation of angry gods/goddesses or evil spirits or thof bad people.

Artemia (2010) stated that the traditional/local health care system is significant in Nigeria because the system is well accepted and well-patronized. This health care long existed with the people but in crude form. The practice is as old as the people. Even in the Holy Bible – Genesis and Numbers, it has many dimensions today. The documents include magic, spell, casting, reciting, invoking, sacrificing, rituals, massaging, concoction, traditional bath, the use of herbs and roots, charming, dancing, family planning etc. Okochi (2008) stated that despite the crudeness, lack of formula, and unfriendly attitude of the people's acceptance of the system, it still serves them their purpose, but not to a large extent. That it has neither unified principle nor regulatory guide of administration.

Alternative medicine plays an essential role in the healthcare delivery system in Nigeria as it is the first contact point in treating the sick. This is because about 70% of the Population lives in rural areas. It makes services and practitioners available to the people considering the shortage of modern doctors, nurses and other paramedical staff in the rural areas. Current medical treatment is expensive, and the rural dwellers cannot afford treatment costs and additional charges; hence, they adopt the cheaper indigenous treatment.

The facilities for modern treatment are inadequate and cannot serve the large population. The ones available are not well-equipped. Drugs are out-of-stock. Alternative medicine practitioners can manage some diseases that defy modern treatment. Such diseases are diseases of affluence or civilization, e.g. hypertension, stroke, heart attack, diabetes, asthma, cancer, epilepsy, etc. Some syncretic and pentecostal churches claim to treat these diseases during their crusade. Recent research indicates that many rural dwellers in Nigeria continue to patronize traditional healers and informal health care providers because of deeply rooted cultural beliefs, perceived effectiveness of traditional remedies, limited access to modern health facilities, and socioeconomic constraints, including cost and convenience. This preference persists even when modern services are available, highlighting the influence of social norms and gaps in formal health care provision on health-seeking behavior among both educated and non-educated rural populations (Oladele & Adeyemi, 2025).

2.1.7 Advantages of Alternative

Alternative medicine as a system that existed as old as the community was developed long before orthodox medicine. It has some benefits to the people. These are that it is the people's system. It meets people's health needs. It enjoys the confidence of the rural dwellers since the practitioners are seen as mediators between the people and the gods/ancestors. The drugs are

available as they are sourced locally. The drugs are also affordable for patients since they are dispensed based on their pay.

Other benefits are that the practitioners can travel to any community or town or individual houses to carry out the practice. The practitioners can diagnose abstract cases such as spiritual attacks, witchcraft, etc. The system also incorporates physical exercises like dancing. Since practitioners live among the people, they have Faith in them and their practices. (Amadi, 2008, Okochi, 2008).

2.1.8 Orthodox Medicine

The orthodox health care came to Nigeria through the missionaries and the explorers. The ministers involved were the Catholics, Church Missionary Society (CMS), the Baptist and the Scottish Missionaries. Although the medical and sanitary services were centred around Lagos, the first General Hospital to open its doors to Nigerians outside Lagos was built by a French Catholic Priest, Jean Coquard, in 1895 Abeokuta, named the Sacred Heart Hospital (Arinola and Arinola, 2007). This hospital still exists today.

Another attempt to establish a modern health facility in Nigeria was through the West African Frontier Force (WAFF) led by Fredrick J.D. Lugard when he was asked to go and recover Bussa and protect Ilorin. The first modern health facility (hospital) then was established in 1863 as a reception centre for the sick seamen of the Royal Navy.

Gemson (2006) stated that West African Frontier Force (WAFF) and the Christian organizations played significant roles in spreading modern health facilities in Nigeria. However, orthodox health care focused on curative care without preventive measures to the health problems. As a result, sickness of different kinds was on the increase. Only a few Nigerians in the security service, such as the army, police, court messengers, warders, etc. and members of their families, benefited. These facilities were beset with many problems:

they were few compared to the population of the people; they had few trained, qualified personnel to cope with the rampantPopulation, and they were concentrated in the cities.

The first conference of health professionals (World Health Assembly) met in San Francisco in America in 1974 was not well-attended. But Nigeria was represented in that conference by the then Minister of Health Late Professor Ransome-Kuti. So the meeting was rescheduled to hold out of America, but this time in Alma Ata, Moscow in USSR. On September 12 1978, a joint conference of Primary Health Care (PHC) that was sponsored by the World Health Organization (WHO) and United Children Fund (UNICEF) recognized Primary Health Care (PHC) as the key to health for all by the year 2000 and beyond. Primary Health Care is the first level of contact of individuals, families and communities with the health care system. It brings modern health care as close as possible to where people live and work. Therefore, it needs community participation at all levels in planning, implementing, and evaluating all programmes (Okochi, 2008). It incorporates preventive, promotive, rehabilitative and curative care. Olise (2007) stated that the level of sophistication depends on the socio-economic development of the people. Health facilities at this level include dispensaries, health posts, clinics, and comprehensive health centres. Oke and Owumi (1996) said that the centres could be headed by a medical doctor or a medical assistant. This depends on the nation's official policy and the available human resources.

Secondary health care is the level that the primary health level refers to because the level of staff and equipment here is higher. The secondary health is mostly disease-oriented and has out-patient, in-patient, gynaecology and paediatric facilities. It has in addition facilities for laboratories and x-ray related services. These services are run in the hospitals owned by the state governments in Nigeria.

The third level is tertiary health care. This is the highest level, and the facilities under this level include University Teaching Hospitals and Specialist Hospitals. The National Government owns them, while some concentrate on only one speciality such as orthopaedics, psychiatry, ophthalmology, etc. Others cover services in many fields. The cases that cannot be handled at the secondary level are referred to the tertiary level. This level also serves as training centres for doctors, pharmacists, etc. (Olise opcit).

2.1.9 Advantages of Orthodox Medicine

The system of orthodox medicine is sentenced to the best because the benefits derivable from it far outweigh those of traditional medicine. Some of these benefits are that the procedure operates in a sanitary or hygienic environment. The practitioners are trained and skilful, and the facilities are better and more refined. The practice is scientifically based, and its application is subjected to scientific proof and tested over time before recommendation for use. It makes use of a referral system; patients are referred to higher health facilities and experts if there are no improvements in their conditions or in the face of a lack of sophisticated equipment to handle the case. Dosage of drugs is based on age, body weight, and illness requirement. There is provision for teamwork, which is sharing knowledge through joint consultations among experts, which involves a two-way referral system. In specialized health facilities, there isthe availability of instruments and equipment.

Apart from some of the shortcomings of orthodox medicine like the issue of unavailability, expensiveness and the use of non-indigenes in practice, which are responsible for underutilization, the system is far better than the alternative practice. This justifies why the government spends aconsiderable sum of money and resources to ensure the available ones are adequately utilized to avoid wasted efforts and those resources.

2.1.10 Classification of Traditional Medicine

Traditional medicine in Nigeria continues to be practiced by different categories of healers, including herbalists, traditional birth attendants, bone setters, and spiritual or faith healers, who employ a combination of herbal remedies, manual techniques, and spiritual practices in health care delivery. These practitioners remain an important component of community health systems, particularly in rural areas where access to formal health services is limited (World Health Organization [WHO], 2019; Oyebode et al., 2016).Their method of diagnosis is divination or consultation of oracles to know which spirit is offended.

The group consists of syncretic churches and their charismatic prophets or leaders. These churches are called spiritual churches, e.g. Cherubim and Seraphim, Brotherhood of the Cross and Stars (O.O.Obu), Celestial Church of Christ and other healing churches like God's Healing Church. Their modes of worship are divination, fervent prayers and sleeping in places designated "Holy", exorcism (i.e. exorcizing evil spirits from patients and immersion in rivers or cleansing with sanctified water called "Holy water".

The group consists of the Pentecostals that emerged in the 1990s and have grown into a formidable force in Nigeria. They use the media, television and radio, organize outreach programmes to heal the sick through deliverances. Emphasis is on Faith and the saving or healing power of Jesus Christ. Miracles are recorded at healing services. They also use spiritual oils for anointing and read some sections of Psalms in the Holy Bible for healing the sick.

2.1.11 Similarities of Alternative and Orthodox Medicine

Ogbonda (2002) opined that both aim to prevent and cure diseases and ailments. And that what makes the differences between the two is the approach each adopts in achieving the objective. Atemie and Okaba (1997) compared that both apply sterilization methods. That

while traditional healers wash their herbs and roots before use, the modern doctors sterilize with heat and the use of antiseptic; both also apply prophylactic measures; while current physicians use antibiotics, traditional healers use talismans, rings and necklaces to prevent the attack by evil spirits and evil men; in bone setting, tools used by conventional doctors are the same with the ones used by orthopaedic surgeons, etc.

2.1.12 Criticisms Against Modern Medicine

Critics of modern medicine have attracted attention becausecurrent drug therapy does more harm than good. (Umar, 2010). He went further to say that while others admit that there are some benefits from modern drugs, they insist that they are medically marginal. In general, criticisms against the medical profession are as follows: The cost of treating ailment using conventional means is prohibitive. Because of the high price and informal charges, two kinds of medical services came into existence – one for the rich and the other for the poor. Certain drugs prescribed by scientific doctors have toxic side effects and disrupt the body's internal milieu. Surgical operations, radiotherapy, organ transplantation, anaesthesia, and so on are highly invasive and sometimes can accidentally take the patient's life. Drug Abuse and Addiction: Drug abuse and addiction lead to the negative effect of mental disorders that affect human relationships in society. There is insensitive bureaucracy in patient's management. Patients criticize the lengthy processes and procedures, including unnecessary protocol in orthodox practice management cases, e.g. history-taking, clinical examination, series of investigations, teamwork, referrals, etc. In alternative medicine, there is no waste of time. It is easily accessible and affordable (Umar, 2010).

2.1.13 Criticisms against Traditional Medicine

The criticisms levelled against alternative medicine are some reasons that make its integration into modern medicine difficult. These criticisms are as follows:

In traditional medicine, diseases are caused by offending angry gods/goddesses or punishment by Almighty God for sins of omission or commission. Treatment in conventional medicine is associated with cultic practices, invocation of spirits, rituals, incantations and sacrifices (which may even involve human life). Other mystic traditions cause havoc in society leading to a chain of adverse events.

There is no standardization of drugs and conventional drug packagesto treat diseases. Consequently, there is the tendency for overdose or underdose of drugs leading to disastrous consequences - no specific periods for drug use and measuring duration of treatment whether palliative, conservative, elective or emergency like in modern medical treatment.

They lack storage facilities. Usually, after the preparation of traditional drugs, they are stored in earthenware pots, tortoise shells, gourds, calabashes, etc. Such containers are unsanitary and can contaminate the drugs and cause other infections. Furthermore, traditional medical practice is shrouded in mystery and secrecy. Training is either by guarded apprenticeship or family inheritance. As a result of this, truth and error are equally transmitted without probity or criticism (Umar, 2010).

Traditional medicine claims comprehensive treatment for all diseases and ailments, while in some cases, it cannot. Their claims to treat diseases that defy modern medicine called diseases of affluence such as hypertension, stroke, diabetes, asthma, epilepsy, arthritis, heart attack, liver and kidney diseases are not valid. Training is through an unspecified period of apprenticeship. Merit is through the attainment of old age and long experience. There is no accredited degree or qualifications.

2.1.14 Factors influencing patronage

Ekere (2011) cited the Study conducted by Hotipoglu and Tarker in 1995 and stated that the people have a very high degree of confidence in traditional bone setting even though the basis

was unfounded. He said that the cost consideration is a significant factor and that patronage will remain high in a chronically depressed economy. Educational Level does not appear to affect custom as persons with tertiary education adversely still feel that traditional care services are indispensable or desirable.

In our society, virtually every reversal in life has a spiritual undertone; and the priest-physicians come very handily to assist in this direction. It is believed that they can"break curses" and even expel evil spirits, including witchcraft, which allows the ailment to heal eventually. Ekere (ibid) stated that even magical devices like "bulletproof" and unseen spiritual vests or material could serve as immunity to gunshot injuries. And these are prepared by traditional practitioners.

In Nigeria, this is worsened by the level of propaganda on the new and electronic media regarding alternative medicine. Unfortunately, the government and even the Nigeria Medical Association (NMA) have not shown interest in the wrong information these people pass to the unsuspecting public to grant public enlightenment campaigns against them and the information they give to people. Therefore, their adverts should be screened and vetted before publishing without minding the money generated from them.

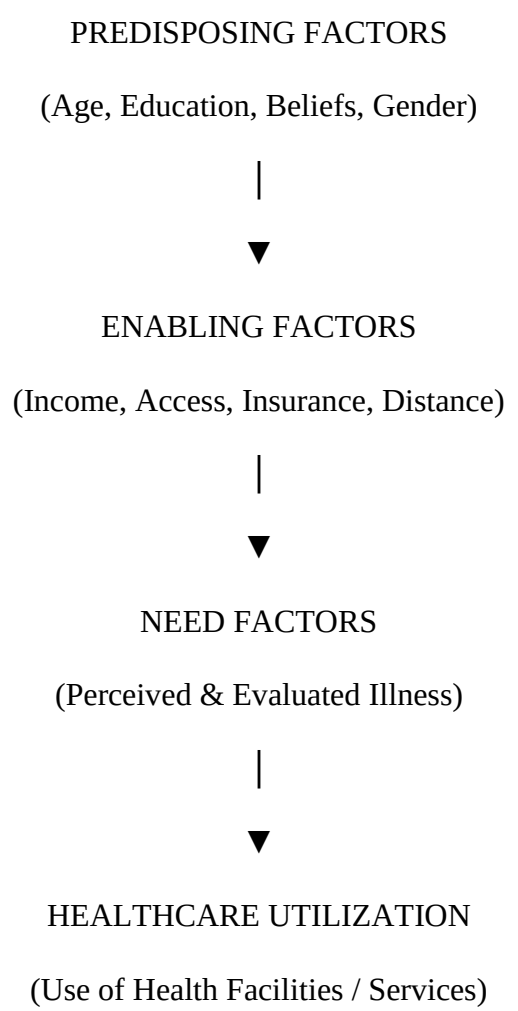
Their claim to treat those diseases that defy modern treatment is yet to be proven correct, as many of their patients die from complications resulting from delays in their hands. But we cannot rule out the efficacy of some of their drugs, the reasons why integration is advocated for close monitoring.

2.2 Theoretical Framework

2.3.1 Andersen's Behavioral Model of Health Services Utilization

Andersen first developed this model in 1968, and it was later refined in 1995 to explain the factors that determine whether people use healthcare services.

The model proposes that healthcare utilization is influenced by three major categories of factors:



1. Predisposing Factors

These are characteristics that exist before illness occurs and influence a person's tendency to use health services. Examples: Age, sex, education level, occupation, cultural beliefs and marital status. For example, people with higher education may be more likely to use modern healthcare facilities.

2. Enabling Factors

These are the resources or conditions that make healthcare use possible.Examples: income level, availability of health facilities, health insurance, transportation, distance to health facility and family support. Even if someone is sick, they may not use healthcare services if these enabling factors are lacking.

3. Need Factors

These refer to the individual's illness level or perceived health condition. Two types: Perceived need (how sick a person feels) and Evaluated need (professional diagnosis). Need factors are usually the strongest predictors of healthcare utilization.

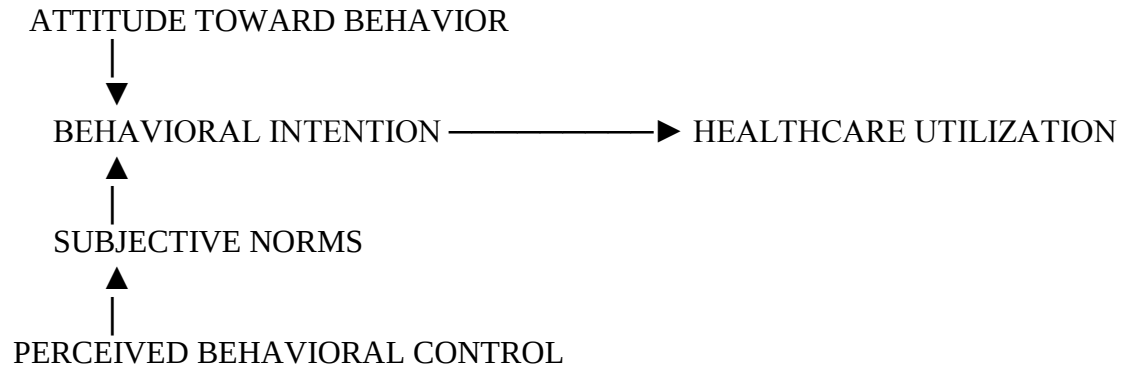
Application to the Study

Andersen's Behavioral Model of Health Services Utilization provides a useful framework for understanding the factors influencing the use of healthcare facilities among rural communities in Rivers State. The model explains that healthcare utilization is shaped by predisposing factors (such as age, education, and cultural beliefs), enabling factors (including income, accessibility of health facilities, and cost of care), and need factors (perceived or actual illness). In the context of this study, these factors help explain variations in health-seeking behavior and the underutilization of modern healthcare facilities in selected communities in Rivers State. The model therefore guides the examination of how

socioeconomic conditions, access to healthcare services, and health needs interact to influence healthcare utilization.

2.3.2 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) was developed by Ajzen (1991) to explain how human behavior is influenced by intentions and perceived control over actions. The theory suggests that a person's intention to perform a behavior is the most important predictor of whether the behavior will occur.



According to TPB, three main factors determine behavioral intention:

1. Attitude toward the Behavior

This refers to how positively or negatively a person evaluates a behavior.For example, if individuals believe that visiting a health facility leads to effective treatment, they are more likely to use healthcare services.

2. Subjective Norms

These refer to social pressure or influence from family, friends, or community members.

In rural communities, decisions about healthcare utilization may be influenced by family members, elders, or cultural expectations.

3. Perceived Behavioral Control

This refers to an individual's perception of how easy or difficult it is to perform a behavior.Factors such as income, distance to health facilities, transportation, and cost of care can influence perceived control over healthcare utilization.Together, these three components influence behavioral intention, which then leads to actual behavior.

Application of TPB to the Study

For the study titled Utilization of Health Care Facilities Among Selected Communities in Rivers State, Nigeria, the Theory of Planned Behavior helps explain how individual perceptions, social influences, and access-related constraints shape healthcare-seeking behavior.Residents of rural communities may develop positive or negative attitudes toward modern health facilities based on previous experiences, perceived quality of care, or trust in healthcare providers. Subjective norms, such as family traditions and community beliefs about traditional medicine, may also influence decisions to use or avoid formal healthcare services. In addition, perceived behavioral control, including financial constraints, distance to health facilities, and transportation challenges, can determine whether individuals are able to utilize healthcare services even when they intend to do so.Thus, TPB provides a useful framework for understanding how beliefs, social influence, and access barriers interact to influence healthcare utilization in rural communities in Rivers State.

2.3 Empirical Studies

Oladipo (2014), conducted a Cross-sectional sample survey in Kwara State, Nigeria (rural and urban areas) . A Multi-stage sampling for patients in health facilities; convenient sampling for residents in communities was used. Study findings shows need factors were the most important predictors of health care utilization, followed by enabling factors, predisposing factors, and health services factors (least important); disparities exist between

rural and urban areas, with rural utilization more influenced by physical accessibility and financial barriers, while urban utilization showed greater variability.

An Empirical studies using data envelopment analysis conducted by Wu (2023), in 19 cities and countries using Analysis of statistical data from 19 counties and cities over 2015–2020, resulting in 114 samples (19 × 6 years), divided by population. Findings from the study shows annual average efficiency of medical service capacity was approximately 90%, with room for 10% improvement; only Taipei City had sufficient capacity, while others needed enhancement; most areas showed increasing returns to scale, indicating a need to expand capacity to improve utilization and reduce cross-regional reliance.

Song et al., (2025), conducted a Cross-sectional survey in Henan Province, China. A multistage stratified sampling was used and findings from the study shows Significant underutilization among migrant communities, with low rates for health records (32.1%), family doctors (21.3%), health knowledge seeking (23.2%), and health education (41.5%); factors like age, gender, education, socioeconomic status, employment, insurance, proximity to facilities, and healthier lifestyles positively influenced utilization, while lack of insurance, higher income, unemployment, and poor health perceptions reduced it.

Lin et al., (2022) conducted Empirical study using binary logistic regression models in China and a multistage sampling; in-person surveys among adults over 60 in 4 street communities and 5 township communities, yielding 1061 valid questionnaires . Study findings indicated the utilization of family health services was low (demand 20.7%, utilization 0.8%), while preventive services were higher (demand 66.6%, utilization 52%); key predictors included pension source, income surplus, household registration, insurance coverage, pre-retirement work, health status, chronic diseases, self-care ability, and preventive needs.

A cross-sectional conducted in Oyo State Nigeria by Oyeyemi et al.,(2023) using multi-stage random sampling technique to select 80 respondents that met the criteria were given the opportunity to participate in the study. A semi-structured questionnaire was used to collect information from respondents. Findings from the study showed that almost all, 62 representing 77.5% of respondents, said that they had used or just starting to use or will like to use these health care facilities in future. A few above half, 43 representing 53.7%, consented to the scope of operation and equipment on ground were not cable of meeting the health services demand of the people in the community i.e. not reliable to depend on. Though, a little above two-fifth, 33 representing 41.3% of respondents, contradicted "no" that the facilities were meant to diagnosis, drug prescribe, treat and take good health care of series of health challenges for promoting physical, social, emotional, etc. for the old, young, pregnant, nursing mothers, children, and others living in Lagun Community while few below two-fifth, 31 representing 38.7% respondents, supported the establishment of the facilities for such in the community. Although, a little above two-fifth, 33 representing 41.3%, responded "no" to the functionability of those facilities in the last a year or there about as to requesting for medical service for themselves, while a few below two-fifth, 31 representing 38.7%, responded "yes" to the functionability of those facilities. Altogether, a few below two-fifth, 31 representing 35.0%, said "yes" to the fact that health care workers in the facilities were not capable, too wicked, and not accommodative to their patients, while a few above two-fifth, 33 representing 41.3%, confessed "no" to the statement

A cross-sectional study, involving 250 rural and 250 urban respondents selected through multi-stage sampling techniques was conducted in Kwara Stated Nigeria by Ahmed et al., (2021). Quantitative data were collected using an interviewer-administered questionnaire. Qualitative data collection was done with an FGD guide. Findings from the study indicated that most of the respondents in the rural community 237(94.8%) attested to having

geographical accessibility to the health facility in their community compared with 201(80.4%) with similar accessibility in urban communities ($\chi 2 = 23.866$, p-value = 0.01). More than half of the rural 126(53.2%) and urban 117(58.2%) respondents lived within <5.0km distance from the health facility while a higher proportion of rural respondents 30(12.6%) traveled>10km distance before accessing modern health care compared to their urban counterpart 18 (9.0%). The mean distance travel by rural respondents was 4.813±2.1km which was higher compared to 4.382±1.2km traveled by the urban respondents. The views of some of the urban FGD participants corroborate the findings in the quantitative study, some of the responses were that" They do lots of work in the health center especially the government own, for instance, our women deliver there, we the men also go there for treatment anytime we are sick". A similar opinion was expressed by the rural FGD participants on the effect of distance and health care utilization by the community members" I stay in a very distant place but I still make effort to go to the hospital because health is wealth, so I take "Okada" to and from or sometimes trek if time is on my side. Another participant commented, "There are some far away villages that use this health facility (PHC) for some of them they come here by commuter buses or private vehicle especially people who stay in Oke-Oyi". The cost was also a significant factor in access to care, in this study 202 (80.8%) of urban respondents believed that cost of care was expensive compared to 58 (23.2%) of rural respondents who believed the cost of care was expensive. A greater proportion 136 (54.4%) of rural respondents believed that care was moderate compared to 29 (11.6%) of urban counterparts who said costs were moderate. The mean cost of indirect care i.e., cost of cards (265±29.7 naira) and transportation (279±38.4 naira) were higher among urban respondents compared with the cost for cards (154±17.9 naira) and transportation (108±19.9 naira) among rural respondents, these were statistically significant (p-value = 0.01). The direct cost of care contrast sharply with indirect cost, rural respondents paid a far

higher amount (1,320±141.9 naira) compared to the urban respondents (750±90.8 naira) and were also statistically significant (p- value=0.01).

CHAPTER THREE

MATERIALS AND METHODS

This chapter deals with the general plan of carrying out the Study and procedures for data analysis to answer the research questions and the formulated hypotheses. Specifically, the chapter describes the Study's design, the area of the survey, Population, sample and sampling technique, instrument for data collection, its development, validation and reliability of test instruments, administration and data analysis technique.

3.1 Materials

3.1.1 Study Design

The study employed a cross-sectional descriptive design. Data was collected from a large sample of beneficiaries of health facilities in some selected rural communities in Rivers State to ascertain if alternative medicine practice is responsible for the underutilization of modern health facilities in some selected facilities in Rivers State.

3.2 Methods

3.2.1 Study Area

The study was conducted in selected rural communities in Rivers State, Nigeria. Rivers State is located in the Niger Delta region of the country and is bounded to the south by the Atlantic Ocean, to the north by Anambra, Imo, and Abia States, to the east by Akwa Ibom State, and to the west by Bayelsa and Delta States. The state is characterized by low-lying plains interlaced with numerous rivers and tributaries, including the New Calabar, Orashi, Bonny, Sombreiro, and Santa Barbara rivers. Rivers State comprises twenty-three (23) Local Government Areas (LGAs), which are broadly categorized into upland and riverine areas. For this study, ten (10) LGAs were randomly selected, consisting of five upland LGAs Emohua,

Ikwerre, Etche, Omuma, and Khana and five riverine LGAs Okrika, Bonny, Andoni, Opobo/Nkoro, and Degema.

The study focused specifically on rural communities within these selected LGAs. The inhabitants of these communities are predominantly engaged in farming, fishing, trading, civil service, and small-scale economic activities. Multiple indigenous languages are spoken across the communities. Infrastructure development in many of these rural areas is limited, with irregular electricity supply and reliance on privately owned generators in some locations. Although government-owned modern healthcare facilities exist across the state, their utilization in rural areas remains suboptimal. These selected LGAs were chosen to enable the study to examine healthcare utilization patterns and to assess how the presence of alternative medicine practices influences the use of modern healthcare facilities in rural Rivers State.

3.3 Study Population

The Population of the Study consisted of all the beneficiaries of health care services in the ten (10) Local Government Areas (Upland and Riverine) of Rivers State. Thus, the Population of the Study is 400 respondents selected by proportionate stratified random technique out of the total Population of 1,119,327. The local government areas and people were culled from the 2006 National Population Census.

3.4 Sample Size Determination

The sample size of this Study was determined by using Taro Yamen's Statistical formula, which is stated as follows:

$$S = \frac{N}{1 + N(e)^2}$$

Where n is the sample size to be sought

e = level of significance (0.05)

N = Population

Hence, the study population is 1,119,327 people from both the upland and riverine communities of Rivers State.

Thus, by applying Taro Yamen's Statistical formualr

N = 1,119,327

e = 0.05

$$= \frac{1,119,327}{1,119,327 \times 0.0025}$$

$$= \frac{1,119,327}{298.3175}$$

= 400

:. Sample Size = 400

3.5 Sampling Techniques

The sample of this Study consisted of 400 respondents that were made up of the beneficiaries of health services from the selected areas/communities. This sample was composed through a multi-stage sampling technique involving simple random sampling and proportionate

stratified random sampling. Asika (2002) stated that multi-stage selection requires the researcher to choose the sample in stages until the required sample size is obtained. He added that multi-stage sampling is more of a procedure than a method. It is called multi-stage because the researcher used different sampling techniques at each stage. For instance, in selecting the Local Government areas used from each geographical zone, selecting the communities in each Local Government Area and selecting the beneficiaries from the regions, the fourth stage was selecting the sampling unit. This gives a total of four steps which are described below.

In the first stage, a simple random sampling method was applied using the balloting technique. This was used to select 10 Local Government Areas, where 5 Local Government Areas were selected from each geographical zone. This was accomplished by listing all the nine riverine Local Government Areas and 14 upland Local Government Areas (excluding Port Harcourt and Obio/Akpor Local Government Areas, which are urban and semi-urban, respectively) in small slips of paper, which were folded and put in a small container. After thorough reshuffling, the researcher did not look into the container, dipped their hand and picked one, recorded the element it contained, refolded it, and put it back in the container. This process continued until the required number of Local Government Areas was drawn. (See appendix).

The second stage was stratified random sampling of the communities in the selected local government areas to form the second strata. From the communities in each local government area, we randomly selected five (5) communities making 50 communities. (See appendix).

In the third stage, another proportionate stratified random sampling was used to select the beneficiaries of health care services from each rural community. This gave a total of 400 respondents. (See appendix).

To select a sampling unit, a proportionate stratified method was adopted. We purposively decided the required number of respondents from each community in clusters.

3.6 Instruments for Data Collection

The methods or instruments the researcher used in collecting data for this project work primarily consisted of personal observation, personal interview and questionnaire and secondary data sources.

3.6.1 Personal Observation

The researcher paid several visits to the areas and observed the living conditions of the families and households in the morning and evening hours. This approach helped give the idea of their living conditions about the prevention and treatment of minor ailments using their local medicine instead of visiting modern health facilities provided.

3.6.2 Personal Interview

The researcher also carried out personal face-to-face interviews with adult community members, including students. Some traditional medical practitioners were interviewed to assess their patronage level and how efficacious their drugs were. Modern health workers were also interviewed to know the attendance rate of their facilities.

3.6.3 Questionnaire

The primary method used to collect information was a self-developed and structured questionnaire. A questionnaire was considered the most widely used technique for collecting data in educational research. The question items were based on the variables in the hypotheses. The instrument was designed to elicit information from the respondents on the relationship between the poor health status of the people in rural communities and underutilization of modern health care facilities; low income and ineffective use of modern

health care facilities, and the non-utilization of contemporary health care facilities and under-utilization of modern health facilities in some selected facilities in Rivers State.

The people responded based on the 5-point modified Likert scale of Very Large, Large, Moderate, Low and Very Low. And they were weighted 5-points, 4points, 3 points, 2 points and 1 point respectively. The questions were distributed in the study communities according to their Population's proportion. The schedule of the distribution of the questionnaire among the selected communities is proportionately shown in the table below.

Table 3.1: Proportionate Sample Size for the Study

S/N	Typology of the Local Government Area	Name of Local Government Area	Population	Percentage of Response Rate	No. of Questionnaire
1	Up Land	Ikwerre	102,989	9.2%	37
2	Up Land	Emohua	124,774	11.15%	45
3	Up Land	Etche	93.009	8.30%	33
4	Up Land	Omuma	166,931	14.91%	60
5	Up Land	Khana	107,133	9.53%	38
6	Riverine	Okirika	79,295	7.10%	28
7	Riverine	Bonny	117,679	10.51%	42
8	Riverine	Andoni	66,240	5.92%	24
9	Riverine	Opobo/Nkoro	101,514	9.0 %	36
10	Riverine	Degema	159,763	14.27%	57
		Total Sample Size	**1,119,327**	**100%**	**400**

3.6.4 Secondary Data Sources

The secondary data sources were books, journals, seminar papers and some unpublished materials. These sources are clearly shown in the bibliography.

3.7 Validity of the Instrument

After developing the instrument, three experts in a related discipline gave some copies of the device. These persons were vetted for the instrument's suitability to the Study's objectives and the level of respondents. After that, the experts' reactions were incorporated into the tool to ascertain its validity.

3.8 Reliability of the Instrument

The reliability of the instrument was determined using Cronbach Alpha method. This enabled the Study to check for the internal consistency of the instrument's items. At the same time, the device was administered once during its trial testing. As a result, a coefficient index of 0.67 and above was obtained to ascertain that the instrument is moderately reliable for the Study.

3.9 Data Analysis Techniques

This Study used percentages, ratios, frequency distribution, scaling, ranking, and other statistical tools to analyze and achieve research objectives. Also, Pearson's Product Moment Correlation Co-efficient was used to test the hypotheses formulated in the Study. The formula is given as follows:

$$r = \frac{n(\Sigma x\, y) - (\Sigma x)(\Sigma y)}{\sqrt{[n(\Sigma x^2) - (\Sigma x)^2]\,[n\Sigma y^2) - (\Sigma y)^2]}}$$

For ‘t’ we have:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Where;

r = correlation coefficient

n = number of observations

x = independent variable

y = dependent variable

Decision Criterion

Reject (Ho) if computed t is greater than or equal to the t value obtained from the table at a corresponding level of significance of 5%, the alternative hypothesis (Ha) is accepted. If otherwise, (Hi) is rejected and Ho received.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Results

The presentation and analysis of data are made in this section as follows: Of the 400 copies of the questionnaire distributed, 378 documents were retrieved, and 366 copies of the questionnaire (representing 91.50% response rate) were correctly filled and analyzed.

4.1.1 Demographic Characteristics of the People in Rural Areas and their Choice of Health Care Facilities

Table 4.1.1 shows the demographic distribution of respondents. The age range of the respondents was between 18 and 62 yr (33.62±4.21 yr). Almost 80% of the respondents were between 18 and 50 yr. Male: female ratio was 0.89:1. The single, married and widowed were 55.7%, 38.3% and 6.0%, respectively. Only 15.0% of the respondents had no form of formal education. Most of the respondents were students (126, 34.4%), and this was followed by skilled workers (105, 28.7%), which included various forms of artisans while the civil servants while others such as professionals (bankers, lawyers, doctors, teachers), unskilled workers such as orderlies and petty traders. The results indicated that sex, marital status, educational status, occupation and residential area where the respondents dwell are all associated with the preferred choice of health facility for care. The select health facility with the highest proportion for both sexes was the alternative medicine, but whereas 33.1% of males would prefer the alternative medicine, it was 37.1% for the female gender.

The study also revealed that the most common preferred facility for singles and married was the health centres, but it was the alternative medicine for the separated/widowed/divorced. Among respondents with primary or no formal education, pharmaceutical/medicine store was the preferred choice of health facility, but it was health centres for respondents with

secondary and tertiary education. Respondents with higher educational status utilize the private and teaching hospital more than their counterparts with lower academic levels. Similarly, the unemployed respondents and those with skilled jobs, such as artisans, prefer medicine stores for care than other facilities. Still, students and professionals, including respondents with unskilled jobs, will choose the private hospital. More respondents living in the inner core would rather patronize the medicine store, while those living in the outer heart would prefer the alternative medicine most.

Table 4.1.1: Socio-Demographic Characteristics of Respondents

	Frequency	
Variable	**N= 366**	**Percentage Response**
Age		
18 – 30	112	30.6
31 – 40	84	23
41 – 50	95	26
51 – 60	57	15.5
> 60	18	4.9
Sex		
Male	172	47
Female	194	53
Marital status		
Single	204	55.7
Married	140	38.3
Widowed/separated/ divorced	22	6
Educational status		
None	55	15
Primary	106	29
Secondary	136	37.2
Tertiary	69	18.8
Occupational status		
Professional	41	11.2
Skilled	105	28.7
Unskilled	50	13.7
Students	126	34.4
Unemployed	44	12
Area of Residence		
Inner core	216	59
Outer core	150	41

4.1.2 Respondents' Usual Choice of Health Facilities as the First Port of Call for Care

Table 4.1.2 shows the preferred and usual choice of the health facility as the first point of call for medical care was an Alternative medical centre (35.2%) followed by a pharmaceutical or patent medicine store (27.9%). At the same time, general/teaching hospital preference was indicated by 17% of the respondents. About 12.3% of respondents preferred to go to Basic Health Centers, while only 7.6% said they did not have any preference but would attend a primary health care centre convenient for them at any time. However, 32% said they would change their mind if they felt the illness was severe, among those who indicated a preference for medical stores and primary health centres. Instead, they would choose a teaching hospital or alternative medical centre for their care. Another 76% of the respondents reported that they could only utilize Primary Health Centres for immunizations and not delivery or treatment.

Table 4.1.2: Respondents' Usual Choice of Health Facilities as the First Port of Call for Care

Health Facility	Frequency	Percentage Response
Alternative medical centre	129	35.2
Pharmacy/Medicine Store	102	27.9
Basic Health Centre	45	12.3
General/Teaching Hospital	62	17.0
Primary health care centre	28	7.6
Total	**366**	**100.0**

4.1.3: Reasons for Respondents' Preference of Choice of Health Facility for Care

Table 4.1.3 shows that in seeking reasons for their preference and what they considered in choosing a healthcare facility, quick service was the most typical reason given by 82.8% of all respondents. This was followed by the availability of drugs (78.1%). Other reasons were availability of laboratory facilities (77.6%), good attitude of the staff (69.90%) and qualified personnel (65.6%), convenience and proximity (71.6%), privacy (58.7%), respect or good attitude by workers (69.9%), cheap service constitute (29.0%) and the fact that it was the family hospital (17.8%) (Table 3). Other reasons provided were the doctor being a family member, relative or friend;the doctor is very patient, thorough and considerate. Some also felt that they had been too used to a particular health centre or that the native doctors in such facilities knew their history well. Others thought they could have some leverage regarding mode of payment of fees/charge, while some claimed they received free treatment. Some of the respondents (184, 51.4%) felt that the staff at the Basic Health Centers were not capable of treating them because they were not experts or because there were no qualified doctors.

Table 4.1.3: Reasons for Respondents' Preference of Choice of Health Facility for Care

Reason	Frequency	Percentage Response
Cheap Service	106	29.0
Convenience/Proximity	162	44.3
Qualified Personnel	240	65.6
Quick Service (alternative medicine)	303	82.8
Privacy	215	58.7
Good Attitude of Staff	256	69.9
Equipment an Lab Service	284	77.6
Drug Availability	286	78.1
Family Hospital	65	17.8
Other reasons	174	47.5
No other Choice	212	57.9

4.1.4 Factors / Reasons for Non-Utilization of Modern Health Facilities by the People in Rural Areas

Table 4.1.4 shows that the major reasons for not utilizing the primary health centres were presumed lack of equipment and drugs. Others reported that the choice of facility for healthcare service should be personal, and everyone should be given a free hand. In addition, 21.4% of the respondents felt that Basic health centresare meant for local and illiterate people, and 33.9% thought it is for those who cannot afford the expenses in teaching hospitals or other reputed primary health care centres. To improve utilization of the basic and comprehensive health centres and cottage hospitals, the respondents felt the following should be put in place: good looking environment, modern facilities including laboratories, drug availability, geographical accessibility, availability of qualified medical personnel – doctors and nurses. Other qualities demanded were the improved attitude of workers and affordable services. If these things are put in place, 72.5% of those who would not have loved to use the primary health centres claimed they would use it, while 13.6% claimed they will still not use it despite the improvement, and another 13.6% could not make up their mind yet. Some respondents (314, 85.8%) reported that they usually skipped one or more health facilities close to them to attend their choice much farther away. The respondents gave reasons why they would ignore a health facility close to them and utilize one that is farther are provided in Table 4.1.4 For most of the respondents, no specific reasons were given.

Table 4.1.4: Factors / Reasons for Non-Utilization of Modern Health Facilities by the People in Rural Areas(n=314)

Reason	Frequency	Percentage Response
No 24 hr service	46	14.6
No equipment/laboratory service	158	50.3
Environment unkempt / not cozy	166	52.9
Staff poor relationship	124	39.5
No doctor in the health centre	65	20.7
The doctor does not present most times	112	35.7
No doctor on call / night duty	108	34.3
Do not trust staff competence	85	27.1
Services are expensive	73	23.2
Do not like primary health care centre	29	9.2
I wouldn't say I like government health centres	66	21
travel cost	55	17.5
No particular reason	32	10.2

4.1.5: Distribution of Respondents Based on the Rate of Change from Modern to Alternative Medicine Due to the Low Income Level of the People in Rural Areas

Table 4.1.5 shows that 88.24% of the respondents from Ikwerre LGA indicated that they changed their treatment from modern medicine to alternative medicine due to the low income earned by the people in rural areas. At the same time, 77.14% of the respondents from Emohua indicated that they changed their treatments from modern medicine to alternative medicine low income. Also, 76.08% of the respondents from Etchestated that they changed their treatment from modern medicine to alternative medicine. Table 4.5 further shows that 64.86% of the respondents from Omuma indicated that they changed their treatments from modern medicine to alternative medicine because of low income. In comparison, 62.26% of the respondents from Khana stated that they changed their treatment from modern medicine to alternative medicine because of low income. The significant fallout of the low-income level of the people in the Okirika local government area is that 78.05% of the respondents indicated that they changed their treatments from modern medicine to alternative medicine. The data in table 4.5 equally show that 53.85% of the respondents from Bonny, 91.67% from Andoni; 51.85% from Opobo/Nkoro and 94.44% of the respondents from Degema agreed that they changed their treatments from modern medicine to alternative medicine because of low income earned by the people in rural areas.

The respondents in various local government areas studied indicated that self-administered traditional remedies are used widely to cure various illnesses. Generally, the users collect them directly from plants and other herbs that they believe will cure their disease or their families. However, traditional remedies are provided by relatives, friends, neighbors, or directly from traditional practitioners in a few cases. The list of ailments handled by conventional treatments directly by those afflicted, as the discussion shows include;

stomachache, pile, malaria, cold, period pain, high blood pressure, high temperature, toothache, pneumonia, sore throat, gonorrhoea, vomiting, headache and convulsions.

Table 4.1.5 Distribution of Respondents Based on the Rate of Change from Modern to Alternative Medicine Due to the Low Income Level of the People in Rural Areas

Local Government Areas	Frequency	Percentage Response
Ikwerre	30	88.24%
Emohua	27	77.14%
Etche	35	76.08%
Omuma	24	64.86%
Khana	33	62.26%
Okirika	32	78.05%
Bonny	21	53.85%
Andoni	33	91.67%
Opobo/Nkoro	14	51.85%
Degema	17	94.44%
Multiple Response		

4.1.6: The Perception of the Respondents on the High Cost Effects of Modern Medicine on the People in Rural Areas

Table 4.1.6 shows that the shift to alternative medical treatments is one of the first high-cost effects ofmodern medicine on the people in rural areas, and this has been weighted 3.67 in the Likert scale showing high impact. The proliferation of quacks in medical matters is the 2nd effect of the high cost ofmodern medicine on the people in rural areas as it had a 3.63 weighted score,which is considered high impact based on the study's Likert scale. Equally, the data in table 4.1.6 revealed that Reduced Life Span constituted the 3rd effect of the high cost ofmodern medicine on rural people, which has been weighted 3.61 and considered as high impact. The respondents have indicated the increased rate of untimely death as the 4th effect of the high cost ofmodern medicine on rural people. The impact is considered high because the option is weighted at 3.58. For the 5th effect of the high price ofmodern medicine on the people in rural areas, the respondents indicated *that the* Spread of diseaseshas to be considered high impact because it is weighted 3.52 on the Likert scale. Ill - The respondents have stated health as the 6th effect of the high cost ofmodern medicine on the people in rural areas, and it has been weighted 3.17 on the Likert scale, indicating a low impact. The 7th effect of the high cost ofmodern medicine on the people in rural areas is Increase in self-medication, and it has been weighted 2.84 (Low Impact). Finally,recourse to superstitions and cultural heritage is the 8th effect of the high cost ofmodern medicine on the people in rural areas. It had a 2.69 weighted score, which is considered low impact based on the study's Likert scale.

Table 4.1.6: The Perception of the Respondents on the High Cost Effects of Modern Medicine on the People in Rural Areas

Options	Total Score	Mean Score	Comments/ Decision
Shift to alternative medical treatments	1336	3.67	High
Low patronage to modern health facilities	1281	3.52	High
Spread of diseases	1299	3.57	High
Increase in self-medication	1034	2.84	Low
Ill Health	1154	3.17	Low
The proliferation of quacks in medical matters	1321	3.63	High
Increase rate of untimely death	1303	3.58	High
Recourse to superstitions and cultural heritage indulgence	979	2.69	Low
Reduced Life Span	1314	3.61	High
Multiple Responses			

4.1.7: Rate of Under Utilization of Health Care Facilities by the People in Rural Areas

Table 4.1.7 reveals that the ten local Government Areas have 138 health facilities distributed: Ikwerre 13, Emohua11, Etche 29, Omuma 10, Khana 17, Okirika 14, Bonny 10, Andoni 21, Opobo/Nkoro 4 and Degema 9.However, the data on the underutilization rate of the health facilities reveal that Ikwerre has a 62% underutilization rate, Emohua64%, Etche 59%, Omuma 60%, Khana 71%, Okirika 72%, Bonny 60%, Andoni 71%, Opobo/Nkoro75%, and Degema 67%. The study has revealed that the average underutilization rate of the health facilities in the 10 Local Government Areas is 65%.

The facilities for modern health care services are primarily concentrated in certain localities, making them inaccessible to most of the inhabitants in some parts of the local government areas. This has affected most rural dwellers' level of awareness according to them, as reflected during the focus group discussions.

Table 4.1.7: Rate of Under Utilization of Health Care Facilities by the People in Rural Areas

Name of Local Government Area	Number of Health Facilities	Number of Health Facilities Optimally Used	Rate of Usage of the Health Facilities	Number of Under Utilized Health Facilities	Rate of Under Utilized Health Facilities
Ikwerre	13	5	38%	8	62%
Emohua	11	4	36%	7	64%
Etche	29	12	41%	17	59%
Omuma	10	4	40%	6	60%
Khana	17	5	29%	12	71%
Okirika	14	4	28%	10	72%
Bonny	10	4	40%	6	60%
Andoni	21	6	29%	15	71%
Opobo/Nkoro	4	1	25%	3	75%
Degema	9	3	33%	6	67%
Total / Average Rate	138	48	35%	90	65%

4.1.8 The Perception of the Respondents on Factors Responsible for the non Patronage of modern health facilities by the people in rural areas

The data in table 4.9 reveal the factors responsible for the non-patronage of modern health facilities by the people in rural areas. One of them is self-medication with traditional herbs, and the effect is high with a 3.98 mean score in the evaluation of the respondents' responses. Another factor responsible for the non-utilisation of modern health care facilities by the people in rural areas is stereo type beliefs/culture, which is high with a 3.94 mean score as indicated by the respondents. Equally, the data show that the problem of long queues is a significant factor responsible for the non-utilisation of modern health care facilities by the people in rural areas, as indicated by the respondents whose mean score is high at 3.68. Furthermore, an increase in Poverty constitutes another major factor responsible for the people's non-utilisation of modern health care facilities in rural areas. This is because the variable had a mean score of 3.56 depicting high. Furthermore, unemployment is one of the factors responsible for the non-utilisation of modern health care facilities by the people in rural areas, as indicated by the respondents, even though the effect is considered low at a mean sore of 3.44. Finally, the respondents' responses indicated that Inadequate information/ignorance is one of the factors responsible for the non-utilisation of modern health care facilities by the people in rural areas as the variable a mean score of 3.41 points depicting common effect. Apart from self-medication with traditional herbs, visits and consultations with conventional medical practitioners were widely used by the respondents. The people are pretty knowledgeable about the presence of conventional medical practitioners in their localities. Discussions and observations during the field survey show that both men and women, illiterate and educated patronize traditional medical practitioners. According to the conclusions emanated from the focus group discussions, what distinguishes conventional medical practitioners from others in the various communities is their apparent

ability to diagnose illness and prescribe remedies and their perceived powers to prevent misfortune through protective medicines. The people can distinguish between the traditional medical practitioner who uses herbs to treat their patients and the witch doctor. The former is acceptable to the vast majority because they base their diagnosis on the examination of the patient and the reported symptoms. The treatment given was primarily herbal, although some used a mixture of traditional and modern remedies in treating their patients.

In some cases, people consulted a diviner. These traditional practitioners use a combination of techniques to determine the cause of their patient's complaint: bone-throwing, questioning, examination and knowledge of the patient's circumstances. Their treatment could be herbal, but diviners often prescribe special `magical' protection of persons, livestock and property against sorcery, evil spirits or bad luck. In addition, a `feast for the ancestors' is often recommended to alleviate any discontented ancestor who may be the source of ill. Although some people in the area use hospitals and primary health centers such as dispensaries and maternity clinics, as discussed earlier, the people were critical of the services these modern health institutions received. Concerning dispensaries and health centres, the people agree that kindness is quicker. With fewer people to deal with, lines are generally shorter, and people are given attention earlier. They also claim that the cost is cheaper for treatment than hospitals. The most common complaint concerning primary health centres is that they are not easily accessible because they are located in settlements with no fast means of public transport. In such circumstances, it is easier to travel to distant hospitals in areas accessible by rapid public transportation. The problem of long queues is aggravated by poor service. People complain about standing in line for hours only to be told that the doctor's medication is not available. Others queue to see a doctor only to be meantthey are not available. With doctors being in short supply, most of those using clinics and hospitals are attended to by nurses. The hospitals' system of screening patients so that doctors deal with only severe cases

is unpopular. People feel entitled to the best services available and are easily upset if they are sent home after being seen only by a nurse. Once in the consulting room, patients complain that they are not examined physically (by palpation or with a stethoscope). They describe how nurses and doctors ask them what is wrong and then quickly write something on their cards before dismissing them without examination or explanation. Although modern medicine also uses physical examination, the commonly used method of depending on a patient's case history (given orally by the patient) for prescribing treatment goes against the grain of traditional medical practice. Instead of the practitioner telling the patient the nature and cause of their ailment, the patient is the one who is expected to do all the talking. A traditional practitioner will extract information from a patient but only through a long process of questioning (during divination), which is often supplemented by knowledge of the patient's situation. The result of this process is that the traditional practitioner will announce the nature and cause of their ailment to the patient. This is what is lacking in clinics and hospitals. Patients are often treated (paternalistically) as incapable of understanding what is happening to them, so no attempt to explain the nature or cause of their disease is made. This problem appears to apply to both doctors and nurses. Clinic and hospital users complain about several things when it comes to treatment.

Table 4.1.8 The Perception of the Respondents on Factors Responsible for the non Patronage of modern health facilities by the people in rural areas

Variables	Total Count	Mean Score	Decision
The problem of long queues	1346	3.68	High
Increase in Poverty	1295	3.56	High
Stereo type beliefs / culture	1433	3.94	High
Unemployment	1251	3.44	Low
Inadequate information / ignorance	1243	3.41	Low
Self-medication with traditional herbs	1448	3.98	High
Multiple Responses			

Likert Scale = 5 Points.

Decision Rule Cut off: ≥ 3.50 = High; < 3.50 = Low

4.1.9 The Extent to which the People in Rural Areas Attribute Poor Health Status to Under Utilization of Health Facilities

From the presentations in tables 4.1.9, it is revealed that Poor enlightenment ranked first with a 3.88 mean score in the evaluation of the extent to which the people of the oil-bearing Communities attribute changes in Education to exploitation and or exploration. The programme was considered a high development project by the people in rural areas. Ignorance on health care management constitutes the 2nd development strategy selected by the people in rural areas as the option had a mean score of 3.63,meaning a high development programme. Low-Income Generation / Livelihood / Supply Chains rated third as it had 3.55 points and was equally considered high in the rating of the effects of modern medicine by the respondents from the oil-bearing communities. Also,a low level of education/illiteracy had a 3.43 mean score indicating the 4th (low) development programme preferred by the oil-bearing communities. Finally,the respondents from the oil bearing communities stated a lack of finance as the 5th development project required by them with a mean score of 3.36 points, meaning low outcome among other development options.

Table 4.1.9: Extent to which the People in rural areas attribute Poor health status to underutilization of health facilities

Community Development Primary health care facilities	Extent / Counts					Total Count	Mean Score	Decision
	Very Large	Large	Moderate	Low	Very Low			
Scores	**5**	**4**	**3**	**2**	**1**			
Ignorance on health care management	223	230	227	340	300	1320	3.63	High
Low Income Generation	220	252	263	268	290	1293	3.55	High
Poor enlightenment	210	234	245	304	420	1413	3.88	High
Lack of finance	248	238	245	232	260	1223	3.36	Low
Low level of education/ illiteracy	240	248	230	240	290	1248	3.43	Low
Total	**1141**	**1202**	**1210**	**1384**	**1560**	**2497**		

Likert Scale = 5 Points. Decision Rule Cut off: ≥ 3.50 = High; < 3.50 = Low

4.1.10 Major Factors Hindering the Effective / Full Utilization of Modern Health Facilities in Rural Areas

From table 4.1.10, it is observed that the first significant factor hindering the practical/full utilization of modern health facilities in rural areas is poverty; 98% of the respondents indicated this. Followed in that order is the high cost of modern health care facilities, as 92 respondents stated this, placing it 2nd in the rating. Corrupt medical personnel and communal conflict came third in the rating as 81% indicated this. Lack of sustainability in health care treatment came fourth in the placements, as 76% of the respondents did mean. Other significant factors hindering the practical/full utilization of modern health facilities in rural areas: are Non-adherence to primary health care standards and No portable water supply, both representing 75% of the respondents. Lack of qualified personnel, poor rural infrastructure, and uncoordinated primary health care facilities ranked 6th in the rating as 73% of the respondents indicated. The last option is inadequate monitoring and evaluation of primary health care facilities, which 72% of the respondents considered a significant factor hindering the practical/full utilization of modern health facilities in rural areas.

Table 4.1.10: Respondents Responses on the Major Factors Hindering the Effective / Full Utilization of Modern Health Facilities in Rural Areas

Options	Frequency	Percentage Response	Rating
Non adherence to primary health care standards	273	75	5th
Poverty	357	98	1st
Lack of sustainability in health care treatment	277	76	4th
High cost of modern health care facilities	328	90	2nd
Lack of qualified personnel from the community	266	73	6th
Poor Monitoring/Evaluation of primary health care facilities	262	72	7th
Corrupt medical personnel	295	81	3rd
Poor rural infrastructure	266	73	6th
Inadequate funding	295	81	3rd
No potable water supply	273	75	5th
Uncoordinated primary health care facilities	266	73	6th

Multiple Response

4.1.11: The Extent to which there is poor health status amongst the people in Rural communities of Rivers State

Table 4.1.11 shows that 23% of the respondents indicated poor health status among the people of Emohua LGA to a large extent. In comparison, 26% of the respondents pointed to a large area to the question. Equally, 17% of the respondents indicated that the health status of most rural dwellers is poor to moderate. In comparison, 15% of the respondents stated that there is poor health status among the rural dwellers to a low extent. Only 19 of the respondents indicated that the health status of the rural dwellers is poor.

Table 4.1.11: The Extent to which there is poor health status amongst the people in Rural communities of Rivers State

Option	Number of respondents	Percentage response
Very large extent	85	23%
Large extent	97	26%
Moderate extent	61	17%
Low extent	54	15%
Very low extent	69	19%
Total	**366**	**100%**

4.1.12: The extent to which there is underutilization of modernhealth facilities in rural areas

Table 4.13 reveals that 28% of the respondent's indicated underutilization of modern health facilities in rural areas to a considerable extent. Also, 30% of the respondents stated that there is underutilization of modern health facilities to a large size, while 13% of the respondents indicated to a moderate extent to the question. Table 4.1.12 equally shows that 12% of the respondents indicated that modern health facilities are being underutilized in rural areas to a low volume. In comparison, 17% of them stated that there is underutilization of modern health facilities in rural areas to a shallow extent.

Table 4.1.12: The extent to which there is underutilization of modernhealth facilities in rural areas

Option	Number of respondents	Percentage response
Very large extent	102	28%
Large extent	111	30%
Moderate extent	49	13%
Low extent	41	12%
Very low extent	63	17%
Total	**366**	**100%**

4.1.13: Income distribution of the Respondents (Rural dwellers)

Table 4.1.13 shows that 18% of the respondents earn income levels between N184,000 – N100,000 per annum, while 20% earn between N100,001 to N200,000 per annum. Equally, the data in table 4.13 reveal that 49% of the respondents earn an income bracket between N200,001 to N300,000PA, while 6% of the respondent earn between N300,001 to N500,000 per annum. Finally, the respondents indicated that only 7% of them make between N500,001 and above.

Table 4.1.13: Income distribution of the Respondents (Rural dwellers)

Options	Number of respondents	Percentage response
N84,000 – 100,000 PA	66	18%
N100,001 – 200,000PA	73	20%
N200,001 – 300,000PA	179	49%
N300,001 – 500,000PA	22	6%
N500,001 and above	26	7%
Total	**366**	**100%**

4.1.14 Extent of the non-utilisation of modern health care facilitiesdue to the low income of rural dwellers

Table 4.1.14 shows that 25% of the respondents indicated that to a very large extent the non utilisation of modern health care facilities is due to low income of the rural dwellers while 36% of the respondents indicated to a large extent to the question. Also, 13% of the respondents indicated that to a moderate degree, the non-utilisation of modern health care facilities is mainly due to the low income of the rural dwellers, even as 9% of the respondents indicated to a low extent. Finally, 17% of the respondents said that the non-utilisation of modern health care facilities is due to low income to a shallow time.

Table 4.1.14: Extent of the non-utilisation of modern health care facilitiesdue to the low income of rural dwellers

Option	Number of respondents	Percentage response
Very large extent	93	25%
Large extent	131	36%
Moderate extent	46	13%
Low extent	34	9%
Very low extent	62	17%
Total	**366**	**100%**

4.1.15 Extent of the non-utilisation of modern health care facilities, the practice of the people in the rural area

Table 4.1.15 shows that 27% of the respondents indicated that, to a considerable extent, the people in rural areas patronize alternative medicine practitioners. In comparison, 34% of the respondents indicated that, to a large size, the people in rural areas patronize alternative medicine practitioners. Equally, 13% of the respondents pointed to a moderate extent to the question, while 10% indicated that people in rural areas patronize alternative medicine practitioners to a low volume. Only 16% of the respondents indicated that to a shallow extent, people in the rural regions patronize alternative medicine practitioners

Table 4.1.15: Extent of the non-utilisation of modern health care facilities, the practice of the people in the rural area

Option	Number of respondents	Percentage response
Very large extent	98	27%
Large extent	125	34%
Moderate extent	48	13%
Low extent	36	10%
Very low extent	59	16%
Total	**366**	**100%**

4.1.16: Statistical relationship between poor health status and under utilization of modern facilities in rural areas.

Based on the result in table 4.1.16, it is evident that the computed r (0.98) is positive and also, the calculated value of t, which is 8.53 is greater than the critical value from the table, which is 3.18. Therefore, the study has accepted the alternative hypothesis I (H_A1),i.e. "there is a significant relationship between underutilization of health care facilities and the poor health status of the people in selected rural areas in Rivers State".

Table 4.1.16: Statistical relationship between poor health status and under utilization of modern facilities in rural areas.

Options	The extent of underutilization of modern health facilities X	Extent of Poor Health Status Y	X^2	Y^2	XY
Very large extent	102	85	10404	7335	8670
Large extent	111	97	12321	9409	10767
Moderate extent	49	61	2401	3721	2989
Low extent	41	54	1681	2916	2214
Very low extent	63	69	3969	4761	4347
Total	**366**	**366**	**30,776**	**28,032**	**28,987**

r = 0.98

t = 8.53

4.1.17: Statistical relationship between low income and underutilization of modern health facilities

The computations in table 4.1.17 reveal that the computed r-value is 0.96 and positive. Equally, the calculated value of t is 594 and is greater than the critical value of t from the statistical table. Accordingly, the study has accepted the alternative hypothesis II; hence, “there is a significant relationship between underutilization of modern health care facilitiesand low income of the people in selected rural areas in Rivers State”.

Table 4.1.17: Statistical relationship between low income and underutilization of modern health facilities

Options	The extent of low income	The extent of underutilization of modern health facilities			
	X	**Y**	**X^2**	**Y^2**	**XY**
Very large extent	93	102	8649	10404	9486
Large extent	131	111	17,161	12,321	14,541
Moderate extent	46	49	2116	2401	2254
Low extent	34	41	1156	1681	1394
Very low extent	62	63	3844	3969	3906
Total	**366**	**366**	**32926**	**30776**	**31581**

r = 0.96
t = 5.94

4.1.18: Statistical relationship between patronage of alternative medicine by the people and underutilization of modern health facilities in rural areas.

The results of the computation in table 4.19 shows that the r-value is 0.98 and cheerful; the t computed value is 9.53 and more excellent than 3.18 the statistical r value @ (5-2) 0.05). Accordingly, the study has accepted the alternative hypothesis III (H_{A3}); hence "there is a significant relationship between underutilization of modern health facilities and the patronage of alternative medicine practice by the people in selected rural areas in Rivers State".

Table 4.1.18: Statistical relationship between patronage of alternative medicine by the people and underutilization of modern health facilities in rural areas.

Options	**The extent of patronage of A.M by the people in rural areas X**	**The extent of underutilization of modern health facilities Y**	$\mathbf{X^2}$	$\mathbf{Y^2}$	**XY**
Very large extent	98	102	9604	10404	9996
Large extent	125	111	15,625	12,321	13,875
Moderate extent	48	49	2304	2401	2352
Low extent	36	41	1296	1681	1476
Very low extent	59	63	3481	3969	3717
Total	**366**	**366**	**32,310**	**30,776**	**31,416**

A.M. = Alternative Medicine

r = 0.98

t = 8.53

4.2 Discussions

This study examined healthcare utilization patterns and factors influencing the preference for alternative and modern healthcare facilities among rural residents of Rivers State, Nigeria. The findings reveal persistently low utilization of modern primary healthcare facilities, with a substantial proportion of respondents preferring alternative medicine, patent and proprietary medicine vendors (PPMVs), and private hospitals. These patterns are consistent with empirical evidence from rural communities across Nigeria and other low- and middle-income countries, where deficiencies in primary healthcare systems continue to shape health-seeking behaviour.

The study found that socio-demographic characteristics such as age, sex, marital status, educational level, occupation, and residential location significantly influenced respondents' choice of healthcare facility. The predominance of respondents within the economically active age group (18–50 years) aligns with findings from Oladipo (2014) and Ahmed et al. (2021), who reported that healthcare decisions in rural Nigerian households are largely driven by young and middle-aged adults. This age group often balances health needs with economic responsibilities, influencing their preference for faster and more accessible care options.The observed female predominance in healthcare utilization supports earlier studies indicating that women generally exhibit higher health-seeking behaviour due to reproductive health needs and greater health awareness (Onwujekwe et al., 2019; Ahmed et al., 2023). However, the strong preference for alternative medicine among both males and females contrasts with findings from urban-based studies where women are more likely to utilize formal healthcare services (Adepoju & Oladimeji, 2023). This disparity may be attributed to rural-specific barriers such as poor service quality, limited staffing, and infrastructural inadequacies in primary health centres. Educational attainment emerged as a key determinant of healthcare utilization. Respondents with secondary and tertiary education were more likely to utilize

health centres, private hospitals, and teaching hospitals, while those with little or no formal education relied more on medicine stores and alternative medicine. This finding corroborates empirical studies by Oyebode et al. (2016), and Okedo-Alex et al. (2022), which demonstrate that education improves health literacy, perception of illness severity, and trust in formal healthcare systems. In contrast, lower educational levels are often associated with stronger reliance on traditional beliefs and informal care providers.

Occupational status also significantly influenced healthcare choices. Unemployed respondents and artisans were more inclined to patronize medicine stores, likely due to lower costs, flexible payment arrangements, and perceived convenience. Similar patterns have been reported in studies from Kwara State and Enugu State, where informal healthcare providers were preferred by low-income groups due to financial constraints and accessibility (Ahmed et al., 2021; Okedo-Alex et al., 2023). Conversely, students and professionals showed a higher preference for private hospitals, reflecting their relatively better socioeconomic status and expectations of higher service quality. Interestingly, although cost remains an important determinant of healthcare utilization, it was not the most frequently cited reason for facility preference in this study. This finding contrasts with some empirical studies that identify cost as the dominant barrier to utilization of modern healthcare in rural Nigeria (Warri & George, 2020). The present findings suggest that service quality indicators—such as speed of service, drug availability, and staff competence may outweigh cost considerations when patients perceive public facilities as inefficient or poorly equipped.

Furthermore, quick service delivery was the most commonly cited reason for healthcare facility preference, reported by over 80% of respondents. This finding strongly aligns with empirical studies by Oluyemi et al. (2017) and Kruk et al. (2018), which identified long waiting times as a major deterrent to the utilization of public health facilities in Nigeria. The

preference for alternative medicine and PPMVs may therefore reflect perceptions of prompt attention and personalized care, even in the absence of standardized medical practices.The importance of drug availability and laboratory services observed in this study is consistent with findings from Onwujekwe et al. (2009) and Okedo-Alex et al. (2022), who reported that frequent drug stock-outs and limited diagnostic capacity undermine confidence in primary healthcare facilities. In contrast, studies conducted in better-resourced urban settings have shown higher utilization of public health facilities where consistent drug supply and diagnostic services are available (Adepoju & Oladimeji, 2023).Provider attitude and perceived competence were also significant determinants of healthcare utilization. Respondents reported distrust in staff competence and poor staff patient relationships as major barriers to using primary health centres. These findings mirror empirical evidence from Aregbeshola and Khan (2017), who emphasized that interpersonal quality of care plays a crucial role in shaping patients' healthcare decisions, particularly in rural settings where trust and familiarity are highly valued.

Besides, non-utilization of modern healthcare facilities in this study was largely driven by systemic and structural challenges, including lack of equipment, absence of laboratory services, poor facility environment, and shortage or absenteeism of doctors. These findings are consistent with national health system assessments that highlight infrastructural decay and human resource shortages as persistent challenges within Nigeria's primary healthcare system (Federal Ministry of Health, 2016; WHO, 2022).The widespread practice of bypassing nearby health facilities in favour of distant ones further reflects low confidence in the quality of care at the primary level. Similar bypass behaviour has been documented in rural Nigeria and other low- and middle-income countries, where patients prioritize perceived quality over geographical proximity (Dorjdagva et al., 2017; Kruk et al., 2018). This pattern underscores

the limitations of expanding healthcare infrastructure without simultaneous improvements in service quality and staffing.

Encouragingly, the majority of respondents indicated willingness to utilize primary health centres if improvements were made in infrastructure, staffing, drug availability, and service delivery. This finding aligns with empirical studies suggesting that underutilization of modern healthcare services in rural Nigeria is not due to cultural resistance alone, but rather to modifiable system-level deficiencies (Okedo-Alex et al., 2023; WHO, 2022). Strengthening primary healthcare services through targeted investments in quality improvement, workforce retention, and community engagement may therefore significantly enhance utilization and reduce reliance on unregulated alternative care.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study examined the Utilisation of HealthCare Facilities in some selected facilities in Rivers State. It administered 400 copies of the questionnaire to the respondents from 10 Local Government Areas of Rivers State;378 copies of the questionnaire were retrieved from the respondents. However, after editing the copies of the questionnaire, only 366 documents representing (91.50% response rate) were found helpful for the data analysis.

The age range of the respondents was between 18 and 62 years (33.62±4.21 years). Almost 80% of the respondents were between 18 and 50 years. Male: female ratio was 0.89:1. The single, married and widowed were 55.7%, 38.3% and 6.0%, respectively. Only 15.0% of the respondents had no form of formal education. Most of the respondents were students (126, 34.4%), and this was followed by skilled workers (105, 28.7%), which included various forms of artisans while the civil servants and others such as professionals (bankers, lawyers, doctors, teachers), unskilled workers (orderlies and petty traders). The results indicated that sex, marital status, educational status, occupation and residential area where the respondent's dwell are all associated with the preferred choice of health facility for care. The select health facility with the highest proportion for both sexes were the alternative medicine, but whereas 33.1% of males would prefer the alternative medicine, it was 37.1% for the female gender.

The study also revealed that socio-economic factors determine patronage of modern health facilities in some selected facilities in Rivers State. Among respondents with primary or no formal education, pharmaceutical/ medicine store was the preferred choice of health facility, but it was health centres for respondents with secondary and tertiary education. Respondents with higher educational status utilize the private and teaching hospital more than their

counterparts with lower academic levels. Similarly, the unemployed respondents and those with skilled jobs, such as the artisans, would prefer medicine stores for care than other facilities. Still, students and professionals, including respondents with unskilled jobs, will choose private hospitalsover others. More respondents living in the inner core would rather patronize the medicine store, while more of those living in the outer body would prefer the alternative medicine most. In all the preferred and usual choices of health facilities, the first port of call for medical care was the alternative medical centre.

In seeking reasons for their preference and what they considered in choosing a facility for health care, quick service was the most typical reason the study revealed. However, some also felt that they had been too used to a particular health centre or that the native doctors knew their history well.

Primary reasons provided by the respondents for not utilizing the basic health centres were presumed lack of equipment and drugs. Others reported that the choice of facility for healthcare service should be personal, and everyone should be given a free hand. In addition, some of the respondents felt that Basic health centresare meant for local and illiterate people. Many others thought it was for those who could not afford teaching hospitals or other reputed primary health care centres. To improve utilization of the primary and comprehensive health centres and cottage hospitals, the respondents felt the following should be put in place: good looking environment, modern facilities including laboratories, drug availability, geographical accessibility, availability of qualified medical personnel – doctors and nurses. Other qualities demanded were the improved attitude of workers and affordable services.

The respondents in various local government areas studied indicated that self-administered traditional remedies are used widely to cure various illnesses. Generally, the users collect them directly from plants and other herbs that they believe will cure their disease or their

families. However, traditional remedies are provided by relatives, friends, neighbours, or directly from traditional practitioners in a few cases. The list of ailments handled by conventional treatments directly by those afflicted, as the discussion shows include; stomachache, pile, malaria, cold, period pain, high blood pressure, high temperature, toothache, pneumonia, sore throat, gonorrhoea, vomiting, headache and convulsions.

The study revealed that the significant effects of the high cost of modern medicine on the people in rural areas include: shift to alternative medical treatments, low patronage to modern health facilities, the spread of diseases, increase in self-medication, ill health, the proliferation of quacks in medical matters, expand rate of untimely death, recourse to superstitions and cultural heritage indulgence and reduced life span.

The study also revealed that the facilities for modern health care services are primarily concentrated in certain localities, making them inaccessible to most of the inhabitants in some parts of the local government areas. This has affected the level of awareness accorded to most rural dwellers. The study revealed that a small proportion of the sick people follow this ideal pattern reflecting comparatively less attention being paid to modern medical care in terms of the overall treatment of diseases in the area mainly because of their non-availability.

The study found that the main factors responsible for the non-utilisation of modern health care facilities by the people in rural areas are the problem of long queues, increase in poverty, stereotype beliefs/ culture, unemployment, inadequate information/ignorance and self-medication with traditional herbs. The major factors hindering the practical/full utilization of modern health facilities in rural areas include: poverty, high cost of modern health care facilities, Corrupt medical personnel, Lack of sustainability in health care treatment, Non-adherence to primary health care standards and No portable water supply, both representing,

Lack of qualified personnel, poor rural infrastructure, and uncoordinated primary health care facilities and poor monitoring and evaluation of primary health care facilities

Policy Implication of the Findings

While the current study articulates the perceived needs of rural householders and the underlying factors influencing their health-seeking behaviour, it underscores a broader public health responsibility that goes beyond service provision. Government at all levels must prioritize the equitable distribution of healthcare facilities to ensure that rural and underserved communities are not structurally disadvantaged in the allocation of health resources. The concentration of modern health facilities in urban or semi-urban areas perpetuates inequality and reinforces the continued reliance on alternative and informal health care options among rural populations.

In addition, subsidization of healthcare services remains a critical policy imperative. High costs of modern medical care, including consultation fees, medications, and ancillary expenses, were identified as significant deterrents to utilization. Targeted subsidies particularly for primary health care services, essential drugs, and maternal and child health interventions would reduce the financial burden on rural dwellers and encourage sustained use of orthodox health facilities.

Furthermore, policy efforts should focus on strengthening regulatory frameworks to guide the practice of alternative medicine, ensuring adherence to minimum standards of safety and quality. This should be complemented by sustained health education programmes aimed at improving health literacy and informed decision-making among rural populations.

Overall, deliberate policies that promote fair distribution of facilities, sustained public financing through subsidization, and effective regulation of health services are essential for

improving utilization patterns and health outcomes in rural communities. Without such concerted policy actions, disparities in healthcare utilization and preventable poor health outcomes are likely to persist.

5.2 Conclusion

This study has shown that the people in rural areas prefer alternative medicine to the modern ones regarding receiving healthcare. Within the public sector, the higher levels of health facilities are selected to the primary health care centres. The provision and distribution of primary health centres were also vastly inequitable, especially since the geographical coverage of these centres is quite limited. At the same time, the services provided in these primary health centres are pretty little due mainly to the lack of facilities and shortage of personnel. Thus the hierarchical principle is expected in the distribution of health facilities in which the number of secondary health centres will depend on a tertiary centre. Several primary health centres will rely on a secondary centre that is not in existence in most parts of the state. The inaccessibility of the vast majority of the population in Rivers State to modern health care services has contributed to the prevailing attitude of the people towards current health care services.From the test of the hypotheses in this study, it is evident and conclusive that: the poor health status of the people in rural communities is the result of underutilization of modern health care facilities in the areas; the use of alternative medicine due to low income is responsible for ineffective use of modern health facilities in rural areas, and the non-utilisation of contemporary health care facilities leads to underutilization of modern health facilities in rural areas.

5.3 Recommendations

Because of the findings and conclusions, the following recommendations have been made in this study:

i. Policy makers' and all stakeholders' attention ought to be drawn to improving the status and performance of the peripheral health facilities, improving the outlook image of the primary health facilities and making them environmentally friendly. Similarly, efforts to raise and keep the standards of practices in the primary health care centres through continuous medical education and regular accreditation assessment by relevant bodies is imperative in providing quality healthcare services to the populace that can lure the out of crude alternative medicine patronage.

ii. The role which primary health centres are expected to play in terms of health education of the people has not been possible because of their poor staffing and lack of facilities. The challenge of improving the contribution of primary health care centres to the modern health care system in Rivers State in the next decade relates to the need to train and retain more community staff to carry out the essential functions carried out by nurses, midwives and health educators. However, given the reluctance of professionally trained health personnel to work in the remote villages in local government areas and considering the reluctance of the youth to migrate to urban areas where jobs are no longer available, there is a pool of local person that can be easily trained for this purpose.

iii. A programme of personnel and facility improvement in the primary health care centres in the state should be combined with a policy of deliberate dispersal of primary health centres in various parts of the state, especially in the local government

areas where population density is high and yet there are limited primary health establishments.

iv. Closely related to the policy of dispersal of primary health centres is the establishment of mobile clinics in localities where the population is so dispersed that it will be difficult for the threshold population, which is justifiable for a primary health centre to be provided and be attained. The primary function of such clinics is to carry out activities similar to those carried out by primary health establishments. This measure would reduce the penchant for non-utilisation of modern health care facilities by rural dwellers.

v. Despite the case being made for the provision of adequate primary health centres in the state, there is no doubt that considering the attitude of the people as reflected in the study, alternative medical establishments will continue to play a significant role in the health care system of the state in the coming decades. As far as the rural areas are concerned, there is still the belief that modern health care means the availability of costly health centres/facilities. Yet the study's findings show that this is not so because some alternative medicine practitioners start with deceitful cheap services and end up extorting their patients/customers at the close of the treatment without commensurate results. To ensure equity and moderation of medical cost in the modern medical care provision, a policy of locating additional modern health facilities in some selected facilities in need subsidized by the government must be articulated and implemented.

vi. The success of a deliberate policy of dispersal of primary and modern medical establishments as articulated in this study must be closely related to rural development and settlement, upgrading poorly established ones.

vii. Development planning in Nigeria has focused attention on urban areas at the expense of rural communities. Consequently, the emphasis in modern health facilities must be on the overall improvement in the lives of people in rural communities. If primary health services and, to some extent, regulated alternative medical services are to be attracted and made functional in the rural communities, the availability of essential infrastructure services such as roads, water transport etc., is essential. This requires the participation of the people, the local government authorities, the oil companies, the private sector, non-governmental organizations, and the federal and the state government agencies, particularly those responsible for the development of the petroleum-producing areas.

viii. In summary, this will promote Goal three of the Sustainable Development Goal and further reinforce the Call for Universal Healthcare Coverage which will be decisively driven by Health Insurance. This is where the National Health Insurance System – NHIS will play. The Rivers State Health Insurance Agency will be critical here.

5.4 Contribution to Knowledge

This study has made significant contributions to knowledge on healthcare utilization in rural communities of Rivers State, Nigeria, by providing empirical, context-specific evidence on utilization patterns, determinants of underutilization, and their implications for health outcomes. First, the study provides quantitative evidence on patterns of healthcare utilization in rural Rivers State. Findings revealed that alternative medical centres constituted the most common first point of care (35.2%), followed by patent medicine stores (27.9%), while utilization of basic health centres (12.3%) and primary healthcare centres (7.6%) was remarkably low. This clearly demonstrates the marginal role of formal primary healthcare

facilities in rural health-seeking behaviour and adds numerical clarity to existing literature that often discusses this trend descriptively.

Second, the study contributes new insights into the extent of underutilization of modern healthcare facilities. Results showed that 58% of respondents reported underutilization to a large (30%) or very large extent (28%), providing measurable evidence of the depth of the problem. This quantification advances understanding beyond general claims of poor utilization by specifying the magnitude of underuse in rural settings.

Third, the study empirically establishes the institutional and service-related factors responsible for non-utilization of modern health facilities. Key barriers identified include unkempt facility environments (52.9%), lack of equipment and laboratory services (50.3%), poor staff–patient relationships (39.5%), and absence of doctors (35.7%). By presenting these factors with precise figures, the study strengthens evidence for health system weaknesses that require targeted policy and managerial interventions.

Fourth, the study makes a strong contribution by quantitatively linking socioeconomic status to healthcare utilization. Findings showed that 98% of respondents identified poverty as a major barrier, while 90% reported high cost of modern healthcare services as a deterrent to utilization. Furthermore, income analysis revealed that 49% of respondents earned between ₦200,001 and ₦300,000 annually, while 38% earned below ₦200,000, underscoring the dominance of low income in healthcare decision-making in rural communities.

Fifth, the study advances knowledge by demonstrating statistically strong relationships between key variables. A very strong positive correlation ($r = 0.98$) was established between underutilization of healthcare facilities and poor health status, while a similarly strong relationship ($r = 0.96$) was found between low income and underutilization of modern health

facilities. These findings provide robust empirical confirmation of the health consequences of poor service utilization in rural areas.

Finally, this study contributes context-specific evidence from ten Local Government Areas in Rivers State, offering baseline data that can inform health planning, primary healthcare revitalization, and future research. By integrating utilization patterns, socioeconomic determinants, and statistical relationships, the study enriches existing literature and provides actionable evidence for improving equitable access to healthcare services in rural Nigeria.

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APPENDICES

APPENDIX A: COVER LETTER

School of Health Technology,

Federal University of

Technology, Owerri.

30th June, 2012

Dear Respondent,

I am an M.P.H. student of the School of Health Technology, Federal

University of Technology, Owerricurrently undertaking a research project on *Utilization of Health care FacilitiesSome selected facilities in Rivers State* as part of the requirement for this programme.

My research project is designed purely for academic purpose. Specific local government areas of Ikwerre, Emohua, Etche, Omuma, Khana, Okirika, Bonny, Andoni, Opobo/Nkoro and Degema in Rivers State have been earmarked for the study.

Kindly assist me by ticking the right answers or provide short written answers as the case may be. Your responses will be treated with utmost confidentiality.

Thank you.

Yours Sincerely,

Onyetulem, Dan

APPENDIX B: QUESTIONNAIRE

Topic:*Utilization of Health Care Facilities in Some selected facilities in Rivers State*

Section A (General)

Please, tick (✓) the appropriate box or provide a short written answer as applicable.

(1) Name:…… Village:……

(2) Sex: (a) Male ☐ (b) Female ☐

(3) Age: (a) 20 - 25 years ☐ (b) 26 – 30 years ☐

(d) 36 – 40 ☐ 31 – 35 years ☐ (e) 41 years and above ☐

(4) Qualifications: (a) FSLC ☐ (b) WASC/SSCE/GCE ☐

(c) A level/ OND ☐ (d) B. Sc ☐ (e) PGD/Masters /PhD ☐

(f) Others (Specify):.....…….

(5) Marital Status: Single ☐ Married ☐

(6) What is your treatment preference?

(a) Alternative ☐ (b) Modern medicine ☐ (c) medicine ☐

Others (Specify):….……

(7) Please indicate your usual choice of health facilities as the first port of call for care health facilities?

Options	**Responses (Please Tick the Appropriate option/s)**
Alternative medical centre	
Pharmacy/Medicine Store	

Basic Health Centre	
General/Teaching Hospital	
Primary health care centre	

(8) What are the reasons for your preference or choice of health facilities for care?

Options	**Responses (Please Tick the Appropriate option/s)**
Reason	
Cheap Service	
Convenience/Proximity	
Qualified Personnel	
Quick Service (alternative medicine)	
Privacy	
Good Attitude of Staff	
Equipments an Lab Service	
Drug Availability	
Family Hospital	
Other reasons No other Choice	

(9) What are the Factors/Reasons for Non Utilization of Modern Health Facilities by the People in Rural Areas?

Reason	**Responses (Please Tick the Appropriate option/s)**
No 24 hr service	
No equipment/laboratory service	
Environment unkempt / not cozy	
Staff poor relationship	
No doctor in the health centre	
Doctor not present most times	
No doctor on call / night duty	
Do not trust staff competence	
Services are expensive	
Do not like primary health care centre	
Do not like government health centres	
travel cost	
No particular reason	

(10) What are the high cost effects of modern medicine on the people in rural areas?

Options	**Responses (Please Tick the Appropriate option/s)**
Shift to alternative medical treatments	
Low patronage to modern health facilities	

Spread of diseases	
Increase in self medication	
Ill Health	
Proliferation of quacks in medical matters	
Increase rate of untimely death	
Recourse to superstitions and cultural heritage indulgence	
Reduced Life Span	

(11) What are the factors responsible for the non utilisation of modern health care facilities by the people in rural areas?

Variables	**Responses (Please Tick the Appropriate option/s)**
The problem of long queues	
Increase in Poverty	
Stereo type beliefs / culture	
Unemployment	
Inadequate information / ignorance	
Self-medication with traditional herbs	

(12) To what Extent do the People in rural areas attribute Poor health status to under utilization of health facilities?

Health care facilities	**Scores**	**Responses (Please Tick the Appropriate option/s)**				
		Very Large	**Large**	**Moderate**	**Low**	**Very Low**
		5	**4**	**3**	**2**	**1**
Ignorance on health care management						
Low Income Generation						
Poor enlightenment						
Lack of finance						
Low level of education / illiteracy						

(13) What are the major factors hindering the effective/full utilization of modern health facilities in rural areas?

Options	**Responses (Please Tick the Appropriate option/s)**
Non adherence to primary health care standards	
Poverty	
Lack of sustainability in health care treatment	

High cost of modern health care facilities	
Lack of qualified personnel from the community	
Poor Mentoring/Evaluation of primary healthcare facilities	
Corrupt medical personnel	
Poor rural infrastructure	
Inadequate funding	
No portable water supply	
Uncoordinated primary health care facilities	

Section B: For the Local Government / Health Centre Officials

(14) How many people have changed from modern to alternative medicine due to the low income level of the people in rural areas?

Local Government Areas	**Please indicate the number appropriate to your LGA / Health Centre**
Ikwerre	
Emohua	
Etche	
Omuma	
Khana	
Okirika	
Bonny	
Andoni	
Opobo/Nkoro	

Degema	

(15) How many health facilities in your local government area /health centre?

Name of Local Government Area	**Please indicate the number appropriate to your LGA / Health Centre**
Ikwerre	
Emohua	
Etche	
Omuma	
Khana	
Okirika	
Bonny	
Andoni	
Opobo/Nkoro	
Degema	

APPENDIX C: Data

CLASSIFIED POPULATION OF THE UNDERLISTED COMMUNITIES BASED ON NPC, 2006 CENSUS

Geographical Zone	Selected LGA	Selected Community	Population	Questionnaire distributed	Percentage Population
UPLAND:	Ikwerre	Isiokpo	41,387	14	
		Omagwa	10,124	4	
		Aluu	6,594	3	
		Elele	39,169	13	
		Omerelu	5,715	3	
			102,989	**37**	**9.20**
	Emohua	Elibrada	18,329	7	
		Rumuji	34,955	12	
		Ibaa	29,718	10	
		Egbeda	20,161	8	
		Ndele	21,611	8	
			124,774	**45**	**11.15**
	Etche	Igbodo	17,791	6	
		Okehi	30,938	11	
		Ndashi	18,621	6	
		Umuaturu	14,483	5	
		Ndele	11,176	5	
			93,009	**33**	**8.30**
	Omuma	Eberi	61,308	21	
		Obiohia	20,441	7	
		Ofen	38,143	13	

		Umuoyoro Umuoke	27,642 19,397	10 8	
			166,931	60	14.91
	Khana	Bori Bane Taata Gwara Opuoko	69,149 10,557 8,846 11,439 7,142	24 4 3 4 3	
			107,133	**38**	**9.57**
Geographical Zone	**Selected LGA**	**Selected Community**	**Population**	**Questionnaire distributed**	**Percentage Population**
RIVERINE	Okirika	George Ama Ogan Ama Ogoloma Ibaka Oba Ama	18,212 12,237 20,136 12,789 15,921	6 5 7 5 5	
			79,295	**28**	**7.1**
	Bonny	Bonny Finima Peterside Oloma Abalamabie	72,183 22,968 9,114 7,508 5,906	25 8 4 2 3	
			117,679	**43**	**10.5**
	Andoni	Ngo Ataba Unyeala	21,318 12,709 9,915	7 4 4	

		Abarama Ikuru	7,387 14,911	3 6	
			66,240	**24**	**5.92**
	Degema	Degema Bakana Tonitia Buguma Bille	41,952 33,936 30,481 34,402 18,992	14 12 11 12 9	
			159,763	**57**	**13.2**
	Opobo/ Nkoro	Minimah Epellema Queens town Nkoro Kalaibiama	17,172 12,367 21,391 30,124 20,460		
			101,514	**28**	**9.0**
Total Target Population = 1,119327					

APPENDIX D

Table 4.17: Statistical relationship between poor health status and under utilization of modern facilities in rural areas.

Options	**Extent of under utilization of modern health facilities X**	**Extent of Poor Health Status Y**	X^2	Y^2	**XY**
Very large extent	102	85	10404	7335	8670
Large extent	111	97	12321	9409	10767
Moderate extent	49	61	2401	3721	2989
Low extent	41	54	1681	2916	2214
Very low extent	63	69	3969	4761	4347
Total	**366**	**366**	**30,776**	**28,032**	**28,987**

Source: Survey date – 2012 (see tables 4.12 and 4.13)

$$r = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

$$= \frac{5(28{,}987) - (366)(366)}{\sqrt{[5(28{,}032) - (366)^2][5(30{,}776) - (366)^2]}} = \frac{144{,}935 - 133{,}956}{\sqrt{\quad}}$$

$$= \frac{(6{,}204)(19{,}924)}{11117.94} = \frac{10{,}979}{11117.94}$$

$$= 0.98$$

$$r = 0.98$$

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-(r)^2}} = \frac{0.98\sqrt{5-2}}{\sqrt{1-(0.98)2}} = \frac{1.697}{0.199} = 8.53$$

$$t = 8.53$$

APPENDIX E

Table 4.18B: Statistical relationship between patronage of alternative medicine due to low income and under utilization of modern health facilities

Options	**Extent of low income** **X**	**Extent of under utilization of modern health facilities** **Y**	**X^2**	**Y^2**	**XY**
Very large extent	93	102	8649	10404	9486
Large extent	131	111	17,161	12,321	14,541
Moderate extent	46	49	2116	2401	2254
Low extent	34	41	1156	1681	1394
Very low extent	62	63	3844	3969	3906
Total	**366**	**366**	**32926**	**30776**	**31581**

Source: Survey date – 2012 (see tables 4.13 and 4.15)

$$r = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

$$= \frac{5(31581) - (366)(366)}{\sqrt{[5(32926) - (366)^2][5(30776) - (366)^2]}} = \frac{23949}{\sqrt{\quad}}$$

$$(30{,}674)(19{,}924)$$

$$= 23{,}949$$

$$24{,}721 = 0.96$$

$$r = 0.96$$

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-(r)^2}} = \frac{0.96\sqrt{5-2}}{\sqrt{1-(0.96)^2}} = \frac{1.663}{0.28} = 5.94$$

$$t = 5.94$$

APPENDIX F

Table 4.19B: Statistical relationship between patronage of alternative medicine by the people and under utilization of modern health facilities in rural areas.

Options	**Extent of patronage of A.M by the people in rural areas** **X**	**Extent of under utilization of modern health facilities** **Y**	**X^2**	**Y^2**	**XY**
Very large extent	98	102	9604	10404	9996
Large extent	125	111	15,625	12,321	13,875
Moderate extent	48	49	2304	2401	2352
Low extent	36	41	1296	1681	1476
Very low extent	59	63	3481	3969	3717
Total	**366**	**366**	**32,310**	**30,776**	**31,416**

Source: Survey date – 2012 (see tables 4.13 and 4.16)

$$r = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

$$= \frac{5(31416) - (366)(366)}{\sqrt{\quad}}$$

$$[5(32310) - (366)^2]\,[5(30776) - (366)^2] = 23124$$

$$\sqrt{27{,}594)(19{,}924)}$$

$$= 23{,}124$$

$$23{,}447 = 0.98$$

$$r = 0.98$$

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-(r)^2}} = \frac{0.98\sqrt{5-2}}{\sqrt{1-(0.98)2}} = \frac{1.697}{0.199} = 8.53$$

$$t = 8.53$$