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## CHALLENGES OF FINANCIAL INCLUSION BY MICROFINANCE BANK IN NIGERIA: EDO STATE IN HINDSIGHT

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### ABSTRACT

**Background:** The role of microfinance institutions (MFIs) in poverty alleviation and economic development in Nigeria, focusing on Edo State. Drawing on a comprehensive review of literature spanning from 2009 to 2022, the study investigates the challenges and opportunities associated with financial inclusion, microfinance, and the role of micro, small, and medium enterprises (MSMEs) in driving sustainable development. Theoretical frameworks such as Access to Finance theory, Financial Literacy theory, and Social Capital concept provide a foundation for understanding the complexities of financial inclusion and microfinance.

**Method:** The research methodology adopts an ex-post facto design, utilizing document analysis to examine 16 relevant articles selected from a pool of 120 and key metrics evaluation to understand the impact of the SIP on financial inclusion indicators and microfinance sustainability. Qualitative insights from various studies further enrich the understanding of the challenges and opportunities in the Nigerian context.

**Result:** Findings reveal the multifaceted impact of MFIs on poverty reduction, entrepreneurship promotion, and employment generation, particularly in rural areas. While acknowledging persistent challenges such as gender biases and economic hardships, the study underscores the importance of policy reforms, supportive measures, gender empowerment, digital financial solutions, and capacity building to enhance the effectiveness of microfinance interventions.

**Conclusion:** Challenges such as poor services, regressive tax regimes, and inefficient policies are highlighted, calling for strategic interventions to address these issues and maximize the potential of microfinance in driving economic development and reducing poverty.

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### INTRODUCTION

It has been widely acknowledged that the primary goal of microfinance is to achieve favourable It is widely acknowledged that the main objective of microfinance is to

provide favorable financial services in both developed and developing economies, including Nigeria<sup>1,2,3,4</sup>. Microfinance is the provision of a range of financial services such as savings, loans, payment services, money transfers and insurance to the poor,



low-income earners, households and businesses. their micro. In other words, it is the granting of small loans (microcredit) to the poor so that they can engage in productive activities or business development. Microfinance programs aim to reach poor sections of society because they do not have access to financial services<sup>5</sup>. It seeks to reach populations that are excluded from the banking system.

Financial inclusion refers to the availability and accessibility of financial services to all individuals and businesses, especially those who are often underserved or excluded from the financial system. traditionally<sup>6,7</sup>. The Center for Financial Inclusion defines Financial Inclusion as a state in which all who can use them have full access to quality financial services, provided at affordable prices. affordably, conveniently, with respect and dignity. Financial inclusion is more than just credit support; it is about connecting people to the banking system to benefit from a variety of financial services, including access to payment systems<sup>8</sup>. It covers many different aspects, including access to savings accounts, credit, insurance, payment services, and other financial products and services.

Financial inclusion aims to empower individuals, promote economic development and reduce poverty by allowing them to manage their finances, invest in education and healthcare, and participate in other activities. economic dynamics<sup>9</sup>. It also involves ensuring that financial services are affordable, convenient and suitable to the needs of diverse populations, regardless of income level, geographical location or social status. their association<sup>10</sup>. Ultimately, financial inclusion aims to create a more inclusive and equitable financial system that benefits all members of society. Financial services are provided by a variety of providers, in a stable and

competitive market, to customers with sufficient financial means. At the most basic level, financial inclusion begins with having a deposit or transaction account at a bank or other financial institution or through a mobile money service provider, which can be Use to make and receive payments and store or save money<sup>11</sup>. Financial inclusion does not mean that everyone will use all available financial services; on the contrary, everyone has the opportunity to use them<sup>9</sup>. Ongoing financial services must be provided to individuals as they improve their standard of living. Financial inclusion can help reduce poverty and inequality by helping people invest in the future, smooth their consumption, and manage financial risks<sup>10</sup>. Adults around the world and in all income groups use an array of different financial services.

Micro, small and medium enterprises (MSMEs) play a vital role in the economic development of Edo State and the entire Nigerian economy<sup>12,13</sup>. They contribute significantly to employment generation in urban and rural areas of Edo State and Nigeria. They provide employment opportunities to a significant portion of the population, including youth, women, and people from vulnerable groups<sup>14</sup>. MSMEs contribute to economic diversification by participating in various sectors such as agriculture, manufacturing, services and technology<sup>15</sup>. They play an important role in reducing dependence on oil revenues and promoting sustainable economic growth. They promote innovation and entrepreneurship by introducing new products, services and business models. They promote creativity, adaptability and resilience, thereby contributing to a dynamic and competitive business environment<sup>16</sup>.

MSMEs are often integrated into the value chains of large companies, both domestic and international. They act as suppliers,



distributors and service providers, enhancing the efficiency and competitiveness of the entire economy<sup>17</sup>. MSMEs contribute significantly to gross domestic product (GDP) growth in Edo State and Nigeria. Their productive activities and cumulative value addition contribute to overall economic expansion and development<sup>18,19</sup>. MSMEs play an important role in promoting exports by producing goods and services for domestic consumption and international markets. They contribute to increased foreign exchange earnings, improved trade balance and economic integration<sup>20</sup>.

MSMEs play an important role in poverty reduction efforts by providing income-generating opportunities to low-income earners and marginalized communities. They contribute to improving living standards, reducing inequality and reducing poverty through employment and entrepreneurship<sup>21</sup>. They contribute to regional development by distributing economic activities across different geographical areas<sup>2</sup>. They stimulate local economies, support infrastructure development, and promote inclusive growth in rural and urban areas<sup>23</sup>.

Financial inclusion should bring banking services to the poor, rather than the poor coming to the bank<sup>24</sup>. The vast majority of the population, particularly the impoverished, does not participate in the formal financial system. In addition to distribution and access, there is a need to improve on financial literacy. Financial literacy has been an increasingly important component in sustaining financial inclusion<sup>25</sup>. Cost-effective technologies and applications should be adopted and implemented appropriately<sup>26</sup>. Access to payment services via technology can be fostered even more<sup>27</sup>. Regional disparities in the financial inclusion process are highly obvious, and there is a need for the microfinance movement to spread

throughout Nigeria in order to make financial inclusion more meaningful and inclusive<sup>28</sup>.

The objective of this study is to undertake an empirical analysis of the challenges of microfinance and financial inclusion as it relates to MSMEs as drivers of poverty reduction in Edo State and the overall economy Nigerian economy.

## Theoretical Review

Theories and concepts related to financial inclusion, microfinance, and the role of MSMEs in economic development adopted for this study include:

1. Financial Inclusion Theories and Concepts: Access to Finance theory which emphasizes the importance of providing access to formal financial services to all segments of society, especially the underserved and marginalized populations<sup>10</sup>, Financial Literacy theory which underscores the significance of financial education and literacy in empowering individuals to make informed financial decisions and participate fully in the financial system<sup>29</sup> and Social Capital concept<sup>30</sup> which highlights the role of social networks, trust, and community cohesion in facilitating financial inclusion, particularly in contexts where formal financial institutions may be lacking.

2. Microfinance Theories and Concepts: The Grameen Bank Model<sup>31</sup> developed by Muhammad Yunus. This concept emphasizes the provision of small loans to poor individuals, particularly women, to promote entrepreneurship and alleviate poverty and Double Bottom Line<sup>32</sup> by which MFIs aim to achieve both social impact (such as poverty reduction) and financial sustainability, thereby operating with a "double bottom line" perspective.



3. Role of MSMEs in Economic Development Theories and Concepts: Entrepreneurship Theory, which emphasizes the role of entrepreneurship, innovation, and risk-taking in driving economic growth and development, with MSMEs often being the engines of entrepreneurial activity<sup>33</sup>. Employment Generation concept<sup>23</sup> as MSMEs are recognized for their ability to create jobs, particularly in urban and rural areas, thereby contributing to reducing unemployment and poverty and Inclusive Growth concept because MSMEs are seen as critical for fostering inclusive economic growth by providing opportunities for women, youth, and other marginalized groups to participate in economic activities<sup>34</sup>.

Understanding these theories and concepts, assist policymakers, practitioners, and researchers can develop strategies and interventions to promote financial inclusion, strengthen microfinance initiatives, and harness the potential of MSMEs for sustainable economic development.

## METHODS

**Research Design:** This study adopts the ex-post facto research design, a systematic empirical study in which the researcher does not in any way control or manipulates the independent variables because related studies on the challenges of financial inclusion by microfinance bank in Edo state has taken place.

**Search criteria:** The use of search engines such as Google and Google Scholar, were employed to select related articles published between 2009 up to 2022; using keywords include SIP, financial inclusion, poverty alleviation, challenges, MSMEs. Articles which did not meet these criteria were excluded from the study.

**Data Collection:** 120 Published articles from 2009 to 2022 which had related topics were reviewed. 56 of these related articles were scrutinized for relevance and 16 of them met the selection criteria. They were critically reviewed and used for the study.

**Data Analysis:** Document analysis was used to give qualitative insight in order to provide a comprehensive understanding of the topic.

**Key Metrics:** Evaluation of the impact of the SIP on financial inclusion indicators, including access to credit, savings mobilization, use of formal financial services, and poverty reduction. Assessment of microfinance sustainability metrics, such as loan portfolio quality, financial performance, outreach to underserved populations, and institutional governance; were also used.

**Qualitative Insights:** Exploration of qualitative insights to understand the mechanisms through which the SIP influences financial inclusion outcomes, including stakeholder perceptions, contextual factors, and implementation challenges. Identification of success stories, lessons learned, and areas for improvement based on qualitative feedback from stakeholders.

## RESULTS

The study carried out by Okojie et al<sup>35</sup>; highlights the reliance of rural women in Edo State, Nigeria, on informal microfinance institutions due to challenges accessing formal financial institutions. Despite facing difficulties like lack of collateral and perceptions about loan repayment, access to loans significantly benefits women's businesses and overall well-being.



In another study by Imoisi<sup>36</sup>, primary data was used to obtained through field survey from the selected microfinance banks in Edo State and utilized quantitative tools to analyze these data so as to bring out any existing relationship between microfinance and poverty alleviation. The study results indicate a strong positive relationship between microfinance and poverty alleviation, with the majority of respondents reporting improved standard of living due to microfinance initiatives. Key findings include that a significant portion of the sampled population obtained credit from microfinance banks to start or expand their small-scale businesses, highlighting the role of microfinance in enabling entrepreneurship and economic growth. Additionally, a notable percentage of respondents used the loans to invest in new technology, indicating the potential for microfinance to drive innovation and productivity. Recommendations from the study emphasize the need for focused microfinance programs in poor communities and widespread educational campaigns to raise awareness about the benefits of microfinance in addressing poverty. The study emphasized the positive impact of microfinance in promoting wealth creation, self-sufficiency, and economic development.

While Ugiagbe<sup>37</sup> highlights several challenges microfinance institutions and their beneficiaries, particularly women, in Nigeria face; including Poor Services and Attitude, Regressive tax regimes, harsh economic conditions, and patriarchal norms cited as additional obstacles to the success of loan beneficiaries and poverty reduction efforts, gendered Impacts and its Implications for Social Policy; the paper by Oghoator<sup>38</sup> acknowledges the microcredit scheme as a positive step forward but suggests the need for strategies to ensure wider coverage and efficiency. It highlights several perspectives: such as Microfinance being

likened to keeping a weak engine running, extending the period before potential failure, seen as a palliative measure rather than a definitive solution to poverty and described as a cosmetic policy aimed at benefiting financiers and preventing social unrest rather than truly addressing the needs of the poor. The paper stressed the necessity of genuine assistance for the poor beyond the scope of microfinance.

Ekunwe, et. al.,<sup>39</sup> examined the impact of micro-credit on crop production profitability in Orhionmwon Local Government Area of Edo State, Nigeria. Key findings include: gender distribution among respondents being nearly uniform, with slightly more females. Beneficiaries of the micro-credit reported higher profit margins compared to non-beneficiaries across various crops, including maize, yam, cassava, and plantain. Key constraints for beneficiaries included untimely delivery of loans, while non-beneficiaries cited high interest rates and distance to microfinance banks as major barriers to accessing loans. In summary, this, study suggests that micro-credit has a positive impact on crop production profitability, but challenges such as loan delivery timing and interest rates need to be addressed to maximize its benefits for farmers.

Again, The study by Odejimi and Agbada<sup>40</sup> investigated the impact of the Microcredit Scheme on rural entrepreneurship development, focusing on women in Ovia North East, Edo State, Nigeria. The study distributed 240 questionnaires to rural women micro-entrepreneurs, with 225 returned and deemed usable for analysis. Statistical analysis was conducted using SPSS version 17.0, employing F-statistics (ANOVA) and correlation coefficients. Findings highlighted a common problem faced by microfinance institutions in Nigeria, which is the inclusion of social



welfare projects that detract from financial sustainability. However, it suggests that access to credit can increase business profits and improve the standard of living for rural communities. The study recommends strategic policy formulation by all tiers of government, along with providing bailout funds to microfinance banks. These measures are intended to enable microfinance banks to operate effectively and reach rural areas in Edo State and beyond in Nigeria. The study emphasizes the potential of microcredit schemes to positively impact rural entrepreneurship and suggests policy interventions to support the sustainable operation of microfinance institutions in Nigeria.

In Okafor<sup>41</sup> aimed to assess the impact of microfinance banks on the standard of living in Nigeria using annualized time series data from 1993 to 2012. It found that microfinance banks' activities did not have a significant positive impact on the standard of living in Nigeria, contrary to expectations set by the Microfinance Policy Framework established by the Central Bank of Nigeria in 2005. Recommendations provided to address this issue include: Establishing core microfinance banks specifically targeting the poor, Locating microfinance banks within impoverished areas, Shifting away from tangible collaterals for microfinance credit and instead relying on social collaterals and Developing microfinance products tailored to the needs of the clients' environment. These recommendations aim to better align microfinance efforts with the needs of the impoverished population and potentially enhance their impact on improving the standard of living in Nigeria.

The study by Ifere and Okosu<sup>42</sup> focused on the unique challenges of the Niger Delta region, particularly concerning poverty and financial inclusion. The study

surveyed poverty levels using monthly income distribution and assessed financial inclusion based on access and usage of financial products and services. The findings indicate that women in the region are more financially excluded. Additionally, a majority of the population is unbanked and hesitant to use financial products and services, particularly ATMs, due to concerns such as unauthorized debits, long queues, high interest rates on loans, and difficulty in accessing credit from financial institutions. The study suggested that providing optimal digital financial services and products in rural communities, coupled with education and advocacy efforts, can help broaden financial inclusion. This, in turn, can contribute to poverty reduction in the region. Overall, the study spotlighted the importance of addressing financial exclusion and implementing tailored solutions to improve access to financial services and reduce poverty in the Niger Delta region.

The study by Awojobi<sup>43</sup> systematically assessed the impact of microcredit on poverty reduction in Nigeria, particularly among petty traders. It conducted a thorough search for relevant studies published between 2008 and 2018, identifying twenty studies that met the inclusion criteria. The majority of the studies supported the hypothesis that microcredit contributes to poverty reduction, with only one study objecting to this hypothesis. However, despite the positive impact of microcredit on poverty reduction, the review identified challenges hindering access to microcredit. Therefore, the study recommends that the government review its microcredit policy to address these challenges and enhance accessibility to microcredit for poverty alleviation among petty traders and other beneficiaries.



The study by Ehiabhi<sup>44</sup> examined the impact of microfinance institutions on poverty reduction and entrepreneurial activities in Nigeria, focusing on Ikpoba Okha Local Government Area of Edo State. The study utilized a survey research instrument, administering questionnaires to 200 micro and small-scale business enterprises. Data analysis involved Pearson correlation, multivariate regression techniques, Heteroskedasticity diagnostic test, and Ramsey RESET test. The results indicate a positive and significant relationship between microfinance institutions and poverty alleviation. However, the relationship between entrepreneurial activity and poverty reduction was found to be positive but insignificant. The study suggests creating a conducive environment for microfinance institutions to operate effectively. This supportive environment would enable these institutions to assist in developing micro and small business enterprises, thus helping to mitigate the effects of poverty in Nigeria. The outcome of the study strengthens the importance of microfinance institutions in poverty alleviation and emphasizes the need for favorable conditions to enhance their impact on entrepreneurial development and poverty reduction in the Nigerian society.

Ochonogor<sup>3</sup> findings also indicate positive relationship between microfinance loans and the human development index, suggesting that microfinance institutions contribute to economic growth and social capital formation in Nigeria. Recommendations highlighted that stakeholders should increase awareness about the importance of microfinance loans for citizens' livelihoods and the need for Central Bank of Nigeria (CBN) to involve microfinance institutions in administering specialized funds, such as SME Credit Guarantee Schemes, aimed at improving access to microcredit at low-

interest rates to further enhance the human development index in Nigeria. The study underscores the significance of microfinance institutions in fostering economic development and social progress in Nigeria, recommending collaborative efforts to maximize their impact.

The study findings by Falade, Aliu and Alabi<sup>45</sup> reveal that access to funds and empowerment programs offered by microfinance banks significantly reduce the severity of poverty among women in the Akoko region of Ondo State, Nigeria. Access to loans had a greater impact on poverty reduction compared to empowerment initiatives. The provision of financial inclusion through loans not only benefited women directly but also positively affected their households, highlighting the pivotal role women play in family well-being. Additionally, women's empowerment programs contributed significantly to poverty alleviation, indicating the importance of non-financial services provided by microfinance banks. The study recommends leveraging microfinance banks as channels for achieving financial inclusion at the grassroots level by introducing capital encouragement funds with low-interest rates. It also suggests expanding the scope of microfinance services to include non-financial empowerment programs, such as providing assets like motorcycles and grinders, with long-term repayment plans to further empower women in the informal sector. The study spotlights the potential of microfinance institutions in combating poverty among women and recommends strategic interventions to enhance their impact.

The paper by Olili- Uhrorho<sup>46</sup> examines the role of microfinance bank services in promoting business sustainability, particularly focusing on LAPO microfinance bank in Benin City, Edo



State. Through the use of questionnaires and a sample of 150 respondents, the study found that an increase in loan amounts provided by the microfinance bank contributes to business expansion, while an increase in micro savings leads to increased financing. Based on these findings, the study concludes that microfinance banks play a crucial role in supporting small businesses and encouraging savings among individuals. It recommends that microfinance banks should continue providing loans to small businesses to enhance their sustainability, promote savings, ensure proper use of microloans, and calls for government intervention to establish more microfinance banks in both rural and urban areas to further support business sustainability efforts.

## Discussion

The various studies conducted in Nigeria shed light on the multifaceted impact of microfinance institutions (MFIs) on poverty alleviation, entrepreneurship, and economic development, particularly in rural areas. Okojie et al.,<sup>35</sup> research underscores the significant role of informal microfinance institutions in supporting rural women entrepreneurs, who face challenges accessing formal financial services. Despite these challenges, access to microfinance significantly improves business outcomes and overall well-being. Abebe & Kegne<sup>47</sup> agrees with this as it reports the positive impacts on entrepreneurship development of microfinance in women.

Imoisi's<sup>36</sup> study reinforces the positive correlation between microfinance and poverty alleviation, with microfinance initiatives leading to improved living standards and entrepreneurship opportunities. However, Ugiagbe's findings highlight the persistent challenges faced by microfinance institutions and

beneficiaries, particularly women, such as poor services, economic hardships, and gender biases. This resonates with Abu<sup>48</sup> who investigated the macroeconomic influence of microfinance institutions and the broader banking sector on poverty in Bangladesh. It was revealed that microfinance positively influences GDP growth, but its impact on poverty remains minimal. In a similar perspective, Chikwira et. al.,<sup>5</sup> delve into Zimbabwe's microfinancing landscape, revealing a perplexing long-term outcome where microfinance, counterintuitively, contributes to increased poverty levels.

Ekunwe et al.<sup>39</sup> research delves into the impact of micro-credit on crop production profitability, revealing promising outcomes but also identifying challenges such as loan delivery timing and interest rates. Similarly, Odejimi and Agbada<sup>40</sup> emphasize the potential of microcredit schemes in rural entrepreneurship development while acknowledging the need for strategic policies and support for microfinance institutions. In agreement with these submissions, Owusu et. al.<sup>49</sup> confirm that high default rates in MSMEs lending is a major concern to policy makers in developing countries, because of its unintended negative impacts on MSMEs financing.

Contrary to expectations, Okafor's<sup>41</sup> study questions the significant positive impact of microfinance banks on the standard of living in Nigeria, suggesting the necessity for tailored approaches and policy reforms to enhance their effectiveness. Oseni, Olusegun and Kayode<sup>52</sup> agrees to these findings. Ifere and Okosu's<sup>42</sup> study underscores the importance of addressing financial exclusion and implementing digital financial solutions to reduce poverty in specific regions like the Niger Delta. Xiaowen<sup>53</sup> align with these inferences. Additionally, Awojobi's systematic review<sup>43</sup> and Ehiabhi's<sup>44</sup>





examination highlight the overall positive impact of microcredit on poverty reduction and entrepreneurship, emphasizing the importance of creating an enabling environment for microfinance institutions. Ochonogor's<sup>3</sup> findings further support the positive relationship between microfinance loans and economic growth, advocating for collaborative efforts and specialized funds to maximize their impact.

Falade, Aliu, and Alabi's study<sup>45</sup> also emphasizes the pivotal role of microfinance banks in reducing poverty among women, recommending expanded financial and non-financial services to empower women in the informal sector. Lastly, Olili-Uhrorho's paper<sup>46</sup> underscores the significance of microfinance banks in promoting business sustainability and stresses the call for continued support and expansion of microfinance services.

Summarily, these studies collectively advocate for strategic interventions, policy reforms, and supportive measures to enhance the effectiveness of microfinance institutions in addressing poverty, fostering entrepreneurship, and promoting economic development in Edo state and Nigeria at large. Theoretical underpinnings related to financial inclusion, microfinance, and the role of MSMEs in economic development are outlined, providing a theoretical foundation for the study. These theories and concepts inform the strategies and interventions proposed to promote financial inclusion and harness the potential of MSMEs for sustainable economic growth.

## Conclusion

The collective findings of various studies on microfinance institutions (MFIs) in Nigeria highlighted their crucial role in poverty alleviation, entrepreneurship promotion, and economic development, particularly in rural areas. Despite facing

challenges such as poor services, gender biases, and economic hardships, microfinance initiatives have shown promising outcomes in improving living standards and empowering marginalized groups, especially women. While some studies question the significant positive impact of microfinance banks on the standard of living, others emphasize the need for tailored approaches, policy reforms, and strategic interventions to maximize their effectiveness. Overall, the synthesis provides a comprehensive understanding of the research questions by examining the current state of financial inclusion in Nigeria, proposing strategies for improvement, grounding the study in relevant theories and concepts, and presenting empirical evidence of the impact of microfinance on poverty reduction and economic development.

## Recommendations:

1. **Policy Reforms:** Government entities should review and reform microfinance policies to address existing challenges and enhance the accessibility and effectiveness of microfinance services.
2. **Supportive Measures:** Stakeholders, including government agencies, NGOs, and financial institutions, should collaborate to provide support and resources to microfinance institutions, particularly in rural areas.
3. **Gender Empowerment:** Efforts should be made to promote gender equality and empower women through expanded financial and non-financial services tailored to their needs.
4. **Digital Financial Solutions:** Implementing digital financial solutions can help address financial exclusion and improve access to financial services, especially in underserved regions like the Niger Delta.



5. Capacity Building: Investment in capacity building programs and educational campaigns to raise awareness about the benefits of microfinance and enhance financial literacy among target communities, should be increased.

**Strengths and Limitations of the Study:** The studies provide valuable insights into the impact of microfinance institutions on poverty alleviation and entrepreneurship in Nigeria. Utilization of diverse methodologies, including quantitative analysis, surveys, and systematic reviews, helped to comprehensively explore the subject matter. The inclusion of primary data from field surveys enhanced the reliability and validity of the findings. The studies highlighted the importance of microfinance in empowering marginalized groups and promoting economic development.

On the other hand, some studies may have limited generalizability due to their focus on specific regions or populations within Nigeria. There was methodological limitations, such as small sample sizes or potential biases in data collection, which may have affected the robustness of the findings. The studies may not have captured the long-term effects or unintended consequences of microfinance interventions and external factors, such as changes in economic conditions or government policies, could influence the outcomes but may not be fully accounted for in the studies.

While these studies provide valuable insights into the impact of microfinance institutions in Nigeria, further research is needed to address the identified limitations and enhance understanding of the complex dynamics involved in poverty alleviation and economic development efforts.

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## A REVIEW AND CRITICAL APPRAISAL OF THE TRANSFORMATIVE INFLUENCE OF BUSINESS ANALYTICS IN DETERMINING ORGANIZATIONAL SUCCESS IN NIGERIA.

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### ABSTRACT

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**Background:** Nigeria has witnessed a notable surge in the utilization of business analytics (BA) across multiple industries, these past few years. This growth has been propelled by technological advancements, abundant data sources, and a heightened recognition of analytics' transformative potential. BA encompasses the use of technology to process business data and generate actionable insights for strategic decision-making. Despite its perceived benefits, Nigerian organizations face challenges in fully realizing the potential of BA due to factors like data privacy concerns, inadequate infrastructure, skill shortages, and cultural barriers to data-driven decision-making.

**Method:** This qualitative study employs a thematic analytical approach to explore the complexities and nuances associated with BA within the Nigerian business context. Data were sourced from published articles and studies conducted within Nigeria over the past five years. Thematic analysis was used to uncover underlying themes and insights related to the adoption, challenges, and impact of BA in Nigerian enterprises.

**Results:** The findings from various studies highlight the significant impact of BA on organizational performance, HRM practices, market adaptation, and retail business sustainability in Nigeria. Factors such as technological infrastructure, management support, talent management, and organizational culture play crucial roles in driving successful BA implementation. However, challenges such as data privacy concerns and skill shortages persist, necessitating collaborative efforts between the public and private sectors to address these barriers.

**Conclusion:** BA holds immense potential to shape the trajectory of Nigerian businesses by enhancing operational efficiency, optimizing marketing strategies, identifying new business prospects, and increasing customer satisfaction. While the studies provide valuable insights into the role of BA in organizational success, further research is needed to fully understand the requirements for successful BA adoption and implementation in the Nigerian context. Addressing existing challenges and fostering a culture of data-driven decision-making will be essential for Nigerian organizations to harness the



full potential of BA and drive sustainable growth and innovation in the dynamic business landscape.

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## Introduction

Over the last decade, Nigeria has seen a significant increase in the use of business analytics cross multiple industries<sup>1,2,3,4</sup>. Initially defined by primitive data management procedures, organizations have increasingly acknowledged the importance of using data-driven insights to inform strategic decision-making processes<sup>5</sup>. This growth has been supported by technological advancements, the abundance of data sources, and a rising recognition of analytics' transformative potential<sup>6</sup>.

Business Analytics (BA) is the use of technology to process business data and generate insightful insights for making strategic business decisions<sup>7,8</sup>. Yin and Fernandez<sup>9</sup> described business analytics as the extensive use of data and the application of statistical methodologies to generate factual outcomes for decision making. Business analytics provides a complete technique for managing, processing, and analyzing data for actionable insights<sup>7</sup>, as well as assisting firms in being proactive in responding to market requirements<sup>10,11</sup>. BA is seen as a competitive differentiator<sup>12,13</sup> believe that the creation of data analytics as a new sort of information system has proven to be complex and difficult. According to Yahya-Imam and Aranuwa<sup>14</sup>, the technological trend has advanced, and data is the new approach to generate insights. Deep knowledge of big data is crucial in helping to conclude information<sup>15,14</sup>. Business analytics has demonstrated tremendous synergies and opportunities for business-wide application, as well as the development of a data-driven business model<sup>16</sup>. Some studies have shown that businesses that adopt business analytics

outperform those that do not<sup>17,18</sup> while some researchers believe that many businesses are still figuring out how to adapt and reap the benefits of business analytics<sup>19,20,21</sup>.

With time, the BA tool has changed and gained consideration for a variety of applications, especially when it comes to the dynamics and quantum of the data<sup>16</sup>. In order to identify the business value that ensures corporate sustainability in a difficult business environment and to link purpose with strategy, these huge data interactions aid in the modeling of descriptive, predictive, and prescriptive outcomes<sup>22</sup>. Big data technologies, according to De Luca et al. (2020), have improved corporate outcomes, but their full potential has not yet been realized. Technology affordability supports capabilities that are driven by results<sup>23,24,25</sup>. According to George & Lin<sup>24</sup>, companies are integrating big data because of its evolution.

Big data and business analytics techniques have recently been developed and put into use to examine vast amounts of data produced by various commercial organizations<sup>26</sup>. Analyzed data can be sourced from business reports, database, and business data stored in the cloud<sup>27</sup>. As every company requires quicker access to the increasing amounts of transactional data; organizations may see the past and predict the future by using real-time data analysis<sup>28</sup>. Business Analytics Implementation is designed broadly to cover Descriptive Analytics, predictive Analytics, and prescriptive Analytics<sup>3</sup>. The beauty of streaming analytics is in its ability to provide information about what happened (descriptive), why it happened (diagnostic), what might happen in the future (predictive), and, finally, how to



influence future events (prescriptive)<sup>27</sup>. Business analytics processes include reporting results about business intelligence and in addition seeks to explain why the results occur based on the analysis<sup>27</sup>.

The usage of business analytics is no longer a luxury but rather a need for firms to survive and grow in today's market. It assists firms in improving operational efficiency, optimizing marketing strategies, identifying new business prospects, and increasing customer satisfaction<sup>29</sup>. Fully integrated business analytics, product management, and market adaptation capabilities are insufficient in the homegrown industry, and these are necessary to drive innovative outcomes and sustainability. Similarly, a correlation exist between changing market demand and market adaptation<sup>30,14</sup>. Recent studies have established that several organizations have adopted the use of BA, however, the record of successes from implementation across these organizations have been very few<sup>19,31</sup>. These views point to the need for additional research that could help understand the requirements for achieving success with business analytics adoption.

Business analytics plays a pivotal role in shaping the trajectory of product development initiatives within Nigerian firms<sup>6</sup>. By leveraging predictive analytics, businesses can gain valuable insights into consumer preferences, market trends, and emerging opportunities, thereby enabling more informed product design and development strategies. Furthermore, analytics-driven approaches facilitate the identification of latent consumer needs and preferences, empowering organizations to tailor their offerings to meet evolving market demands effectively.

In the service sector, business analytics serves as a catalyst for enhancing service

quality, optimizing delivery processes, and personalizing customer experiences. Through the analysis of customer data and feedback, organizations can identify areas for service improvement, refine service delivery channels, and tailor offerings to better align with customer expectations. Moreover, analytics enables real-time monitoring of service performance metrics, facilitating proactive intervention and continuous enhancement of service delivery standards<sup>32</sup>. Studies so far reveal that BA appears to have a substantial impact in business but the extent of the application of business analytics in determining organizational success in Nigeria, is yet to be synthesized.

Despite the undeniable benefits of business analytics, Nigerian organizations face several challenges in realizing its full potential. These include data privacy concerns, inadequate infrastructure, skill shortages, and cultural barriers to data-driven decision-making. However, these challenges also present opportunities for collaboration between the public and private sectors, investment in data infrastructure and capacity-building initiatives, and the adoption of best practices from global leaders in analytics implementation.

The impact of business analytics on product and service development in Nigeria cannot be overstated. By harnessing the power of data-driven insights, organizations can unlock new avenues for growth, innovation, and competitiveness in an increasingly dynamic marketplace. However, realizing the full potential of analytics requires a concerted effort to address existing challenges, foster a culture of data-driven decision-making, and embrace a mindset of continuous improvement and adaptation. As Nigeria continues on its path towards economic prosperity and sustainable development, the integration of





business analytics into organizational processes will undoubtedly play a pivotal role in shaping the future trajectory of the nation's business landscape.

### Theoretical Frameworks

Several theories were used to carry out the research that resulted in the outcomes discussed in the provided studies. They include

**Resource-Based View (RBV):** The RBV theory focuses on how firms can gain a competitive advantage by leveraging their unique resources and capabilities. In the context of these studies, researchers used RBV to analyze how organizations' capabilities in business analytics or predictive analytics contribute to their performance or competitive advantage.

**Technology Acceptance Model (TAM):** TAM examines how users accept and use new technologies. Researchers applied TAM to understand factors influencing the acceptance and adoption of business analytics or predictive analytics tools within organizations, as well as their impact on organizational outcomes.

**Human Capital Theory:** Human capital theory explores how investments in human capital, such as education and training, contribute to organizational performance. Researchers used this theory to examine how investments in training and skill development related to analytics affect organizational outcomes, particularly in HRM practices.

**Innovation Diffusion Theory:** This theory focuses on how innovations spread and are adopted within organizations. Researchers used this theory to analyze the diffusion of business analytics or predictive analytics tools across different industries and organizational contexts, exploring factors influencing their adoption and implementation.

**Organizational Learning Theory:** Organizational learning theory explores how organizations acquire, share, and utilize knowledge to improve performance. Researchers used this theory to examine how organizations learn from the insights generated by business analytics or predictive analytics, and how they use this knowledge to drive improvements in various aspects of their operations.

**Social Exchange Theory:** This theory explores the exchange of resources and benefits between individuals or groups within social contexts. Researchers applied social exchange theory to understand the relationships between different stakeholders involved in the use of analytics tools, such as managers, employees, and customers, and how these relationships influence organizational outcomes.

### Methods

**Research Design and Methodological Approach for the Study** The research design for this study adopts a qualitative methodological review approach. This approach is chosen to better understand the complexities and nuances associated with and data analytics within the Nigerian business context, which cannot be fully captured through quantitative measures alone. This approach integrates findings from previous studies and relevant data, is particularly useful for our study as it allows for a comprehensive understanding of business analytics trends in Nigeria. The various research paradigms adopted in their study aligns with our aim to understand Nigerian business analytics adoption as it drives organisational success.

**Data sources:** Data are sourced from published articles of related works from search engines such as Google and Google Scholar.



**Search strategy:** Key words such as business analytics, data analytics, organisational success, transformation, were used

**Data selection criteria:** All published documents Articles which have been written by Nigerians and carried out in Nigeria within the last five years; and had related to the impact of business analytics in Nigeria; were selected for review.

**Data analysis:** The analysis methods for this study is the thematic analysis, which involves identifying and interpreting patterns within the qualitative data. This approach will enable the study to uncover the underlying themes and insights related to the adoption, challenges, and impact of business analytics in Nigerian enterprises.

## Results

Okolo & Idoko 2023<sup>29</sup> investigated the effect of business analytics technique on organizational performance using the Nigeria manufacturing companies. A structured questionnaire was formulated to achieve the aim of the study. The study adopted the descriptive survey research with a population of 423 participants conveniently selected among the manufacturing firms in Lagos State, Nigeria. The main participants are the staff of the ten (10) selected Manufacturing companies in Nigeria. A simple random sampling technique was adopted to distribute the questionnaire formulated and the sample size was calculated using Taro Yamane sample Size determination with the value of 227. The structured questionnaire was validated and 92.1% of the total sample size were retrieved back from the respondents. The study was analyzed using multiple linear regression analysis. The paper showed that there is a significant effect between business analytics technique and organizational performance of the Nigeria

manufacturing companies. The management of the organizations will understand how critical it is to invest in powerful business analytics capabilities in order to increase the organization's overall business value <sup>29</sup>.

Another study by Ejo-Orusa & Okwamkpon<sup>33</sup> examined and analyzed the impact of the use of Predictive Analytics (PHRA) on Human Resource Management (HRM) Practices (recruitment & selection, performance management and succession planning) amongst HR Practitioners in Port Harcourt. A cross sectional study with the use of questionnaire survey was adopted, and the questionnaires were distributed through self-administered procedure. Data was generated from 159 respondents comprising of all levels of HR practitioners in Port Harcourt. The generated data was analysed with a version 20, SPSS statistical tool. Mean scores and standard deviation were calculated from these data to assess the performances of PHRA, recruitment & selection, performance management and succession planning processes amongst the studied HR practitioners. A correlation analysis was done to determine the nature of relationship that existed between PHRA and the HRM practice. Also to predict the significance of the relationship between PHRA and the outcomes HRM practices (recruitment & selection, performance management and succession planning). The outcome from the correlation analyses showed that there was a significant positive relationship between PHRA and the HRM practices used for the study. Based on the findings, it was concluded that PHRA is an important factor in enhancing the HRM practice outcomes. Therefore, the study recommends that HRM practitioners should embrace the use of PHRA in their practices. It further emphasizes that practitioners should not just stop at mere data presentation but strive to move a step further to predictive



analytics in their practices in order to effectively and efficiently improve the human resource practice outcomes in their organization. The study provides additional insight by showing that most practitioners in Port Harcourt stop their analytics at the descriptive stage. A limitation of lack of capability in the identification and application of appropriate metrics amongst the respondents was also identified. It also highlighted general contributions while making suggestions for future study<sup>33</sup>.

This study organizational factors and Business Analytics implementation of Small and Medium Scale Enterprises in Makurdi metropolis, Benue State, Nigeria, carried out by Adzandeh et. al.,<sup>3</sup> specifically examined the effect of Technological Infrastructure Capabilities, Management Supports, Talent Management Challenges, and Environmental Factors on Business Analytics Implementation of Small and Medium Enterprises in Benue State Nigeria. Four research question and four hypotheses were posed and stated respectively to achieve the stated objective of the study. A survey research design was adopted for the study, using Structured Questionnaire. The population of the study was 1,124 owner-managers of SMEs in Makurdi Metropolis, and a sample size of 295 was determined using Taro Yamane's Techniques. The research instrument was validated through content and face validity; Cronbach Alpha reliability procedure was used to establish the reliability of the research instrument. Data gathered in the study were analyzed with the use of descriptive and multiple regression analysis. The result show that a statistical significant relationship exists between Technological Infrastructure Capabilities, Management Support, Talent Management Challenges and Business Analytics Implementation ( $r=.929$ ,  $p<.05$ ). However, an insignificant relationship was

observed between Environmental Factors and Business Analytics Implementation ( $r=.964$ ,  $P>.05$ ). Therefore, the result found that Technological Infrastructure Capabilities, Management Support, Talent Management Challenges Influence Business Analytics Implementation in small and medium enterprises in Benue State, Nigeria. It was recommended that Business owners and Government should consider these actors to increase the extent Business Analytics Implementations among Small and Medium Enterprises<sup>3</sup>.

The study by Oyeniran et. al.,<sup>34</sup> examined the critical role of business analysis in shaping small and medium-sized enterprises' strategies for better odds of success in the ever-evolving Nigerian economy and within the competitive markets. Business analysis ability, as a knowledge-supporting factor, focuses on understanding consumer needs, planning, data collection, analysis, and presentation to decision-makers. The process begins with strategic planning and meticulous data collection, facilitating a deep understanding of the business and consumer behavior and process potential. Analytical skills unearth the true potential of organizational processes, particularly in product creation, resulting in distinctive and highly valued products. Such products align with theories like the resource-based view or VRIO theory, driving increased sales volume—a key performance metric. By leveraging analytical capabilities, Nigerian SMEs can navigate complex market dynamics, create value-driven businesses, and differentiate themselves from competitors thus increasing the odds of success. This paper sets the stage for further research into the impact of business analysis on organizational success within dynamic market landscapes.

The study by Daodu, Bhaumik, & Morakinyo<sup>1</sup> examined the impact of business analytics on market adaptation in



the eCommerce industry in Nigeria. Using purposive sampling and random sampling techniques, a sample of 40 respondents from various eCommerce organizations was taken. The data collected were analyzed using the quantitative approach. Precisely, both correlation and ordinal regression analyses were applied. The result from the study shows that the most important aspect of business analytics that can have a significant impact on market adaptation is the area of data analysis and application of the result to decision-making in the organization. The study recommends the application of business analytics to eCommerce businesses if they want to improve their market adaptation (Daodu, Bhaumik, & Morakinyo, 2022).

The contemporary retail outlets are no more run by manual practices given the electronic nature of company to customers (CC); customers to customers (CC) transactions globally. The application of business intelligence has given an edge to retail outlets operation. (Nwinyokpugi & Lah, 2021) therefore, strove to examine the relationship between business intelligence application and retail business sustainability in Rivers State, Nigeria. The study used descriptive research technique through the adoption of cross-sectional survey design. Nine judgmentally sampled retail outlets especially large scale malls & superstores were studied in Port Harcourt base on their inherent electronic driven operations. Using structured closed ended questionnaire, 45 census senior managers of these sampled retail outlets were studied. Data gathered were analysed using the Pearson Product Moment Correlation Coefficient (PPMCC) statistics and presented with the aid of SPSS version 20.0 for easy interpretation. The results of analysed data showed that, the dimensions of business intelligence application which included but not limited to customers' performance management, data warehouse, data mining and advanced data

visualization significantly correlated positively with the measures of retail business sustainability being profitability and customers' patronage. The finding also showed a high moderating effect of organizational culture on business intelligence application and retail business sustainability in Rivers State, Nigeria. Relying on the empirical findings, the study concluded that business intelligence application has positive significant relationship with retail business sustainability. It is therefore recommended that, the dimensions of business intelligence: customers' performance management, data warehouse, data mining & advance data visualization identified in this study should be utilized as it enhances retail business operational sustainability<sup>3</sup>.

## Discussion

Effect of Business Analytics on Organizational Performance: Okolo & Idoko<sup>29</sup> found a significant effect between business analytics techniques and organizational performance in Nigeria's manufacturing companies. Comparing with related studies, research conducted by Adzandeh et al.,<sup>3</sup> in Benue State also highlights the positive influence of factors like technological infrastructure capabilities and management support on business analytics implementation in small and medium enterprises (SMEs). Both studies emphasize the importance of investing in analytics capabilities to enhance organizational performance.

Impact of Predictive Analytics on HRM Practices: Ejo-Orusa & Okwakpam<sup>33</sup> demonstrated a significant positive relationship between the use of Predictive Analytics (PHRA) and HRM practices, particularly recruitment & selection, performance management, and succession planning. These findings align with the emphasis on predictive analytics in HR practices, suggesting that practitioners



should move beyond descriptive analytics to leverage predictive analytics for more effective decision-making. This aligns with the emphasis on predictive analytics in HR practices, suggesting that practitioners should move beyond descriptive analytics to leverage predictive analytics for more effective decision-making.

The study by Oyeniran et al.<sup>34</sup> explores how business analysis significantly influences the strategies of small and medium-sized enterprises (SMEs) in Nigeria. It emphasizes the practical applications of business analysis, such as understanding consumer needs and strategic planning, within the Nigerian context. The paper highlights the connection between analytical skills and tangible outcomes like increased sales volume and differentiation, while also acknowledging the need for further empirical research to validate these findings and address potential challenges. Overall, it provides valuable insights into the importance of business analysis for SME success in Nigeria's dynamic market landscape.

**Impact of Business Analytics on Market Adaptation:** Daodu, Bhaumik, & Morakinyo<sup>1</sup> emphasized the significance of data analysis and its application in decision-making for market adaptation in eCommerce businesses in Nigeria. This study underscores the importance of leveraging analytics for market adaptation, aligning with the broader theme of using data-driven insights to enhance organizational performance.

**Business Intelligence and Retail Business Sustainability:** Nwinyokpugi & Lah<sup>36</sup> found a significant positive relationship between business intelligence application and retail business sustainability in Rivers State, Nigeria, emphasizing factors like customers' performance management, data

mining, and advanced data visualization. While this study focuses on retail outlets, it reinforces the broader trend of utilizing business intelligence tools to drive operational sustainability and performance improvement across industries.

In conclusion, the discussed research outcomes underscore the growing importance of analytics and intelligence tools in enhancing organizational performance, HRM practices, market adaptation, and sustainability across various industries and geographical regions. While each study provides unique insights specific to its context, collectively, they contribute to a broader understanding of the role and impact of analytics in contemporary business practices.

**Recommendations:** Organizations, particularly SMEs, should prioritize investing in business analytics techniques and technological infrastructure capabilities to enhance organizational performance and market adaptation. HR practitioners should focus on leveraging predictive analytics for recruitment & selection, performance management, and succession planning to improve HRM practices and decision-making effectiveness. There's a need to develop analytical skills among employees to effectively utilize business analytics tools for strategic planning, understanding consumer needs, and driving market adaptation. Retail businesses should leverage business intelligence applications such as data mining and advanced data visualization to drive sustainability and performance improvement.

**Limitations:** The studies are primarily focused on Nigeria's manufacturing, SME, HRM, eCommerce, and retail sectors, limiting the generalizability of findings to other regions or industries. Some studies acknowledge the need for further empirical research to validate their findings and



address potential challenges, indicating the preliminary nature of the research and the possibility of evolving insights. There might be biases inherent in the research methodologies or sample selection processes of the studies, which could impact the validity and reliability of the findings. The effectiveness of business analytics implementation may be influenced by technological constraints, such as limited access to advanced analytics tools or inadequate technological infrastructure, which could hinder organizations' ability to fully leverage analytics capabilities.

### CRITICAL APPRAISAL

This review offer insights into various studies conducted on the application of business analytics and business intelligence in different contexts, particularly within Nigeria. Here's a critical appraisal of the information provided:

Each study focuses on different aspects of business analytics or business intelligence and employs various methodologies such as surveys, regression analyses, and correlation analyses to investigate the relationships and impacts. The studies are mainly conducted in Nigeria, particularly in cities like Lagos, Port Harcourt, and Makurdi; provide a localized perspective on the application of analytics in these regions. The sample sizes vary across studies, ranging from 40 respondents to 1,124 owner-managers of SMEs. While

some studies utilize random sampling techniques, others use judgmental or convenience sampling, which may affect the generalizability of the findings. The studies employ different statistical techniques such as multiple regression analysis, correlation analysis, and SPSS statistical tool to analyze the data collected from surveys and questionnaires. The findings generally support the positive impact of business analytics and business intelligence on organizational performance, HRM practices, market adaptation, and retail business sustainability. They also highlight the importance of factors like technological infrastructure, management support, talent management, and organizational culture in driving successful implementation. Each study provides recommendations for practitioners and policymakers based on their findings. Additionally, they acknowledge limitations such as sample size constraints, potential biases in data collection methods, and contextual factors that may influence the results.

Overall, the studies contribute valuable insights into the role of business analytics and business intelligence in various organizational contexts, while also highlighting areas for further research and improvement in methodology. However, readers should consider the limitations and contextual factors when interpreting the findings and applying them to their own settings.

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## PATRONAGE MOTIVES AND CONSUMERS' CHOICE OF PHARMACY STORES IN OGOJA, CROSS RIVER STATE

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### ABSTRACT

**Background:** Within the competitive pharmacy market environment in Nigeria today and more specifically in Ogoja, Cross River State, pharmacy stores are required to develop efficient and effective marketing strategies based on current information and data about consumer patronage behaviour in order to attract clients and develop customer positive choice and loyalty to their stores.

This study will assess the effect of patronage motives on consumers' choice of Hilary, Odonah, and Emmy Cool Pharmacy Stores in Ogoja, Cross River State.

**Method:** Data collected from customers on their assessment of pharmacy location, drugs quality, pharmacy staff service, price, store atmosphere, and choice of pharmacy store were subjected to statistical analyses

The Stimulus-Organism-Response (S-O-R) hypothesis served as the study's foundation.

324 clients of the three pharmacy outlets provided primary data via a standardized 5-point Likert scale questionnaire. ANOVA, a statistical approach, was used to test the hypotheses and analyze the data obtained from respondents using percentage, mean, and standard deviation.

**Result:** The study's findings indicate that patronage reasons have been linked to location, drug quality, staff service, pricing, and store atmosphere.

**Conclusion:** implication of the findings is that the management of the three pharmacy stores must integrate these patronage motives in their retail store strategies to sustain customers' choice and loyalty to the stores.

**Key words:** price strategy, drugs quality, staff service, patronage motive, store atmosphere and consumers' choice.



## INTRODUCTION

The operation of retail pharmacy stores in Nigeria is an important dimension of the health sector aimed at providing health services to consumers (patients) in the country. Pharmacy stores are spread all over the country located in urban and rural areas which are required to operate in accordance with the regulations prescribed by the Pharmacists Council of Nigeria<sup>1</sup>. In Ogoja, Cross River State many pharmacy stores have been established and are operating in various locations amongst which are Hilary pharmacy, located at No 13 Mission Road Igoli Ogoja, Odonah pharmacy, located at No.11 Mission Road Igoli, Ogoja and Emmy Cool Pharmacy Limited, located at No.7 Ntol Mgbeje street, Igoli, Ogoja. This study on consumer patronage motives and choice of pharmacy stores is focused on these three pharmacy stores.

A pharmacy store or retail pharmacy is a place to purchase medicines and healthcare related products<sup>2</sup>. A pharmacy store is a point of care where patients or clients interact with a drug expert, a pharmacist who offers them adequate and accurate drug information, counseling as well as an opportunity for point of care screening on hypertension, diabetes, malaria, hepatitis, and other conditions<sup>3</sup>. The pharmacist provides patient-centered care while also ensuring to refer patients to a hospital or laboratory for further examination in order to aid accurate diagnosis<sup>3</sup>.

Patronage of pharmacy stores (also called community pharmacies) is very common among many Nigerians, especially in seeking advice for self-care, minor ailments, and treatment of common conditions such as malaria and common cold<sup>4,5</sup>. The successful and effective operation of a pharmacy store requires an in-depth understanding and application of appropriate retail mix variables in terms of

consumers' patronage motives in choosing a particular store to fulfil their needs. It has been shown through previous studies that consumers' patronage motives influence their choice of stores where they purchase products and services<sup>6,7,8</sup>.

Consumer choice is concerned with the notion that consumers make rationed decisions to satisfy their needs and wants. They make the choices that best fit their budget, their preference, and optimize the amount of benefits or value they derive from their choice<sup>9</sup>. Consumer store choice results from a process whereby information on various alternatives is evaluated by the consumer prior to the selection of one of the alternatives (Fotheringham, 1988). Consumers' choice of pharmacy stores is based on patronage motives<sup>8</sup>.

Patronage motives are the reasons or a consideration which makes a buyer to prefer one particular outlet or service provider over others<sup>11</sup>. Ozo<sup>12</sup> states that those influences within the consumers explaining why they purchase from particular firms or outlets are designated as patronage motives. Once the marketer determines or ascertains consumers' patronage motives, he can design or device appropriate marketing strategies aimed at appealing to those motives<sup>11</sup>.

The reasons or motives for patients' choice of pharmacy stores have been studied extensively over the years. Such studies have identified many attributes as salient which include convenient hours, the pharmacist, friendliness of employees, and personalized attention<sup>13</sup>. Location of a store influences its choice by consumers. Easy availability and access to a community pharmacy means that it is often the first point of contact for people in need of advice or information about medical services or healthcare<sup>14</sup>.



Another important aspect widely used in community pharmacy or pharmacy store to attract customers is medication price strategy. It was found to be a strong factor affecting repeat purchase, customer commitment or customer devotion in various business types including community pharmacy<sup>14</sup>. However, customer decision to choose and buy in a particular pharmacy repeatedly did not depend on only the price of medicines but the service quality provided by the pharmacist and other pharmacy sales staff<sup>16</sup>. Also the literature reveals that the most frequently reported antecedents to retail patronage is the level of product assortment and store atmosphere<sup>17,18</sup>. Additionally, Reuttever and Teller<sup>19</sup> and Wong and Dean<sup>20</sup> showed that product quality was the most important attribute which influenced consumers' decision making when choosing a particular store.

Under the current prevailing competitive retail pharmacy business situation in Ogoja, Cross River State, all the pharmacy stores operating in the area must be well acquainted and abreast with the current and changing consumer behaviour in terms of their patronage motives. Hence, this study is timely and pertinent in order to assess the patronage motives of customers of the three selected pharmacy stores in Ogoja, Cross River State, namely Hilary Pharmacy, Odonah Pharmacy and Emmy Cool Pharmacy Limited, all located and operating in Igoli, Ogoja in cross river state. The outcome of the study will be helpful to the respective pharmacy stores to determine the right retail mix strategies to adopt in order to attract and retain their customers and thereby sustain or enhance their competitive position, profitability and growth.

A pharmacy store is a point of care where patients or clients interact with a drug expert, a pharmacist who offers them adequate and accurate drug information, counseling, as well as opportunity for

point of care screening on hypertension, diabetes, malaria, hepatitis and other conditions (PSN Young Pharmacist Group Lagos, 2020).

A pharmacy store, also known as retail pharmacy or community pharmacy, is the most common type of the pharmacy that allows the public access to the medications and the advice about their health. Traditionally known or called a chemist, it is the healthcare facility which is responsible for the provision of the pharmaceutical service to a specific community group or a region<sup>3,4</sup>.

Pharmacy stores (or community pharmacies) serve as the first point of call for patients<sup>21</sup>. Their roles range from the traditional role of dispensing of prescription and non-prescription medicines to counseling, provision of effective medicine, drug information to the general public and patients that encourage quality use of medicines as well as different aspects of self-care and health promotions<sup>22,23</sup>.

Pharmacy stores are located close to where the people live, work and play. They stay open for long hours and require no previous appointment bookings to see the pharmacist<sup>1</sup>. The activities of retail pharmacy stores are so vital to the lives of the communities that they are classified as essential services by most governments. Most retail pharmacies provide not just essential, safe, quality and efficacious medicines but also sound professional service by the pharmacist<sup>1</sup>.

Pharmacy stores are typically required to have a qualified pharmacist on duty at all times when they open. It is also often a requirement for the owner of a pharmacy store to be a registered pharmacist, but is not the case in all jurisdictions. Where permitted many retailers including supermarkets and mass merchandisers now include a pharmacy as a department of



their store. Likewise, many pharmacies are now rather grocery store-like in their design. In addition to medicines and prescriptions many pharmacies now sell a diverse arrangement of additional items such as cosmetics, shampoo, office supplies, confections electronics, home décor, snack foods and durable medical equipment<sup>24,1</sup>.

Those influences within the consumer explaining why they purchase products and service from particular firms or outlets are conceptualized as patronage motives<sup>12</sup>. MBA Skool<sup>11</sup> states that patronage motives are the reasons or considerations which make a buyer to prefer one particular retailer, outlet or service provider over others. Thus, behind every buying decision made by the customer there is a motive.

Patronage motives are classified into two categories namely emotional and rational patronage motives. When a consumer patronizes a particular retailer or outlet without any reasoning, he is said to be influenced by emotional patronage buying motive<sup>11</sup>. According to Ozo<sup>12</sup> emotional patronage motives are those which encourage a consumer to patronize a particular store with a minimum of thought as to the reasons for or against doing so.

However, most consumers buy from a store only after some conscious reasoning as to which one they should patronize. When a consumer patronizes a retailer or store by considering the possible benefits through logical reasoning, he is said to be influenced by rational buying motives. These motives include convenience, low price offered by the store, availability of credit facilities, sales persons efficiency, availability of wide options, reputation of the shop and experience in dealing with same shop or retailer<sup>12,11</sup>.

The idea of consumer choice is based on the fact that people make rational

decisions to satisfy their needs and wants. Specifically, consumers want to make the choice that best fits their budget, their preference and optimizes the amount of benefits or value they derive from their choice<sup>9</sup>.

The rational choice theory postulates that individuals make choices using self-interest, choosing what will bring them the most benefit. Basically, they weigh the options and choices and then make decision on what will be best<sup>25</sup>. Personal preferences come into play when deciding on what suits or profits a particular consumer<sup>25</sup>.

To make choices, consumers need to have relevant information. For instance, the price of a product or service which is a very important factor in a consumers' decision-making. Marketers make information available usually through advertising or marketing communication to assist consumers as rational actors in making rational calculations<sup>9,25</sup>. Consumer store choice results from a process whereby information on various alternatives are evaluated by the consumer prior to the selection of one of the alternatives<sup>10</sup>.

Using a series of forty depth interviews focused on store patronage motives, Kelly and Stephenson<sup>26</sup> developed thirty-five criteria for store selection by consumers. A factor analysis of these criteria suggested that there are eight basic dimensions in store choice which include:

- (i) General store characteristics (reputation in community, number of stores).
- (ii) Physical characteristics of the store (décor, cleanliness, check out service).
- (iii) Convenience of reaching the store from the consumers' location (time required, parking).
- (iv) Products offered (variety, dependability, quality).



- (v) Prices charged by the store (value, special sales).
- (vi) Store personnel (courteous, friendly, helpful)
- (vii) Advertising by the store (informative, appealing, believable)
- (viii) Friend's perception of the store (well-known, liked, recommended).

Franic et. al.<sup>6</sup> outlined factors associated with community pharmacy selection to include: Pharmacy location, the attributes of pharmacist, efficiency of treatment given, expeditious service given by pharmacist, and insurance coverage of prescription drugs. Prior research has also shown that price and convenience are two major motives that influence patients' pharmacy choice with proximity and location to a home as strongly important in their choice<sup>6</sup>.

Location and convenience have consistently been identified as important factors that determine a patient's pharmacy choice. This factor seems particularly important to older adults because of the increased number of medications that need to be filled at a pharmacy, the frequent travel to the pharmacy one or more times a month, and increased mobility limitations that comes with old age<sup>6</sup>.

Additionally, it has been shown that the attributes of the pharmacists and staff are major drivers for pharmacy patronage by consumers. More specifically, personnel variables such as professionalism, friendliness, and a caring nature will influence a customer's decision-making process of where to shop. Added to this, a pharmacist's attire is also critical in instilling confidence, trust, and professionalism to patients. Many customers value and desire the personal and focused interaction with pharmacy staff during their visits<sup>7,27,6</sup>.

Franic et al.<sup>6</sup> further showed that service-related features determine pharmacy stores that patients choose to fill their prescriptions. Their study results highlighted the value of pharmacy staff and pharmacists in patient's pharmacy decision-making process.

Holdford<sup>8</sup> points out those important factors which attract consumers to a community pharmacy which include convenient location and liking the pharmacist, price and pharmaceutical services being offered. A Kaiser Family Foundation Study also reported that when consumers think of quality of health care they think in terms of access, costs, choice of health provider, amount of time the provider spends with them and the provider's qualifications<sup>8,28</sup>.

Franic et. al.<sup>6</sup> researched on pharmacy patronage: Identifying key factors in the decisions making process using the determinant attribute approach. The objective of the study was to evaluate customer pharmacy choice when having a prescription order filled in different pharmacy settings such as grocery store, community independent, community chain, and discount store pharmacies in Georgia. The study was based on a convenience sample of 175 adult pharmacy consumers. The survey measured consumer preferences on 26 attributes which included general pharmacy site features (16 items), pharmacist characteristics (5 items), and pharmacy staff characteristics (5 items) which all together yielded 26 potential determinant attributes for pharmacy selection. The results of the study established that the attributes of pharmacist and staff at all the four pharmacy settings affect pharmacy patronage motive, although consumers frequenting non-community independent pharmacies were also motivated by secondary convenience factors such as



hours of operation and prescription coverage.

Pharmacy staff attributes constituting one of the factors influencing consumers' pharmacy choice as indicated from the results of the above study will be verified in our current study on patronage motives and consumers' choice of pharmacy stores in Ogoja, Cross River State.

Merks et. al.<sup>29</sup> carried out a study on factors influencing patient choice of community pharmacy and components of pharmaceutical care. The objective of the study was to compare factors that influence a patient's choice of pharmacy in Poland and in the UK, and to identify which of them are components of pharmaceutical care as well as to relate them to patient loyalty to the same pharmacy. The research was a cross-sectional study which utilized a self-administered questionnaire distributed to clients during their visit to a community pharmacy in Poland and in the UK. Thirty-six pharmacies in Poland and 56 pharmacies in the UK located in areas of different socioeconomic characteristics were included in the study. The number of respondents who were sampled in the study is 417 in Poland and 405 in the UK. In analyzing data collected from respondents from both countries, comparisons were performed using chi-square test and Logistic Regression. All statistical analyses were performed using SPSS version 20.0. The findings of the study established that in Poland, the factors that influence choice include location, professional and high-quality service, good quality of medicines, while in the UK the choice factors include professional and high quality service, location, good quality advice from the pharmacist and option of discussing and consulting all health issues in a consultation room.

The variables of location and pharmacy staff service confirmed as influencing factors for pharmacy store choice in the foregoing study have been adopted to be verified as salient variables in our current study in Ogoja, Cross River State.

Nikolova, Dyankova and Petkova<sup>30</sup> undertook a study on factors of customer loyalty in pharmacy retail. The study was an empirical sociological research conducted among 433 adult citizens in Varna in February 2017 using a structured questionnaire. The aim of the study was to investigate the main and supplementary factors of customer loyalty in the pharmaceutical retail market. The questionnaire included questions about the leading factors for customer loyalty, customer preferences and attitudes when choosing a pharmacy. The results of the study revealed that customer loyalty to a particular pharmacy depends on the range of products it offers, low prices, and competent and friendly personnel. The results further showed that range of product offered by pharmacy was the most important factor for men (73% of male respondents) and women (68% of female respondents) mostly stated competent service by pharmacy staff. The low price attracted mainly pensioners and people with lower income.

Based on some of the factors confirmed as influencers of store choice in the foregoing study, our current study will test drugs variety and quality, price and pharmacy staff service variables to determine their effects on consumers' pharmacy store choice in Ogoja.

The study of Nitadpakom, Farris and Kittiscope<sup>31</sup> was on factors affecting pharmacy engagement and pharmacy customer devotion in community pharmacy. The research objective was to assess conceptual customer perceptions about pharmacists, perceived quality of pharmacy structure, medication price,



customer engagement and customer devotion. An additional objective was to assess and measure if there is a direct or indirect relationship between these variables. The study population was Thai citizens who lived in the Bangkok metropolitan area and received service from community pharmacies in Bangkok and Vicinity in the past three months. The research was a quantitative study conducted by using self-administered questionnaire. Two hundred and fifty-three (253) customers who regularly visited the pharmacy were randomly recruited from a purposively selected 30 community pharmacies in Bangkok. To assess the direct and indirect relationship between the variables, the structural equation model (SEM) was adopted. The result of the study revealed that only perceptions about pharmacist in customers receiving professional pharmacy services were statistically significant in terms of pharmacy engagement. The result confirmed the indirect positive influence of customer perception about pharmacist in providing service on pharmacy customer devotion via pharmacy engagement. It was customer perceptions about pharmacist that influenced customer retention, positive word of mouth and constructive advice to pharmacies, not quality of pharmacy structure and medication price. The study concluded that to create a long term impact on community pharmacy business, pharmacist is the key success factor.

Like in the above study, our current study is examining the role of the pharmacist as one of the critical motives determining consumers' choice of a pharmacy store in Ogoja, Cross River State. The professional medical knowledge and competency of the pharmacist is highly valued by customers who seek medical advice, counseling and in appropriately filling their prescriptions.

Kevrekidis<sup>32</sup> conducted a study on community pharmacy customer

segmentation. The objective of the study was to investigate consumer's preference concerning the selection of pharmacy and over-the-counter (OTC) medicines, as well as to identify customer segments in relation to these preferences. The cross-sectional study was conducted between February and March, 2016 using a convenient quota sample of 300 participants recruited in the metropolitan area of Thessalonika, Greece. Structured questionnaire comprising of close-ended, multi-choice questions was used to collect data from respondents. To identify customer segments, a two-step cluster analysis was conducted. The result of the study produced three distinct pharmacy customer cluster groups. Customers of the largest cluster (convenience customers) making up 49%, were mostly younger consumers who gave moderate to positive ratings to factors affecting the selection of pharmacy and OTC's, convenience, previous experience, and the pharmacist's opinion received the highest ratings. Customers of the second cluster (loyal customers) making up 35% were mainly retired. Most of them reported visiting a single pharmacy. They gave high ratings to all factors that influence pharmacy selection especially the pharmacy staff, and factors influencing the purchase of OTC's, particularly previous experience and the pharmacist's opinion. Customers of the smallest cluster (convenience and price-sensitive customers) making up 16% were mainly retired or unemployed with low to moderate education, and low personal income. They gave the lowest ratings to most of the examined factors like convenience among factors influencing pharmacy selection, while previous experience, the pharmacist's opinion and product price among those factors affecting the purchase of OCT's received the highest ratings. The study concluded that the community pharmacy market comprised of distinct customer segments that varied in terms of the factors





they preferred in selecting pharmacy and OCT's.

Our current study in Ogoja is not concerned with segmenting pharmacy customers but rather examining factors that determine their store choice such as the ones used in the foregoing study which include price, pharmacy staff service, and location as a factor of convenience.

Ghattas and Al-Abdallan<sup>33</sup> undertook a study on community pharmacies. The aim of the study was to identify and evaluate different factors influencing the customer decision in selecting a community pharmacy in the city of Amman. The study also sought to verify the possible impact of branded pharmacy on the selection process. The study was based on five main factors driving pharmacy store choice which were selected from the literature review undertaken which included convenience, physical environment, sales promotion, qualified and experienced pharmacists, and customer service. The study used a descriptive, quantitative survey approach. The population of study consisted of customers who decide to choose a community pharmacy estimated at 934.5 thousand households. To collect the primary data required in the study, a self-administered questionnaire was used. One thousand and seventy (1070) copies of questionnaire were distributed in different, community pharmacies using the convenience sampling and intercept approach in Amman. Eight hundred and seven (807) copies of well filled and screened questionnaire were used in analysis. The result of the analysis indicated that customer service factor had the highest effect on customers' selection of pharmacies followed by qualified and experienced pharmacists and convenience respectively. Sales promotions and physical environment had the least impact on customer's decision.

The factors from the above study that will be replicated in our current study are physical environment (in terms of store atmosphere), convenience (in terms of store location), and qualified and experienced pharmacists (in terms of pharmacy staff service).

Chijioke-Nwauche and Ogoro<sup>14</sup> researched on distribution pattern of community pharmacies in Port Harcourt Metropolis, Niger Delta, and Nigeria. The objective of the study was to examine the distribution pattern and accessibility of community pharmacies in Port Harcourt Metropolis to the populace. The material and method used in the study include high resolution Google Earth Image, Geographical Information System, and the Global Positioning System which were employed in data collection. The study area was limited to Port Harcourt Metropolis and the design consisted of a Cross-sectional observational study. The sampling technique adopted was convenience sampling. A total of 219 community pharmacies were sampled in the study which represents more than half of the total community pharmacies of 362 within the study area. The data sources for the study were primary and secondary sources using the Global Positioning System to extract the coordinate of the pharmacies across the study area. The distribution pattern of community pharmacies across the study area was analyzed using the nearest neighbor analytical tool which was used to examine the location of community pharmacies and determine the pattern of these locations whether they are clustered, random or dispersed across the study area. The result obtained from the study showed that the spatial location of pharmacies in Port Harcourt metropolis is clustered and located within developed neighborhood of the city or where persons of higher financial capacity reside. The study concluded that to ensure better distribution of pharmacies in terms of



location and ensure comprehensive healthcare coverage, emphasis should be paid by government on geo-location in the approval of operating licenses.

The above study shows that location of pharmacies is very critical in meeting the medical needs of patients. Thus, the current study is using this variable to determine whether it is a patronage motive consumers' use in choosing pharmacy stores in Ogoja, Cross River State.

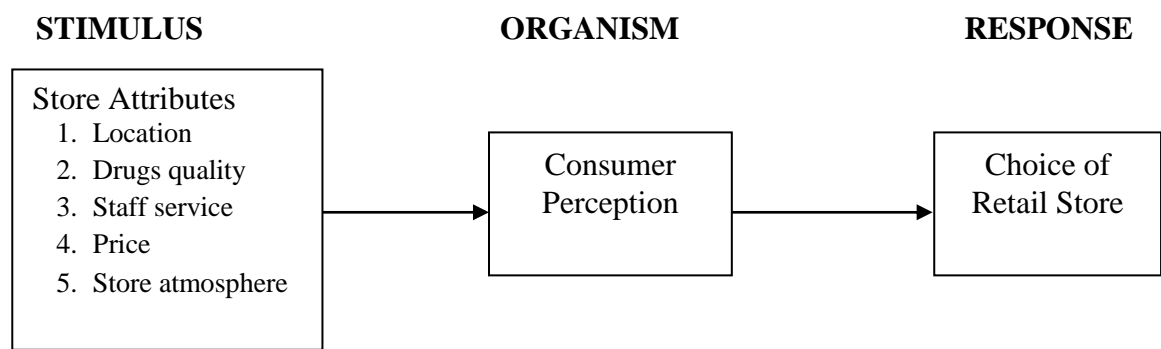
Rohova, Dimova, Atanasova and Rangelova<sup>34</sup> conducted their study on consumer preference for pharmacy in a highly competitive environment. The objective of the study was to examine the factors influencing consumer choice of a pharmacy in a highly competitive environment. This survey research was conducted based on a sample of 433 consumers in the city of Varna. The method of study adopted was a direct anonymous inquiries used to ascertain consumer opinion with respect to factors affecting the choice of a pharmacy and over-the-counter medicines. Data collected with copies of questionnaire were analyzed with regression analysis. The results of the study indicated that majority of the respondents attend relatively regular pharmacies at least once a month or more frequently. The study established that geographical proximity and price level are the most important factors in pharmacy choice. Counseling by qualified staff is important to 65% of respondents. Product range and competitive price also have an impact on loyalty and choice of pharmacy stores.

The salient factors for pharmacy choice adopted from the foregoing study to be replicated in our current study are price, location (geographical proximity), staff service (counseling), and product (drug) range.

This study is anchored on Stimulus-Organism-Response (S-O-R) theory. The theory was propounded by Woodworth<sup>35</sup> who analyzed the effect which stimulus (S) has in producing different responses (R) depending on the emotional state of the organism (O). The theory was later introduced into marketing context by Kakkar and Lutz<sup>35</sup> which has been applied in various retail setting to explain consumer decision-making process as well as the relationship between store environment and consumer perception on the one hand, and instore patronage intentions on the other hand.

The Stimulus-Organism-Response (S-O-R) theory holds that the retail store environment and attributes (Stimulus) has an impact on the emotional states of the consumer (Organism) in terms of giving pleasure or causing his arousal. The emotional states act as mediators on the behaviour (Response) of the consumer which is characterized as avoiding or approach toward a store. In other words, the store stimulus (attributes) which a consumer receives will make him either to approach (choose) or avoid (not choose) to patronize a retail store<sup>35</sup>. The assumption of the theory is that the consumer or customer (O) will respond positively in choosing to patronize (R) a particular retail store depending on the nature of the attributes or stimulus (S) which the store manifests.

Mehrabian and Russel<sup>35</sup> who were environmental psychologists suggested that environmental stimulus of store atmosphere (S) lead to an emotional reaction (R) which in turn drives consumers' response approach and avoidance behaviour in terms of store patronage (R). Thang and Tan<sup>19</sup> used the S-O-R model as a framework to study consumers' preferences regarding store choice (see Figure 1 below).



**Figure 1:** An S-O-R Model of Consumer Retail Patronage Behaviour

**Source:** Adapted from Thang and Tan<sup>18</sup> in Nilsson<sup>35</sup>.

As shown in figure 1, the stimulus pertaining to store attributes (patronage motives) include location, quality of drugs, staff service, price and store atmosphere. These attributes (S) impact on consumers (O) decision to patronize (R) a particular store or not. Therefore, in order to become a customer-oriented business, the management of pharmacy stores needs to be familiar and work strategically with each of the elements in the model<sup>18</sup>.

The S-O-R theory is appropriate for the current study on patronage motives and consumers' choice of pharmacy stores in Ogoja, Cross River State because it shows the critical importance of store attributes to influence the consumers in choosing a particular pharmacy store to patronize. The implication is that every pharmacy store can formulate its retail strategies based on store attributes (patronage motives) which impact on consumers' choice of their retail stores.

Within the competitive pharmacy market environment in Nigeria today and more specifically in Ogoja, Cross River State, pharmacy stores are required to develop efficient and effective marketing strategies based on current information and data about consumer patronage behaviour in order to attract clients and develop customer positive choice and loyalty to their stores<sup>32</sup>. It has been shown that

certain store attributes induce or motivate consumers (patients) in their choice or preference of pharmacy stores. It is therefore imperative that pharmacy stores operating in a competitive environment such as Ogoja, Cross River State, should assess, ascertain and address those store attributes which constitute patronage motives for consumers. These store attributes include store location and accessibility, quality of drugs, pharmacy staff service, pharmacy pricing strategies, and pharmacy store atmosphere.

The performance of a pharmacy store in achieving its marketing and business objectives depends on whether it understands and applies the right retail mix in terms of patronage motives aimed at influencing consumers (patients) to choose their retail outlets. This entails that those who own and operate pharmacy stores should understand the critical role of consumer patronage motives in determining the choice of pharmacy stores. Many pharmacy stores in Nigeria and more specifically in Ogoja, Cross River State, may not be currently focusing on consumer patronage motives in devising their marketing strategies. Also they may not have carried out studies to assess and ascertain the patronage motives of their customers so that they can utilize the research findings to improve or device



new strategies that will impact positively on consumer patronage behaviour. Therefore, this study was critical and essential to determine consumer patronage motives for the three selected pharmacy stores operating in Ogoja, Cross River State.

A number of previous studies had examined competitive advantages in pharmacy practice. Some of those studies focused on identifying determinant attributes of pharmacy patronage and patients' choice for pharmacy stores<sup>8</sup>. However, no study exist in the marketing literature which was undertaken in Ogoja, Cross River State focused on consumers' patronage motives and choice of pharmacy stores. This current study is aimed at filling the research gap to enable operators of the three selected pharmacy stores determine how to effectively and strategically influence customers towards choosing and patronizing their retail pharmacy.

Pharmacy school stores must create effective marketing strategies based on data and current information about consumer patronage behavior in the competitive Nigerian pharmacy market, particularly in Ogoja, Cross River State, if they hope to draw customers and foster positive customer choice and loyalty<sup>32</sup>. Research indicates that specific shop characteristics can influence or encourage

patients to select or favor particular pharmacy businesses. Thus, it is essential that drugstores functioning in a cutthroat setting like Ogoja, Cross River State, evaluate, identify, and resolve those aspects of their establishment that serve as reasons for customers to return. These shop characteristics include the location and ease of access, drug quality, staff service, and drugstore pricing tactics.

## METHODOLOGY

### Research Design

The study adopted the descriptive survey design to collect primary data from customers of pharmacy stores. The descriptive design enabled the researcher to assess customers' patronage motives with respect to their choice of pharmacy stores in Ogoja, Cross River State.

### Area of the Study

Three pharmacy stores all located in Igoli, Ogoja cross river state, constitute the area of the study. The pharmacy stores include Hilary Pharmacy, Odonah Pharmacy, and Emmy Cool Pharmacy Ltd.

### Population of the Study

The population of the study comprised all customers who patronize the three pharmacy stores that were studied. However, the total number of customers making up the population is unknown.

## Sample Size Determination

To determine the sample size, the researcher undertook a pilot survey by randomly sampling 50 pharmacy store customers in Ogoja. Twenty-two (22) responded positively that they patronize the three pharmacy stores being studied, while 28 do not patronize them. From this result we obtained the following:

$$P = \frac{22}{50} = 0.36 \text{ i.e probability of positive response}$$

$$q = \frac{28}{50} = 0.64 \text{ i.e probability of negative response}$$



The sample size is calculated using Toman's formula as shown below

$$n = \frac{Z^2 pq}{e^2}$$

Where

n	=	required sample size
p	=	probability of positive response
q	=	probability of negative response
z	=	normal distribution at 95% level of confidence
e	=	error margin
p	=	0.36
q	=	0.64
z	=	1.96
e	=	5% or 0.05
		$\frac{(1.96)^2 \times 0.36 \times 0.64}{(0.05)^2}$
n	=	354

### Sampling Technique

Both cluster and convenience sampling techniques were adopted. In terms of cluster sampling, the researcher distributed copies of questionnaire to customers who came to the three pharmacy stores to purchase drugs. In terms of convenience sampling, copies of questionnaire were administered only to those who accepted to participate in the study both at the pharmacy stores location and in other locations in Ogoja.

### Type and Source of Data

The primary data required in the descriptive study was sourced from customers of the three pharmacy stores in Ogoja.

### Research Instrument

A structured questionnaire based on 5-point Likert Scale was used to collect primary data from the respondents. The questionnaire was vetted and validated by the researcher's supervisor. The instrument's reliability was also verified and confirmed based on Cronbach Alpha Index using SPSS software.

### Analytical Techniques

To analyze data sourced from pharmacy stores customers, tables, frequency, percentage, mean and standard deviation were used, while hypotheses were tested with Analysis of Variance (ANOVA).

### Ethics and Permission:

The ethical considerations for this research include the following principles:

**Informed Consent:** All participants who were part of the research are informed of the nature of the study, and they were required to sign a consent form before participating.

**Confidentiality:** The privacy and confidentiality of the participants were upheld. The data collected was treated with strict confidentiality, and participants are not identified by names.

**Data Protection:** Adequate measures were taken to protect the data collected from unauthorized access or manipulation. This includes the encryption of data, storage in



secure locations, and limiting access to authorized personnel only.

Transparency: The research process was transparent, and all participants were informed of the research findings. Additionally, the research report is made available to the public.

Permission was sought from the management of the three selected pharmacy stores in Ogoja Cross River

State, on the 6<sup>th</sup> of September, 2023 and signed by each stores pharmacist on the 10th of September, 2023 before conducting this research. The management was informed of the research objectives and how the data will be used. The research work commence only after obtaining written consent from the management of the three selected pharmacy stores.

## RESULTS

### Questionnaire Distribution and Return

**Table 1: Number of copies of Questionnaire Distributed and Returned**

Pharmacy Store	Number Distributed	Number Returned	Number not Returned	Percentage Rate of Return
Hilary Pharmacy	118	106	12	29.9
Odonah Pharmacy	118	110	8	31.1
Emmy Cool Pharmacy	118	108	10	30.5
<b>Total</b>	<b>354</b>	<b>324</b>	<b>30</b>	<b>91.5</b>

Source: Abua Survey Data, 2023

A total number of 354 copies of questionnaire were distributed to the three pharmacy customers in Ogoja, Cross River State. Three hundred and twenty four (324) copies were returned well filled, while 30 copies were not returned. This gave a response rate of 91.5 percent.

### Analysis of Patronage Motives Affecting Choice of Pharmacy Stores

**Table 2: Customers' Assessment of Location Attribute as Patronage Motive for Choosing Pharmacy Store**

S/N	Statements on Pharmacy Shop Location	N	Mean	Standard Deviation	Decision
1	The pharmacy store has a convenient location	324	2.8364	.82216	A
2	The pharmacy store is easily accessible to me	324	2.8395	.90690	A
3	The pharmacy store has a parking space	324	2.6852	.78273	A

Source: Output from SPSS



Result in Table 2 shows the means and standard deviations of customers' assessment of location as a patronage motive for choosing a particular pharmacy store in Ogoja, Cross River State. The mean ratings for items 1, 2, and 3 are above 2.5 set as criterion. The three pharmacy stores have a good location, are easily accessible, and have a parking space. These locations attributes constitute customers' patronage motive for choosing the pharmacy stores.

**Table 3: Customers' Assessment of Drugs Quality as Patronage Motive for Choosing Pharmacy Store**

S/N	Statements on Pharmacy Product Offering	N	Mean	Standard Deviation	Decision
1	The drugs sold in the pharmacy store are reliable and effective	324	2.7469	.88895	A
2	The pharmacy offers variety or assortment of drugs	324	2.8364	.86617	A
3	The drugs I want to buy are always available	324	2.7963	.86299	A

**Source: Output from SPSS**

Result in Table 3 shows the means and standard deviations of customers' assessment of drugs quality as a patronage motive for choosing a particular pharmacy store in Ogoja. The mean ratings for items 1, 2, and 3 are above 2.50 set as criterion. This indicates that drugs quality constitute customers' patronage motive for choosing the three pharmacy stores since the result shows that quality of the drugs offered by the three pharmacy stores are reliable and effective, the stores offer variety or assortment of drugs, and drugs customers want to buy are always available.

**Table 4: Customers' Assessment of Pharmacy Staff Service as Patronage Motive for Choosing Pharmacy Store**

S/N	Statements on Pharmacy Staff Service	N	Mean	Standard Deviation	Decision
1	The pharmacy staff provide prompt service to customers	324	2.9012	.87064	A
2	The pharmacy staff are courteous friendly and helpful	324	2.8395	.79014	A
3	The pharmacy staff are competent and effective	324	2.7593	.82384	A

**Source: Output from SPSS**

Result in Table 4 shows the means and standard deviations of customers' assessment of pharmacy staff service as a patronage motive for choosing a particular pharmacy store in Ogoja. The mean ratings for items 1, 2, and 3 are above 2.50 set as criterion. This indicates



that the customers' patronage motive for choosing the three pharmacy stores is because the pharmacy staffs provides prompt service to customers, are courteous, friendly and helpful, and are competent and effective in performing their medical service.

**Table 5: Customers' Assessment of Price as Patronage Motive for Choosing Pharmacy Store.**

S/N	Statements on Pharmacy Pricing	N	Mean	Standard Deviation	Decision
1	The pharmacy store sells drugs at low prices	324	2.7068	.77329	A
2	The pharmacy store sells drugs at moderate prices	324	2.7006	.87263	A
3	The pharmacy store sell drugs at prices lower than its competitors	324	2.6512	.85765	A

**Source: Output from SPSS**

Result in Table 5 shows the means and standard deviations of customers' assessment of price as a patronage motive for choosing a particular pharmacy store in Ogoja. The mean ratings for items 1, 2, and 3 are above 2.50 set as criterion. This indicates that price constitutes customers' patronage motive for choosing the three pharmacy stores. The result shows that the pharmacy stores sell drugs at low or moderate prices or at prices lower than those offered by other competitors.

**Table 6: Customers' Assessment of Store Atmosphere Patronage Motive for Choosing Pharmacy Store**

S/N	Statements on Pharmacy Atmosphere	N	Mean	Standard Deviation	Decision
1	The pharmacy store is clean and neat	324	2.8086	.83673	A
2	The pharmacy staff are well dressed and neat	324	2.7963	.87369	A
3	Drugs are well organized and displayed in the pharmacy store	324	2.7500	.81158	A

**Source: Output from SPSS**

Result in Table 6 shows the means and standard deviations of customers' assessment of store atmosphere as a patronage motive for choosing a particular pharmacy store in Ogoja. The mean ratings for items 1, 2, and 3 are above 2.50 set as criterion. This indicates that store atmosphere constitutes customers' patronage motive for choosing the three pharmacy stores in Ogoja. The analysis result shows that the three pharmacy stores are clean and neat, the pharmacy staffs are well dressed and neat, and drugs are well organized and displayed in the stores.



**Table 7: Assessment of Customers' Choice of the three Pharmacy Stores in Ogoja**

S/N	Statements on Pharmacy Choice	N	Mean	Standard Deviation	Decision
1	I will buy from this pharmacy store any time I want to buy drugs	324	2.8348	.86612	A
2	I will continue to buy drugs from this pharmacy store in the near future	324	2.7963	.86299	A
3	I say positive things about this pharmacy	324	2.7963	.86299	A
4	I will recommend this pharmacy store to others who will seek my advice	324	2.9012	.87064	A

**Source: Output from SPSS**

Result in table 7 shows the means and standard deviations of assessment of customers' choice of the three pharmacy stores in Ogoja. The means showing customers agreement to items 1, 2, 3, and 4 are above 2.50 set as criterion. This result suggests that the customers will buy from the three pharmacy stores any time they want to buy drugs, they will continue to buy from the pharmacy stores in the near future, they say positive things about the pharmacy stores to their friends, colleagues, and relatives, and they will recommend the pharmacy stores to others who may seek their advice.

**Test of Hypotheses****Hypotheses One**

**H<sub>01</sub>:** Store location has no significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.

**H<sub>A1</sub>:** Store location has significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.

**Table 8: ANOVA of the significant effect of Store location patronage motive on consumers' choice for three pharmacy stores in Ogoja, Cross River State**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	9.274	3	3.091	4.732	.003
Within Groups	209.056	320	.653		
<b>Total</b>	<b>218.330</b>	<b>323</b>			

**Source: Output from SPSS**

Result in table 8 shows the ANOVA result of the significant difference in the mean ratings effect of location patronage motive on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State. Result shows that an f-ratio of 4.732 was obtained with a



probability value of 0.03. This probability value was compared with 0.05 set as level of significance and it was found to be significant. This means that hypothesis one which stated that store location has no significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State is not accepted. The alternate hypothesis is therefore accepted. Our conclusion is that store location patronage motive has significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.

### Hypotheses Two

**H<sub>02</sub>:** Drugs quality has no significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.

**H<sub>A2</sub>:** Drugs quality has significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.

**Table 9: ANOVA of the significant difference in the mean ratings of drug quality patronage motive on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.535	3	3.512	4.592	.004
Within Groups	244.712	320	.765		
Total	255.247	323			

### Source: Output from SPSS

Result in table 9 shows the ANOVA result of the significant difference in the mean ratings effect of drug quality patronage motive on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State. Result shows that an f-ratio of 4.592 was obtained with a probability value of 0.04. This probability value was compared with 0.05 set as level of significance and it was found to be significant. This means that hypothesis two which stated that drugs quality patronage motive has no significant positive effect on consumers' choice for three pharmacy stores in Ogoja, Cross River State is not accepted. The alternate hypothesis is therefore accepted. The conclusion is that drugs quality patronage motive has significant positive effect on consumers' choice for three selected pharmacy stores in Ogoja, Cross River State.

### Hypotheses Three

**H<sub>03</sub>:** Pharmacy service staff patronage motive has no significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State

**H<sub>A3</sub>:** Pharmacy staff service has significant positive effect on consumer' choice of three selected pharmacy stores in Ogoja, Cross River State.

**Table 10: ANOVA of the significant difference in the mean ratings effect of pharmacy staff service patronage motive on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State**



	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18.857	3	6.286	8.901	.000
Within Groups	225.982	320	.706		
<b>Total</b>	<b>244.840</b>	<b>323</b>			

**Source: Output from SPSS**

Result in table 10 shows the ANOVA result of the significant difference in the mean ratings effect of pharmacy staff service patronage motive on consumers' choice for three pharmacy stores in Ogoja, Cross River State. Result shows that an f-ratio of 8.901 was obtained with a probability value of 0.00. This probability value was compared with 0.05 set as level of significance and it was found to be significant. This means that hypothesis two which stated that pharmacy staff service has no significant positive effect on consumers' choice for three selected pharmacy stores in Ogoja, Cross River State is not accepted. The alternate hypothesis is therefore accepted. The conclusion is that pharmacy staff service patronage motive has significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.

**Hypotheses Four**

**H<sub>04</sub>:** Price has no significant positive effect on consumers' choice of three selected

Pharmacy stores in Ogoja, Cross River State

**H<sub>A4</sub>:** Price has significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.

**Table 11: ANOVA of the significant difference in the mean ratings of price patronage motive on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.493	3	1.498	2.540	.050
Within Groups	188.652	320	.590		
<b>Total</b>	<b>193.145</b>	<b>323</b>			

**Source: Output from SPSS**

Result in table 11 shows the ANOVA result of the significant difference in the mean ratings effect of price patronage motive on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State. Result shows that an f-ratio of 2.540 was obtained with a probability value of 0.05. This probability value was compared with 0.05 set as level of significance and it was found to be significant. This means that hypothesis two which stated that price has no significant positive effect on consumers' choice of three pharmacy stores in Ogoja, Cross River State is not accepted. The alternate hypothesis is therefore accepted. The conclusion is that price has significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.



### Hypotheses Five

**H<sub>05</sub>:** Store atmosphere has no significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.

**H<sub>A5</sub>:** Store atmosphere has significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.

**Table 12: ANOVA of the significant difference in the mean ratings effect of store atmosphere patronage motive on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	28.280	3	9.427	15.246	.000
Within Groups	197.856	320	.618		
<b>Total</b>	<b>226.136</b>	<b>323</b>			

### Source: Output from SPSS

Result in table 12 shows the ANOVA result of the significant difference in the mean ratings effect of store patronage motive on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State. Result shows that an f-ratio of 15.246 was obtained with a probability value of 0.00. This probability value was compared with 0.05 set as level of significance and it was found to be significant. This means that hypothesis two which stated that store atmosphere has no significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State is not accepted. The alternate hypothesis is therefore accepted. Our conclusion is that store atmosphere patronage motive has significant positive effect on consumers' choice of three selected pharmacy stores in Ogoja, Cross River State.

### Discussion of Findings

This study was undertaken in Ogoja, Cross River State to assess the effect of patronage motives on consumers' choice of pharmacy stores. Specifically, five patronage motives were examined to verify their effect on customers' choice of pharmacy stores. The results from data analysis are discussed in this section.

From the data analysis, the indicators of location that have effect on consumers' choice of pharmacy store include convenient location, accessibility of the pharmacy store, and availability of parking space. The test of hypothesis one indicates that location patronage motive has significant positive effect on consumers' choice of the three pharmacy stores in Ogoja, Cross River State. This finding

conforms to what Merks et. al.<sup>29</sup> found in their study that location of pharmacy stores influence choice of a community pharmacy in both Poland and UK. Kevrekidis<sup>32</sup> in his study on community pharmacy customer segmentation conducted in Thessalonika also found out that pharmacy location was one of the patronage motives that influence choice of pharmacy stores. Additionally, Ghattas and Al-Abdailam<sup>33</sup> established in their study that convenience in terms of location impacted positively on consumers' choice of community pharmacy stores.

The indicators of quality of drugs analyzed in the study include variety or assortment of drugs offered by the pharmacy store, reliability and efficacy of the drugs and availability of the drugs required by consumers. From data analysis, the result showed that drugs quality patronage



motive has significant positive effect on consumers' choice of the three pharmacy stores in Ogoja, Cross River State. This result is the same with the finding of Rehova, Dimova, Atanasova and Ranyelova<sup>34</sup> in their study on consumer preference for pharmacy in a highly competitive environment in which they confirmed that product range or variety among other factors impact on choice and loyalty to pharmacy stores. Similarly, Merks et al.<sup>29</sup> found in their comparative study in Poland and UK that good quality medicines influence choice or selection of pharmacy stores by consumers.

The indicators of pharmacy staff service as analyzed in the study include provision of prompt service to customers, courtesy, friendliness and helpfulness of the pharmacy staff, and competency and effectiveness of the staff. The test of hypothesis three capturing these variables indicated that pharmacy staff service has significant positive effect on consumers' choice of the three pharmacy stores in Ogoja, Cross River State. This finding is in tandem with what Ghattas and Al-Abdallam<sup>33</sup> found in their study. They established that customer services had the highest effect on customer selection of pharmacies in the city of Amman. Franic, Haddock, Tucker and Wooten (2008) also found that one of the critical factors influencing choice of pharmacy stores in Georgia is attributes of pharmacist and staff especially in terms of their service to customers. Nitadpakom, Farris and Kittiscope<sup>31</sup> found that professional service performed by pharmacy staff influenced consumers in their prior engagement which ultimately led to their devotion to a pharmacy store.

The indicators of price variable analyzed in the study include selling at low prices by the pharmacy store, selling at moderate prices, and selling at prices lower than those of competitors. The test performed on hypothesis four established that price

has significant positive effect on consumers' choice of the three pharmacy stores in Ogoja, Cross River State. A similar finding was made by Nikolova et al.<sup>30</sup> in their study in Varna. They reported that customers' choice and loyalty to a particular pharmacy in Varna was influenced by low prices charged on their products. Kevrekidis (2018) also found out that price was a salient patronage motive that influenced choice of pharmacy stores. The price level was also confirmed by Rehova et al.<sup>34</sup> as an important patronage motive that impacts on choice and loyalty towards pharmacy stores.

The indicators of store atmosphere as analyzed in this study include cleanliness and neatness of pharmacy store, pharmacy staff being well dressed and neat, and drugs marketed being well organized and displayed in the pharmacy store. The test of hypothesis five capturing these indicators shows that pharmacy atmosphere has significant positive effect on consumers' choice of the three pharmacy stores in Ogoja, Cross River State. This finding is in agreement with that made by Ghattas and Al-Abdallam<sup>33</sup> who established in their study of community pharmacies in Amman that physical environment impacted positively on consumers' decision to choose a community pharmacy store in the city of Amman.

### **Strength of the study**

This study has relevance for various groups. First the pharmacy stores operating in Ogoja and other places will benefit as the outcome of the study will help them to improve their provision of products and healthcare services to customers, thereby attaining enhanced profitability and business growth.

The findings and recommendations of the study will equally be of benefit to consumers since they will receive



enhanced value and satisfaction as the pharmacy stores integrate their patronage motives into their retail store strategies.

The stock of literature information relating to patronage motives and consumers' choice of pharmacy stores will be increased and this will become available to academics and researchers who may undertake research related to the current study.

### **Limitations of the study:**

**Limited geographical scope:** The study focuses only on one specific area within Ogoja, it may not capture the diverse experiences and perspectives of consumers in other parts of Cross River State. This could limit the applicability of the findings to a broader context.

**Self-reporting bias:** As this study likely involves collecting data through surveys, there is a risk of participants providing inaccurate or biased responses. This could affect the reliability and validity of the findings.

### **Conclusion**

This study was undertaken to assess the effect of patronage motives on consumers' choice of Hilary, Odonah, and Emmy Cool Pharmacy Stores in Ogoja, Cross River State. Primary data collected from customers on their assessment of pharmacy location, drugs quality, pharmacy staff service, price, store atmosphere, and choice of pharmacy store were subjected to statistical analyses. The test of hypotheses based on Analysis of variance (ANOVA) statistical technique established that location, drugs quality, pharmacy staff service, price and store atmosphere have significant positive effect on consumers' choice of the three

pharmacy stores. In other words, these store attributes constitute the salient patronage motives for consumers' choice of the three pharmacy stores in Ogoja, Cross River State. The implication of the findings is that the management of the three pharmacy stores must integrate these patronage motives in their retail store strategies to sustain customers' choice and loyalty to the stores.

### **Recommendations**

The current locations of the pharmacy stores should be well managed and controlled especially the parking space. As the pharmacy business grows and expands, new branches of the pharmacy store should be opened and sited in convenient and accessible locations to attract or capture customers' patronage.

The stores should purchase and stock variety or assortment of drugs and other products to ensure that the exact brands of products desired or recommended by doctors for patients are available.

The pharmacy staff should continue to upgrade and update their professional skills and competence to ensure that they provide satisfactory service and value to customers.

The pharmacy stores should sustain or enhance their competitive position through adopting appropriate pricing strategies that appeal to customers such as low and moderate prices or periodically using sales promotional prices.

The store atmosphere and physical environment should be made appealing and attractive. Re-organization of the in-store space could be effected to make it better. Both inside and outside of the store should be kept impeccably clean and neat.



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## KNOWLEDGE, ATTITUDE AND EXPOSURE TO ALCOHOL ADVERTS BY SECONDARY SCHOOL STUDENTS IN MUBI, ADAMAWA STATE

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### ABSTRACT

**Background:** This study aims to assess the knowledge, attitude, and exposure to alcohol adverts by secondary school students in Mubi, Adamawa State. Four specific objectives and four relevant research questions guided the study.

**Method:** The study used a descriptive cross-sectional study design. A multi-stage sampling technique was used to select 239 participants from both public and private schools in Mubi, Adamawa state. A 25-item self-structured, self-administered questionnaire ranging from sociodemographic characteristics, knowledge, attitude, and exposure to alcohol adverts. The data were analyzed using Microsoft Excel and SPSS version 26.

**Result:** The respondents were significantly exposed to alcohol advertising in various media in the environment and these exposures led to early alcohol initiation. Family and friends' consumption of alcohol considerably influences adolescents' initiation and consumption of alcohol.

**Conclusion:** The students have the knowledge and exposure to alcohol adverts; the students are aware of some of the negative effects of excessive consumption of alcohol and have been exposed to alcohol advertising around their locality. Based on the findings, the following recommendations are made: government at all levels and other regulatory agencies should actively regulate the marketing of alcoholic beverages and avoid unnecessary exposure of these young adults to alcohol marketing which sometimes targets them, parents/family should be continuously re-oriented through enlightenment campaigns on their role in the character development of the children and the need to avoid undue exposure of alcohol consumption to the younger ones by their own lifestyle and the need for more exhaustive research into alcohol marketing and possible impact on the general use.

**Keywords:** Alcohol, Knowledge, Attitude, Exposure, Advertising.

### INTRODUCTION



Globally, the harmful use of alcohol is a growing public health problem. It increases the risk of morbidity and mortality and is a causal factor for a myriad of social, mental, and behavioral disorders<sup>1</sup>. Alcohol consumption is a risk factor for both communicable and non-communicable diseases, including social and psychological harms such as cultism, rape, armed robbery, kidnapping, school failure, and dropouts<sup>2</sup>. Large volumes of alcohol intake are related to long-term health consequences, including alcohol dependence, ischemic heart disease, ischemic stroke, and injuries<sup>3</sup>. Equally, low-level drinking can increase the risk of several diseases, including some cancers<sup>4</sup>. Globally, about three million deaths (5.9% of all deaths) are associated with the unsafe consumption of alcohol<sup>5</sup>. In 2016, alcohol increased the burden of diseases and injury causing 132.6 million disability-adjusted life years, (DALY) which represented 5.1% of all DALYs in that year including mortality (World Health Organization, 2018). Death due to alcohol is higher among men (2.3 million deaths and 106.5 million DALYs) compared to women (0.7 million deaths and 26.1 million DALYs attributable to alcohol consumption<sup>6</sup>.

In Africa, the burden of disease due to alcohol misuse is on the rise and accounts for about 6.4% of deaths<sup>7</sup>. Reports from 2016 Global burden of disease estimates indicated a high prevalence of alcohol use in Sub-Saharan African countries such as Nigeria<sup>8</sup>. There is a high prevalence of alcohol use among Nigerian adults aged 15 years and older which is estimated at 40 to 59.9 %<sup>8</sup>. High levels of alcohol use occur among adolescents globally. Early alcohol use can have long-term detrimental health, social, economic, and developmental effects on youth. Research shows that secondary school students who started indulging in alcohol use before the age of 15 have about a six-fold higher tendency

to develop alcohol dependence compared to those who started drinking later i.e., after 21 years of age<sup>9</sup>. Some factors associated with an increase in the prevalence of alcohol use among young people in Nigeria include social identity, enhancement of sexual performance, or means of dealing with stress related to academic activities<sup>10 11</sup>. Alcohol consumption also predisposes adolescents to risky sexual behaviors and mental health disorders<sup>12,13</sup>. There is substantial evidence linking alcohol marketing exposure to alcohol consumption among young adults worldwide<sup>8</sup>.

Knowledge and attitudes toward alcohol are influenced by the continuous identification with alcohol advertisements<sup>8</sup>. In addition, a significant body of knowledge indicates that exposure to alcohol advertising is related to increased awareness and positive views about alcohol which elicit intentions to indulge in underage drinking<sup>14</sup>. Certain alcohol marketing strategies such as routine promotional activities could enhance the accessibility and the quantity of liquor often consumed<sup>14</sup>. Thus, it creates conditions that heighten alcohol-related damage, especially among the vulnerable group<sup>15,16</sup>. Evidence also exists of the dose-response relationship between a higher likelihood of alcohol consumption and greater exposure to advertisement<sup>14</sup>. Developed countries have some regulation of alcohol advertising; however, in most cases, these systems are solely designed and managed by the industries themselves with little or no government oversight<sup>17,18</sup>.

Various authors have defined knowledge. Morojele et al.<sup>7</sup> viewed knowledge as experience or information that can be communicated or shared based on information and experience. Knowledge is an understanding premised on experience<sup>19</sup>. According to Hornby<sup>20</sup>, knowledge is the general awareness or



explicit information of a situation or a fact. It also means information in mind, possession of information, facts, ideas, truths, and principles. Knowledge refers to human faculty resulting from interpreted information, understanding that germinates from a combination of data, information, experience, and individual interpretation<sup>6</sup>. In this study, knowledge refers to the acquisition of information or skills through observation, inquiry, or learning. Knowledge is assumed to be a construct that helps modifies the attitudes, and practices of the individuals. Knowledge has a significant positive impact on an individual's behavioral change. However, Pradeep et al.<sup>19</sup> posited that the knowledge of alcohol effects and their prevention was poor among adolescents in Nigeria. The author further posited that adolescents are usually involved in risky behaviour or have the intention to engage in risky behaviour. Kilibarda et al.<sup>6</sup> stated that knowledge of the effects of alcohol is low among adolescents in Nigeria. However, adolescents' knowledge may be influenced by their attitudes.

Various authors have defined attitudes. For instance, Morojele et al.<sup>7</sup> defined attitude as a favorable or unfavorable evaluative reaction toward something or someone, exhibited in one's beliefs, feelings, or intended behavior. Myers<sup>21</sup> further defined attitude as a social orientation - an underlying inclination to respond to something either favorably or unfavorably through its (three) components: cognitive (our thoughts, beliefs, and ideas about something); affective (feelings or emotions that something evokes fear, sympathy, hate); and conative, or behavioral (disposition to act in certain ways toward something). According to Gordon<sup>22</sup>, an attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and

situations to which it is related. Morojele et al.<sup>7</sup> averred that attitude is a dispositional readiness to respond to certain institutions, persons, or objects in a consistent manner which has been learned and has become one's typical mode of response. Kilibarda et al.<sup>6</sup> averred that attitude denotes the total of man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and other specific topics. According to Stylianopoulos, Munn, and Jain<sup>22</sup>, attitudes are learned predispositions toward aspects of our environment and they may be positively or negatively directed toward certain people, services, or institutions. In this study, attitude is defined as a person's favorable or unfavorable disposition towards something, somebody, or situation.

The content of the advertisement is managed by the industry code of conduct called the Alcohol Beverages Advertising Code (ABAC) and may be breached (Alcohol Advertising: The Effectiveness of Current Regulatory Codes in Addressing Community<sup>24,25,15,26,27,28</sup>). Public health expert opinion and findings from the public indicate that alcohol advertisements breaching advertising codes are published frequently in the youth-friendly media in Australia and U S<sup>29,30,31</sup>. Sub-Saharan African (SSA) countries require vital marketing restrictions particularly where alcohol companies have targeted communities with low rates of alcohol use and countries with non-existent legislation or lack enforcement of alcohol marketing legislation<sup>32,33,34</sup>. In Nigeria, the harmful use of alcohol lacks an independent, comprehensive policy regulation and the government does not directly regulate the advertising industry<sup>35</sup>.

The 'Advertising Practitioners Council of Nigeria' (APCON) is the agency responsible for registering practitioners,



scrutinizing advertising materials and oversees all advertisement in the country<sup>36</sup>. However, the content of the APCON code of practice is usually not obeyed by the alcoholic beverage industries, and there is little or no strategic enforcement in place<sup>37</sup>. Globally, the systems of regulation comprise that advertisement should not be appealing to children or adolescents (<18 or <21 years of age) although it depends on what is obtainable in the context<sup>38</sup>. In addition, it should not encourage excessive use, associate alcohol with mood enhancement or be used to depict the success of any kind<sup>38</sup>. In many parts of the world, governments have tried to protect the youths from frequent exposure to alcohol advertisement through various legal frameworks<sup>19</sup>. Nevertheless, young people are often unduly exposed to significant alcohol marketing targeting youth. Alcohol-related problems have drawn great scientific attention in the last few decades with tremendous progress made into the understanding of the vital aspect of prevention and treatment<sup>19</sup>.

Secondary school students refer to in-school adolescents who are currently enrolled in school education in Nigeria. According to WHO<sup>18</sup>, secondary school students are at the adolescence period. Adolescents refer to individuals between the ages of 10 to 19 years, and it is often characterized by a period of discoveries, sexual experimentation, and development of autonomy that create the desire to be an adult and to have the same right<sup>39</sup>. Previous study indicated that the goal of being a secondary school student is to be prepared for useful living within the society, and continued higher education<sup>37</sup>. It, therefore, becomes necessary to investigate the knowledge, attitude and exposure to alcohol adverts by secondary school students in Mubi, Adamawa State. The influence of socio-demographic variables of the in-school adolescents is very crucial in this study.

## Methods

### Study Design and Setting

A descriptive cross-sectional study was designed among secondary school students in Mubi, Adamawa State to assess their knowledge, attitude, and exposure to alcohol advertising. According to Basavanikappa (2010), this design collects data about various variables from the sample at one point in time to uncover relationships existing among those variables. This study was conducted in four selected secondary schools across Mubi Adamawa State. Mubi is one of the major commercial cities in Adamawa state. Mubi is one of the major commercial cities in Adamawa state of Nigeria and has a population estimate of about 800,000 people based on the 2006 National census. The secondary school students are originally inhabitants of Fali and Gude ethnic population but has grown more heterogeneous with the migration of few others from West African and Central African Republic nationals. There are about 66 secondary schools, both public and private secondary schools distributed across Mubi North and South Local Government Areas. The areas just below the Mandara Mountains record the highest rains. Rainfall intensity is high with rainy days making up to 87 % of the days with more than 20 mm of rainfall.

### Participants

The study participants comprised of secondary school students who are less than 18 years of age selected from four public and private schools in Mubi, Adamawa State. The population comprised of 2,661 students from the selected public and private secondary schools.



## Sampling procedures and sample size determination

A sample size of 250 secondary school students was used for the study. The sample size was determined using Cohen, Manion, and Morrison's (2011) randomized sample size estimates, which stipulated that when the population size is 2,500 or above at a 95-confidence level (5% interval), the sample size should be at the minimum, of 233. To achieve the purpose of this study, a multistage sampling technique was employed which included simple random, proportionate, and purposeful methods were used. The simple random sampling was used to select four (4) schools (senior and Junior Public and private secondary schools) from Mubi. Proportionate sampling was used in each of the four (4) selected schools to select the total number of respondents based on their population and to select the appropriate respondents separately for each school using the following procedures. The names of all schools in Mubi were written and squeezed on pieces of paper and placed inside a black nylon bag. Four individuals were allocated to select a piece of paper from the black nylon bag representing the schools using the deep-hat process. This was achieved before deciding on the four (4) schools for research. Because schools differ in population, proportionate sampling was used to select the total needed respondents from each of the selected local government areas. All 250 copies of the questionnaire were distributed proportionately based on the total population of the schools.

## Data Collection

The instrument for data collection was researcher-designed questionnaire tagged 'Knowledge, Attitude and Exposure to Alcohol Adverts by Secondary School Students Questionnaire'. The

questionnaire consisted of four sections (A - D). Section A elicited information on socio-demographic characteristics of the respondents while section B consisted of information on the extent of knowledge of secondary school students towards alcohol adverts. Section C elicited information on the attitudes of secondary school students towards alcohol adverts; and section D elicited on the level of exposure of secondary school students to alcohol adverts. The instrument consisted of 25 items which used dichotomous and polychotomous questions of Yes or No and Strongly Agree, Agreed, Disagreed or Strongly Disagreed. The respondents were requested to place a tick [✓] as it applied to them in sections A, B, C and D. The questionnaire items were organized based on the aim and objectives of the study.

## Data Analysis

The returned copies of the completed questionnaire were properly cross-checked for completeness of responses. The information was coded and analyzed using International Business Machine Statistical Package for Social Sciences-IBM-SPSS (version 25 statistics for windows). The data were analyzed using frequencies and percentages as well as descriptive statistics.

## Ethical Considerations and Permission

An introductory letter was sent to Mubi post primary schools zonal office, attaching both an introductory and ethical approval letter seeking their permission to conduct the study. The same was repeated for the four different schools that were selected by purposively visiting the school principal, and all of them granted express permission. The informed consent form was given to the school heads to sign on behalf of the students that are not up to the age required to individually assent. Also, there was no adequate time to reach their



parents individually. The subjects' wishes to withdraw from the study to do voluntary participation was also so, but none did. emphasized to allow any student who

## RESULTS

**Table 1: Respondents Socio-demographic Characteristics**

Table 1 presents the demographic characteristics of the respondents that participated in this study. More than half of the participants (62.8%) are within the age group of 10-15 years, while (37.2%) are between 16-18 years. For the gender, (66.9%) are male, while only (31.8%) are female. Over half of the participants (58.2%) are Christians, (41.8) are Islam faithful. Regarding their present class in school, (69%) are in JSS while (31%) are in SS classes respectively.

S/N	Variable	Frequency (N =239)	Percentage (%)
<b>1.</b>	<b>Age</b>		
	10 – 15	150	62.8
	16 – 18	89	37.2
<b>2.</b>	<b>Gender</b>		
	Male	160	66.9
	Female	76	31.8
<b>3.</b>	<b>Religion</b>		
	Islam	100	41.8
	Christianity	139	58.2
<b>4.</b>	<b>Class</b>		
	JSS	165	69
	SS	74	31

Based on the analysis of data, the respondents between the age group of 10-15 years (62.8%), for the gender, (66.9%) are male, the highest respondents are those practicing Christianity (58.2%) and JSS respondents are highest (69%) (Table 1).

**Table 2: The knowledge of the health risks associated with alcohol use among the respondents.**

Table 2 presents the knowledge of the health risks associated with alcohol use among the respondents. 130 (54.5%) were aware that alcohol is harmful to human health, whereas 80 (33.5%) respondents were unaware, and 29 (12%) had no idea. 100 (41.8%) respondents said that it is safe to drive a car or motor bike after taking alcohol, whereas, 101 (42.3%) respondents said it is unsafe and 38 (15.9%) respondents had no idea. 88 (36.8%) respondents were aware of recommended legal age for alcohol use in Nigeria, whereas, 112 (46.9%) respondents said not aware and 39 (14.3%) respondents had no idea. 100 (41.8%) respondents said they were taught in class about the problems associated with alcohol, whereas 101 (42.3%) respondents said they were not taught and 36 (15.9%) respondents had no idea.

S/N	Variable	Frequency (N = 239)	Percentage (%)
<b>1.</b>	Are you aware that alcohol is		



	harmful to human health?		
	Yes	130	54.5
	No	80	33.5
	No Idea	29	12
2.	It is safe to drive a car or motor bike after taking alcohol		
	Yes	100	41.8
	No	101	42.3
	No Idea	38	15.9
3.	Are you aware of any recommended legal age for alcohol use in Nigeria?		
	Yes	88	36.8
	No	112	46.9
	No Idea	39	14.3
4.	Were you taught in class about the problems associated with alcohol?		
	Yes	100	41.8
	No	101	42.3
	No Idea	38	15.9

Based on the data analysis on the knowledge of the health risks associated with alcohol use among the respondents, respondents are aware that alcohol is harmful to human health (54.5%), and they were not taught in class about the problems associated with alcohol (42.3%) (Table 2).

**Table 3: Attitude towards Alcohol Consumption**

In Table 3, above indicated that 20 (8.4%) of the students strongly agreed that only people who live immoral lives drink alcohol 75 (31.4%) agreed, 70 (29.2%) disagreed, while 74 (31%) strongly disagreed. About whether those who take alcohol should be isolated for the safety of others, 38 (15.9%) strongly agreed, 24 (10%) agreed, 78 (32.6%) disagreed while 99 (41.4%) strongly disagreed. On their opinion as to whether those who take alcohol should be punished severely; 31 (13%) strongly agreed, 82 (34.3) agreed, 51 (21.3%) disagreed, while 75 (31.4%) strongly disagreed. On whether alcohol does not affect young people 10 (24.4%) strongly agreed, 29 (12.1%) agreed, 108 (45.2%) disagreed, and 92 (38.5%) strongly disagreed. Assessing their opinion on whether people are afraid of alcohol advertisements, 11 (4.6%) strongly agreed, 5 (2.1%) agreed, 87 (36.4%) disagreed, while 136 (56.9%) strongly disagreed that people are afraid of alcohol advertisements. The finding also revealed that 9 (3.8%) strongly agreed that people who take alcohol should be avoided at all costs, 16 (6.7%) agreed with the statement, 77 (32.2%) disagreed, while 137 (57.3%) strongly disagreed. On whether the advertisement is for uneducated people or not, 20 (8.4%) strongly agree, 75 (31.4%) agree, 70 (29.3%) disagree, and 74 (31%) Strongly disagree.

S/N	Items	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	Only people who live immoral lives drink	20 (8.4%)	75 (31.4%)	70 (29.3%)	74 (31%)





2.	Persons who drink alcohol should be isolated for safety	38 (15.9%)	24 (10%)	78 (32.6%)	99 (41.4%)
3.	Persons who take alcohol should be punished severely	31 (13.0%)	82 (34.3%)	51 (21.3%)	75 (31.4%)
4.	Alcohol do not affect young people	10 (4.4%)	29 (12.1%)	108 (45.2%)	92 (38.5%)
5.	People are so afraid of alcohol advertisement	11 (4.6%)	5 (2.1%)	87 (36.4%)	136 (56.9%)
6.	People who take alcohol should be avoided at all costs.	9 (3.8%)	16 (6.7%)	77 (32.2%)	137 (57.3%)
7.	Alcohol advertisements are for uneducated people	20 (8.4%)	75 (31.4%)	70 (29.3%)	74 (31%)

Based on the data analysis on the attitude towards alcohol consumption, respondents strongly disagreed with the statement that persons who drink alcohol should be isolated for safety (41.4%) also disagreed to the statement that alcohol do not affect young people (45.2%) (Table 3).

#### Table 4: Alcohol Advertising Exposure

Table 4 shows the extent of alcohol advertising exposure of the students who participated in the survey. Most of the participants 200 (83.7%) have seen alcohol advertised while 39 (16.3%) have never seen it. Only 39 (16.3%) have promotional items but the majority 200 (83.7%) do not have such personal belongings. About 57 (23.8%) know the common advertising slogan 183 (76.6%) lack the knowledge. Furthermore, over half 120 (50.2%) have observed drinking responsibly succeeding alcohol advertising messages however, 119 (49%) have not observed. Regarding their knowledge of what drinking responsibly implies; 119 (49%) find no meaning in the phrase, and 120 (50.2%) are aware that it means, do not get drunk. 183 (76.6%) affirmed the fact that the advertisement could influence the choice of a particular brand while 57 (23.8%) had a contrary opinion. Furthermore, about 200 (83.7%) of these students agreed that the advertising message is easy to remember while only 39 (16.3%) did not agree that the advertising message is easy to remember. Most of the participants 183 (76.6%) affirmed that the people used to advertise alcohol are seen as role models while 57 (23.8%) hold a different opinion. Over half 140 (58.6%) of the students surveyed agreed that the advert message could influence people to start consuming alcohol while 99 (41.1%) believe that may not have such an impact. A good number of the participants 182 (76.2%) are of the position that drinking could help an individual to overcome bad feelings while only about 57 (23.8%) do not agree with that assertion. Equally, 200 (83.7%) of the students hold the position that alcohol is used for fun, relaxation, and for overcoming life challenges while a handful 39 (15.5%) hold a contrary opinion.

S/N	Variable	Frequency (N = 239)	Percentage (%)
1.	Ever seen alcohol advertised.		
	Yes	200	83.7
	No	39	16.3
2.	Ownership of promotional item		
	Yes	39	16.3
	No	200	83.7
3.	Awareness of alcohol advertisement slogan		



	Yes	57	23.8
	No	183	76.6
<b>4.</b>	Ever seen/heard “drink responsibly”		
	Yes	120	50.2
	No	119	49
<b>5.</b>	Choice of brand could be because of advertisement seen		
	Yes	183	76.6
	No	57	23.8
<b>6.</b>	Alcohol advertising message is easy to remember.		
	Yes	39	16.3
	No	200	83.7
<b>7.</b>	Most of the people shown in alcohol adverts are role models		
	Yes	57	23.8
	No	183	76.6
<b>8.</b>	Alcohol advertising messages may influence people to start drinking		
	Yes	140	58.6
	No	99	41.4
<b>9.</b>	Drinking alcohol helps to overcome bad feelings		
	Yes	182	76.2
	No	57	23.8
<b>10.</b>	Alcohol is used for fun, relaxation and to overcome life challenges		
	Yes	200	83.7
	No	39	15.5

Based on the data analysis on the alcohol advertising exposure, the respondents claimed that, they have ever seen alcohol advertised (83.7%) and they are not aware of alcohol advertisement slogan (76.6%) (Table 4).

## DISCUSSION

This chapter discusses the analyzed data presented in the result section and the overall conclusions of the study. The majority of the participants are within the age group of 10 - 15 years (62.8%). This could be compared with a recent study which also had a similar age group dominating the respondents<sup>40</sup>. Having younger adolescents in this study could be a result of the fact that the study location is a relatively urban area where children are likely to be enrolled in school early. This result is consistent with other results and therefore not surprising.

This study reveals that over half of the students have adequate knowledge of alcohol and the consequences of excessive consumption (54.5%). This outcome corroborates with previous research<sup>41</sup>, which revealed that children between the ages of 5 and 12 were aware of the potential damages of alcohol, and considered it an adult product<sup>42</sup>. Another recent study also reported similar findings, although, significant differences in age and gender have also been identified<sup>43</sup>. Equally, Jones and colleagues in a systematic review study of young people’s alcohol-related knowledge concluded that from a very tender age, children can identify alcohol and have some knowledge



of its effects<sup>41</sup>. In contrast, other studies earlier reported overall poor knowledge of younger adults regarding the relationship between alcohol and alcohol-related health problems<sup>44</sup>. The lack of consistency in awareness of alcohol and its associated risks may be due to the disparities in sociodemographic characteristics where this study was conducted. In this era of a rising prevalence of Non-Communicable Diseases (NCDs), alcohol is recognized as one of the four major NCD risk factors by WHO, which is outlined as a point for mitigation following the 2011 United Nations meeting<sup>5</sup>. This result is consistent with other results and therefore not surprising.

A significant number of the participants (60.3%) indicated a negative attitude towards alcohol consumption. This finding can be compared with a study<sup>41</sup> conducted to ascertain the attitude of adolescents towards the smell of alcoholic beverages which found that 77% do not like the smell of beer, while 81% expressed dislike for that of whiskey. On the contrary, a study<sup>45</sup> found 70% and 87%, respectively of adolescents oppose increasing the legal age for buying alcoholic beverages to 21 or 25 years to enable young people to have access to alcohol early enough. This result is inconsistent with other results and therefore surprising. The inconsistency may be as a result of differences in the area of the study.

The current study revealed that, 34.68% of the students have a positive attitude towards alcohol advertising, whereas 65.32% of student's attitude is on the negative side. This is in line with a study<sup>41</sup> which found favorable attitudes toward alcohol advertising with role models, particularly appealing to children and adolescents. Considering that a good proportion of the participants have favorable attitudes toward alcohol marketing messages; this suggests that

there is a likelihood of progression in alcohol usage. This study found that 72.5 % of the respondents have seen alcohol advertised. This is in line with the findings of the only qualitative study done in Nigeria<sup>19</sup> in which the student verbally attested that they frequently see alcohol advertising messages. Also, in Australia,<sup>46</sup> 94.2 % of the population of college students indicated that they have been exposed to alcohol advertising messages in at least six media channels. One interesting finding of this study is that half of this population 50.2% indicated having observed "Drink responsibly" accompanying advertising messages. This result is consistent with other results and therefore not surprising.

## Conclusion

This study was carried out to assess the knowledge, attitude, and exposure to alcohol adverts by secondary school students in Mubi, Adamawa State. In the overall, the students are aware of some of the negative effects of excessive consumption of alcohol and have been exposed to alcohol advertising around their locality. In the light of limited literature available in Nigeria on alcohol advertising and exposure among the general public, this effort unveils the need for more exhaustive research into alcohol marketing and its possible impact on general use. Based on the findings, the following recommendations are made:

- (i) Government at all levels and other regulatory agencies should actively regulate the marketing of alcoholic beverages and avoid unnecessary exposure of these young adults to alcohol marketing which sometimes targets them.



- (ii) Parents/families should be continuously re-oriented through enlightenment campaigns on their role in the character development of the children and the need to avoid unduly exposure of alcohol consumption to the younger ones by their lifestyle.

makes it much easier for the students to be contacted at once with good coordination. This study employed quantitative data (questionnaire only) if the researcher had used quantitative and qualitative data (questionnaire & interview), more information would have been obtained, but because only quantitative data was employed, the researcher could not get an in-depth information to explain reasons for the findings of quantitative data.

### Strength and Limitations of Study

The study utilized in-school adolescent, leaving the out-school categories, this

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## MANAGEMENT SKILLS, JOB SATISFACTION AND SELF-EFFICACY AS PREDICTORS OF JOB PERFORMANCE AMONG HEALTH WORKERS IN SELECTED HOSPITALS IN SOUTH WESTERN, NIGERIA.

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### ABSTRACT

**Background:** This study investigated the level of Job Performance, level of Management Skills, the level of Job, level of Self-Efficacy, relative contributions of management skills, job satisfaction and self-efficacy to the job performance among Health Workers in Selected Hospitals in South Western, Nigeria.

**Method:** The research design that was adopted for the study is Ex-Post Facto research design. The research population consisted of the population for the study consist of all Health Workers in South Western, Nigeria totaling 6,960. The sample for the study consist of all Health Workers in South Western, Nigeria drawn from sampled six states in the Zone. The sampling techniques is a multi-stage sampling techniques. The population of the study is made up of 750 Health Workers in South Western, Nigeria in the sampled hospital. Data was collected with the use of researcher's designed structured questionnaire validated by three experts and tested for reliability with the use of Pearson Product Moment Correlation. A reliability coefficient of  $r = 0.94$  was obtained. The seven postulated null hypotheses were tested using inferential statistics of one sample t-test at 0.05 alpha level of significance.

**Result:** Job Performance has significant influence Health Workers work productivity in Selected Hospitals in South Western, Nigeria. Recommendations included addition of more fringe benefits to the staff inform of monthly bonus, training and good work environment and timely payment of salaries and allowances, overnment availing chances for managerial skill development and improvement through proficiency organized programmes to the health workers, hospital management improvement of communication between the management and the health workers, hospital management improvement of job security by being fair in their management practices and also looking into ways of improving remuneration of health workers in order to stem upward mobility.





## INTRODUCTION

Most countries especially less developed ones have been found to have less than 50% of the required staff available to provide health care in most health institutions, and in most, health care services are provided by non-qualified staff<sup>1,2</sup>. Health Workers are leaving their workplaces because of difficult working conditions. This portends grave danger to the poor who want to access health care, this scenario is no different in Nigeria as many health workers are leaving for greener pastures. Zhang<sup>3</sup> opined that Job satisfaction is a good way of measuring the health care providers wellbeing. It is also a pointer to the likelihood of disengagement from work by the health care provider. Management skills in the healthcare setting are composed of sets of competencies essential for healthcare professionals who effectively and efficiently manage a variety of medical, nursing, or public health resources to attain goals that ideally align with improving the overall health of the population and healthcare system<sup>4</sup>.

Zayum, Aule, & Hangeior<sup>5</sup> submitted that the necessary skills of healthcare managers involve planning, organizing, implementing, monitoring, and evaluation skills. Planning refers to the preparation of the steps and protocols needed to achieve an ultimate end goal and the proper allocation of anticipated resources (including human resources) to the objectives and goals of the healthcare organization. Al-Eisa, Furayyan & Alhemoud<sup>6</sup> observed that as a healthcare manager, one must know how to harmonize workflow within all concerned staff, ensuring that the individual and overall plans get implemented effectively. The leadership practices essential in organizing and implementing (management) skills include aligning and

mobilizing the staff. While management skills are focused on the use of organizational resources as mentioned, the goal of leadership skills centers on the mobilization of the members of the organization<sup>4</sup>. Tai<sup>7</sup> noted that monitoring and evaluating skills must be part of the practice of healthcare managers on whatever type of healthcare organization.

Self-efficacy refers to one's personal assessment of one's ability to organize and execute actions in specific situations<sup>8</sup>. It is the perceived ability based on performance<sup>9</sup>. Individuals with high self-efficacy believe that they can perform a particular task well. In contrast, individuals with low self-efficacy appear to question whether they can perform a particular task<sup>10</sup>. The assumption that these are beliefs about one's perceived abilities is common to self-efficacy and other expectancy beliefs; they differ in that self-efficacy is characterized by the individual's perceived capabilities to perform assigned types of task and achieve specific outcomes<sup>11</sup>. As Maddux<sup>12</sup> pointed out, self-efficacy is not what you want, but what you believe you can do under certain circumstances. This conviction plays a central role in psychological adjustment, mental and physical health, and competent and self-directed behavior change strategies. Self-efficacy is more specific and clearly delineated than self-confidence or self-esteem; it is generally better developed than either of these<sup>13</sup>. Self-efficacy is often task-specific, but it can also be more general. People have general self-efficacy when they believe they can succeed in range of situations. People with greater self-efficacy generally, have better self-evaluation<sup>14</sup>. In addition to task-specific and generalized self-efficacy, Lee<sup>15</sup> also mentioned the mid-ranged self-efficacy as an area between task-specific and generalized self-efficacy, such as academic or political self-efficacy.



Working environment such as absenteeism, physical and social environment, learning opportunity, health and safe environment, communication, supervision, staff relation, hospital location, and family supports affect the job performances of health workers<sup>16</sup>. The current cost burden of unhealthy and unsafe workplaces for organizations and society includes reduced worker commitment and job satisfaction, absenteeism and lost productivity. Fotaki<sup>17</sup> noted that working condition such as commitment, workload, supervision, management and others also affect job performances of health workers in health institution. Job performances have positively correlated with hospital staff commitment. Other studies indicated that an increase in the workload resulted in increased absenteeism and a decrease in quality of care. Job performance is found to be affected with satisfaction with several aspects of work conditions, including working hours, physical surroundings and access to supplies and equipment as a significant predictor of job performance<sup>18</sup>. Job satisfaction of employee is the fulfilment, gratification, and enjoyment that come from work. It is not just the money or the fringe benefits, but the feelings employees receive from the work itself<sup>19</sup>. The most used research definition of job satisfaction is by Locke<sup>20</sup> who defined it as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences. Motivation can be seen as an inner force that drives individuals to attain personal and organization goals. Motivating factors are those aspects of the job that make people want to perform, and provide people with satisfaction, for example, achievement in work, recognition, and promotion opportunities. Motivating factors such as achievement, recognition, rewards, the work itself, responsibility, advancement and growth or promotion and hygiene factors such as supervision,

working conditions, interpersonal relations, pay and security, organization policy and administration affect job performances of health workers in health institution<sup>21</sup>. The purpose of this study is to assess Management Skills, Job Satisfaction and Self-Efficacy as Predictors of Job Performance Among Health Workers in Selected Hospitals in South Western, Nigeria.

## METHODS

**Research Design:** The research design that was adopted for the study is Ex-Post Facto research design; which is non-experimental. The researcher did not manipulate the independent variables Management Skills, Job Satisfaction and Self-Efficacy as these already existed with the respondents prior to the research.

**Population of the study:** The population for the study consist of all Health Workers in South Western, Nigeria. These include Ekiti State University Teaching Hospital. EKSUTH (population of 1,221), Obafemi Awolowo University Teaching Hospital, Ile Ife (population of 2,985) and University College Hospital, Ibadan (population of 2, 754). This gave a total of 6,960 population

**Sample and Sampling Techniques:** The sample for the study consist of all Health Workers in South Western, Nigeria drawn from sampled six. The sampling techniques is a multi-stage sampling techniques. The sample size 750, was determined according to Research Advisor (2006), which states that if a population is 1,000,000, then, the minimum required sampled size could be 384 at 5% margin of error and 95% confidence interval. The researcher therefore increased the sample size to 800 to tackle the effect of attrition and to increase the tendency for generalization of research findings. Stage one: Simple random sampling procedure



will be used to select the three states from the six state in the geo-political zones (South West). Through fish bowl method, this was done by using piece of paper with assign number for each state in the geopolitical zones. The states were folded and thoroughly mixed in a small container so that all state in the geopolitical zones has equal chances of being selected. Stage two: Purposive sampling technique will be used to select the Hospital within each state in the selected state based on capacity for training, research and high number of staff base. Stage three: Voluntary sampling technique will be used to select seven hundred health workers in selected hospitals through office to office visit with the participants at the various hospital.

**Instrument for Data collection:** Close ended questionnaire was developed by the researcher to obtain information from the respondents. The researcher adopted questionnaire such that respondents will be free and enjoy sense of privacy with the information they give as the questionnaire did not reflect the name of any respondent. The choice of the instrument is also based on the fact that, it permits wider coverage and also allows respondents enough time to think about the questions and give their response. The questionnaire comprises of forty-nine (49) items the items was designed, eleven (11) on bio-data, four (4) items and Section A and B in modified four (4) point Likert scale of rating as follows: Strongly agree (SA), 4 points; Agree (A), 3 points; Disagree (D), 2; points, Strongly Disagree (SD). Any response that has a mean aggregate of 2.5 and above was accepted as positive and any response that has a mean score of less than 2.5 negative or not accepted.

**Validity of Instrument:** In order to establish the face and content validity of the instrument, the researcher submitted copies of the prepared questionnaire to his supervisors for necessary corrections, after

effecting all the corrections raised by the supervisors, clean copies were produced and given to three (3) experts three in the Department of Human Resource Management Science for further corrections. All corrections and suggestions made by the experts were effected and the final copy produced, pilot tested and data collected.

**Pilot Testing:** Pilot testing was carried out in Ondo State: University of Medical Science Teaching Hospital, Ondo City; to test the reliability of the instruments using simple random sampling procedure. The State, hospital was homogeneous to sample respondents. A total of 100 respondents was purposively selected. The corrected copies of the questionnaire were administered to the respondents at the teaching hospital until the required number of sampled size is obtained. Copies of the questionnaire were retrieved on the spot and processed for reliability through a split half method by dividing the copies of questionnaire into two and the two halves was correlated to determine the level of reliability of the instrument using cronbach alpha to ascertain the reliability of the instrument.

**Reliability of the Instrument:** The result were analyzed item by item and overall; using cronbach alpha coefficient which showed cronbach alpha of the overall analysis of 0.90 which indicated that the instrument is reliable to assess the Management Skills, Job Satisfaction and Self-Efficacy as Predictors of Job Performance Among Health Workers in Selected Hospitals in South Western, Nigeria as reported by Kerlinger and Lee (2002). Any instrument that is 0.5 and above is reliable.

**Procedure for Data Collection:** Data collection was done through office to office visitation within the selected hospitals using a close ended questionnaire



developed by the researcher. Voluntary sampling procedure was used to select respondents at the various hospitals to fill the questionnaires which were retrieved on the spot to avoid misplacement. The trained research assistants followed up in the event on the spot retrieving was not feasible. It took 6 weeks to collect data from all the respondents in the various hospitals where the study were conducted.

**Ethical Considerations:** The researcher collected a letter of Introduction from the department of Human Resource Management, in all hospitals the study was carried out. In addition, verbal consent were gotten from respondents who participated in the study.

**Data Analysis:** The questionnaire was sorted and coded on excel sheet after collection. With the use of Statistical Package for Social Sciences (SPSS) version 26 the following statistical tools was used; Descriptive statistics of frequency count and Percentage was used to describe the demographic characteristics of the respondents, Descriptive statistics of means and standard deviation was used to answer the research questions on the Management Skills, Job Satisfaction and Self-Efficacy as Predictors of Job Performance Among Health Workers in Selected Hospitals in South Western, Nigeria. Hence mean score of response was considered positive if it is 2.5 and above and mean score of any response less than 2.5 regarded as negative. Inferential statistics of one sample t-test will be used to test the stated null hypotheses on Management Skills, Job Satisfaction and Self-Efficacy as Predictors of Job Performance Among Health Workers in Selected Hospitals in South Western, Nigeria.

## RESULTS

Of the seven hundred and fifty (750) copies of the questionnaire administered; seven hundred and twenty nine (729) were valid and used for the analysis. It was revealed that the demographic characteristics of the respondents, were between the ages 31 – 43 Years 328 (45%) while 615 (84.1.1%) of the respondents are married, 630 (86.4%) of the respondents are Christians. The table also reveals that majority of the respondent are Yoruba 414 (56.8%).

### Major Findings include the following:

Job Performance has significant influence on Health Workers work productivity in Selected Hospitals in South Western, Nigeria. From the above result of analysis presented, it shows that the probability value 0.001 is less than 0.05 level of significance. The t-value (7.862) is greater than the t-critical of 1.972 at degree of freedom 728 using two- tailed significant level. The null hypothesis which states Job Performance will not significantly influence Health Workers work productivity in Selected Hospitals in South Western, Nigeria.” is therefore rejected. Based on this finding, it was discovered

Management Skills is a Predictor of Job Performance among Health Workers in Selected Hospitals in South Western, Nigeria. probability value 0.001 is less than 0.05 level of significance. The t-value (8.124) is greater than the t-critical of 1.972 at degree of freedom 728 using two-tailed significant level. The null hypothesis which states that “Management Skills will not be a Predictor of Job Performance among Health Workers in Selected Hospitals in South Western, Nigeria” is therefore rejected.

Job Satisfaction will be a Predictor of Job Performance among Health Workers in



Selected Hospitals in South Western, Nigeria. it shows that the probability value 0.000 is less than 0.05 level of significance. The t-value (7.821) is greater than the t-critical of 1.972 at degree of freedom 728 using two- tailed significant level. The null hypothesis which states that “Job Satisfaction will not be a Predictor of Job Performance among Health Workers in Selected Hospitals in South Western, Nigeria” is therefore rejected.

Self-Efficacy will not be a Predictor of Job Performance among Health Workers in Selected Hospitals in South Western, Nigeria. probability value 0.000 is less than 0.05 level of significance. The t-value (8.412) is greater than the t-critical of 1.972 at degree of freedom 728 using two-tailed significant level. The null hypothesis which states that “Self-Efficacy will not be a Predictor of Job Performance among Health Workers in Selected Hospitals in South Western, Nigeria.” is therefore rejected. With this finding, it shows that Self-Efficacy is a Predictor of Job Performance among Health Workers in Selected Hospitals in South Western, Nigeria.

Management skills, job satisfaction and self-efficacy will contribute to job performance among Health Workers in Selected Hospitals in South Western, Nigeria. it shows that the probability value 0.001 is less than 0.05 level of significance. The t-value (8.541) is greater than the t-critical of 1.972 at degree of freedom 728 using two- tailed significant level. The null hypothesis which states that “Management skills, job satisfaction and self-efficacy will not contribute to job performance among Health Workers in Selected Hospitals in South Western, Nigeria.” is therefore rejected.

## Discussions

The outcome of this study revealed that Job Performance has significant influence on Health Workers work productivity in Selected Hospitals in South Western, Nigeria. This corroborates the findings of Fotaki<sup>17</sup> noted that working condition such as commitment, workload, supervision, management and others also affect job performances of health workers in health institution. Job performances have positively correlated with hospital staff commitment<sup>22</sup>. Other studies indicated that an increase in the workload resulted in increased absenteeism and a decrease in quality of care<sup>23</sup>. Job performance is found to be affected with satisfaction with several aspects of work conditions, including working hours, physical surroundings and access to supplies and equipment as a significant predictor of job performance<sup>24</sup>.

This study also revealed Management Skills is a Predictor of Job Performance among Health Workers in Selected Hospitals in South Western, Nigeria. This is in line with the results of the study by Ghofran, Dadkhah, Azizollah<sup>25</sup> indicate a significant relationship between managers' skills (technical, perceptual, and human) and job performance and creativity of employees of Zahedan University of Medical Sciences. In their research, Sarabi Asiabar and Saleh Ardestani<sup>26</sup> stated that factors influencing hospital managers' leadership can be categorized as people management skills, self-management skills, nuclear management skills, and health-care delivery skills. Another study found out that improving management skills can further enhance the quality of health services. Azman, Hafizah & Ilyani<sup>27</sup> noted that Education and training needs for healthcare management as basic preconditions for the development and implementation of adequate programs.

This study also revealed Job Satisfaction will be a Predictor of Job Performance



among Health Workers in Selected Hospitals in South Western, Nigeria. This is in line with Faryl and Naqvi<sup>28</sup>. Satisfied employees are happy to help others outside the work environment and to readily defend the organization in which they work<sup>29</sup>. Employees that have good caring relationship with their co-workers engage in helpful behaviours while those with difficult relationships with their co-workers are less likely to help others. Studies have shown that satisfied employees result to satisfied customers (in this study satisfied patients)<sup>30</sup>. Karaferis, Aletras & Niakas<sup>21</sup> found low satisfaction among employees to affect the health of health care providers and affects also quality of care. Employee satisfaction is essential to the provision of high quality health care. Dissatisfied health care providers provide poor quality and inefficient health care that leads to wastages and increase hidden and sometimes overt cost of care<sup>31</sup>.

The study also revealed that Self-Efficacy will not be a Predictor of Job Performance among Health Workers in Selected Hospitals in South Western, Nigeria. This corroborates the findings of DeDonno & Demaree<sup>32</sup> There has been a great deal of evidence which has linked the importance of employee self-efficacy and his performance including the ability to adapt to advanced technologies in the workplace like internet or new software<sup>33</sup>, ability to cope with current changes in career plan<sup>34</sup>, ability to generate new ideas and grow to a managerial level<sup>35</sup>, ability to perform better as a team, ability to acquire more skills<sup>36</sup>. Success in a realm is closely linked to self-efficacy in the realm<sup>37</sup>. Higher self-efficacy in a realm is associated with good outcomes, ranging from greater job satisfaction and performance<sup>38</sup>, to better physical and mental health<sup>37</sup>, to better academic performance<sup>37,39</sup>. For example, students with higher academic self-efficacy show

better academic performance<sup>39</sup>. Priming a high self-efficacy component of a self-schema for a realm might result in outcomes similar to those found for individuals who have characteristically high self-efficacy in a realm. Related to this notion, previous research in other areas indicates that manipulating individuals' perceptions with respect to motivation will have an impact on their performance

The study finally reveals that management skills, job satisfaction and self-efficacy contribute immensely to the job performance among Health Workers in Selected Hospitals in South Western, Nigeria. This further assert the findings of Hanaysha<sup>40</sup> Study done in Jordan on health workers' career commitment has been found that health workers job performance is positively influenced by holistic management, clinical skills, social support, job satisfaction, recognition of achievement, education and professional communication and negatively influenced by old age, understanding and heavy workload, job stress, leadership difficulties and lack of skills needed to perform the job. Level of education is negatively correlated with job performance, indicating that the higher the level of education, the lower job performance of health workers.

## CONCLUSION

Job Performance will significantly influence Health Workers work productivity in Selected Hospitals in South Western, Nigeria. Management Skills will be a Predictor of Job Performance among Health Workers in Selected Hospitals in South Western, Nigeria. Job Satisfaction will be a Predictor of Job Performance among Health Workers in Selected Hospitals in South Western, Nigeria. Self-Efficacy will be a Predictor of Job Performance among Health Workers in



Selected Hospitals in South Western, Nigeria. Management skills, job satisfaction and self-efficacy will contribute to job performance among Health Workers in Selected Hospitals in South Western, Nigeria.

**Recommendations:** Based on the findings of this study, the following recommendations were made; there should be more fringe benefits added to the staff inform of monthly bonus, training and good work environment and timely payment of salaries and allowances. It is also important that the government considers availing chances for managerial skill development and improvement

through proficiency organized programmes to the health workers. The hospital management should improve communication between the management and the health workers. The hospital management should improve job security by being fair in their management practices. The hospital management should look into ways of improving remuneration of health workers in order to stem upward mobility

**Limitations of the study:** Few respondents (21) failed to return the instrument while some requested for gratifications before responding to it.

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## **PRACTICE AND BARRIERS TO STANDARD PRECAUTIONS COMPLIANCE BY HEALTH WORKERS IN SPECIALIST HOSPITAL YOLA, ADAMAWA STATE**

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### **ABSTRACT**

**Background:** Health care workers (HCWs) are at risk of various occupational hazards including exposure to blood borne infections such as HIV and hepatitis B and C virus from sharps injuries and contact with body fluids. Standard precautions are set of measures formulated to prevent transmission of blood borne pathogens when providing health care.

**Method:** A cross sectional survey of 182 eligible respondents from the Specialist Hospital, Yola, participated in the study. This study aims to assess the knowledge of standard precaution and barrier to compliance among health workers of Specialist hospital, Yola, Adamawa State. A convenience sampling technique was adopted for this study and data collected using a self-administered structure questionnaire and analyzed using SPSS version.

**Result:** Of the 182 health workers, findings revealed that 84 (30.5%) are very familiar with the term standard precautions while 98(69.5%) are familiar. 89.4% of the respondents agreed that hands need to be washed before and after any direct contact with the patients while 10.6% disagreed. All respondents agreed that gloves need to be removed after the procedure and after attending to each patient. 81.4% of the respondents agreed that it is necessary to cover mouth and nose when coughing and sneezing while 18.6% disagreed. 89.4% of the respondents agreed that lack of professional experience, knowledge and training in standard precaution can serve as a barrier to compliance with standard precaution.

**Conclusion:** Based on the findings of the study, the following recommendations were made among others: enhancement of training and education of staff: hospital administrators should implement regular and comprehensive training programs for all healthcare workers, resource allocation: hospital Administrators should ensure a consistent and adequate supply of personal protective equipment (PPE) and infection control resources, policy enforcement and monitoring.

**Keywords:** Knowledge, Barrier, Compliance, Standard Precautions



## INTRODUCTION

Standard precautions (SPs) are designed by the Centers for Disease Control and Prevention (CDC) to minimize all pathogens' transmission risks, including blood-borne pathogens in healthcare units<sup>1</sup>. According to Bouchoucha<sup>2</sup>, the CDC expanded the isolation precaution concepts in 1996 to form the SPs. The SPs included and expanded the elements to encompass all body fluids and blood except sweat<sup>3</sup>. The CDC<sup>4</sup> documented SPs elements in 2007, including hand hygiene, personal protective equipment (PPE), cough etiquette or respiratory hygiene, sharp safety, safe injection practice, sterile instruments and devices, and clean and disinfected environmental surfaces<sup>5</sup>. PPE refers to equipment that nurses wear to protect themselves from contact with or exposure to infectious pathogens, such as face masks, gloves, coats, and gowns<sup>6</sup>. It protects nurses from multiple patient interactions, covering the clothing and skin likely to come into contact with saliva, blood, and infectious materials<sup>6</sup>. Another element of SPs is environmental infection prevention and control policies, indicating that ecological surfaces are also part of the strategy. Cleaning eliminates important microorganisms from environmental surfaces and must be followed by disinfection to destroy pathogens<sup>7</sup>.

The exposure of a susceptible host to organisms such as bacteria, fungi, parasites and viruses result in infectious disease conditions. Infectious diseases are among the top 10 leading causes of death in the World<sup>8</sup>. According to the National Center for Health Statistics, the number of visits to physician's offices for infectious diseases was 17.8 million in 2014 with 94,770 people dying from some forms of infectious diseases<sup>8</sup>. Infection prevention and control are essential for creating a safe healthcare environment for patients,

families, and staff because they reduce the likelihood of spreading diseases from one person to another<sup>9</sup>. According to the Centers for Disease Control and Prevention (CDC), an average of 1,383,700 people are residing in hospitals each day<sup>10</sup>. Working with this population therefore necessitates providing a safe environment where they can thrive and improve their quality of life. Research estimates by Burdsall and his colleagues<sup>11</sup>, show 1.6 million to 3.8 million infections annually. The economic burden of hospital acquired infections (HAIs) is enormous. SPs have been regarded as essential in the fight for control and prevention of infection and are considered an effective means of protecting healthcare practitioners, patients and the public<sup>12</sup>. One of the objectives of SP is to prevent and reduce HCAI's<sup>13</sup>.

Health care workers (HCWs) are at risk of acquiring blood and body fluid borne infections such as hepatitis and human immune deficiency virus (HIV) etc. through accidental injuries and direct exposure to body fluids<sup>10</sup>. These body fluids include cerebrospinal fluid (CSF), peritoneal fluid, pleural fluid, pericardial fluid, synovial fluid breast milk, semen and urine. Saliva, vomitus, perspiration, sputum and nasal secretions are less established sources of infection. The risk of injuries at work place is higher in developing countries compared to the developed nations<sup>14</sup>. This is attributable to more prevalent blood borne pathogens in low-income countries especially sub-Saharan African countries. The effect of percutaneous injuries ranges from psychological trauma through chronic diseases to death<sup>15</sup>. The safety of HCWs is therefore a global health concern<sup>16</sup> as it is important that measures are in place for protection. Universal Precautions which later translated to Standard Precautions



was introduced by Centre for Disease Control (CDC).

HCWs are at risk for exposure to pathogens, but among those nurses are the group that is most affected<sup>16</sup>. It has been estimated that > 50% of nurses experience at least one needlestick injury in their careers<sup>17</sup>. Compliance with Standard Precaution has been shown to reduce the risk of exposure to blood and body fluids<sup>6</sup>. The CDC's focus on SPs is to promote health as well as to focus attention on infectious disease prevention and control<sup>10</sup>. Healthcare workers are more closely to adhere to infection control standard precautions when they realize the value of it as they felt motivated to follow the guidance because of fear of infecting themselves or their families, or because they felt responsible for their patients<sup>18</sup>. These infection control standard precautions include hand and respiratory hygiene, the use of appropriate personal protective equipment (PPE) according to a risk assessment, practice safe injection, safe waste disposal management, proper linens, environmental cleaning, and sterilization of patient care-related equipment<sup>19</sup>.

Compliance with Standard Precaution The practice of standard precaution is widely promoted to protect HCWs from exposure to healthcare associated infections<sup>20</sup>. However, some studies showed that compliance with Standard Precaution among nurses is still suboptimal and inconsistent<sup>21,20,22,23,24</sup>. Compliance, defined as the degree to which a person adheres to instructions, is essential to infection control but has been found to be suboptimal among HCWs in the pre-pandemic era<sup>25</sup>.

Many factors are responsible for compliance or non-compliance to the basic principles of universal precautions among health care providers<sup>26</sup>. From the available

literature, the knowledge and practice of standard precautions and barriers to compliance among health workers in specialist hospital Yola, Adamawa State has not been assessed. Therefore, this study is conducted to assess the knowledge and practice of standard precautions and barriers to compliance among health workers in specialist hospital Yola, Adamawa State.

## MATERIAL AND METHODOLOGY

### Design of the Study

Descriptive cross-sectional design was used to assess the practice and barriers to standard precautions compliance by health workers in specialist hospital Yola, Adamawa State

### Participants

The target population for this study is all registered HCWs working in Specialist hospital, Yola, who are about 305 in number. Criteria includes registered HCWs working in Specialist Hospital Yola, having at least one-year service experience and willing to participate in the study.

### Sample and Sampling Methods

A convenience sampling technique was adopted for this study where any HCW in the hospital was chosen as we met them. The sample for this study consisted of 190 HCWs working in specialists hospital Yola, Adamawa State. This was calculated using Yaro Yamane's formula for determining the sample size of any definite population. There are about three hundred and 305 HCWs working in Specialist hospital, Yola. The number of HCWs was gotten from the hospital record.

The sample size was determined using **Taro Yamane's formula.**

$$n = N / 1 + (Ne^2)$$



Where,  $n$  = Sample size

$N$  = Total population (364 HCWs)  $e$  = 0.05  
(constant)

$364/1 + (364 \times 0.0025)$

$364/1 + 0.91$

$364/1.91 = 190$

### Data collection

The respondents were seen at their various units, in the Specialist Hospital Yola. The purpose and procedures of the research study was explained to them in English language. A self-structured questionnaires were administered to obtain data. The questionnaire was grouped into sections A-C for demographic data of the respondents, level of practice of standard precautions among health workers of the respondent's delivery among health workers and the barriers to compliance of standard precautions among health workers, respectively. The questionnaires were numbered to ensure retrieval and completeness. The questionnaires were distributed and retrieved immediately after being filled by the respondents.

### Data Analysis

The returned copies of the completed questionnaire were properly cross-checked for completeness of responses. Data obtained were coded and analysed using SPSS version 20. Descriptive statistics such as frequency counts and percentages were used to answer the research questions and present the results. Data generated for the study were analyzed on item-by-item basis.

### Ethical Consideration

An introductory letter was written and submitted to heads of the various departments in order to facilitate entry into

the hospital for research purposes. Permission was obtained from the facility management to be allowed to conduct the study in the hospital. Informed consent was obtained from respondents and assurance of anonymity and confidentiality and their wishes and rights were respected throughout the period of data collection including the right to withdraw from the study at any time they wish. Respondents were treated with respect and dignity. Their rights and welfare were protected. All the findings of this study were used with a high level of confidentiality.

### Criteria for Inclusion and Exclusion

This study included all health workers in specialist hospital Yola, Adamawa State, who were present in the clinic during the time of this study. All health workers from different health facility were excluded.

### Validity and Reliability of the instrument.

The validity of the instrument was established by giving a drafted copy of the developed questionnaire to other experts in public health. The main task was to critically examine the questionnaire. The criticisms and suggestions made were used to modify the instrument that was used for data collection. In order to determine the reliability of the instrument, the test-retest method was used in this study. Copies of the questionnaire were administered to ten HCWs in selected health centers of Yola South Local Government Area, Adamawa State. Copies of the questionnaire were re-administered to the same HCWs again after two weeks and the results were similar.



## RESULTS

Table 1 shows the demographic data of the respondents. Out of one hundred and eighty-two (182) respondents 38% of the respondents were male while 62% were female. One hundred and eighty-two (182) respondents 38% were within age 21-25 years, 29% were within age 26-30 years, 7% were within age 31-35 years, 11% were within age 36-40, 14% were within age 41 years and above.

**Table 1: Demographic Data of Respondents (N=182)**

S/No.	Items	Responses	Frequency	Percentage (%)
1	sex	Male	70	38
		Female	112	62
		Total	182	100
2	Age	18-25 years	70	38
		26-30 years	52	29
		31-35 years	13	7
		36-40 years	27	11
		41 years and above	20	14
		Total	182	100
3	Tribe	Yoruba	46	26
		Igbo	39	21
		Hausa	97	53
		Others	0	0
		Total	182	100
4	Religion	Christianity	77	42
		Islam	105	58
		Traditional worshippers	0	0
		Total	182	100
5	Educational qualification:	RN	93	51
		BNSC	71	39
		Others	18	10
		Total	182	100
6	Marital status	Single	93	51
		Married	72	40
		Divorced	13	7
		Widow/Widower	4	2
Total	182	100		

Table 2 shows the level of practice of standard precautions among health workers of the respondent's delivery among health workers. Item on hand washing technique after touching a patient is a good practice, 107 (58%) of the respondents strongly agreed, 65(36%) agreed, 10 (6%) undecided, none strongly agreed, and none disagreed. Item on dispose sharps in the safety box after each procedure, 80 (44%) of the respondents strongly agreed, 100 (55%), 2 (1%) undecided, none strongly agreed, and none disagreed. Item on wearing gloves, facemasks, goggles, aprons/gowns is necessary before handling patients. 74 (41%) of the respondents strongly agreed, 107(58%) agreed, 1(1%) undecided, none strongly disagreed, and none disagreed.

**Tables 2: Practice of Standard Precautions Among Health Workers**



S/No.	Items	Respondents	Frequency	Percentage
7	Hand washing technique after touching a patient is a good practice	SA A UD SD D Total	107 65 10 - - 182	58 36 6 - - 100
8	Dispose sharps in the safety box after each procedure	SA A UD SD D Total	80 100 2 - - 182	44 55 1 - - 100
9	Wearing glove, facemasks, goggles, aprons/gowns is necessary before handling patients	SA A UD SD D Total	74 107 1 - - 182	41 58 1 - - 100
10	Do you Wash or decontaminate hands before and after touching patient's surroundings?	SA A UD SD D Total	92 90 - - - 182	51 49 - - - 100

Table 3 shows the barriers to compliance of standard precautions among health workers. Item on compliance during emergency puts patients at risk, 102 (56%) of the respondents strongly agreed, 58 (32%) agreed, 22 (12%) undecided, none strongly disagreed, and none disagreed. About complying with standard precautions interferes with the ability to provide care. 178 (98%) of the respondents strongly agreed, 2 (1%) agreed, 2 (1%) undecided, none strongly disagreed, and none disagreed. Item on unavailability of PPE, 182 (100%) of the respondents strongly agreed, none agreed, none undecided, none strongly disagreed, and none disagreed. Item on practice of standard precautions is time consuming, 178 (98%) of the respondents strongly agreed, 2 (1%) agreed, 2 (1%) undecided, none strongly agreed, and none disagreed.

**Table 3: Barriers to Compliance of Standard Precautions Among Health Workers**

S/No.	Items	Respondents	Frequency	Percentage
11	Compliance during emergency puts patients at risk.	SA A UD SD D Total	102 58 22 - - 182	56 32 12 - - 100
12	Complying with standard precautions interferes with the ability to provide care.	SA A UD SD	178 2 2 -	98 1 1 -



		D	-	-
		Total	182	100
13	There is unavailability of PPE.	SA	182	100
		A	-	-
		UD	-	-
		SD	-	-
		D	-	-
		Total	182	100
14	Protective gear is uncomfortable.	SA	178	98
		A	2	1
		UD	2	1
		SD	-	-
		D	-	-
		Total	182	100
15	Standard precautions is time consuming	SA	182	100
		A	-	-
		UD	-	-
		SD	-	-
		D	-	-
		Total	182	100
16	Unavailability of infection control policies.	SA	182	100
		A	-	-
		UD	-	-
		SD	-	-
		D	-	-
		Total	182	100
17	Lack of professional experience, knowledge and training in standard precautions serves a barrier to compliance with standard precaution.	SA	182	100
		A	-	-
		UD	-	-
		SD	-	-
		D	-	-
		Total	182	100

## Discussion

The study revealed that a significant proportion of health workers in Specialist Hospital Yola had a good practice of standard precautions. They practices the basic principles, such as hand hygiene, the use of personal protective equipment (PPE), and safe injection practices. This is consistent with the findings of previous studies by <sup>27,28</sup>, which have indicated that health workers generally possess a solid knowledge base practices standard precautions. In contrast, poor compliance

with the use of personal protective equipment among low cadre health workers was reported<sup>29</sup>. However, there were variations in the practices among different healthcare professional categories. Nurses consistently demonstrated higher levels of practices compared to other healthcare workers, such as support staff. This difference could be attributed to variations in training, experience, and job responsibilities. It highlights the need for targeted educational interventions to ensure that all healthcare workers, regardless of their





role, have a comprehensive understanding of standard precautions.

Despite the reasonably good practices of standard precautions, the study identified several barriers to compliance among health workers in Specialist Hospital Yola. These barriers include: lack of adequate resources: a common barrier was the shortage of essential resources, such as PPE, in the hospital, this does not only hindered compliance but also raised concerns about the safety of both patients and healthcare workers. Time constraints: the demanding work environment in the hospital often left healthcare workers with limited time for proper adherence to standard precautions. High patient loads, emergency situations, and the pressure to provide quick care contributed to this challenge. Inadequate Training and Education: while the overall knowledge was relatively good, some health workers expressed a need for ongoing education and training. In contrast, the lower levels of compliance among low cadre health professionals may be related to limited knowledge and training in infection control compared with the higher cadre personnel such as doctors and nurses<sup>29</sup>. Continuous updates on best practices, as well as refresher courses, were identified as potential solutions. Perceived low risk: Some health workers, especially those with years of experience, perceived their risk of exposure to infectious diseases as low. This perception could lead to complacency and reduced compliance. Lack of Enforcement: the absence of a strict policy enforcement mechanism within the hospital was cited as a significant barrier. Health workers felt that compliance was not consistently monitored, which reduced the incentive to adhere to standard precautions.

However, some studies found that because of the high work loads of HCWs, particularly in developing countries, and

time limitations, wearing different protective wear and the rigours of hand washing in between handling patients is considered burdensome, interfering with their duties and placing patients at the risk of escalating sickness<sup>30,31</sup>. As a matter of public health policy, health care facilities must ensure that hand hygiene and proper use of gloves must be optimised to protect the patient and HCWs and indirectly minimise treatment costs of cross infections as a result of suboptimal hand hygiene care. Hugonnet, Perneger and Pittet<sup>29</sup> asserted that alcohol-based hand rubs have been shown to improve health care workers' compliance with hand hygiene practices. In some studies, HCWs mentioned that patients are uncomfortable with protective wear<sup>32</sup> and, HCWs indicated that the use of protective wear may cause psychological distress among patients<sup>33</sup>. To encourage the wearing of PPEs, the work environment must be improved especially for developing countries. Suggested improvements are the inclusion of cooling systems such as fans and air conditioners to make wearing of PPEs more comfortable. Patients must be made aware that PPEs also protect them from infection; this may minimise psychological distress. As much as possible, all health workers should be involved in decisions governing SP.

## Conclusion

The research findings provide valuable insights into the current state of practice and barriers to standard precautions compliance in hospital setting. This study has shed light on the practice of standard precautions and the barriers to compliance among health workers in Specialist Hospital Yola, Adamawa State. While health workers generally possess a good practice of standard precautions, there are notable variations among different professional categories. The identified barriers to compliance, including resource



shortages and time constraints, should be addressed to ensure a safer healthcare environment. Promoting a culture of safety and adherence to standard precautions is essential to protect both healthcare workers and patients. This study findings provide a foundation for targeted interventions and policy changes within Specialist Hospital Yola, with the potential to improve compliance and reduce the risk of healthcare-associated infections.

### Recommendations

Based on the findings of the study, the following recommendations were made: hospital administrators should implement regular and comprehensive training programs for all healthcare workers; hospital Administrators should ensure a

consistent and adequate supply of personal protective equipment (PPE) and infection control resources; infection control committee should strengthen the enforcement of hospital policies and regularly monitor compliance; communication/information unit should develop communication materials highlighting the importance of standard precautions and offer regular awareness campaigns.

### Limitation of the study

The researcher encountered some difficulty among the health workers, some of the health workers were reluctant to fill the questionnaire because they claim they do not have time for it or were not interested at all.

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## KNOWLEDGE ABOUT SEXUALLY TRANSMITTED INFECTIONS AND SAFE SEX PRACTICES AMONG STUDENTS OF THE COLLEGE OF HEALTH TECHNOLOGY MUBI, ADAMAWA STATE.

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### ABSTRACT

**Background:** The aim of the study is to determine the Knowledge about sexually transmitted infections and safe sex practices among students of the College of Health Technology Mubi, Adamawa State. Sexually Transmitted Infections (STIs) have been conventionally recognized as a major public and social health problem for several years.

**Method:** The design of the study was a descriptive survey design. The population of the study was 9,307 students. The sample of the study were 384 students, and Taro Yamane formular for finite population was used. A structured questionnaire of 31 items were used to collect data, which were analyzed using means and standard deviation.

**Result:** The findings of the study amongst others are that students have knowledge of the signs and symptoms of sexually transmitted infections but most of them do not have adequate knowledge of other STIs. Also, students have adequate knowledge of the mode of transmission of sexually transmitted diseases.

**Conclusion:** The findings of this study have revealed that students have knowledge of the signs and symptoms of STIs but vast majority of them do not have adequate knowledge of other STIs. The students have adequate knowledge of the mode of transmission of STIs, they have healthy practices towards sex and they are aware of the control and prevention of STIs. The study revealed that female students seek more information from health professionals on STIs while male students seek information from the internet.

### INTRODUCTION

Sexually Transmitted Infections (STIs) have been conventionally recognized as a major public and social health problem for

several years. STIs remain one of the major causes of acute illness and morbidity all over the world. More than one million STIs are acquired daily; over 100 million STIs occur yearly under 25<sup>1</sup>. WHO estimated 374 million new



infections with 1 of 4 STIs: chlamydia (129 million), gonorrhea (82 million), syphilis (7.1 million), and trichomoniasis (156 million). More than 490 million people were estimated to be living with genital herpes in 2016, and an estimated 300 million women have an HPV infection, the primary cause of cervical cancer and anal cancer among men who have sex with men. An estimated 296 million people are living with chronic hepatitis B globally<sup>1</sup>.

Sexually transmitted infections (STIs) constitute an epidemic of tremendous magnitude, with an estimated 27 million persons acquiring a new STI in 2018 at \$16 billion. Reported disease rates underestimate the true burden of infection because the majority of STIs are asymptomatic and underreported<sup>2</sup>. STIs have far-reaching public health consequences on the sexual and reproductive health of individuals, as well as long-term healthcare costs to the community<sup>3</sup>. Due to the dramatic increase in reportable STI rates with resultant reproductive health consequences, an STI National Strategic Plan was developed with actionable goals, objectives, and strategies for prevention that focus on 4 of the STIs with the highest morbidity rates (chlamydia, gonorrhea, syphilis, and human papillomavirus), though most of the components of the plan apply to other STIs (herpes simplex virus, trichomoniasis, *Mycoplasma genitalium*)<sup>4</sup>.

Sexually transmitted infections (STIs) are a significant public health concern among students, particularly those who are sexually active. STIs are infections that are spread through sexual contact, including vaginal, anal, and oral sex<sup>5</sup>. Some common STIs include chlamydia, gonorrhea, syphilis, herpes, human papillomavirus (HPV), and human immunodeficiency virus (HIV)<sup>6</sup>. According to World Health Organization<sup>7</sup>, several studies have been

conducted worldwide regarding knowledge about STIs and reported that 74.7% in India, 92.4% in Nigeria, 89.9% in Brazil, 98% in Tanzania, 88.5% in Jimma, Ethiopia, 79% in Dhaka, Bangladesh, 86.6% in Malaysia, 74% medical and 61.6% non-medical university students in Pakistan, 83.1% in Turkey, 68.3% in Klang Valley, Malaysia, 27% in Udipi Taluk, India, and 70.1% in Northern Cape Province, South Africa of the respondents had good knowledge of STIs. The factors that influence knowledge of STIs are diverse and include age, sex, residence, marital status, academic year, and acquiring information from friends/internet and mass media<sup>8</sup>.

Safe sex practices can significantly reduce the risk of getting an STI. These practices include using condoms consistently and correctly, getting vaccinated against HPV, limiting the number of sexual partners, and getting tested regularly for STIs<sup>6</sup>. Studies have shown that many students have insufficient knowledge about STIs and safe sex practices<sup>9</sup>. For example, some students may not know how to use a condom correctly or may not realize that they need to use a new condom every time they have sex. Additionally, some students may not understand the importance of getting tested for STIs regularly or be too embarrassed to talk to their healthcare provider about their sexual health<sup>10</sup>. This study aims to analyze the knowledge about sexually transmitted infections and safe sex practices among College of Health Technology Mubi students. College of Health Technology Mubi is in Mubi North Local Government Area of Adamawa State under Lokuwa Ward Barama opposite National Television Authority (NTA) Mubi.

## Methods

### Design of the Study



A descriptive survey design was used to investigate and find out the knowledge about sexually transmitted infections and safe sex practices among students at the College of Health Technology Mubi. The design was chosen because it is convenient for capturing the opinions of respondents and information was collected once from the population using representative samples.

### Participants

This study's participants covered the students of College of Health Technology, Mubi. The total population of the study is 9,307, these are students from various departments. The departments are: environmental health, community health, medical laboratory, dental health science, health education and promotion, health information and management, medical sociology, nutrition and dietetics, pharmacy, among others.

### Sample Size Calculation

A sample size of 422 students was used for the study. The sample size of 384 was determined using Taro Yamane's formula for finite population was applied as a guide for statistically obtaining the sample for the study. Whereas, additional 38 students represent the 10% non-response rate. For this study, a stratified random sampling technique was used, therefore each department was considered as a stratum.

### Data Collection

The instrument for data collection was researcher-designed questionnaire tagged 'Knowledge About Sexually Transmitted Infections and Safe sex Practices Among Students Questionnaire'. The questionnaire consisted of five sections (A

- E). Section 'A' elicited information on the level of students' knowledge of the signs and symptoms of STIs while section 'B' consisted of information on the students' knowledge of the mode of transmission of STIs. Section 'C' elicited information on the students' practices towards safe sex. Section 'D' elicited on their knowledge of the control and prevention of STIs, whereas section 'E' determined the influence of gender on students' level of knowledge of STIs. The instrument consisted of 31 items which used polychotomous questions of Strongly Agree, Agreed, Disagreed or Strongly Disagreed. The respondents were requested to place a tick [√] as it applied to them in sections A, B, C, D and E. The questionnaire items were organized based on the aim and objectives of the study.

### Data Analysis

Data for this study was analysed using mean and standard deviation. A four (4) point scale was employed. For the study, items with mean responses of 2.50 and above will be agreed upon, whereas items with mean responses less than 2.50 will be disagreed.

### Ethical Consideration

Permission was obtained from the school management to be allowed to conduct the study in the school. Informed consent was obtained from respondents and assurance of anonymity and confidentiality and their wishes and rights were respected throughout the period of data collection including the right to withdraw from the study at any time they wish. Respondents were treated with respect and dignity. Their rights and welfare were protected. All the findings of this study were used with a high level of confidentiality.

## RESULTS



**Table 1: level of student’s knowledge of the signs and symptoms of STIs**

Table 1 shows that item six was disagreed upon by the respondents with a mean value of 2.13 and corresponding SD value of 4.33, whereas items one, two, three, four, five, and seven were agreed upon with mean values ranging from 2.60 - 3.32 and corresponding SD value of 5.44 – 6.91. This suggests that students know the signs and symptoms of Sexually Transmitted Infections (STIs) at the College of Health Technology Mubi, Adamawa State.

**Table 1: Mean Responses of Level of student’s knowledge of the sign and symptoms of STIs**

S/No	Statement	Departments																Remark	Grand Mean	Grand SD		
		Environmental Health		Community Health		Medical Laboratory		Dental Health Science		Health Education and Promotion		Health Information and Management		Medical Sociology		Pharmacy					Nutrition and Dietetics	
1	Yellow discharge from the vagina or urethra is among the signs and symptoms of Chlamydia	2.67	3.22	3.10	13.91	3.53	9.92	3.14	6.91	3.00	6.82	3.50	2.19	4.00	4.47	3.26	11.63	3.67	3.11	Agreed	3.32	6.91
2	Painful or frequent urination is a sign and symptom of HIV	2.50	1.19	2.27	8.43	2.53	9.06	2.57	3.29	3.00	2.85	1.00	2.69	3.50	4.90	2.61	9.17	3.67	3.11	Agreed	2.63	4.97
3	Fever, Rash, and Night sweats are signs and symptoms of Gonorrhea	2.75	2.57	2.75	11.28	2.83	7.63	3.14	4.64	3.00	6.82	3.50	2.19	4.00	4.47	2.13	5.76	3.33	3.32	Agreed	3.05	5.41
4	Fatigue, poor appetite, stomach pain, nausea, and jaundice are the signs and symptoms of Hepatitis B	3.50	3.34	3.35	14.53	3.35	9.11	3.00	3.71	2.75	4.31	3.50	2.19	3.00	2.29	3.17	11.08	3.67	3.11	Agreed	3.25	5.96
5	Flat warts may be seen on the vulva as sign and symptom of syphilis	3.50	2.19	2.88	14.85	3.06	9.91	2.50	4.48	3.50	3.34	3.50	2.19	3.50	2.19	3.29	11.36	3.00	2.29	Agreed	3.19	5.87
6	Foul-smelling discharge from the vagina is among the signs and symptoms of Typhoid	1.50	2.98	1.81	9.09	2.38	7.94	2.86	3.46	1.80	2.67	1.50	2.08	3.50	2.19	2.28	7.35	1.50	2.08	Disagreed	2.13	4.43
7	Small bumps or blisters around the genitals, anus or mouth are not the signs and symptoms of Genital herpes	2.50	3.38	2.20	9.40	2.56	7.43	2.29	4.72	3.00	3.41	3.00	4.15	3.00	2.19	2.83	11.12	2.00	3.16	Agreed	2.60	5.44
																				Agreed	2.88	5.57

Source: *Field Survey (2023)*

**Table 2: Mean Responses of Mode of Transmission of STIs**

Table 2 shows that item ten, eleven, twelve, and thirteen was disagreed upon by the respondents with mean values ranging from 2.01 – 2.42 and corresponding SD value of 4.28 - 4.87, whereas items eight, and nine were agreed upon with mean values of 3.29 - 3.42 and corresponding SD value of 5.65 – 6.43. This suggests that students have knowledge of the mode of transmission of STIs at the College of Health Technology Mubi, Adamawa State





S/No	Statement	Departments																		Remark	Grand Mean	Grand SD
		Environm ental Health		Communit y Health		Medical Laboratory		Dental Health Science		Health Education and Promotio n		Health Informati on and Managem ent		Medical Sociology		Pharmacy		Nutrition and Dietetics				
		$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$			
8	STIs can be transmitted to the fetus during pregnancy	3.50	4.60	2.84	10.65	3.06	9.73	3.29	4.41	3.00	2.85	4.00	4.47	3.50	2.19	2.79	8.85	3.67	3.11	Agreed	3.29	5.65
9	Infected blood or blood products can be a source of STI transmission	3.75	4.43	3.13	12.48	3.00	7.25	4.00	9.26	2.50	3.38	4.00	4.47	3.50	2.19	3.24	11.30	3.67	3.11	Agreed	3.42	6.43
10	STIs are transmitted through kissing and romance	2.75	4.31	2.10	9.06	2.22	6.81	2.14	3.84	2.80	3.93	1.00	2.69	3.00	2.29	2.46	7.58	3.33	3.32	Disagreed	2.42	4.87
11	STIs can be transmitted by coughing/sneezing	1.75	3.85	1.90	8.29	2.71	7.13	2.00	3.59	2.40	2.99	1.00	2.69	3.50	2.19	2.24	7.21	1.33	2.43	Disagreed	2.09	4.49
12	STI can be transmitted by sharing toilets and sharing kitchen utensils (spoons, forks, cups etc.)	2.50	3.38	1.92	9.45	2.72	7.29	2.00	4.04	2.40	2.99	1.00	2.69	3.50	2.19	2.28	7.70	1.33	2.43	Disagreed	2.18	4.68
13	STIs cannot be transmitted through contact with vaginal fluid or semen	2.00	2.55	2.08	8.46	2.53	5.79	2.00	2.67	1.60	3.71	1.00	2.69	3.00	2.29	1.86	7.72	2.00	2.24	Disagreed	2.01	4.24
																				Agreed	2.57	5.06

Source: *Field Survey (2023)*

**Table 3: Mean Responses of Student’s practices towards safe sex**

Table 3 shows that item eighteen was disagreed upon with mean value of 2.29 and corresponding SD value of 4.56, whereas items fourteen, fifteen and sixteen were agreed upon with mean values of 2.56 – 3.71 and corresponding SD value of 5.65 – 7.85. This suggests that students have safe sex practices at the College of Health Technology Mubi, Adamawa State.

S/No	Statement	Departments																		Remark	Grand Mean	Grand SD
		Environm ental Health		Communit y Health		Medical Laboratory		Dental Health Science		Health Education and Promotio n		Health Informati on and Managem ent		Medical Sociology		Pharmacy		Nutrition and Dietetics				
		$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$			
14	The proper use of condoms could enhance safe sex	3.75	4.43	3.72	19.03	3.61	10.77	3.89	7.72	3.20	2.94	4.00	4.47	4.00	4.47	3.54	13.75	3.67	3.11	Agreed	3.71	7.85
15	Coitus interruptus is a practice towards safe sex	3.50	3.34	2.66	9.79	3.06	8.00	2.29	5.18	2.80	5.30	3.00	4.15	4.00	4.47	2.54	8.19	2.00	3.16	Agreed	2.87	5.73
16	Abstinence is among the practices of safe sex	3.25	2.54	2.85	12.24	3.28	9.65	2.86	7.03	3.25	4.06	4.00	4.47	3.50	2.19	2.57	8.31	2.00	3.16	Agreed	3.06	5.96
17	Penile circumcision can reduce contracting STIs	2.50	3.38	2.21	9.27	2.67	6.47	2.57	4.07	3.00	2.85	1.00	2.69	3.50	2.19	2.75	7.98	3.00	4.06	Agreed	2.58	4.77
18	Unfaithful sexual partners can practice safe sex	3.00	3.41	2.00	8.50	2.41	6.12	3.00	3.79	2.40	3.92	1.00	2.69	3.50	2.19	2.32	7.16	1.00	3.29	Disagreed	2.29	4.56
19	The use of emergency contraceptive pill is the best practice for safe sex	3.00	3.41	2.54	10.24	3.00	7.29	2.43	5.11	2.00	3.41	2.00	3.61	4.00	4.47	3.04	10.03	1.00	3.29	Agreed	2.56	5.65
																				Agreed	2.85	5.76

Source: *Field Survey (2023)*

**Table 4: Mean Responses of Student’s Awareness of the Control and Prevention of STIs**



Table 4 shows that all items were agreed upon with mean values ranging from 2.66 – 3.63 and corresponding SD value of 5.19 – 8.05. This suggests that students are aware of the control and prevention of STIs at the College of Health Technology Mubi, Adamawa State.

S/No	Statement	Departments															Remark	Grand Mean	Grand SD			
		Environm ental Health		Communit y Health		Medical Laboratory		Dental Health Science		Health Education and Promotio n		Health Informati on and Managem ent		Medical Sociology		Pharmacy				Nutrition and Dietetics		
		$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$				$\delta$	$\bar{X}$	$\delta$
20	Sexual health education in schools provides awareness of the control and prevention of STIs.	3.75	4.43	3.64	17.92	3.83	13.37	3.43	5.36	3.20	5.12	4.00	4.47	3.50	2.19	3.69	16.52	3.67	3.11	Agreed	3.63	8.05
21	Enlightenment campaigns on sexuality provide knowledge on the control and prevention of STIs	3.25	2.54	3.32	13.92	3.39	10.14	3.14	3.97	2.80	2.73	3.50	2.19	4.00	4.47	3.57	13.55	3.50	2.19	Agreed	3.39	6.19
22	I would take precautions to reduce my risk of HIV/AIDS when having sex.	3.25	2.54	2.61	11.66	3.17	8.34	3.50	5.16	2.80	2.73	3.00	4.15	4.00	4.47	3.03	11.17	3.50	2.19	Agreed	3.21	5.82
23	The use of condoms is the best way of preventing sexually transmitted diseases/infections.	3.50	3.34	3.50	15.57	3.5	10.44	3.29	5.01	2.60	4.23	3.00	4.15	4.00	4.47	3.46	13.57	3.50	2.19	Agreed	3.37	7.00
24	Abstinence from sexual activities is the best in controlling and preventing STIs.	3.25	2.54	3.18	12.84	3.39	9.22	2.86	7.03	3.00	2.37	4.00	4.47	4.00	4.47	3.39	12.43	3.00	2.29	Agreed	3.34	6.41
25	Emergency contraceptive use is the correct control and prevention measures for STIs	3.00	3.41	2.11	9.39	2.71	7.71	2.57	5.18	2.20	3.09	3.00	4.15	3.50	2.19	2.86	9.38	2.00	2.24	Agreed	2.66	5.19
																				Agreed	3.27	6.44

Source: *Field Survey (2023)*

**Table 5: Mean Responses of Influence of Gender on students’ Level of knowledge of STIs**

Table 5 shows that all items were agreed upon with mean values ranging from 2.94 – 3.30 and corresponding SD value of 5.79 – 6.60. This suggests that female students seek more information on sexually transmitted infections than males at the College of Health Technology Mubi, Adamawa State.

S/No	Statement	Departments															Remark	Grand Mean	Grand SD			
		Environm ental Health		Communit y Health		Medical Laboratory		Dental Health Science		Health Education and Promotio n		Health Informati on and Managem ent		Medical Sociology		Pharmacy				Nutrition and Dietetics		
		$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$	$\delta$	$\bar{X}$				$\delta$	$\bar{X}$	$\delta$
26	Females tend to drop out of school due to poor sexual and reproductive health (SRH) knowledge than males	2.50	3.38	3.05	12.53	3.28	9.65	3.29	4.41	2.60	3.14	3.00	4.15	3.50	2.19	2.21	11.50	3.00	1.19	Agreed	2.94	5.79
27	Several STIs such as Chlamydia, trichomoniasis and gonorrhea are more prevalent in females than males	3.25	4.06	3.53	16.05	3.28	9.51	3.14	4.64	2.80	3.70	3.50	2.19	3.50	2.19	3.18	11.02	3.00	4.06	Agreed	3.24	6.38
28	Women often experience complications (infertility, chronic pelvic pain) from STIs than men	3.00	2.37	3.52	17.06	3.35	9.11	3.14	4.64	2.40	3.92	3.50	2.19	4.00	4.47	3.46	12.72	3.33	2.89	Agreed	3.30	6.60
29	Females often have a higher awareness and knowledge of STIs than males	3.00	2.37	3.05	12.52	3.41	9.45	3.14	4.64	2.40	3.92	2.50	2.30	3.50	2.19	3.30	11.77	3.33	2.89	Agreed	3.07	5.78
30	Females seek information on STIs from healthcare professionals, educational institutions and reliable sources than males.	3.50	3.34	3.21	14.08	2.94	7.31	3.00	3.79	2.40	3.92	3.00	4.15	4.00	4.47	3.31	12.36	3.50	1.19	Agreed	3.21	6.07
31	Males rely on peers and the internet for information on STIs than females	3.00	5.97	3.13	14.03	3.29	10.3	3.00	3.79	3.25	4.06	3.50	2.19	3.50	2.19	3.34	12.28	2.67	3.22	Agreed	3.19	6.44
																				Agreed	3.16	6.18



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**Source: Field Survey (2023)**

### **Discussions of Findings**

The study revealed that students have knowledge of the signs and symptoms of Sexually Transmitted Infections (STIs) such as chlamydia, hepatitis B, syphilis, and genital herpes and they also have knowledge that foul-smelling discharge from the vagina is not among the signs and symptoms of typhoid. However, the vast majority of the students do not have adequate knowledge of the signs and symptoms of other STIs such as HIV and gonorrhea (2.88 and corresponding SD value of 5.57). The finding is not surprising rather expected since the sexuality education programme is highly encompassing in schools/colleges, addressing STIs and thus, is expected to make positive impact on the STIs knowledge. Also, the finding can be attributed to the fact that STIs is a global phenomenon that can result in multiple serious long term problems including pregnancy complications, fetal and neonatal demise, cancer, infertility, sexual dysfunction, and enhanced HIV transmission<sup>11</sup>. Amu and Adegun<sup>12</sup> reported that 499 out of 550 adolescents were aware of sexually transmitted infections with emphasis on their sources of information to include electronic media, schoolteachers and print media. This implies that the respondents who were aware of STIs are more than their counterparts who were not. Furthermore, Oluyemi, Yinusa, Abdullateef and Sunday<sup>13</sup> reported that secondary school adolescents possessed fair knowledge of sexually transmitted diseases in Asa LGA of Kwara State Nigeria. This finding is in agreement with previous study and therefore not surprising.

The study revealed that students have knowledge of the mode of transmission of STIs such as transmission during

pregnancy to the foetus, through infected blood and blood products, and contact with vaginal fluid or semen and cannot be transmitted through kissing, romance, coughing/sneezing or sharing toilets or kitchen utensils (2.57 and corresponding SD value of 5.06). Similarly, Nwatu et al.<sup>14</sup> reported high level of knowledge of STIs transmission school/college students in South-eastern part of Nigeria. The finding, however, contradicts the result of Okere<sup>15</sup> who reported poor knowledge of STIs transmission mode among in-school adolescents in selected urban and semi - urban Areas of Enugu State in a sample of 950 students selected from 34 secondary schools. Similarly, Ogbe<sup>16</sup> in a descriptive survey reported that the rural dwellers in Delta State, Nigeria were deficient in knowledge, practice and sources of information on STIs (condom use). This finding is in agreement with previous study and therefore not surprising.

The study also revealed that students practice safe sex by agreeing that proper use of condoms could enhance safe sex, abstinence is among the practices of safe sex. However, most students don't have adequate knowledge about safe sex practices as coitus interruptus also termed as (withdrawal) isn't a practice of safe sex and doesn't offer protection from sexually transmitted infections, penile circumcision isn't a safe sex practice and doesn't offer protection from sexually transmitted infections, and the use of emergency contraceptive pill doesn't offer protection from sexually transmitted infections. (Mean value of 2.85 and corresponding SD value of 5.76) finding is well expected and encouraging as it further demonstrates the significant effect of school-based-educational programme in combating certain sexual risky behaviors that are prevailing among the students in school environments. This finding is in accordance with Castillo-Arcos et al.<sup>17</sup>



reported that safe sex is practiced among adolescents in Southern Mexico. Also, the finding is in line with Mwale and Muula<sup>18</sup> who found significant effect of safe sex practices among students in Northern Malawi. It is therefore plausible to attribute these peculiarities in the findings to the adoption of appropriate research design.

The study revealed that students have awareness of the control and prevention of sexually transmitted infections by agreeing that the use of condoms is the best way of preventing sexually transmitted infections (3.57 and corresponding SD value of 7.00), abstinence from sexual activities is the best in controlling and preventing STIs (3.34 and corresponding SD value of 6.41), sexual health education and enlightenment campaigns on sexuality provide knowledge on the control and prevention of STIs (3.63 and corresponding SD value of 8.05). However, the vast majority of the students do not have adequate knowledge and awareness that emergency contraceptive use is not a control and preventive measure for STIs (2.66 and corresponding SD value of 5.19). The finding was not surprising rather expected. The finding agrees with Bell<sup>19</sup> who posited that knowledge is an organized set of statement of fact or ideas, presenting a reasoned judgment or an experimental result such as the present and is being transmitted to others through some their preventive and control measures. In furtherance of the author's postulation, appropriate STIs knowledge of the preventive measures, risk factors, and consequences by the students would enhance their sexual and reproductive health positively. Ajide and Balogun<sup>20</sup> found that the knowledge of STIs and its prevention was poor among the adolescents in Nigeria. The authors further stated that the adolescents were either already involved in risky sexual behaviour or have intention to engage in risky sexual

behaviour. Similarly, Munakampe, Zulu and Michelo<sup>21</sup> stated that the main barriers found among young people to use contraceptives for prevention of STIs is the lack of knowledge. This finding is not in agreement with previous study<sup>18</sup> and therefore surprising. The disparities in the findings of the studies could be due to variations in both geographical and socio-cultural settings where the studies were conducted.

The study also revealed that female students are more influenced knowledgeable than male students because female students seek more information from healthcare professionals, educational institutions, and reliable sources on sexually transmitted infections and have a higher awareness of STIs than male students, females often experience complications from STIs than males, and several STIs are more prevalent in females than males (3.16 and corresponding SD value of 6.18). This implies that gender influenced positively the impact in increasing the STIs knowledge of the students. The outcome of the study could also be attributed to the composure and readiness of the who were consistently exposed to well-organized learning experiences and mental exercises by their mothers in their houses. This finding agrees with Rizwan et al.<sup>11</sup> who saw the need for intervention such as the present in addressing multiple long term problems including pregnancy complications, fetal and neonatal demise, cancer, infertility, sexual dysfunction, and enhanced HIV transmission emanating from STIs cases. Also, the finding is in line with Okere<sup>15</sup> who found that the male in-school adolescents had poor knowledge of STIs when compared to their female counterparts with adequate knowledge in the selected urban and semi-urban areas of Enugu State. Ogbe<sup>16</sup> in a descriptive survey showed that the female rural dwellers in Delta State had higher



knowledge than their male counterparts on STIs knowledge-based survey. There are obvious similarities in these studies as they addressed STIs knowledge with respect to gender. It is therefore plausible to attribute these peculiarities in the findings to the participants' composition and the appropriateness of the adopted research design.

## Conclusion

The findings of this study have revealed five major aspects. Firstly, the study revealed that students have knowledge of the signs and symptoms of Sexually Transmitted Infections (STIs) but vast majority of them do not have adequate knowledge of other STIs. Secondly, the study revealed that students have adequate knowledge of the mode of transmission of STIs. Thirdly, the study revealed that students have healthy practices towards sex. Fourthly, the study revealed that students are aware of the control and prevention of STIs. Fifthly, the study revealed that female students seek more information from health professionals on sexually transmitted infections while male students seek information from the internet.

## Recommendation

The following recommendations were made based on the findings of the study: School authorities should sustain efforts towards improving student's knowledge of sexually transmitted infections and safe sex practices. Parents/guardians should put considerable effort in adequately educating their children about the importance of safe sex practice. Government should include sexual health as a course in tertiary institution's curricula for students to have an in-dept knowledge on sexually transmitted infections or diseases and safe

sex practices. Federal Ministry of Health, Ministry of Education, private organizations, communities, religious leaders, cultural leaders, and other government agencies to provide effective programmes on sexuality education for students, train and equip professionals who will further educate students on the right knowledge and attitude towards sexually transmitted infections or diseases and safe sex practices. Government should support through the ministry of health and ministry of education in creating awareness and enlightenment campaigns and workshops on sexual health to improve students' knowledge and the public on sexually transmitted infections and safe sex practices.

## Limitation and Strength of the Study

- The study was restricted to only in-school adolescent, leaving the out-of-school categories in Adamawa State. Thus, the findings of the study may not serve a general representation of the entire adolescents in the state.
- The study was restricted to the use of questionnaire tool, thus only quantitative data were generated analysed. The finding might not be generalized since qualitative measures were not assessed.
- Only students in Adamawa State College of Health Technology participated in the study while students in other institutions or states of the country did not. Thus, the findings may not represent a general situation in Nigeria.
- The structure of the research instrument did not allow the participants to express views and experiences. The students were restricted to respond to only the items of the questionnaire.



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## INVESTIGATING THE KNOWLEDGE, ATTITUDE, PRACTICE OF CHILD FEEDING AND NUTRITIONAL STATUS OF CHILDREN 6-24 MONTHS IN SOUTHERN IMAN, ETINAN, AKWA IBOM STATE.

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### ABSTRACT

**Background:** The intake of food and nutrients in food sustains life, promote growth and provides energy for day-to-day living. Providing nutritious food for children is among the most important things to do by parent for normal growth and development of the infants. Appropriate feeding practices are essential for the achievement of optimal growth in children. Hence the assessment of knowledge, Attitude practices of child feeding and nutritional status of children in Southern Iman, Etinan Local government area, Akwa Ibom state.

**Materials and Methods:** This was a descriptive cross-sectional study. Multistage sampling technique was employed in selecting the sample size of 354 respondents with the use of a well -structured questionnaire. Nutritional status of children was determined with the use of anthropometric instruments (Weighing scale and MUAC). Data was analyzed using SPSS statistical Package version 20.

**Result:** Findings revealed that more than half (53.67) had excellent knowledge. The knowledge on child feeding is excellent, there is positive Attitude and good practice of infants feeding but some mothers and caregivers still accept tinned foods as necessary for the growth of the children while neglecting the offer of different types of food and fruits. Breast feeding on demand is not practiced as specified by WHO and Some infants have the reading of 11-12.5cm in MUAC measurements indicating the risk of developing Severe Acute Malnutrition (SAM)

**Recommendations;** The government should intensify effort and implement various strategies to improve breastfeeding and appropriate complementary feeding recommendations and Health workers should provide personalized support and assistance to mothers and measures for monitoring IYC nutritional status for early detection and management of malnutrition.

**Key words:** Knowledge, Practice, infants and young children, child feeding, Nutritional status, Malnutrition.





## Background

Consuming food and utilizing its nutrients keeps the body living, fosters growth, and supplies energy for daily activities. One of the most crucial things parents can do to guarantee their children experience proper growth and development is to give them a healthy diet<sup>1</sup>.

According to the World Health Organization (WHO), which defines nutrition as "the intake of food, considered in relation to the body's dietary needs." Good nutrition is a major factor in determining health. Malnutrition happens when food consumption is out of proportion to the body's nutritional requirements<sup>2</sup>. Infants and young children (IYC) have a critical first 1,000 days of life during which they must receive enough nutrition to support healthy growth and development and increase their chances of survival. However, poor nutrition can impede progress and raise the risk of illnesses<sup>3,4</sup>. Future physical, psychological, and social performance of an individual is significantly influenced by diet during childhood. According to studies, a kid's first two years of life are the most crucial for growth and development<sup>5</sup>. This is because a child is more susceptible to malnutrition during this time due to high nutritional needs<sup>6</sup>. Growth throughout infancy is accompanied by certain changes in the organs' functions as well as the structure of the body. At this age, inadequate nutrition can cause immunological diseases, stunted growth, delayed development, and malnutrition with associated repercussions, as well as damage to the central nervous system<sup>7,8</sup>.

Malnutrition is the leading cause of mortality for young people worldwide. Research indicates that 10.9 million deaths

in this age range occur worldwide, and more than two thirds of these deaths are related to inadequate nutrition, with underweight being a contributing factor. The closest individuals who have a significant impact on a child's nutrition and overall health are mothers and other caregivers<sup>9</sup>.

In order to improve infant survival and optimal feeding, WHO and UNICEF developed a global strategy for infant and young child feeding. This strategy aims to increase public awareness of the key issues affecting IYC feeding, identify the steps involved in finding solutions, and provide necessary interventions. Additionally, it seeks to strengthen the commitment of NGOs and the government to IYC feeding best practices and to empower mothers and caregivers to make and carry out informed decisions about what constitutes optimal feeding practices<sup>10</sup>.

The World Health Organization (WHO) suggests that breastfeeding begin within the first hour of the baby's birth and that complementary foods be introduced safely and adequately while the baby is breastfed for up to two years of age<sup>11</sup>.

According to USAID<sup>12</sup>, complementary feeding is the practice of providing food to a newborn in addition to breastfeeding when the baby reaches six months of age and the breastmilk is no longer adequate to meet their nutritional demands. IYC are offered semi-solid food products manufactured from locally accessible, reasonably priced, and nutritious food throughout the complementary feeding phase, a little at a time, to help the child become accustomed to the taste and texture of the meal. The young one is fed often, and as the child becomes older, the meal portion size increases. When talking about infant and young child feeding (IYCF) practices, mothers' and caregivers'



attitudes and levels of knowledge become crucial factors to consider.

Globally, it has been reported that millions of children under the age of five die yearly and malnutrition directly or indirectly account for about 35% of all deaths among these children<sup>13</sup>. In Nigeria, about 60% of all the children dying is attributed to underlying malnutrition due to poor IYCF and hygiene practices<sup>14</sup>. As important IYCF is, it is estimated that about 41% of infant are breastfed exclusively for six months while 60% are given other foods and fluid in the early months of life<sup>15</sup>.

WHO<sup>16</sup> states that if complementary foods are not provided by the time a child is six months old or are administered incorrectly, there is going to be growth faltering. Therefore, the guideline for appropriate complementary feeding should be observed including breastfeeding through to and including age two, on demand and frequently. The primary complementary meals utilized in Akwa Ibom state are two varieties of unripe banana porridge, marsh bean porridge, and mixed grains that turn brown when combined with crayfish (soya bean flow). These complementary foods might be sufficient, but they are deficient in antioxidants, which raises the possibility of improper nutrient absorption<sup>17</sup>.

Since iron is necessary for the body's growth, it is present from birth but rapidly depletes during the first six months of life. It is found in breast milk and readily absorbed, but not in sufficient amounts for the infant. As a result, needs to be included in the meals the young ones eat. While iodized salt is necessary for family cuisine, it is not necessary to give it to newborns. This allows the child to experience the natural flavor of the food, and flavor enhancers are discouraged because they add no nutritional value and may raise the risk of developing diseases<sup>18</sup>. Mothers/caregivers in Akwa Ibom state often prefer

giving infants pap, banana porridge, boiled rice, since that is what they can afford with no record of offering fruits and vegetables to the infants of which may result to stunting, underweight, and wasting. Despite several pleas from organizations like the WHO and FAO, most infants are only exposed to family foods around the age of five months, with relatively little fruit and animal protein consumed. Lack of nutrient-rich foods during the first year of life can result in stunted growth that is not easily reversible and may harm the child's cognitive ability while lowering academic performance. Mothers and children tend to follow a monotonous diet consisting primarily of vegetables and maize-based meals. While continuing to adhere to some cultural norms Neglecting nutrient-dense foods or getting inadequate nourishment during a child's first year of life which can result in stunted growth, which is difficult to reverse, and may lower academic achievement while affecting the child's cognitive development. Availability of adequate meal for mother and child is important during the 1000 days of life. Beliefs, and taboos about food exist bordering on which foods should be given to children, adults and for pregnant women. For instance, some communities in Nigeria forbids the intake of snail by pregnant women and consumption of egg by children<sup>19</sup>.

## Methods

### Study design

A descriptive cross-sectional study design was adopted for the study. This is a descriptive cross-sectional study design involving mothers of children under five years residing in southern Iman ward four in Etinan local government area. Anthropometric measurements of weight and mid-upper arm circumference were



used to assess the nutritional condition of infants and young children.

### Study Area

Akwa Ibom state is one of the 36 states in Nigeria, located in the south-south geopolitical zone of Nigeria. There are 168,924 people living there in total; 85,760 of them are men and 83,164 are women (NPC, 2006). Eleven wards make up this area: About twenty (20) health facilities are found in Etinan local government area. Sixteen (16) primary health care facilities and four secondary health facilities (M and E Unit, 2023).

### Study Population

The study population comprised of mothers with their children, 6 – 24months attending the three health facilities; Primary Health Center Iwo etor, Primary Health Center, Ikot Akpantembom and Health Facility in Mbioto II in southern Iman in Etinan. The target population was the mothers and care givers. The accessible study population includes all mothers/caregivers residing and accessing the three Health Facilities in the Ward which were recruited during attendance in child welfare clinic in the three Health Facilities in the Ward during the period of study.

## 4 Inclusion and Exclusion Criteria

Inclusion and exclusion criteria for the study was considered paramount since it is a required in practice for high quality research study.

### Inclusion criteria

All mothers/caregivers of children 6 – 24 months residing in Southern Iman, all mothers/caregivers of children 6 – 24 months accessing the facilities during the period of the study and mothers who gave their consent to the study

### Exclusion criteria

All mothers/caregivers of children 6 – 59months who are not residence in Southern Iman and mothers/caregivers who do not attend the facility during the period of the study

### Study Tools

Study tool occupies a critical position in this research work. An interviewer administered questionnaire on guidelines for infant and young child feeding practices. (WHO/UNICEF 2020) was adopted and modified for use in the study.

**Sample Size.** All mothers and care givers attending the 3 Health facility in the ward were the target population. The sample size was calculated by using the Cochran formular by taking the prevalence of malnutrition, 30%, assuming a 95% level of confidence and 10% nonresponse rate which yielded a sample size of 354.

**Sampling Techniques:** For the investigation, a simple random sampling procedure with Multi-stage sampling technique was employed. Southern Iman was chosen by a simple balloting method and process from among the eleven Etinan wards. The sampling fraction was calculated to select the respondents. Once the first mother was chosen at random, each subsequent mother and her child were chosen until the required sample size was reached.

**Data collection tool and procedure:** The study employed a well-structured questionnaire which contained items that have been properly designed and well framed for the purpose of the study. The question items were both open-ended and close-ended questions. Section A contains question items on the socio demographic characteristics of the respondents, Section B contains items on Knowledge of proper child feeding, Section C had Items on



Attitude towards proper child feeding while section D contains question items on child feeding practices of the respondents and Anthropometric measurements of the infant with the use weighing scale and mid upper arm circumference stripe. Mid-upper arm circumference stripe/tape was used to determine the nutritional status of the children. This instrument is special to measure the mid-upper arm circumference of infant age 6 – 24months (26cm).

Based on UNICEF guideline, the MUAC tape is marked with colors to enhance easy identification of the degree of acute malnutrition, moderate acute malnutrition and the risk of acute malnutrition. It's unit of measurement was in centimeters. The mid-point of the arm was measured and the half of arm was determined. The MUAC tape was placed round the mid-point of the arm while the end of the MUAC tape is inserted through the whole where the arrows are indicated. Reading was done with the help of the colors on the tape. Such that; Green color with calibration in-between 12.5cm to 13.5cm indicated the risk of acute malnutrition. Green color with 13.5cm and above then represented adequate nutrition. Yellow color from 11.5 to 12.5cm indicated children at risk of developing malnutrition. Red reading less than 11.5cm indicates severe acute malnutrition.

**Data Analysis:** Descriptive statistics was used in analyzing the data collected for the study. These includes: tables, frequencies, percentages and Data was entered, cleaned, sorted and coded in excel data base and then transported into SPSS Statistical package version 20.0 for analysis.

The knowledge of respondent was analyzed using a set of ten (10) questions and two point scored for each correct

answer. The respondents were rated to have excellent knowledge if scored 51% and above those who score 41% - 50% were rated to have fair knowledge while those who scored < 40% were rated to have poor level of knowledge. while 5 questions were used to assess mothers/caregivers attitude towards child feeding practices and immunization using a 5- point Likert scale of 5 (strongly agree), 4 (Agree), 3 (indifferent), 2 (disagree) and 1 (strongly disagree). The total attitude score per question for all respondents was determined as 25 for maximum score and 5 for minimum score. This total attitude score was divided by 5 and values rounded up to the nearest whole number. Values of 1 and 2 were categorized as poor attitude, 3 as indifferent and 4 and 5 as positive attitude.

Six (6) questions were used to assess child feeding practices. Respondents with a total score of less than 50% (0-2) were categorized as having poor practice while scores of 50% and above were categorized as having good practice

### **Ethical Considerations**

Approval for the study was obtained from the Research Ethics Committee of the University of Port Harcourt. Appropriate permission was obtained from the Director of Primary Health Care services in Etinan Local Government and the officer in charge of each of the health facilities used for the study. Information about the study, objectives and assessment methods was given to the participant. Mothers/caregivers were offered written informed consents assigned before participation in the research. They were informed of freedom to decline and were assured that their normal health services in the health facilities will not be denied if they decline.

### **Results**



**Table 1: Socio-demographic Characteristics of Respondents**

Socio-demographic Characteristics	Frequency	Percent
<b>Age of Child (in months)</b>		
6-8	112	31.64
9-11	69	19.49
12-18	67	18.93
19-24	31	8.76
25-59	75	21.19
<b>Sex of Child</b>		
Male	142	40.11
Female	212	59.89
<b>Age of Mother/Caregiver (in years)</b>		
<19	9	2.54
20-25	103	29.10
26-30	167	47.18
31-35	75	21.19
<b>Educational Status of Mother/Caregiver</b>		
No Formal	20	5.65
Primary	57	16.10
Secondary	54	15.25
Post-secondary	223	62.99
<b>Occupation of Mother/Caregiver</b>		
Farming	51	14.41
Housewife	55	15.54
Business	199	56.21
Civil Servant	49	13.84
<b>Type of Family</b>		
Monogamy	263	74.29
Polygamy	91	25.71
<b>Number of People in the family</b>		
1-2	42	11.86
3-4	177	50.00
5-7	112	31.64
>7	23	6.50

A greater proportion 112 (31.64%) were aged between 6-8 months and 212 (59.89%) were females. Many of the mothers 167 (47.18%) were aged 26-30 years and most mothers 223 (62.99%) had post-secondary education. More than half ,199 (56.21%) of the mothers /caregivers were business women and 263 (74.29%) belonged to monogamous families. Half 177 (50.0%) of the respondents had 3-4 person's n their families (Table 1)

**Table 2. Respondents Knowledge of Proper Child Feeding Practices**

Knowledge of proper Child Feeding and Immunization	Frequency	Percentage (%)
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Breastfeeding should commence immediately after the birth of the baby	334	94.35
Colostrum, the whitish fluid that comes out of the breast of a mother after birth is not good for the child	163	46.05
Babies should be fed with only breast milk until they are at least 6 months old	286	80.79
A baby that is exclusively breastfed needs water to prevent it from becoming thirsty	135	38.14
A child can be given the food eaten by other members of the household once they are more than 6 months old	297	83.90
Hand washing before preparing the food of a baby is not important in preventing the baby from developing diarrhea	147	41.53
Tinned baby foods are necessary to ensure the proper growth of a child	273	77.12
Babies should be given their first immunization as soon as possible after birth	330	93.22
The immunization card is also used to measure how well the baby is growing	330	93.22
Measles immunization is one of the last vaccinations given to a baby in Nigeria	313	88.42
<b>Mean Knowledge Score: 6.52+/-1.16</b>		

334 (94.35%) respondents knew that breastfeeding should commence immediately after the birth baby, 191 (53.95%) knew that colostrum is good for the child. Two hundred and eighty – six (80.79%) knew that babies should be exclusively breastfed until they are 6 months old while 219 (61.86%) knew that a baby that s exclusively breastfed does not need water to prevent it from becoming thirsty. Two hundred and ninety- seven (83.90%) knew that a child more than 6 months old can be given foods eaten by other members of the household and 207 (58.47%) knew that hand washing before preparing a baby’s food is important in preventing diarrhea in children. Eighty- one (22.88%) knew that tinned foods are not necessary to ensure the proper growth of a child and 330 (93.22%) knew that babes should be given their first immunization as soon as possible after birth. Many 313 (88.42%) knew that measles vaccine is one of the last vaccinations given to a baby in Nigeria.

Overall, 190 (53.67%) of the respondents had an excellent knowledge of proper child feeding practices

**Table 3: Respondents Attitude towards child Feeding Practices**

Variables	Strongly Agree n (%)	Agree n (%)	Indifferent n (%)	Disagree n (%)	Strongly Disagree n (%)
Feeding the child with only breast milk until the child is at least 6 months prevents diseases and ensures a healthy growth	269 (75.99)	67 (18.93)	4 (1.13)	9 (2.54)	5 (1.41)
Baby that are exclusively	191	102	23 (6.50)	32 (9.04)	6 (1.69)



breastfed are not thirsty and should not be given water	(53.95)	(28.21)			
Tinned baby foods are necessary to ensure the proper growth of a child	18 (5.08)	29 (8.19)	39 (11.02)	104 (29.38)	164 (46.33)
Proper hand washing before preparing the food of a baby and before feeding the baby is important in preventing diarrhea	269 (75.99)	72 (20.34)	8 (2.26)	3 (0.85)	2 (0.56)
Child immunization protects the child from the common childhood diseases	258 (72.88)	71 (20.06)	7 (1.98)	8 (2.26)	10 (3.10)

Two hundred and sixty-nine (75.99%) strongly agreed that feeding the child with only breast milk until 6 months of age prevents diseases and ensures a healthy growth, 191 (53.95%) strongly agreed that babies that are exclusively breastfed are not thirsty and should not be given water and 164 (46.33%) strongly disagreed that tinned baby foods are necessary to ensure the proper growth of a child. Two hundred and sixty -nine (75.99%) strongly agreed that proper hand washing before preparing the food of a baby and before feeding the baby is important in preventing diarrhea. About seventy-three percent strongly agreed that childhood immunization protects the child from common childhood diseases.

In all, 334 (94.35%) of the mothers/caregivers had a positive attitude towards child feeding practices and immunization, 17 (4.80%) had indifferent attitude and 3 (0.85%) had a negative (poor) attitude (Table 3)

**Table 4: Child Feeding Practices of Mothers/Caregivers**

<i>Variables</i>	<i>Frequency</i>	<i>Percentage (%)</i>
<b>What food items do you feed your babes with</b>		
Different types of Foods	117	33.05
Boiled and cooled water with breast milk	237	66.95
<b>When do you start breast feeding?</b>		
Within one hour after birth	285	80.51
2 days after birth	58	16.38
One month after birth	11	3.11
<b>Reasons for delay of commencement of breast feeding (n=)</b>		
No breast milks		
As instructed by the grand-mother		
<b>How many times do you breastfeed the baby?</b>		
5 times a day	330	64.97
Once every day	17	4.80
2 times a day	32	9.04
3 times a day	38	10.73
Just like 3 square meals	37	10.45



<b>How Often do you breastfeed your child?</b>		
Every 3 hours	230	64.97
Every 2 hours	17	4.80
Once daily	32	9.04
At nights only	38	10.73
On demand	37	10.45
<b>How do you feed your Baby?</b>		
With feeding bottle	196	55.37
Using cup and spoon	108	30.51
Chewing baby's food before giving the baby	50	14.12
<b>What is the texture of the Food?</b>		
Watery food	46	12.99
Semi-solids	167	47.18
Thick	141	39.83
<b>Fruits/vegetables given to the baby</b>		
All fruits	130	36.72
No fruit	224	63.28

One hundred and seventeen (33.05%) fed their children with different types of foods while 237 (66.95%) only fed with boiled and cooled water along with breast milk. Many 285 (80.51%) commenced breastfeeding their children within one hour after birth and 330 (64.97%) breastfeed their babies up to 5 times in a day. Only 37 (10.45%) breastfeed their babies any time the baby demands (on demand) while many 230(64.97%) breastfeed every 3 hours and 38 (10.73%) breastfeed at night only. One hundred and ninety-six (55.37%) use feeding bottle to feed their babies while 108 (30.51%) use cup and spoon and 50 (14.12%) chew baby's food before giving the baby. One hundred and sixty-seven (47.18%) feed their babies with semi-solid foods and 224 (63.28%) do not give their children fruit at all. More than half 210 (59.32%) had good child feeding practices.

**Table 5: Assessment of Severe Acute Malnutrition using Mid Upper Arm Circumference (MUAC)**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>MUAC</b>		
Red	4	1.13
Yellow	65	18.36
Green	285	80.51

Four (1.13%) of the children had mid upper arm circumference less than 11cm (Red) indicating severe acute malnutrition, SAM, 65 (18.36%) had MUAC reading of between 11-12.5 cm indicating children at risk of SAM while the majority 285 (80.51%) had a MUAC reading of > 12.5 cm no SAM or risk of SAM. (Table 5)

### **Discussion of Findings.**

This chapter presents the results and discussion concerning the knowledge, attitude and feeding practice and

malnutrition with immunization status of children in southern Iman ward 4 in Etinan local government area of Akwa Ibom state. SPSS software version 20 was used to analyze the data, and the results were displayed in tables and graphs that took the





study's aims and hypothesis into consideration as well.

### **Socio-demographic characteristics of the respondents.**

A total of 354 children and their mothers/caregivers from southern Iman ward 4 in Etinan local government area participated in the study. 112 (31.64 were female. Many 167 (47.18%) mothers/caregivers were aged 26-30, still within the child bearing %) were infants, 6-8 months and majority (59.89%) age of which were still capable to care for children of this age. This is similar to a study in Nepal where majority (49.27%) of the mothers were age 26-30<sup>20</sup> and not adolescent. Adolescent mothers (15-19 years) who may likely present less responsive and more authoritarian feeding methods but rather initiate complementary foods earlier than recommended with poor feeding practices of offering infants sugary foods and less proteins foods such as bean, egg and meat like adult mothers would do<sup>21</sup>. Majority of the mothers 223(62.99%) had post-secondary education and 56.21% were business women having 3-4 person in their families.

### **Knowledge of proper feeding and immunization.**

The result from this study indicates that 334(94.35%) of the mothers knew that breastfeeding commences immediately after birth. This may be as a result of their educational level.

This runs counter to a research done in the Kingdom of Saudi Arabia, which found that just 43.6% of mothers began breastfeeding as soon as they gave birth to the baby<sup>22</sup>. This may be as a result of poor awareness on the right time for initiation and accessibility to information. On knowledge regarding colostrum, about half (53.95) responded that colostrum is good

for the child. It tends to disagree with a study in Pakistan where only 1.15% had no knowledge about colostrum and its importance in child growth and fighting of infection<sup>23</sup>. However, the knowledge of the importance colostrum in this study is lower than that of a study in Ethiopia where 95.2% mothers knew colostrum to be the first milk which protects the child from disease<sup>24</sup>. Two hundred and eighty-six (80.79%) mothers knew that babies should be breastfed exclusively until they are six months. This agrees with 71.6% mothers who were knowledgeable about exclusive breastfeeding for six months in Nepal<sup>20</sup>. Although knowledge on exclusive breastfeeding is generally high. There are some studies which still show poor knowledge in this aspect of child feeding such is what is recorded by Rana, et. al.,<sup>25</sup> with knowledge of 34.5%. This study reveals that 83.90% mothers support the offering of infant food eaten by other members of the household at 6 months. Masztalerz-Kozubek et. al.,<sup>26</sup> agrees as the report showed that children eating with their family make it possible for them to feed more regularly with more nutritious food. Shrestha<sup>20</sup> also records that many mothers knew the proper age for introduction of complementary feeding while only 9.6% mothers delayed it beyond 6 months. The respondent in this study are knowledgeable about the WHO recommendation on IYCF<sup>27</sup>. Furthermore, this result is consistent with findings of Alreshidi et. al.,<sup>28</sup> which revealed the initiation of complementary feeding at 6months and above as this can enable feeding with potential implication on the IYCF and total health status of the infant. Half (58.4%) respondent agrees that handwashing before preparation and feeding of babies helps in preventing diarrhea. This may be due to high awareness created on Hand washing in recent times due to covid -19. In line with this, Nizame et. al.,<sup>29</sup> opined that large proportion understood the importance of



handwashing with soap and water before preparation and feeding of infant but observed that people did not wash their hand before carrying this activity. It agrees with the findings of Luby, et. al.,<sup>30</sup> that handwashing before food preparation is particularly an important opportunity to prevent diarrhea in children, but disagrees with the observation of Luby, et al<sup>31</sup> that less than 1% persons wash their hands with soap and water before eating or feeding the infant. Hand washing can prevent diarrhea in children therefore, intervention to increase the knowledge on handwashing should be targeted so as to improve the practice. Regarding the knowledge on immunization immediately after birth, majority (93.22%) asserted that children should be given immunization immediately after birth. Almutairi<sup>32</sup> also reported a high knowledge score of 86% about the administration of immunization as soon as possible with consideration on multiple educational method to support the practice practices. Adedire et. al.,<sup>33</sup> confirms that mothers many mothers are aware of the age at which the first dose of immunization is given but few are yet to know this but Oladepo, et. al.,<sup>34</sup> disagrees and attest that mothers had a little knowledge on the order and timing of immunization for children. Only 2% and 22.6% were reported to be knowledgeable about immunization of children with BCG at birth and Hepatitis B at birth, 6, 10 and 14 weeks respectively.

### Attitude towards infant feeding

Attitude of mothers towards IYCF was assessed and majority (75.99%) strongly agreed that breastmilk prevents disease and ensure proper growth. breastfeeding is a well- known method of feeding infants. this may be because Breastfeeding is very important for optimal growth of children and it is necessary for their survival. Study by Muleka et. al.,<sup>35</sup> supports the findings that breastfeeding offers prevention

against disease. It is the best source of nutrition to infant early in life as reported by other studies<sup>36</sup>. Many mothers strongly agree that babies who are exclusively breastfed are not thirsty and should not be given water. This agrees with WHO recommendations that a child should be exclusively breastfed for 6 months without water. Eighty percent (80%) of breastmilk is water especially the first breast milk taken by the child in each feed. Giving water to the baby may cause the baby to take less breastmilk due to early satiety with water or stop breastfeeding too early. It also exposes them to risk of diarrhea as the water may be unclean causing the baby to develop other infections and malnutrition. Giving water to babies may reduce the quantity of breastmilk produced by the mother, therefore babies exclusively breastfed are not to be given water before 6 months because breastmilk provides all the water the baby needs during this period<sup>37</sup>. Overall attitude towards infant feed was positive (99.15%) in contrast with 51.0% finding of favorable attitude<sup>38</sup>.

### Child feeding practices

More than half (59.32%) of the respondent had good child feeding practices in this study. The practice towards infant feeding is adequate due to increase knowledge on IYCF. This is contrary to a study by Shrestha<sup>20</sup> showing the inadequacy and inappropriateness of feeding practices by mothers.

Some feed their children with different types of food, meaning that great number of children are not receiving adequate complementary feeding, this can increase the risk of malnutrition in children. Feeding children with one type of food is detrimental to growth and development. Fredrick et. al.,<sup>39</sup> submitted that majority of the children (73%) were monotonously fed with thick porridge made from maize which can be responsible for high



exposure to aflatoxin B1 which may increase the development of hepatocellular carcinoma with co-infection of Hepatitis B. Bimpong et. al.,<sup>40</sup> attested to the idea that more than half (56.5%) of mothers ensure dietary diversity and enrich their infant diet. On determining the practice of complementary feeding, only 10.5% met the minimum dietary diversity which only 8.5% received minimum adequate diet for their age. Minimum dietary diversity was also reported to be low (31.5%) in Akpabuyo area in Cross-River state and these children had higher odds for underweight while those who were not receiving minimum feeding frequency were more likely to be stunted. This study reveals that only 37 (10.5%) mothers breastfeed their infants on demand in accordance with WHO recommendation. Breastfeeding on demand offers opportunities for babies to initiate breastfeeding while the mother continues the feeding until the baby is satisfied. The infant who are breastfed on demand get enough milk which enable the development of cognitive and emotional development. This is opposed to strict schedule feeding<sup>41</sup>. In contrast, Sultana et. al.,<sup>42</sup> reveals that more than half of the mother breast feed infant on demand. Similarly, breastfeeding on demand is also high (75.8%) in East-Africa<sup>43</sup>. This is considerably high as oppose to this study. It may be that mothers are not aware that infant should be breastfed on demand and their occupation may exert influences on giving the baby breastmilk whenever they need it. More than half (55.3%) of mother's use feeding bottle to feed infants whereas few (30.51%) use cup and spoon. This could be due to inability to create enough time and attention to infants feeding, therefore the mother may want to feed the infant quickly and move over to other business.

Fifty (14.12%) responded that they chew food before giving it to their babies. This

was not expected in present days. It may be due to the influence of culture in Southern Iman ward 4 and the involvement of grandparent in feeding of infant. Pelto, et. al.,<sup>40</sup> reported similar findings of pre-masticated food for infants where 65 females practice chewing food to their infant and 22% did it very often. Majority (69%) of caregivers were also found to practice prechewed feeding for their infant 4-6 month in East Africa<sup>43</sup>. Also, Pittman<sup>45</sup> found that in South Africa more than two-third of mothers and other caregivers prechew food for their infant thereby increasing the risk of HIV transmission if they were HIV positive. Some mothers fed their babies with semi-solid. Mothers who practice this may have understood the WHO recommendation of feeding infants with semisolid food as complementary feeding when the child is up to six months in contrast with findings of national demographic health survey NDHS<sup>46</sup> of which the prevalence of giving semi-solid food was 72.8%<sup>47</sup>. Findings similar to that of the present study reveals that 32.2% infant receive semi-solid or solid food and about 63.8% were not given in the first 6 months<sup>48</sup>. Many (63.28%) mothers in this study do not give fruit at all to their infant. It may be that they lack the knowledge that their babies can take fruits, meaning that only a few mothers see the need to offer their children fruits. In line with this finding, Daman<sup>49</sup> reported that only 28% mothers provided fruits of all types such as apple and banana to their infant. Aguayo<sup>50</sup> also reveal that limited number (33.2%) of children were fed with fruits and vegetables rich in vitamin A. This may be due to mother's idea that infants may not be able to eat fruits

#### **Assessment of SAM using Mid- upper arm circumference MUAC**

Infant in this study were found to have their MUAC reading between 11-12.5cm, indicating the risk of developing severe



acute malnutrition. These children were moderately malnourished(wasting). These could be the children who were not fed with different types of food thus at risk of being malnourished. Zehra, et. al.,<sup>51</sup> agrees thus reporting 13.6% infant with MUAC cut-off point of <11.5cm. MUAC cut-off point between 11.5cm-12.5cm is recommended to use for diagnosing moderate acute malnutrition (wasting) in children<sup>52</sup>. In evaluating the nutritional status of the children using MUAC, Asif, et. al.,<sup>53</sup> confirms the overall level of undernutrition of 8.30% based on MUAC measurement higher girls than in boys. Eaton- Evans<sup>54</sup> point out that MUAC measurement above 13.5cm is normal for IYC while MUAC less than 12.5cm indicate malnutrition. Children with moderate acute malnutrition may finally come down with severe acute malnutrition where there is no intervention.

### Study Limitation

This research work was conducted in a rural setting and most of the respondents were not literate enough to read and

understand the questions. Limited time constituted a constraint to the study. However, the constraints were eliminated through the use of trained research assistance who administer the questionnaire. The researcher source for money to get required materials available in order to achieve the set objectives Time was created out and managed properly in order to conclude the research work at the stipulated time.

### Conclusion

The knowledge on child feeding is excellent, there is positive Attitude and good practice of infants feeding. some mothers and caregivers still accept tinned foods to be necessary for the growth of the children while neglecting the offer of different types of food and fruits. Breast feeding on demand is not practiced as specified by WHO and some infants had 11-12.5cm in MUAC measurement indicating the risk of SAM. more effort is expected to ensure improvement in the nutritional status of children in the community

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## AVAILABILITY AND UTILIZATION OF CHILD HEALTH SERVICES IN PRIMARY HEALTH CARE CENTRES IN HONG LGA, ADAMAWA STATE

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### Abstract

**Background:** Child healthcare services (CHS) are meant to ensure as much as possible that every child live and grows up in a healthy environment and receives adequate nourishment for healthy living. To ensure effective child health services, each primary health centre (PHC) must provide the components or activities of CHS.

**Method:** The multi-stage sampling procedure was used to draw a sample of 474 mothers (366) and health providers (108) for the study. The Descriptive survey research design was used for the study. The population for the study consisted of 3666. The purpose of the study was to find out the availability and utilization of CHS in Primary Health Care Centres in Hong LGA, Adamawa State. The instrument for data collection was questionnaire designed by the researcher.

**Result:** Means and percentage were used to analyze descriptive data. The criterion mean for adequacy and utilization was 2.50. The major findings of the study were as follows: All the CHS were available in PHCs (Growth monitoring: 84.1%, nutritional services: 96.3%, curative services: 100%, oral rehydration therapy: 100%, and immunization services: 100%), All the CHS were adequate ( $X = 2.98$ ,  $SD = .92$ ), All the CHS were adequate and utilized ( $X = 2.98$ ,  $SD = 0.77$ ) in PHCs.

**Conclusion:** The researcher recommended that government should see that PHCs are located equally in both urban and rural areas, and that health workers should strengthen their teaching on the utilization of all the components of CHS especially growth monitoring and curative services.

### Introduction

People seek to improve quality of life in both developed and developing countries. Unfortunately, most people in developing countries live in overcrowded houses with

inadequate sanitation and unsafe water supply. Infectious disease and malnutrition are common especially among children. Death rate is high and life expectancy is low. World Health Organization<sup>1</sup>



estimated that ten million children under the age of five years die each year from complications arising from childhood diseases and 80 per cent of these deaths occur in Sub Saharan Africa. The ratio of infant mortality in the region is one of the highest in the world reaching a proportion of 113 per 1000 live births<sup>2</sup>. In Nigeria, the Federal Ministry of Health<sup>3</sup> reported that about 5.3 million children are born annually that is 11,000 per day. One million of these children die before the age of 5 years. The ministry further submitted that Nigeria's infant mortality rate (528 per day) is one of the highest in the world. One explanation for poor health outcome among children is the non-use of available child health services by sizable proportion of mothers. Haddad<sup>4</sup> Stated that the cost and utilization of health services in developing countries clearly showed that the utilization of available child health services is very low in developing countries. This according to Haddad is influenced by culture, economics, access, perceptions and lack of knowledge of mothers on existing child health services.

Child health services are meant to ensure as much as possible that every child live and grows up in a healthy environment and receives adequate nourishment for healthy living. To ensure effective child health services, each primary health centre must provide the components or activities of child health care services. Gabriel<sup>5</sup> outlined certain activities to be provided for children within the PHC centres. The activities include, immunization of all children against the six preventable diseases such as measles, poliomyelitis, whooping cough, tetanus and diphtheria and pertussis; growth monitoring and development using a standardized chart aimed at assessing the physical development of the child; health education for mothers on general child's health; using oral rehydration therapy (ORT) in treating diarrhoea of any aetiology;

treatment of identified minor diseases in the family and community. The author also mentioned other activities to be provided outside the primary health centres. These activities include promotion of breast feeding in preventing malnutrition and diarrhoea in children; use of locally and culturally acceptable foods during weaning period; and outreach services which are planned and carried out. In the context of this study, the components of child health services to be carried along include; immunization, growth monitoring, ORT, nutrition and curative services. These are chosen because they are the services provided within the health centers of which information can be accessed.

The objective of child health services is to prevent the major causes of death, disability and diseases during childhood. Similarly, Lacus and Gilles<sup>6</sup>, stated that the objectives of CHs are to promote the health of children; ensure that they achieve the optimal growth and development both physical and mental; protect children from major hazards through specific measures (immunization, chemoprophylaxis, dietary supplements) and through improvement in the level of care provided by the mothers and the family; treat diseases and disorders with particular emphasis on early diagnosis. The aim is to provide an effective remedy at an early stage before dangerous complication occur. Bennette<sup>7</sup> asserted that the objective of child health services is to prevent the childhood killer diseases, save children from death due to rapid dehydration as a result of diarrhea, assess the nutritional status of children and give prompt attention to those malnourished and those having poliomyelitis, monitor the growth pattern of children especially the under-five children and encourage breast feeding. To achieve the objectives of child health services, such services must be available.



Availability of the services is also another factor for the accomplishment of CHs objective. Hornby<sup>8</sup> describes availability simply as something that is capable of being used or that is obtainable. Govindasamy and Rumesh<sup>9</sup> suggested effective utilization of available child health services as a means that will help to improve child health. Availability of child health services is considered an effective measure to ensure reduction in child mortality. In this study, availability of child health services refers to the quantity and quality of CHs that are provided within the reach of and utilized by members of the community.

Utilization of specific service or actual coverage is expressed as the proportion of people in need of service who actually received it in a given period usually a year, for example, the proportion of people needing medical treatment who actually go to the health facilities to receive treatment. Stewart and Sommerfelt<sup>10</sup> described utilization as the patronage of health services by the target population or by the group whom the services are designed for. WHO<sup>11</sup> reported that at the community level the extent of utilization of child health services will depend on community factors such as culture, values, beliefs, norms, ecology and geography among other things. Factors such as availability of these services, accessibility, and quality of other health services (private and public) around, food, energy, water supply and sanitation will determine and influence the extent of use of child health services. On the other hand, a factor such as government policies and actions on healthy nutrition, population, health financing and expenditure, evaluation and monitoring will make a way for effective utilization. Other governmental policies such as infrastructure, transportation, energy, agriculture, water supply and sanitation can also influence the extent of use of child health services. In this study

utilization of child health services, refers to extent to which available child health services are being put to use by mothers of child bearing age for their children. Mechanic<sup>12</sup> stated that utilization of child health services implies both the availability and willingness of the user of the services to avail themselves of it. Utilization level will determine whether the available child health services are underutilized or effectively utilized in PHC centres in Hong LGA, Adamawa State.

Primary health care centres are health care facilities providing promotive, preventive, curative and rehabilitative services to a community. They may be well built and equipped with adequate human and material resources and well-funded with tax payer's money<sup>6</sup>. Primary health care centres can be held responsible to account for improvement in managing performance and planning in child health care<sup>13</sup>. They have to meet the health care standard and improving the provision of services for children must be integral to the plan. Primary health care centres as used in this study refers to as building or a place where health care services are provided for preventive, treatment and management of diseases and preservation of mental wellbeing through the services offered by the medical, nursing and allied health professions to the mothers for their children.

Mothers play a principal role in the rearing of children and the management of family affairs. They are responsible for the health of their children; parents or guardians take their children to PHC centres for essential health services which will be beneficial to their health. Addai<sup>14</sup> refers to mothers between the ranges of 15-49 years as mothers of childbearing age. In this study, mother of child bearing age are mothers that care for and take their children to PHC centre for child health services. Health



providers are the people that render child health services for member of the community in primary health centres. They are to keep appointment for immunization, checkups and to give education on health issues. They provide preventive, curative and emergency services for the children. Therefore, mothers of childbearing age and health providers are involved in this study which is based at Hong LGA. Mother involvement here is because they are the custodians of their children and have the responsibility of protecting and promoting their health and wellbeing while the health providers are to implement the services available in PHC centres that offer child health services. Addai<sup>14</sup> stated that a number of social and demographic characteristics of the individual affecting the underlying tendency to seek care are income, education and transportation. The researcher seeks to ascertain availability and utilization of child health services in primary health centres in Hong LGA, Adamawa State.

## Methods

### Study Design and Setting

To achieve the objective of the present study, the descriptive survey design was employed. Hong is both a town and a Local Government Area in Adamawa State, Nigeria. Hong LGA is headquartered in the town of Hong and the area council consists of districts of Gaya, Daksiri, Dugwamba, Hong, Kuliya, Uba, Garaha, Husherezum, Kwarhi, Mayo Lope, Shangui, Thilbang, Bangshikai, Pella, Mbanga, Mugwalar, Shashau, Washim, Zah etc. The Kilba are an ethnic group in the Hong LGA. Hong is located in the northern part of Adamawa State, it lies between latitude 7-11 N and longitude 11-14 E. Hong LGA shares boundary with Mubi local government to the East, Gombi local government area to the West, Song

and Maiha local area to the South and Askira Uba local government area of Borno State to the North. Hong LGA has a land area of about 117,240 square kilometers with a population of about 169,126 (National Population Commission, 2006). Hong comprised of one Federal Medical Centre and fifty-two (52) primary healthcare centres across the LGA. They have different cultural values, beliefs and religions. The major religions are Christianity and Islam. Inhabitants of Hong LGA are predominantly farmers, cattle rearers, petty traders and fishermen. Other inhabitants are civil servants in the State civil service and Local Government council. The major crops grown in the area are groundnut, sorghum, maize rice millet, among others. Common cultural practices in this area include polygamy, traditional medicine, love for many children, food taboo, and exclusive breastfeeding. These characteristics influence their decision. The design was therefore considered appropriate for use in the present study because it gave current information on the availability and utilization of child health services in Primary Health Care Centres in Hong LGA, Adamawa State.

### Participants

The participants for this study consisted of all the mothers of child bearing age attending primary health care centres for CHs in Hong LGA. The total population of mothers of child bearing age are three thousand six hundred and sixty-six (3,666) and two hundred and sixteen (216) health care providers in Hong LGA.

### Sample and Sampling Techniques

The sample for the study consisted of 474 respondents (366 mothers and 108 health care providers). This sample size was used based on Nwana's (1991) rule of thumb which states that when the population is a few hundreds, a forty per cent or more



sample will be used and when few thousands, 10 per cent of them will be adequate. Hence 10 per cent of the entire population was selected for the study. Based on the above 366 mothers representing 10 per cent of the population on the demand side (users) was deemed appropriate as the sample size since the population is in few thousands. The sample on the supply side (providers) consisted of 108 respondents representing fifty per cent of the health personnel directly involved in the care of children in the primary health care centres. Hong is made up of fifty-two (52) PHC centres across the LGA.

The multi-stage sampling procedure was employed to draw the sample for the study. In the first stage, stratified random sampling was used to stratify the primary health centres located in the five political wards, in the Local Government Area. The second stage involved the use of simple random sampling techniques of balloting without replacement to select twelve primary health care centres out of the twenty-five functional ones in the five political wards of the Local Government Area. In the third stage, simple random sampling techniques of balloting without replacement was employed to select 30 mothers and 9 health providers from each of the 12 health centres that was sampled. The decision to select 39 respondents from each of the selected health centre was to meet up with 10 per cent recommended by Nwanna (1991) rule of thumb. At the end of these sampling procedures, 474 respondents [366 mothers and 108 health providers] was selected and utilized for this study.

### Data Collection

The instrument used for data collection was the researcher- structured questionnaire. Two parts of the instrument were developed, part A and part B. part A

for the mothers (as children's representatives) and part B for the health providers who were directly involved in CHs provision. The questionnaire comprised of three sections; A, B and C. The questionnaire for CHs providers consisted of 20 items on adequacy and utilization of CHs in section B. The questionnaire for mothers consisted of 10 items on availability of CHs as well as availability of CHs according to Location in sections A and C, respectively.

### Criteria for Inclusion and Exclusion

This study included all mothers of children residing in the sampled area of Hong LGA, who were present in the clinic. All non-residents such as visitors and women above the age of 49 were excluded.

### Validity and Reliability of the instrument.

The validity of the instrument was established by giving a drafted copy of the developed questionnaire to other experts in public health. The main task was to critically examine the questionnaire. The criticisms and suggestions made were used to modify the instrument that was used for data collection. In order to determine the reliability of the instrument, the test-retest method was used in this study. Copies of the questionnaire were administered to ten healthcare workers in selected health centers of Gombi Local Government Area, Adamawa State. Copies of the questionnaire were re-administered to the same HCWs again after two weeks and the results were similar.

### Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) batch system. The data derived from the questionnaire were based on a 2-point scale Yes or No for availability. Frequencies and percentages were used to



interpret the data obtained. A percentage of 50 and above was considered available services and reverse was the case when the percentage was below 50. The columns on adequacy and utilization level were based on 4-point scale. To categorize adequacy into adequate and inadequate child health services the criterion group mean response score of 2.5 and above was considered adequate CHs while those with group mean response score below 2.5 was considered inadequate CHs. The criterion mean score was obtained by adding all scores assigned to the response options and dividing the sum by the number of responses as follows  $4 + 3 + 2 + 1 = 10$ .

**Ethical Consideration**

An introductory letter was sent to Hong LGA, department of primary health care,

attaching both an introductory and ethical approval letter seeking their permission to conduct the study. The same was repeated for the twelve different primary health care centres that were selected, and all of them granted express permission. During this visit, the Heads of the department and the officer in-charges of the primary health care centres were briefed about the research purpose and what the study aims to achieve. Informed consent was obtained from respondents and assurance of anonymity and confidentiality and their wishes and rights were respected throughout the period of data collection including the right to withdraw from the study at any time they wish. Furthermore, participants were encouraged to ask the research team any questions for clarifications.

**Results**

**Table 1: Availability of Child Health Services and Utilization (n = 107)**

As indicated in Table 1, majority of the respondents indicated that the following child health services were available at the PHCs: Growth monitoring (84.1%), nutritional services (96.3%), curative services (100%), oral rehydration therapy (100%), and immunization services (100%).

S/N	Item	Yes		No	
		F	%	F	%
1	Growth monitoring (e.g., child weighing)	90	84.1	17	15.9
2	Nutritional services (e.g., vitamin A)	103	96.3	4	3.7
3	Curative services (e.g., treatment)	107	100.0	0	0.0
4	Oral rehydration therapy	107	100.0	0	0.0
5	Immunization (e.g., BCG, DPT, OPV)	107	100.0	0	0.0
<b>Overall Percentage</b>			<b>96.08</b>		<b>3.92</b>

**Table 2: Adequacy and Utilization of Child Health Services (n = 107)**

Data in Table 2 show an overall mean score of 2.62 in adequacy of growth monitoring services which is greater than the criterion mean of 2.50. The standard deviation which ranges from .656 to 0.725 shows that the responses of the respondent were close to each other. Table 2 further show an overall mean score of 2.60 in curative services which was greater than the criterion mean value of 2.50. The standard deviation which ranges from .698 to 0.899 shows that the responses of the respondent were close to each other. The table show an overall mean score of 3.22 in oral rehydration therapy which was above the criterion mean of 2.50. The standard deviation which ranges from .635 to 0.870 shows that the responses of the respondent were close to each other. The table show an overall mean score of 3.55 in



immunization services which was greater than the criterion mean value of 2.50. The standard deviation which ranges from .645 to 0.728 shows that the responses of the respondent were close to each other.

S/N	Child health services	X	SD	Decision
	<b>Growth monitoring</b>			
1	Child weighing	3.13	.702	Adequate
2	Measurement of height	2.68	.987	Adequate
3	Measurement of mid arm circumference	2.62	.968	Adequate
4	Measurement of head-chest circumference	2.03	1.023	Inadequate
	<b>Overall mean</b>	<b>2.62</b>	<b>0.92</b>	
	<b>Nutritional services</b>			
5	Vitamin A supplement	2.96	.669	Adequate
6	Micronutrient supplementation	2.59	.739	Adequate
7	Education on exclusive breast feeding	3.02	.765	Adequate
8	Education on weaning diet	3.15	.656	Adequate
	<b>Overall mean</b>	<b>2.93</b>	<b>0.71</b>	
	<b>Curative services</b>			
9	Physical examination	2.80	.720	Adequate
10	Laboratory examination	1.60	.899	Inadequate
11	Treatment	3.24	.725	Adequate
12	Referral	2.76	.698	Adequate
	<b>Overall mean</b>	<b>2.60</b>		
	<b>ORT</b>			
13	Supply of oral rehydration sachet	3.08	.870	Adequate
14	Education on use of salt sugar solution	3.22	.705	Adequate
15	Education on continuous breast feeding and use of available home fluid	3.49	.635	Adequate
16	Assessment of dehydration	3.10	.739	Adequate
	<b>Overall mean</b>	<b>3.22</b>	<b>0.74</b>	
	<b>Immunization services</b>			
17	Identification of needed vaccine	3.58	.645	Adequate
18	Documentation	3.56	.716	Adequate
19	Conduct of immunization	3.57	.728	Adequate
20	Education on immunization	3.48	.705	Adequate
	<b>Overall mean</b>	<b>3.55</b>	<b>0.70</b>	
	<b>Grand mean</b>	<b>2.98</b>	<b>Adequate</b>	

**Table 3: Availability of Child Health Services in PHCs in Hong LGA According to Location.**

As indicated in Table 3, all the urban and rural mothers indicated that curative service, oral rehydration therapy and immunization services were available while majority of the mothers of urban and rural PHCs indicated that growth monitoring (urban X = 92.2%, rural X = 76.4%) and nutritional services (urban X = 100%, rural X = 92.7%) were available.

S/N	Items	Urban		Rural					
		Yes	No	Yes	No				
1	Growth monitoring	48	92.3	4	7.7	42	76.4	13	23.6
2	Nutritional services	52	100.0	0	.0	51	92.7	4	7.3
3	Curative services	52	100.0	0	.0	55	100.0	0	.0



4	Oral rehydration therapy	52	100.0	0	.0	55	100.0	0	.0
5	Immunization	52	100.0	0	.0	55	100.0	0	.0

### Summary of Major Findings

Based on the analysis of the data, the major findings of the study are hereby summarized below:

- (1) All the child health services were available in PHC: Growth monitoring (84.1%), nutritional services (96.3%), curative services (100%), oral rehydration therapy (100%), and immunization services (100%). This is contained in Table 1.
- (2) All the child health services were adequate and utilized ( $X = 2.98$ ,  $SD = 0.77$ ) in PHCs. This is contained in Table 2.
- (3) All CHs were available in both urban and rural PHCs: all the urban and rural mothers indicated that curative service, oral rehydration therapy and immunization services were available while majority of the mothers of urban and rural PHCs indicated that growth monitoring (urban  $X = 92.2\%$ , rural  $X = 76.4\%$ ) and nutritional services (urban  $X = 100\%$ , rural  $X = 92.7\%$ ) were available. This is contained in Table 3.

### Discussion

Result in Table 1 revealed that CHs are available in Hong LGA PHC centres (growth monitoring-84.1%, nutritional services (96.3%), curative services (100%), oral rehydration therapy (100%), and immunization services 100%). This finding is not surprising because WHO<sup>11</sup> asserted that Primary Health Care centres are being established in developing countries to provide accessible, affordable and available primary health care to people, in accordance with the Alma Declaration of 1978 by the member

nations of the World Health Organization. This finding is consonance with the finding of Rahman<sup>15</sup> who reported that their respondents exhibited high level of available immunization services, growth monitoring and nutritional services. Furthermore, study conducted by Nteta, Mokgatle-Nthabu, and Oguntibeju<sup>16</sup>, showed that the Child Healthcare Services in the Northern Nigeria were available and accessible to most participants who lived within 5km of such centres and who traveled 30 minutes or less to the clinic, using a taxi or walking were found to be the most common means of transport used to gain access to such a clinic. From the researcher's observation these services are available in Hong LGA health centres. This is so because government has taken health as one of the policy priorities.

Result in Table 2 revealed the adequacy and utilization of CHs. The data shows an overall mean score of 2.62 in adequacy and utilization of growth monitoring service. The standard deviation which ranges from .656 to 0.725 shows that the responses of the respondent were close to each other. An overall mean score of 2.60 in adequacy and utilization of curative services which was greater than the criterion mean value of 2.50. The standard deviation which ranges from .698 to 0.899 shows that the responses of the respondent were close to each other. The table show an overall mean score of 3.22 in adequacy and utilization of oral rehydration therapy which was above the criterion mean of 2.50. The standard deviation which ranges from .635 to 0.870 shows that the responses of the respondent were close to each other. The table show an overall mean score of 3.55 in adequacy and utilization of immunization services which was greater than the criterion mean value of 2.50. The standard deviation which ranges from .645 to 0.728 shows that the





responses of the respondent were close to each other. This finding is expected and not surprising because the researcher expected that CHs should be adequate and utilized in PHC centres. This finding is similar to Bhatin and Cleland<sup>17</sup>, which stated that, CHs were adequately utilized to avert the dangers of poor utilization. Further stated that, adequacy of health services may enable the individual to choose a more health-conscious behavior to improve health, or decide not to choose. In addition, Schor<sup>13</sup> added that women may have more understanding of utilizing child health services that are adequate to prevent the complications and risk of not utilizing them.

Result in Table 3 revealed that all the child health services were available in both urban and rural PHCs: growth monitoring (urban X = 92.2%, rural X = 76.4%) and nutritional services (urban X = 100%, rural X = 92.7%) were available. This finding was not surprising because experience shows that primary healthcare centres are being established in developing countries and specialized health workers are being trained and posted to the primary healthcare centres. This finding was in consonance with that of Rahman<sup>15</sup> who stated that child health services were available in primary health centres, irrespective of locations. This finding is dissimilar to Abor and Abekah<sup>18</sup>, urban dwellers may utilize CH services more than rural dwellers due to distance from health facility. Similarly, Overbosch et al.<sup>19</sup> reported that currently, utilization of CH services prompts a number of rural women to travel more than 5km to the health facilities. This shows that urban dwellers may have availability of CH services and utilizes them more than their rural counterpart. In the same way,

Chakraborty<sup>20</sup> stated that proximity to a health facility has been found to affect the availability and utilization of CH services especially in rural areas as these facilities are usually located at long distances. More so, Oladipo<sup>21</sup> concluded that differential access and availability to health care facilities between the rural and urban centers reduced utilization of CH services for the rural dwellers.

## Conclusion

The findings of the study indicated that: all the child health services were available in PHCs (Growth monitoring: 84.1%, nutritional services: 96.3%, curative services: 100%, oral rehydration therapy: 100%, and immunization services: 100%); all the CHs were adequately utilized (X = 2.98, SD = 0.77) in PHCs; and all CHs were available in both urban and rural PHCs (urban X = 92.2%, rural X = 76.4%) and nutritional services (urban X = 100%, rural X = 92.7%).

## Recommendations

Based on the finding and conclusion of this study, the following recommendation were drawn: the government should insist on increasing the availability of child healthcare services to ensure that they are utilized; families and communities should provide consistent support to ensure adequacy and utilization of child healthcare services in primary healthcare centers and; government should provide more health care centers in various areas in order to avoid distance as being an excuse of location of child healthcare services, or if possible, vehicles be provided to various local government to bring about efficient transportation to the health care centers.



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## INFLUENCE OF SOCIO-ECONOMIC VARIABLES ON THE PRACTICE OF EXCLUSIVE BREASTFEEDING AMONG NURSING MOTHERS IN OBUDU LOCAL GOVERNMENT AREA.

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### Abstract

**Background:** Exclusive breastfeeding (EBF) is a critical component of infant health, providing numerous benefits such as infection prevention and improved survival rates. Despite its proven advantages, EBF rates remain low in many developing countries, including Nigeria. This study aimed to identify factors influencing EBF practices among mothers in Obudu Local Government Area, Cross River State, Nigeria.

**Method:** A sample of 100 women of childbearing age was surveyed using questionnaires, and data were analyzed to determine demographic characteristics and perceptions regarding EBF.

**Result:** Results indicated that maternal literacy, workplace environment, and economic factors influences EBF practices.

**Conclusion:** Recommendations based on primary and secondary data include promoting early initiation of breastfeeding, providing postnatal support, intensifying health education, banning infant formula importation, and organizing awareness campaigns. Despite limitations such as financial constraints and small sample size, this research provides valuable insights for future studies exploring the impact of EBF on child development and strategies to enhance breastfeeding practices.

### INTRODUCTION

Breast milk is the safest and most natural food for infants<sup>1</sup>. When the baby is fed on breast milk only, it is called exclusive breast feeding (EBF) (world health organization (WHO)<sup>4</sup>. According to (WHO)<sup>2</sup>, "EBF" is the provision of no other food or drink, not even water, except

breast milk for at least six months of life, apart from drops or syrups consisting of vitamins, minerals supplements or medicine, and nothing else<sup>4</sup>. Exclusive breastfeeding when practiced for the first 6months has shown to improve the survival chances of newborn<sup>2</sup>. It is cost effective, natural and a proven means for infection prevention in infant<sup>3</sup>. Its role is



crucial and influences the health, growth and development of infants, and is associated with a reduced incidence of early life diseases and condition<sup>4</sup>.

Prior to 2001, the recommended period for EBF by the WHO was 4-6 months after which any fluid or food other than breast milk may be introduced<sup>5</sup>. However, following series of findings review and consultation, the recommendation for exclusive breastfeeding was encouraged to be for the first 6 months of life<sup>6,7</sup>. Findings from the review of Fewtrell et. al.,<sup>5</sup> clearly demonstrated that infants in the second category (exclusive breast feeding for 6months) were less susceptible and had fewer cases of gastrointestinal infection and normal growth compared to the infants who had exclusive breastfeeding for 3-4 months. Ladomenu et. al.<sup>8</sup> agrees that nursing mothers that breast fed their babies exclusively as recommended by WHO had fewer cases of infections than those infants that were either partially or not breastfeed. American Academy of Pediatric (AAP)<sup>9</sup> emphasized that breast-feeding provides an infant complete nutritional needs, protection from infectious disease, increases their physical and mental growth; and develop parent and equally benefit maternal health by reducing the risk of hemorrhage, osteoporosis, ovarian, uterine and breast cancer. It is recommended that exclusive breast feeding last for the six months of life and then followed by supplemented breast-feeding for at least one year (AAP)<sup>9</sup>. While WHO recommended that supplemented breastfeeding be continued up to two years or more<sup>2</sup>.

Globally only 38 percent of infants are exclusively breast fed during the first four months of life and complimentary feeding practice are often ill timed, inappropriate and unsafe<sup>3</sup>. In developed countries where the baby friendly-

Hospital-Initiative has begun in earnest, exclusive breastfeeding rate are increasing such as Canada, China and U.S.A<sup>3</sup>.

Despite the huge benefits of exclusive breast feeding and ill-effects of not exclusively breastfeeding (EBF) is not extensively adopted and practices in the developing countries<sup>10</sup>. In Nigeria, exclusive breastfeeding adoption and practice is still below the recommended WHO and UNICEF standard of 90 percent in children below the age of 6 months<sup>11</sup>. Kayode, Oyedeji, & Alabi<sup>12</sup> conducted a study in Lagos state and found out that non acceptance and practice of exclusive breast feeding was associated with socio-demographic factors. Similarly, the present study focuses on those factors which may directly or indirectly place nursing mothers in the current study area (Obudu local government area), in the likelihood of not adopting and practicing exclusive breastfeeding. Some of the major factors that affect exclusivity and duration of breastfeeding include breast problems such as sore nipples or mother perception that she is producing inadequate milk, Societal barrier such as employment and length of maternity leave, inadequate breastfeeding knowledge, lack of families and societal support, lack of guidance and encouragement from health when breast milk or infant formula no longer supplies required energy and nutrients to sustain normal growth and development<sup>13,14</sup>. These factors in turn promote the early use of breast milk substitute. When breast milk or infant formula no longer supplies infant with required energy and nutrients to sustain normal growth and optimal health and development, complementary feeding should be introduced according to the (WHO) recommendation the appropriate age at which solids should be introduced is around 6month owing to the immaturity of the gastrointestinal tract and the renal system as well as on the neurophysiologic status of the infants. Understanding the



factors affecting infant nutrition in Nigeria can help in developing strategies to promote breast feeding and overcoming problems faced by mothers and children.

Predictors of breast feeding and weaning practices vary between and within countries. Urban or rural difference, age, breast problems, good breastfeeding practice, mode of delivery, healing system practices and community beliefs have all been found to influence breast feeding in different areas of developing countries. This present study seeks to determine infant feeding pattern and its predictors among Nigerians mothers.

## METHODS

**Study Area:** The study area, Obudu local government area in Cross River State, Nigeria, is characterized by its geographical and cultural diversity. It comprises two constituencies, each with five wards, and is known for its tourist attractions such as the Obudu Mountain Resort and Cattle Ranch. The population primarily practices Christianity, with some adherence to traditional beliefs. Governance follows a decentralized system, with decision-making involving village units, age grades, and community leaders. The local economy relies on agriculture, trading, and civil service employment. Educational and healthcare institutions are present, with efforts to integrate traditional healing practices into primary healthcare. The climate is characterized by distinct wet and dry seasons, with temperatures ranging from warm to hot throughout the year. The population of Obudu Local Government Area of Cross River State as of National Population Census Commission<sup>15</sup> Obudu as a whole had the total population of One Hundred and Sixty One Thousand Four Hundred and Fifty Seven (161,457) making Obudu population density and the estimated population of women was thirty

nine thousand Nine Hundred and Sixty Women (39960) approximately.

**Population of the study:** The population for this study comprise of women of child bearing Age (15-45 year) in Obudu Local Government Area of Cross River State up to 1000 people. Five (5) wards where randomly selected out the ten (10) wards in Obudu which include: Alege/Ubang, Utugwang South, Ipong, Utugwang Central and Obudu Urban

**Sample and sampling techniques:** The sample frame consist of the cluster sampling of 10 wards/units making up Obudu Local Government Area the researcher selected five (5) unit out of the ten (10) units which becomes the representative sample for study. The researcher determined the sample size by using the Slovin's formula. Using simple random sampling of balloting without replacement method, the researcher selected 20 respondents from each of the five (5) selected cluster areas to made up the sample size of 100 respondents( 50% of the calculated sample size).

**Inclusion and exclusion criteria:** inclusion criteria are women of child bearing age which practiced exclusive Breast feeding; whose ages were between 15-45 years within five (5) selected wards in Obudu Local Government Area of Cross River State. Women who do not meet this criteria were excluded from the study.

**Data Collection Instrument:** To elicit and extract a relevant information for this study, the researcher used questionnaires as the primary source of information. The questionnaires were developed by the researcher and made up of open-ended questions and it was divided into three parts: Part 1 collected Informed consent, Part 2; Background information and Part 3 consisted of the main questions. The



researcher used the likert response scale to categories her data in the ranking order, interview were conducted by the researcher.

**Validity of the instrument:** The questionnaire that was constructed by the researcher and approved by the project supervisor who confirmed that the items were valid for the purpose of the study.

**Reliability of the instrument:** The reliability test was done using test-retest method. Here the researcher gave 20 questionnaires to health providers in Obudu PHC who were part of the study and collected. Thereafter the similar set of the Questionnaire were administered to the same respondents and retrieved after one week as the two test was correlated using Pearson Product moment Co-efficient Statistic.

**Method of data collection:** The researcher administered 100 Questionnaire to respondents in order to get their responses for the purpose of this study. To make sure the questionnaire were filled correctly the researcher made thorough explanation to the respondents about the purpose of this study and how they should fill the questionnaires.

**Coding and scoring of the instrument:** The researcher used simple percentage mean score to score the questionnaires according to research questions given under the study. Therefore the means score used were calculated using the formular:

$$\text{Mean X} = \frac{\sum X}{N}$$

**Method of data analysis:** The data collected were analyzed using percentages and presented on table for precise determination of individuals variables.

## RESULT

Table 1, which describes the demographic profile of the respondents show that 39% were 15-20 years, 38% were 21-30 years 16% were 31-40 and the remaining 7% of respondent were 41-45 years and above. 50% were farmers, traders were 15%, tailors were 15%, civil servants 10% and salonists were 10%. 15% of the respondents were single, 60% were married, 15% were divorced and 10% were widows. 10% of the respondents completer primary school, 42% of the respondents completed SSCE, 39% represent 39% are NCE/ND 8 respondent representing 8% are HND/BSC while 1 respondent representing 1% are of other certifications. 81 respondents representing 81% Christian, 12 respondents representing 12% are Muslims, 7 respondents representing 7% are traditional religion.

Table 1: Demographic profile of respondents

variables	Frequency	Percentage (%)
Age		
15-20	39	39%
21-30	38	38%
31-40		
41-45	16	16%
Total	7	7%
	100	100%
Occupation		
Farmers	50	50%



Traders	15	15%
Tailors	15	15%
Civil servants	10	10%
Saloonists	10	10%
Total	100	100%
Marital status		
Single	15	15%
Married	60	60%
Divorced	15	15%
widowed	10	10%
Total	100	100%
Educational qualification		
FSLC	10	10%
SSCE	42	42%
NCE/ND	39	39%
HND/BSC	8	8%
Others	1	1%
Total	100	100%
Religion		
Christianity	81	81%
Islam	12	12%
Traditional	7	7%
Total	100	100%

Result in table 2 revealed that majority of the nursing mothers are aware of the practice of Exclusive breast feeding. Out of 100 respondents, 40 strongly agree on the level of literacy of the nursing mothers towards Exclusive breast feeding, 30 agree, 10 disagree and 20 strongly disagree to the fact.

Table 2: Level of illiteracy of nursing mother on the practice of exclusive breast feeding

QUESTION	SA	A	D	SD	Total
Does the level of illiteracy of nursing mother affect the practice of exclusive breast feeding?	40	30	15	15	100
Percentage	40%	30%	10%	20%	100%

In table 3 below, it revealed that out of 100 respondents, 35 strongly agree to the fact that nature of works of mother affect the practice of exclusive breast feeding, 20 Agree, 20 Disagree and 25 strongly disagree to the fact.

Table 3: Nature of work affect the practice of Exclusive breast feeding

QUESTION	SA	A	D	SD	TOTAL
Does the nature of works of Mothers affect the practice					





Of exclusive breast feeding?	35	20	20	25	100
Average:		35%	20%	20%	25% 100

In the below table, it shows that out of 100 respondents` 45 (45%) strongly agreed, 20 (20%) strongly disagreed and 20 (20%) disagreed to the fact.

Table 4: Socio-Economic factors affecting the practice of Exclusive breast feeding

Items	SA	A	D	SD	Total
Does Socio-Economic Factors Affect the practice of exclusive Breast feeding?	45	15	20	20	100
Average:	45%	15%	20%	20%	100%

## Discussion

This study revealed that the illiteracy of mothers affect exclusive breast feeding. This is highlighted in table 2 which show 40 (40%) respondents strongly agreed to this. This result is in alignment with Valero-Chilleron et. al.,<sup>16</sup> which had approximately half the participants (343 women) of low or inadequate health literacy level. It inferred that health literacy levels are closely related to maintaining exclusive breastfeeding and act as a protective factor against early cessation.

According to results on table 3, as 35% strongly agreed out of 100 respondent. This resonates with Abekah-Nkrumah et. al.,<sup>17</sup> which emphasized on influence of workplace factors on working mothers` decision to exclusively breastfeed their babies.

Table 4, it shows that economic factor affect the practice of exclusive breast feeding as 45% of respondent strongly agreed to this. This correlates with Jebena and Tenagashaw<sup>18</sup> which shows that economic factor is significantly associated factors of exclusive breastfeeding.

## Conclusion

The findings of this study shed light on the various factors influencing exclusive breastfeeding practices among mothers. It is evident that maternal literacy, workplace environment, and economic factors all play significant roles in shaping mothers' decisions regarding exclusive breastfeeding. Addressing the multifaceted challenges associated with exclusive breastfeeding requires a comprehensive approach that encompasses educational, workplace, and economic interventions. By addressing these factors, healthcare providers, policymakers, and communities can collectively promote and support exclusive breastfeeding, thereby contributing to the health and well-being of both mothers and infants.

## Limitation of the Study

The major limitations of this research work was financial constraints, Lack of previous research studies on the topic was a delicate and cumbersome hindrance to the researcher and time constraint. In addition, small sample size, issues with convincing potential respondents on privacy and confidentiality non disclosure; were limitations too.

## Recommendation



Based on the finding of this study, the following recommendation were made based on primary and secondary data synthesis: Babies should be put to breast 30 minutes after delivery, Follow-up home visit should be done by health personnel after discharge from the hospital or health facility so as to support mothers to sustain exclusive breast feeding practice, Health education should be given to mothers during antenatal visit to clinic on good nutrition and how to care for their breast. So as to help prepare mother for a successful breast feeding, Public enlightenment campaigns in form of adverts, relieve, jingle, posters and hand bills should be intensified to promote the practice of exclusive breast feeding, Importation of infants formula or artificial milk for babies should be banned by the federal government so as to increase the price of local manufactured ones. This will discourage mothers, especially those of low income status from buying and breast feeding will be established. An award program to healthy babies who are

exclusive fed, like babies shows; may be carried out by voluntary and non-governmental organization to encourage mothers to breast feed exclusively. Exclusive breast feeding seminars and workshops should be organized regularly in other to create and increase awareness of the practice.


Suggestions for further research include: visiting schools to assess the level of intelligence in children who were exclusively breast fed; compared to those who were not exclusively breast fed, home visits to compare the rate of growth and development of children who were exclusively breast fed compared to those who were not, use of clinic cards/folders to assess the health status of exclusively breast fed children to those who were not: in terms of infant related illness. Plus, Study should be carried out on the impact of essential nutrients from breast milk on children mental development in school. There also should be further study on strategies to maximize breast milk production.

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