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Educational Attainment and Patronage of Orthodox Treatment Among Rural Dwellers in Cross River State- Nigeria.

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Abstract
This study examines the relationship between educational attainment and patronage of orthodox treatment among rural dwellers in Cross River State- Nigeria. As healthcare decisions are often influenced by individual knowledge and awareness, educational level is considered a key determinant in shaping health-seeking behavior of people especially in developing countries of the world like Nigeria. Using a mixed-method approach in theoretical review, the study investigates how individuals with varying levels of education access and utilize formal healthcare services, such as hospitals and clinics, as opposed to traditional or alternative medicine. Findings from the secondary data reveal a positive correlation between higher educational attainment and increased patronage of orthodox treatment. Educated individuals are more likely to understand the importance of professional medical care, adhere to prescribed treatments, and seek early diagnosis. Conversely, lower levels of education are associated with skepticism towards modern healthcare and a higher reliance on traditional and spiritual healers. The study concludes that improving educational access and health literacy can significantly enhance the utilization of orthodox healthcare services, thereby contributing to better public health outcomes. The paper recommends that ministries of education and health at federal, state, and local levels should formulate and implement educational and health policies that promote awareness and access to formal education and orthodox healthcare.
Keywords: Educational, attainment, patronage, orthodox, treatment and rural dwellers

Introduction

Access to healthcare services remains one of the most pressing concerns in rural communities across Nigeria. In Cross River State, particularly in its rural areas, health-seeking behavior is often shaped by a complex interplay of socio-economic and educational factors. One of the critical determinants of whether individuals seek orthodox (modern) medical treatment or alternative care is their level of education. Educational attainment has been found to significantly influence health literacy, which, in turn, determines how individuals perceive symptoms, understand the need for medical attention, and make informed health choices (National Population Commission (NPC, 2019). In Nigeria, the 2018 Nigeria Demographic and Health Survey (NDHS) reported that individuals with secondary or higher education are more likely to seek healthcare from government or private hospitals compared to those with no formal education. For instance, only 32% of rural dwellers with no education sought treatment at formal health facilities, compared to 66% among those with secondary education and above (NDHS, 2018).

In Cross River State, despite efforts by the government and health agencies to improve access to healthcare, many rural residents continue to patronize traditional healers and self-medicate, often due to low awareness, poor health education, and financial constraints (Etim, 2022). According to the Cross River State Ministry of Health (2021), only 47% of rural dwellers in the state utilize orthodox healthcare services when ill, with the remaining 53% relying on traditional and informal sources of care. While the lack of infrastructure is a major factor, the educational level of community members also contributes to their healthcare decisions. A study by Okoi and Nsa (2020) found that rural dwellers with at least a secondary school education in parts of Cross River North were twice as likely to attend antenatal clinics and seek child immunization services compared to their uneducated counterparts.

This scenario underscores a crucial need to investigate how educational attainment directly influences the patronage of orthodox treatment in rural Cross River. Orthodox treatment, also referred to as conventional or modern medicine, encompasses scientifically tested and evidence-based methods used by licensed healthcare professionals to diagnose, manage, and treat diseases. This system is characterized by the use of pharmaceutical drugs, surgical procedures, and advanced diagnostic tools, and is administered in formal healthcare settings such as hospitals, clinics, and medical laboratories (World Health Organization [WHO], 2021). The patronage of orthodox treatment has grown significantly, particularly in urban areas where access to healthcare infrastructure and medical expertise is more readily available. The increasing patronage of orthodox treatment can be attributed to several factors including public awareness, government health campaigns, and improvements in healthcare delivery systems.

In many countries, orthodox medicine is perceived as more reliable due to its foundation in scientific research and the availability of trained medical personnel (Onwujekwe, Onwujekwe, Uguru, Russo, Etiaba, Mbachu, Mirzoev & Gilson, 2019).

The global spread of infectious diseases and the need for standardized treatment have further reinforced the reliance on orthodox healthcare systems. In many developing regions like Nigeria, the utilization of orthodox treatment is sometimes constrained by socio-economic challenges, cultural beliefs, and limited access to healthcare facilities. In such contexts, people may alternate between traditional and orthodox treatment modalities, depending on the nature of the illness, availability of services, and financial capacity (Jegede, 2002). Educational attainment plays a fundamental role in shaping health-seeking behavior, particularly the choice between orthodox (conventional) medical treatment and alternative healthcare options.

Orthodox treatment, typically provided in formal healthcare settings by trained medical professionals, is often preferred in societies where education levels are higher, as education enhances individuals' ability to understand health information, interpret symptoms, and appreciate the benefits of modern medical science (Afolabi, Daropale, Irinoye & Adegoke, 2016). Educated individuals are more likely to recognize the value of evidence-based practices and adhere to prescribed medical regimens, thereby increasing their patronage of orthodox treatment facilities (Onah, Ikeako, & Iloabachie, 2009). Conversely, low levels of educational attainment are frequently associated with limited health literacy, which may lead individuals to rely on traditional or alternative healing practices, influenced by cultural beliefs, community norms, and accessibility issues (Ezeoke, 2015).

In many developing regions, including parts of sub-Saharan Africa, the persistence of traditional medicine is often rooted in limited awareness of modern healthcare benefits, exacerbated by inadequate education and poor access to health information (World Health Organization, 2019). Thus, education acts as a social determinant of health, influencing not only knowledge and attitudes but also the ability to navigate and utilize health systems effectively (Mackenbach, Stirbu, Roskam, Schaap, Menvielle, Leinsalu & Kunst, 2008). Understanding the link between educational attainment and the preference for orthodox treatment is crucial for public health planning. It enables policymakers to design targeted health education campaigns, improve access to formal education, and address barriers to the utilization of orthodox healthcare services.

Review of related literature

Patronage of orthodox treatment among rural dwellers in Cross River State- Nigeria.

In Cross River State, a predominantly agrarian region in South-South Nigeria, over 60% of the population live in rural communities National Bureau of Statistics (NBS, 2022). These communities are often characterized by poverty, poor road infrastructure, limited healthcare personnel, and inadequate healthcare facilities. According to the World Health Organization (WHO, 2023), about 40% of Nigeria's population lacks access to functional healthcare services, and this challenge is even more pronounced in rural areas. The patronage of orthodox medicine defined as the use of scientifically validated medical treatment provided by licensed practitioners remains relatively low among rural dwellers in Cross River. A recent health survey conducted by the Cross River State Ministry of Health (2023) revealed that only about 35% of rural residents in the state regularly visit hospitals or clinics when ill, while the majority either consult herbalists (25%), prayer houses (20%), or practice self-medication (20%).

Several factors have been identified as barriers to orthodox healthcare usage. These include cultural beliefs, the high cost of treatment, long travel distances to the nearest health centers, mistrust in modern medicine, and preference for traditional methods which are seen as more accessible and affordable (Onyeneho & Igwe, (2021). Moreover, orthodox health centers in many rural parts of Cross River State are understaffed and poorly equipped. The Nigeria Health Facility Registry (2023) reports that less than 30% of the state's rural health facilities meet the minimum standards for primary healthcare delivery, with many lacking essential drugs, diagnostic tools, and qualified personnel Obono & Udofia, (2022). The low patronage of orthodox healthcare poses significant risks. It leads to delayed treatment, higher rates of preventable diseases, and increased maternal and infant mortality. For instance, Nigeria still records one of the highest maternal mortality rates in the world, with rural areas contributing a large portion of these deaths (UNICEF, 2023).

Educational attainment and patronage of orthodox treatment.

Globally, the patronage of orthodox treatment varies significantly, influenced by socio-economic status, cultural beliefs, health infrastructure, government policies and education. Education is one of the most important aspects of social and economic development. Education improves capabilities and is strongly associated with various socioeconomic variables such as lifestyle, income, and fertility for both individuals and societies (WHO, 2022). Overall, 36% of females and 27% of males in Nigeria have no education. Eighteen percent of females and 19% of males age 6 or older have attended some primary school; however, only 11% of both sexes have completed a primary education. This also shape the patronage of orthodox treatment (Adewunmi & Omotayo, 2021). In developed nations, such as the United States,

United Kingdom, Canada, and Germany, the majority of the population depends on orthodox medicine due to well-established healthcare systems, insurance schemes, and trust in scientific advancements. The World Health Organization (WHO, 2023) reports that more than 80% of the populations in these countries regularly access modern healthcare services for both preventive and curative purposes.

Moreover, governments in these countries heavily invest in healthcare infrastructure, professional training, and public health education, which boosts public confidence in orthodox medicine (OECD, 2022). The widespread use of electronic health records, telemedicine, and advanced diagnostic tools further supports the dominance of orthodox treatment. In many developing nations, including those in Sub-Saharan Africa, South Asia, and parts of Latin America, there is a dual system where orthodox and traditional medicines coexist.

Limited access to healthcare facilities, high costs, and cultural preferences lead many people to seek traditional remedies. However, there is increasing patronage of orthodox medicine, especially in urban areas, due to growing awareness and expansion of healthcare services (Afolabi, Daropale, & Afolabi, 2020). For instance, in Nigeria, although traditional healers still play a significant role, more people are patronizing orthodox clinics and hospitals for conditions perceived as severe or life-threatening (Adewunmi & Omotayo, 2021). Governmental and international health programs, such as immunization and maternal care campaigns, have also increased trust and reliance on modern medicine. Global health emergencies, such as the COVID-19 pandemic, have further emphasized the importance of orthodox treatment. During the pandemic, countries across all income levels witnessed increased trust in modern medicine due to the effectiveness of vaccines, ventilators, and antiviral treatments. The pandemic also revealed disparities in access, prompting international calls for equitable distribution of orthodox medical resources (Lancet Commission, 2021).

Educational attainment enhances health literacy, empowering individuals to recognize symptoms, understand medical advice, and make informed decisions regarding treatment options. According to Onah, Ikeako, and Iloabachie (2006)**,** in a study conducted in southeast Nigeria, women with at least secondary education were more likely to utilize maternal healthcare services than those without formal education. The researchers concluded that education directly correlates with the knowledge and utilization of orthodox health services. Similarly, Bour**,** Amoateng & NSiah-Asamoah **(**2004**)** found that in Ghana, educational level was significantly associated with the likelihood of seeking modern medical treatment. Individuals with higher education levels exhibited a stronger preference for hospitals and clinics over herbalists and spiritual healers.

This was attributed to a better understanding of disease causation and trust in scientifically backed treatment protocols. A notable challenge in Africa is the urban-rural divide, where educational attainment is often lower in rural areas, leading to limited patronage of orthodox healthcare. In Tanzania**,** Kamat **(**2006**)** observed that rural dwellers with limited schooling often resorted to traditional healers, not solely because of cultural preferences but due to inadequate understanding of biomedical health concepts and limited accessibility to health facilities. Education, therefore, plays a dual role shaping perceptions and enabling physical access to treatment services. Gender disparities in education also impact treatment choices. In Kenya**,** Njau**,** Goodman, Kachur, & Mwageni **(**2006**)** discovered that women with post-primary education were more likely to seek early diagnosis and treatment for childhood illnesses at health facilities. In contrast, uneducated mothers were more inclined to use home remedies or delay seeking treatment.

A cross-sectional study by Tiruneh**,** Wasie**,** and Gonzalez **(**2015**)** in Ethiopia assessed the relationship between education and health-seeking behavior among caregivers of under-five children. It found that caregivers with at least primary education were twice as likely to take their children to a health facility when symptoms of illness occurred, compared to those with no formal education. The study emphasized that education plays a pivotal role in promoting the use of modern healthcare services. Several studies have found that individuals with higher educational attainment are more inclined to seek healthcare services from orthodox medical facilities. Education enhances awareness of health risks, understanding of medical instructions, and trust in scientific medicine. For instance, in a study by Adebowale and Yusuf (2015), it was reported that Nigerians with secondary and tertiary education were significantly more likely to seek treatment at hospitals and health centers than those with no formal education.

Data from the Nigeria Demographic and Health Survey (NDHS) 2018 indicates that 79% of women with higher education sought treatment for childhood illnesses in health facilities, compared to only 38% of women with no education (NPC & ICF, 2019). This highlights the pivotal role of education in promoting health-seeking behavior aligned with orthodox medicine. In Northern Nigeria, where female educational attainment is generally lower, traditional healers and spiritual interventions are more commonly patronized, partly due to limited health literacy (Okafor, Odeyemi & Dolapo, 2018). In contrast, in Southern states such as Lagos and Rivers with higher literacy levels, there is a higher utilization of hospitals and clinics for treatment. Adebayo, Akinyemi & Cadmus (2016), found that in some urban areas of Nigeria, even educated individuals turned to traditional medicine when they perceived the orthodox system as too expensive or ineffective. Educational attainment in Nigeria

significantly affects the pattern of health-seeking behavior, particularly in the patronage of orthodox medical treatment.

The attitudes of literate and illiterate individuals towards the patronage of orthodox treatment

Orthodox treatment, often synonymous with modern or conventional medical care, is characterized by the use of scientifically tested and government-regulated medications, procedures, and interventions. Literate individuals, due to their access to formal education and exposure to scientific knowledge, have more positive disposition toward orthodox medicine. However, their actual attitudes and patronage behaviors can be influenced by various socio-cultural, economic, psychological, and systemic factors (Ogunbode, Olaseha & Ademola, 2019).

Literate individuals are more likely to understand disease causation from a biomedical perspective and are more inclined to seek professional healthcare services when ill (Okafor, 2015). They also tend to have greater trust in the efficacy and safety of orthodox medical interventions due to their understanding of the scientific principles behind them (Ogunbode et al., 2019). In some cases, religious convictions or mistrust of pharmaceutical companies also play a role in shaping people's attitudes towards orthodox treament (Uche, 2020). Literate individuals residing in urban areas tend to access orthodox treatment more frequently than their counterparts in rural settings, where healthcare infrastructure is often inadequate (Eze & Ogochukwu, 2021). The attitude of illiterate individuals towards orthodox (modern) medical treatment is often shaped by a combination of socio-cultural beliefs, limited access to health information, and mistrust in formal healthcare systems. In many developing countries like Nigeria, illiteracy correlates with a preference for traditional medicine due to familiarity, accessibility, and lower costs. Illiterate individuals may view orthodox medicine with "suspicion or fear", especially when they do not understand the procedures, language, or purpose of treatments.

This knowledge gap reduces their likelihood of seeking professional medical help early and consistently (Afolabi, Okonkwo & Ogunbanjo, 2020). Health-seeking behaviors among illiterate populations are influenced by cultural practices and community norms, where traditional healers are often regarded as more relatable and trustworthy (Onokhuome & Omoera, 2021).

In rural and underserved areas, structural barriers such as transportation, cost of treatment, and negative past experiences with healthcare providers can reinforce negative attitudes towards orthodox treatment (Okafor et al., 2019). The perception that orthodox treatment is only for

the educated also deters patronage among the illiterate, leading them to delay care until conditions worsen.

Awareness and preference for orthodox treatment over traditional medicine

Awareness is closely tied to healthcare policy and health infrastructure globally. Awareness of orthodox treatment options refers to the extent to which individuals and communities are informed about conventional, scientifically validated medical treatments available for managing various health conditions (Adepoju, 2021). The global advancement in medical science, awareness and utilization of orthodox treatment remain limited in several parts of the world, especially in low- and middle-income countries. Lack of awareness can lead to delays in seeking appropriate healthcare, increased reliance on traditional and spiritual healers leading to poor health outcomes.

According to Afolabi and Afolabi (2017), factors such as low literacy levels, cultural beliefs, poverty, and limited access to healthcare facilities hinder awareness and acceptance of orthodox treatments, particularly in rural and underserved communities. Health literacy plays a critical role in enabling individuals to make informed decisions about their health. "When individuals are aware of the availability, efficacy, and safety of orthodox treatments, they are more likely to utilize healthcare services" (Nutbeam, 2008). In Nigeria, for example, despite the availability of orthodox healthcare services, many people continue to patronize traditional medicine due to limited awareness and trust in formal healthcare systems (Osamor & Grady, 2016).

Community outreach programs, media campaigns, and school-based health education have been found effective in improving awareness and encouraging the use of orthodox treatments (Eze & Maduka, 2019). The preference for orthodox (modern or Western) medical treatment over traditional medicine is influenced by several factors, including perceived effectiveness, scientific validation and reliability, access to healthcare infrastructure, and formal education.

Orthodox medicine is generally considered more reliable due to its basis in scientific research, standardized procedures, availability of diagnostic tools and evidence-based treatments and regulatory oversight (Gyasi, Asante, Abass, Yeboah, Adu-Gyamfi & Amoah 2017). Traditional medicine is still widely used, especially in rural and under-resourced areas where healthcare infrastructure is lacking. The limitations like over dosage accuracy, lack of scientific backing, and side effects make many individuals prefer orthodox treatment when accessible (James, Wardle, Steel & Adams, 2018). The role of government policies and international

health agencies in promoting modern healthcare systems has also contributed to the widespread adoption and preference of orthodox medicine.

Globalization and the integration of health systems have facilitated the expansion of modern health services even into rural areas where traditional medicine once dominated for instance, the establishment of primary health care systems to meet the health needs of the rural population (Adepoju, 2021). The traditional healing practices still maintain relevance in many communities, especially in Africa and parts of Asia. In some cases, individuals alternate between both systems based on the nature of the illness or perceived efficacy (Oshikoya, Senbanjo, Njokanma & Soipe, 2020). The preference for orthodox treatment continues to rise as people seek scientifically validated therapies, professional medical advice, and improved health outcomes.

Theoretical Framework

Social Cognitive Theory (SCT)

Social Cognitive Theory (SCT) was propounded by Albert Bandura in **1986**. It is a theory that explains how individuals acquire and perform new behaviors by observing others and the consequences of those behaviors, as well as by their own personal experiences. SCT is particularly relevant when examining educational attainment and the patronage of orthodox (or conventional) treatment because it takes into account how personal factors, social influences, and environmental contexts interact to influence individuals' actions. The theory argues that People often adopt health behaviors by observing others, such as family members, peers, or community leaders. If individuals see others benefiting from orthodox treatments or hear positive outcomes about such treatments, they may be more likely to seek the same treatment.

Conversely, if people observe negative outcomes or hear about adverse experiences from orthodox treatment, they may avoid it. The belief that orthodox treatment will lead to desired health outcomes (e.g., symptom relief, recovery, or prevention of further health issues) can strongly influence an individual’s decision. If someone believes that orthodox treatment is effective in curing or managing their illness, they are more likely to seek such treatment. Social norms, cultural beliefs, and the availability of healthcare resources all play a role in the decision to seek orthodox treatment. In some societies, there may be strong cultural or traditional influences that encourage the use of alternative medicine over conventional medical care. However, if individuals are surrounded by supportive healthcare providers, have access to healthcare institutions, and are part of a community that values orthodox treatment, they are more likely to seek it. SCT can also explain the relationship between educational attainment and the patronage of orthodox treatment. Higher educational attainment often increases

individuals' knowledge of health and medical practices, potentially leading to a greater likelihood of seeking orthodox treatments. Individuals with higher education may be more exposed to accurate information about health care, leading to better health-seeking behaviors. Educated individuals may have higher confidence in managing their health and understanding the importance of professional healthcare services, while those with lower educational attainment might rely more on traditional or alternative treatment options due to lower self-efficacy or limited access to health education. Based on the key assumptions of the theory, it has been adopted as a framework to the paper.

Health Education Model

The Health Education Model was primarily developed by Green and Kreuter in 1970. The Health Education Model suggests that attitudes towards health care, including orthodox treatments, are shaped by education. People with higher educational levels may have more positive attitudes toward conventional medicine due to their exposure to scientifically backed health information. For example: They may value evidence-based practices over traditional or alternative treatments. Educated individuals are more likely to trust healthcare professionals and institutions, viewing them as credible sources of information and treatment. The Health Education Model provides a framework for understanding how individuals' health behaviors are influenced by various factors, including education. It focuses on the relationship between knowledge, attitudes, and behaviors in the context of health. When examining educational attainment and the patronage **of** orthodox treatment**,** the Health Education Model is appropriate because educational attainment plays a significant role in the level of health knowledge a person possesses.

The more educated individuals are, the more likely they are to understand health information, including the importance of orthodox treatment. Higher levels of education often correlate with better understanding of disease prevention, awareness of the benefits of orthodox medical treatments, ability to critically evaluate health information and seek appropriate care. Educational attainment encourages proactive health behaviors. Individuals with higher education levels are more likely to seek out orthodox medical care for both preventive and therapeutic purposes, thus increasing patronage of orthodox treatment systems. In summary, the Health Education Model emphasizes the interdependence of knowledge, attitudes, and behaviors. Individuals with higher educational attainment are more likely to have the knowledge needed to understand the value of orthodox treatment, the positive attitude to trust and seek out medical care, and the behavioral inclination to engage with healthcare systems. Therefore, educational attainment significantly influences the patronage of orthodox treatment

by improving understanding, attitudes, and health-related behaviors. Hence, the paper has adopted the model as a framework.

Conclusion and recommendations

The level of education a person has can strongly influence whether they choose to use orthodox medical treatment. People with higher education are often more informed about health issues they understand symptoms better, know the value of preventive care, and are more likely to seek timely medical help. Education also helps them critically evaluate health information, making them less likely to fall for unverified or harmful practices. On the other hand, individuals with little or no formal education may not fully understand the benefits of orthodox medicine. They might face financial barriers or hold cultural beliefs that make them trust traditional healers, herbal remedies, or spiritual treatments more. As a result, they may turn to these alternatives first, which sometimes leads to delayed or poor health outcomes. Overall, a person's educational background can greatly shape how they approach health and how much confidence they place in formal healthcare systems.

The paper recommends that ministries of education and health at federal, state, and local levels should **f**ormulate and implement educational and health policies that promote awareness and access to formal education and orthodox healthcare. The work also recommends that Village heads, religious leaders, youth and women group leaders should periodically, especially during community meetings and events advocate for education and orthodox healthcare patronage. Also, Doctors, nurses, pharmacists, and health educators should propagate h**ealth education and outreach** during clinic hours, community outreaches, and health campaigns, this will promote the benefits of orthodox treatment and provide accurate health information.

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