

**SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA**

University of Ghana



**ASSESSING HEALTH-RELATED QUALITY OF LIFE AMONG CLERGYMEN WITH
DIABETES AND HYPERTENSION: A CASE STUDY OF THE APOSTOLIC CHURCH –
GHANA**

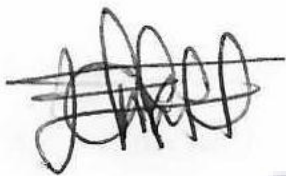
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**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON
IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF
A MASTER OF PUBLIC HEALTH DEGREE**

NOVEMBER 2024

DECLARATION

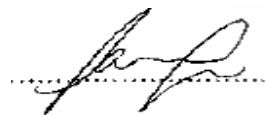
I, Esther Ofori-Wilson, hereby declare that apart from references to other works I have duly acknowledged, this work is as a result of my original work conducted under the supervision of Prof Paulina Tindana. I additionally declare that no part or whole of this dissertation has ever been submitted for the award of any academic credit at this University or any University in the world.



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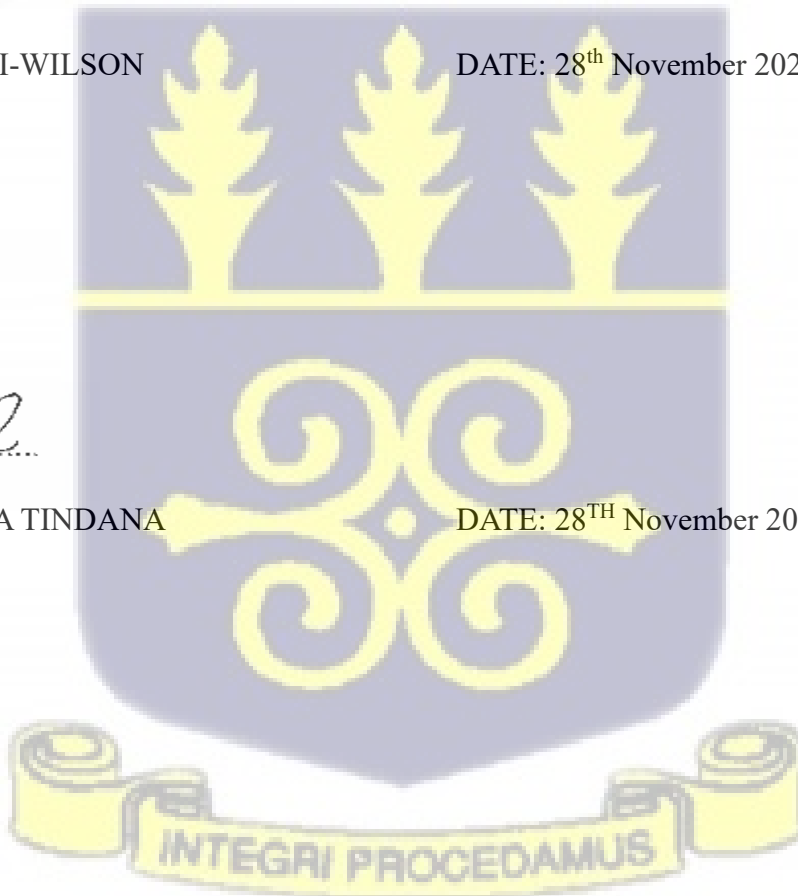
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DEDICATION

This work is dedicated to the almighty God for seeing me through it all to complete the study and coursework. To my supervisor Prof. Paulina Tindana for her support and timely advice. To my dear husband and family, I am so grateful for the support. Lastly, to my father, Rev. S. O. Wilson, who was always there to encourage me and give me comforting words to carry on when my strength failed.



ACKNOWLEDGEMENTS

Firstly, I want to give glory to God for seeing me through, for grace to accomplish, for good health, and most of all for traveling mercies. This dissertation would not have been possible without the guidance, support, and encouragement of numerous individuals and institutions.

My deepest gratitude to my supervisor, Prof. Paulina Tindana, for expert guidance, valuable insights, and unwavering support. To Dr. Vivian Seneo, her support, and counsel, I cannot thank her enough for her availability and readiness to offer help, you are greatly appreciated. To Dr. Richmond Owusu, for his continuous support in diverse forms and encouragement. Also, to Mr. Emmanuel Kwarteng, for his timely intervention and guidance, your constructive feedback is greatly appreciated.

To my dad, you have been my greatest motivator, and your kind words and prayers kept me going. God bless you, Dad. To my dear husband, all I can say is that thank you so much for your patience, understanding, and support throughout this journey. To all my loving family, your prayers and support kept me going.

My gratitude goes to the School of Public Health, especially the Department of Health Policy and Planning lecturers and staff for academic and administrative support especially from the Head of the Department, Dr. Genevieve Aryeetey.

Lastly, I want to acknowledge the leadership of the Apostolic Church - Ghana for permitting me to carry out my studies and supporting me throughout the process. Thank you also to my respondents who contributed to this research. In conclusion, this accomplishment reflects the collective efforts of many, and I am deeply grateful.

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ABBREVIATIONS

EQ-5D-5L	EuroQol 5 Dimension 5 Level
DM	Diabetes
HRQoL	Health-Related Quality of life
HPT	Hypertension
NCDs	Non-Communicable Diseases
QoL	Quality of life
WHO	World Health Organization



ABSTRACT

Background: This thesis investigated the health-related quality of life (HRQoL) among clergy members of the Apostolic Church in Ghana, specifically those managing diabetes and hypertension. The study recognizes the unique stressors inherent in pastoral roles, which often intensify health vulnerabilities.

Objective: The objective of the study was to assess the health-related quality of life (HRQOL) among clergymen with diabetes and hypertension in the Apostolic Church Ghana.

Methods: The study employed a descriptive cross-sectional survey with 515 clergymen in the Apostolic Church-Ghana. The WHOQOL-BREF tool was used to assess HRQoL across four domains: physical health, psychological health, social relationships, and environmental factors. Socio-demographic and self-reported clinical data were obtained through the administration of closed-ended designed questionnaire. Data were analyzed with STATA software version 18. Non-parametric tests (Mann-Whitney) were used to examine relationships between socio-demographics and HRQOL.

Results: All respondents were males with a Mean age of 47.34 (SD ± 7.98) years. The results revealed that the self-reported prevalence of hypertension was (29.9%) while diabetes was (13.4%) within this group. Clergymen with diabetes reported lower physical health scores (M= 60.71, IQR: 53.57–71.43) compared to those without diabetes (M=71.43, IQR 60.71–78.57, $p < 0.001$), and those with hypertension similarly experienced reduced physical health (M=60.71, IQR 50.00–67.86) relative to their non-hypertensive counterparts (75.00, IQR 64.29–80.36, $p < 0.001$). The analysis further identified significant associations between HRQoL outcomes and socio-demographic factors, including education level and urban residence, suggesting that higher

education and urban location correlated with better HRQoL scores. Multiple linear regression analysis determined factors independently associated with QoL domains.

Conclusion: The findings provide critical insights into the health challenges the clergy faces and underscore the importance of targeted, context-specific health interventions to their overall well-being. Key recommendations include tailored interventions, emphasizing culturally sensitive health promotion, improved support systems within church structures, expanded access to healthcare services for the clergy and future research.



CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

This chapter provides the background, rationale, objectives, and significance of the study investigating clergymen's health-related quality of life (HRQoL) within the Apostolic Church of Ghana, specifically focusing on those with diabetes and hypertension.

Chronic diseases can adversely affect health-related quality of life (HRQoL) by limiting physical mobility, reducing the capacity to work, and constraining participation in daily activities. (Khalifa Ibrahim et al., 2022). These conditions often lead to a decline in overall health, impairing individuals' ability to maintain comfort, productivity, and personal fulfillment. Many chronic illnesses significantly restrict functional effectiveness and creativity, thereby diminishing HRQoL and driving up healthcare costs (Khalifa Ibrahim et al., 2022).

Quality of life (QoL) is a multifaceted concept shaped by diverse factors, including individual perceptions, social relationships, environmental conditions, and both physical and mental health aspects (Wong et al., 2018a). When viewed within the context of health and illness, QoL is often referred to as health-related quality of life (HRQoL) to distinguish it from broader quality of life (Tamene et al., 2024). Studies have highlighted the significant roles that clinical factors, cultural and personal values, and social contexts play in influencing QoL (Arjun et al., 2017). HRQoL encompasses attributes related to an individual's physical well-being as well as mental and social dimensions, reflecting a holistic view of health beyond mere physical function (Hernández-Segura et al., 2022).

Clergymen fulfill multifaceted societal roles providing pastoral care and spiritual guidance (Dr. Lovett H. et al 2009), acting as ethical arbiters, and cultural influencers (Owusu et al., 2023). Their leadership fosters collaboration and challenges societal norms (Grigal, 2024). They also provide crucial informal support to older adults, particularly regarding spiritual struggles and mental health (Holleman et al., 2024). However, this demanding vocation presents unique health risks, including neglecting self-care and experiencing adverse mental and physical health outcomes (Terry & Cunningham, 2021). High rates of obesity and obesity-related diseases like diabetes and hypertension, exacerbated by stress and lifestyle factors, are reported among clergymen (Amin et al., 2022a).

Furthermore, clergymen face occupational hazards such as managing crises, professional boundary challenges, and potential hostility. Studies indicate higher rates of occupational distress, burnout, and chronic stress (Adams et al., 2017; Hendron et al., 2012), often coupled with social isolation and limited resources to cope (Terry & Cunningham, 2021). The significant burden of non-communicable diseases Diabetes and Hypertension globally (Alam & Sheeti, 2024), necessitates further investigation into clergymen's vulnerability given these challenges. The diverse roles and responsibilities of clergymen, including congregational care and family obligations, often contribute to stress and inadequate self-care practices, directly affecting their overall health. Therefore, the objective of the study was to assess the health-related quality of life (HRQOL) among clergymen with diabetes and hypertension in the Apostolic Church Ghana.

1.2 Problem Statement

Non-communicable diseases (NCDs) constitute a major global health burden, accounting for approximately 74% of all deaths worldwide, World Health Organization WHO (2023). This

significant public health concern affects populations and health systems alike Martinez et al., (2020). Evidence from Ghana suggests that NCDs are rising among adult populations, with hypertension prevalence estimated at 34% and diabetes at 6% Agyei et al., (2022). Within clergy populations, studies such as Amponsem-Boateng (2017) have reported significant hypertension burdens(38% prevalence rate), underscoring the vulnerability of this occupational group. While some research has documented increased mortality rates from NCDs such as diabetes and hypertension among clergy (Weaver et al., 2008), limited data exists on the overall health status and HRQoL of this group. Studies among United Methodist clergy suggest a higher prevalence of hypertension, pre-diabetes, and other chronic diseases compared to the general population Proeschold-Bell et al., (2011). Phaswana-Mafuya et al., (2013), reported a self-reported prevalence of NCDs of 51.8% among the clergy, with a prevalence of comorbidity (chronic conditions) was 22.5%.

Studies across Ghana, Nigeria, and the U.S., reported high NCD prevalence, emphasizing the public health significance and highlighting the need for HRQoL investigation in these contexts. Brenyah et al., (2024); Minicuci et al., (2014);Agyei et al., (2022); Jackson et al., (2023); Leung et al., (2024).

Clergymen play a pivotal role in providing support, guidance, and counseling to their congregations, often facing demanding and emotionally challenging lifestyles (Rivera-Hernandez & Galarraga, 2015). Their work is often emotionally demanding and characterised by long hours, high stress, and limited opportunities for rest or self-care. These occupational pressures, combined with lifestyle factors such as irregular eating patterns, sedentary behaviour, and inadequate medical check-ups, place clergymen at increased risk of non-communicable diseases (NCDs), particularly

hypertension and diabetes WHO (2023). These demanding roles may contribute to a higher prevalence of NCDs among clergy (Rivera-Hernandez & Galarraga, 2015).

Despite this growing burden, little is known about the health-related quality of life (HRQoL) of clergymen living with NCDs in Ghana. HRQoL is a multidimensional construct encompassing physical, psychological, social, and environmental domains Skevington, Lotfy, & O'Connell, (2004). Understanding HRQoL among clergy is critical, as their well-being directly influences their ability to provide effective pastoral care and maintain congregational health. This study therefore sort to address this gap by systematically examining HRQoL among clergymen with diabetes and hypertension in Ghana.

Specifically, the study investigated: The prevalence and risk profiles of hypertension and diabetes among clergymen in The Apostolic Church-Ghana, situating the problem within Ghana's broader NCD burden Amponsem-Boateng, (2017), Boima et al., (2022). The self-perceived HRQoL status across physical, psychological, social, and environmental domains, using the WHOQOL-BREF instrument to capture clergy-specific experiences Skevington, Lotfy, & O'Connell, (2004); The socio-demographic and occupational factors influencing HRQoL outcomes, including age, education, marital status, and pastoral workload, to identify determinants of vulnerability; and the implications for health policy and church-based interventions, recognising that clergy health is both a public health and pastoral priority in Ghana.

Systematically linking the problem to these objectives, the study provides a clear rationale: clergy are a unique occupational group whose health status has implications not only for their personal well-being but also for the spiritual and psychosocial health of the communities they serve. Addressing their HRQoL challenges contributes to national NCD control strategies and

strengthens the resilience of faith-based institutions in Ghana, particularly the clergymen in Apostolic church, in Ghana.

1.3 Objectives of the Study

This section presents the objectives to the study grouped as general and specific.

1.3.1 General Objective

The objective of the study was to assess the Health-related quality of life (HRQoL) among clergymen with Diabetes and Hypertension in the Apostolic Church.

1.3.2 Specific Objectives:

The following specific objectives were addressed to achieve the general objective of the study;

1. To determine the self-reported prevalence of diabetes and hypertension among clergymen in the Apostolic Church.
2. To determine the overall HRQoL scores of clergymen in the Apostolic Church Ghana with diabetes and hypertension using the WHOQOL-BREF.
3. To establish associations between socio-demographic factors and lifestyle, with HRQoL among clergymen in the Apostolic Church Ghana with diabetes and hypertension.

1.3.3 Research Questions:

The following questions helped to answer the specific objectives of the study;

1. What is the self-reported prevalence of diabetes and hypertension among clergymen in the Apostolic church-Ghana?
2. What are the overall HRQOL scores of clergymen in the apostolic Church Ghana with diabetes and hypertension?
3. What are the overall HRQOL scores of clergymen in the Apostolic church with diabetes?
4. How do socio-demographic factors and lifestyle, influence the HRQOL of clergymen in the Apostolic Church Ghana with diabetes and hypertension?

1.4 Justification and Significance of the Study:

The well-being of clergymen is inextricably linked to the health and vitality of their congregations. Their role in fostering spiritual, emotional, and social welfare within religious communities is paramount. Understanding the relationship between clergy HRQoL and the rising prevalence of NCDs is essential for developing targeted interventions and support systems to enhance their overall well-being.

The Apostolic Church - Ghana represents a unique religious community with distinctive cultural and social dynamics. Exploring the HRQoL of clergymen within this specific context offers a valuable opportunity to gain a nuanced understanding of their unique challenges and stressors, informing the development of culturally sensitive and contextually relevant health promotion strategies. Data from investigating the intersection of religion, health, and well-being holds significant value. Assessing the HRQoL clergymen with diabetes and Hypertension in the Apostolic Church-Ghana has the potential to provide critical insights applicable to similar religious communities globally. By fostering a broader understanding of health challenges experienced by

clergy worldwide, this research may contribute to the development of more effective interventions and support systems for this unique population.

This study embraced significant implications for improving the health and well-being of clergymen within the Apostolic Church of Ghana, a population characterized by unique occupational stressors and limited research regarding their health-related quality of life (HRQoL). The findings will contribute to knowledge in several key areas:

- **Prevalence of NCDs:** The study provides vital data on the self-reported prevalence of diabetes and hypertension among Apostolic Church clergymen in Ghana. This information directly addresses a critical research gap, as existing studies on clergy health are limited, particularly concerning this specific denomination and geographical context (Weaver et al., 2008; Rivera-Hernandez & Galarraga, 2015). Understanding this prevalence is crucial for targeted public health interventions and resource allocation.
- **HRQoL Assessment:** By employing the WHOQOL-BREF, the study provides a comprehensive assessment of HRQoL among clergymen with and without diabetes and hypertension. This allows for a direct comparison of HRQoL scores across these groups, providing valuable insights into the impact of these NCDs on this specific population. The data extends current research on HRQoL among clergy Khalifa Ibrahim et al., (2022b; Wilson, (1995); Hernández-Segura et al., (2022; Sielaff et al., (2021), adding significant knowledge concerning the Ghanaian context.
- **Identification of Risk Factors:** The study identified associations between socio-demographic factors, lifestyle characteristics (diet, physical activity, stress levels), and HRQoL among Apostolic Church clergymen with diabetes and hypertension. This sheds light on modifiable risk factors affecting their well-being, leading to the development of

context-specific interventions. This will directly extend research investigating similar influences on HRQoL in other populations Jiang et al., (2009; Witts et al., (2024).

- **Informing Interventions:** The findings will inform the development of culturally sensitive health promotion programmes and support systems tailored to the needs of Apostolic Church clergymen. This is critical given the unique cultural and social dynamics of this community Bopp et al., (2013); Anshel et al., (2013); Weaver et al., (2008); Barry et al., (2014); Huang et al., (2013), underscoring that a ‘one size fits all’ approach is inappropriate for this unique population. The results have direct implications for improving both clergy and congregational well-being.
- **Global Applicability:** While focusing on the Apostolic Church in Ghana, the study’s findings will have broader implications. Understanding the health challenges faced by clergy in a specific cultural context adds vital insight to the international literature, potentially informing interventions for similar religious communities globally. The results will contribute to a better understanding of health among clergy, informing future research, and promoting well-being for clergy populations internationally Khalifa Ibrahim et al., (2022); Wilson, (1995).

1.5 Organization of the Study

The study is organized into six chapters. The first is Chapter One, which introduces the study, articulating the research problem, defining the objectives and research questions, highlighting the study's significance. Chapter two provides a comprehensive literature review, examining previous research on the topic and evaluating the tools used for assessing HRQoL and presenting the conceptual framework. Chapter three details the study’s methodology offering an in-depth

description of the research design, procedures, and data collection methods. Chapter four presents the study's findings. Chapter five, discusses the implications of these findings. Chapter six provides the study conclusion, the study's limitations and recommendations based on the results and analysis.

Conclusion. This study aims to address these critical research gaps by providing a comprehensive assessment of the HRQoL of clergymen of The Apostolic Church-Ghana, with diabetes and Hypertension. Due to the absence of such a documented study on this population, the findings will contribute to an in-depth understanding of the health challenges faced by clergy and inform the development of targeted interventions to improve their overall well-being. This research gap necessitates a comprehensive assessment to understand the health challenges and inform targeted interventions.



CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.0 Introduction

The literature review provides a critical examination of existing scholarship relevant to quality of life and the health-related quality of life (HRQoL) of clergymen, particularly those living with non-communicable diseases such as diabetes and hypertension. It situates the present study within the broader academic discourse by synthesizing theoretical perspectives, empirical findings, and methodological approaches. Readers should expect a thematic exploration of the concept of quality of life and its health-related dimensions, the global and Ghanaian prevalence of hypertension and diabetes amongst clergy, and the diverse factors that influence HRQoL outcomes.

This chapter it evaluates their contributions, identifies gaps in knowledge, and highlights areas of contention. In doing so, it establishes the rationale for the current research and demonstrates how the study builds upon, extends, or challenges existing evidence. The review also considers the unique occupational and socio-cultural context of clergymen, recognizing how pastoral responsibilities, lifestyle behaviours, and social support systems intersect with chronic disease management.

2.0.1. Clergymen: Their health and Wellbeing

Clergy play a crucial role in promoting community well-being (Bopp et al., 2013; Anshel et al., 2013), they often experience significant occupational stress that negatively impacts their mental health (Weaver et al., 2008; Barry et al., 2014). This stress, coupled with the pressure to address

congregational health concerns, underscores the intricate relationship between religious roles, beliefs, and health outcomes. The multifaceted influence of religiosity on health demands a nuanced approach (Romeu et al., n.d. 2010; Harmon et al., 2024), recognizing that while religious practices can foster social support and positive emotions, they can also contribute to stress and anxiety when individuals perceive a failure to meet religious expectations. Consequently, effective health promotion interventions must be tailored to diverse religious perspectives (Huang et al., 2013). HRQoL encompasses physical, psychological, and social well-being, (Khalifa Ibrahim et al., 2022; Wilson, 1995; Mulugeta et al., 2023; Hernández-Segura et al., 2022; Leung et al., 2024; Rivera-Hernandez & Galarraga, 2015) and is a critical metric for evaluating the impact of various factors on an individual's life (Sielaft et al., 2021). The considerable emotional, psychological, and spiritual demands of clergy roles, alongside potential physical challenges, make this population a unique focus for HRQoL research. While HRQoL studies have explored various populations affected by non-communicable diseases (NCDs), (Jiang et al., 2009; Jackson et al., 2023; Witts et al., 2024) reported that, dedicated studies on clergy are limited. Existing research, particularly on United Methodist clergy in the U.S., reveals concerning rates of obesity, chronic disease, depression, and burnout (Proeschold-Bell et al., 2011; Çetin et al, 2016; Ellison & Lee, 2010) highlighting the crucial need for further research focusing on improving HRQoL among diverse clergy populations globally, including the Apostolic Church in Ghana (Mook, 2024 ; Holleman et al., 2024). Diabetes and hypertension are two of the most common non-communicable diseases globally, significantly affecting both physical and mental health.

Clergymen experience unique stressors, including long working hours, work-life imbalance, occupational stress, burnout, lack of social support, and the emotional burden of dealing with congregational crises and individual trauma (Dr. Lovett H. et al, 2009; Hendron et al., 2012; Mook,

2024; Tamene et al., (2024). The COVID-19 pandemic further compounded these challenges (Achangwa et al., 2022; Fiedler et al., 2023) Although research directly examining clergymen's health behaviors is limited, Mook, (2024) dissertation on Wesleyan clergy reveals a high prevalence of overweight and obesity, correlating with other non-communicable diseases (NCDs) and impacting the health-related quality of life (HRQoL).

These studies indirectly suggest that comparable factors may influence clergymen's health behaviours and QoL. Several studies demonstrate negative correlations between high stress levels and poor physical or mental HRQoL Gajere Adamu et al., (2024). However, some research indicates that high stress doesn't always correlate with poorer physical functioning among the clergy, suggesting factors such as resilient spiritual disposition or strong vocational commitment may be protective Proeschold-Bell et al., (2011) Clergymen's health behaviours, such as diet and exercise, significantly contribute to their overall health and quality of life Xu et al., (2018).

Moreover, nearly one-third of churches in the United States are located in rural areas, yet limited research has examined the unique health challenges rural clergy face Miles & Proeschold-Bell, (2011). Research suggests that rural churches often have smaller congregations and lower annual budgets, indicating potentially fewer resources available to support the health and well-being of rural clergy Miles & Proeschold-Bell, (2011). While rural clergy reported a higher frequency of prayer, further investigation is warranted to explore the complex relationship between religious coping mechanisms and health outcomes in this population, as individuals who are ill often report increased prayer activity Miles & Proeschold-Bell, (2011). A follow-up study by Miles et al., (2011), revealed that United Methodist clergy serving in rural settings reported significantly lower HRQoL as compared to their counterparts in urban areas.

2.1 Socio-Demographic characteristics

Sociodemographic factors including characters such as age, gender, income, and education level, influence the onset and management of diabetes and hypertension as well as HRQoL of affected individuals. Additionally, studies show that lower education and income levels are associated with poorer disease management and reduced QoL Amin et al., (2022). Similarly, sociodemographic factors such as age, income, and level of education, significantly influence health outcomes in individuals with diabetes and hypertension. Lower socioeconomic status has been linked to poorer access to healthcare and lower HRQoL Wong et al., (2018).

The age of clergy members and the age at which they entered ministry significantly influence their perceptions of stress and barriers to health. Younger clergy (under age 35) often cite financial limitations as a major obstacle to achieving optimal health Miles et al., (2011). Clergy members typically possess high levels of education, with a majority holding master's degrees Weaver et al., (2008). However, their salaries often lag other professionals with similar educational attainment, ranking 325th out of 432 occupations Weaver et al., (2008). This discrepancy can contribute to socioeconomic disparities in health outcomes. Higher educational attainment is associated with lower body mass index (BMI), indicating a positive relationship between education and overall health in the general population Manister, (2012). Conversely, lower socioeconomic status is linked to increased stress and poorer health outcomes Ferguson et al., (2015).



2.2. Prevalence of Non-Communicable disease (NCDs) Hypertension and Diabetes and HRQoL

Globally, non-communicable diseases (NCDs) such as hypertension and diabetes remain leading causes of morbidity and mortality, accounting for 74% of deaths World Health Organization, WHO, (2023) Clergymen are particularly vulnerable due to occupational stress, sedentary lifestyles, and limited self-care Proeschold-Bell et al., (2011). The growing prevalence of chronic non-communicable diseases (NCDs) among older adults' places significant strain on healthcare systems, Targeted strategies for the prevention and management of NCDs are urgently required, particularly for economically disadvantaged populations who are most reliant on these essential services (St Clair et al., 2017). This study primarily will depend on data from the self-reported prevalence of hypertension and diabetes from respondents Phaswana-Mafuya et al., (2013). NCDs are long-term conditions that typically progress slowly, are generally not preventable by vaccines or curable by medication, and do not disappear. Examples include hypertension, diabetes mellitus, cardiovascular diseases, chronic respiratory diseases, and certain cancers. Studies demonstrate the significant global prevalence of NCDs Khamaiseh & Habashneh, (2024); Alam & Sheoti, (2024), with varying prevalence rates depending on location and population. For example, in Jordan, hypertension (19.6%), diabetes (17.5%), and other conditions are prevalent, with men experiencing significantly higher rates than women Khamaiseh & Habashneh, (2024). Studies from Phaswana-Mafuya et al., (2013), show that, self-reported prevalence of chronic NCDs was 51.8%. The prevalence of comorbidity (chronic conditions) was 22.5%.

Studies in rural Ghana reported high prevalence rates of hypertension (35%) and diabetes (7.7%), along with a 15.8% self-reported hypertension prevalence among older adults (Ansong et al., 2016; Tetteh et al., 2020). This highlights the significant global and regional NCD burden. Some studies

consistently demonstrate a negative correlation between NCDs and HRQoL Jiang et al., (2009); Nwakile et al., 2023; Jackson et al.,(2023); Mulugeta et al., (2023). This negative relationship is often amplified by the presence of multiple comorbidities, which significantly impact both physical functioning and mental well-being (Leung et al., 2024; Weaver et al., 2008). Studies across Ghana, Nigeria, and the United States have reported high NCD prevalence, underlining the public health significance and emphasizing the need for HRQoL investigation in these contexts (Ansong et al., 2016; Tetteh et al., 2020; Minicuci et al., 2014, Agyei et al., 2022; Jackson et al., 2023; Leung et al., 2024). It is important to note that the specific impact of an NCD on HRQoL may vary depending on the disease itself Witts et al., (2024).

In Ghana, national surveys highlight rising burdens of hypertension and diabetes Agyei et al., (2024; Brenyah et al., 2024). More specifically, Boima et al., (2022) Boima et al. (2022) found that hypertensive patients in a Ghanaian tertiary hospital reported moderate HRQoL, with psychosocial stressors significantly influencing outcomes. Amadu et al., (2025) further demonstrated that treatment adherence strongly predicts HRQoL among hypertensive patients in rural Ghana. Despite these insights, there remains a paucity of research focusing on clergy, underscoring the importance of context-specific investigation. Furthermore, the prevalence of hypertension among church workers reflecting the burden of non-communicable diseases in Ghana's adult population and capturing clergy-specific risk profiles was reported with prevalence figures which emphasized on the aim to quantify hypertension and map associated risks among the clergy Amponsem Boateng (2017).

Studies consistently show that individuals with NCDs report significantly lower HRQoL scores across physical, psychological, and social domains compared to those without (Jiang et al., 2009; Leung et al., 2024; Weaver et al., 2008; Nwakile et al., 2023). This negative relationship is

exacerbated by multiple chronic diseases (Weaver et al., 2008; Mook, 2019; Witts et al., 2024). Mook, (2019), demonstrated the impact of comorbid NCDs on overall well-being in Wesleyan clergy, suggesting a similar trend is likely among Ghanaian clergy.

2.3 Health-Related Quality of Life (HRQoL), Frameworks and Measurement Tools

Quality of life (QoL) is a multidimensional concept encompassing physical health, psychological state, independence, social relationships and environmental context. (World health organization (1997). Quality of life (QoL) is a vital indicator for assessing the health and well-being of individuals, typically encompassing physical and mental health and functional abilities. The WHO BREF version (WHOQOL-BREF) captures individual perceptions of their overall position in life factoring in the cultural context, values, goals, expectations, and personal standards with which they identify. WHOQOL-BREF, (1998). The comprehensive understanding of QoL underscores the importance of integrating environmental and lifestyle factors in health assessment to enhance overall well-being. Diabetes and hypertension are the two most common non-communicable diseases globally, significantly affecting both physical and mental health. Studies have shown that the rising prevalence of diabetes contributes to the burden on the QoL (Wong et al., 2018b).

Health related Quality of Life (HRQoL), focuses on the impact of health on a person's ability to live a fulfilling life. HRQL represents a broad concept of physical, psychological with social functioning and well-being that includes both positive and negative aspects. For people with chronic medical conditions this also includes how their disease and treatment affect disability and every day function. It captured how people perceived and experienced their daily health living. Hernandez-Segura et al. (2022). HRQoL is measured with tools such as the WHOQOL-BREF and

EQ-5D-5L are widely used to measure the physical, psychological, social and environmental health (Tamene (2024).

Having established the theoretical basis of QoL and HRQoL, the next section examines the prevalence of hypertension and diabetes. Among the population in Ghana. With emphasis on the clergy population.

Health-related quality of life (HRQoL) is influenced by a range of socio-demographic and clinical factors. In Ghana, Boima et al. (2022), reported that among male hypertension patients, HRQoL was positively impacted by income level but negatively affected by insomnia, sexual desire dysfunction, educational attainment, and adherence to antihypertensive drugs. These findings highlight the complex interplay between economic, psychosocial, and clinical variables in shaping HRQoL outcomes. They further suggest that interventions must go beyond clinical management to address lifestyle and psychosocial challenges faced by patients.

Various models and instruments assess HRQoL. The Wilson and Cleary model (1995) provides a conceptual basis, encompassing physical, psychological, and social domains. Numerous studies have employed the use of validated instruments for measuring HRQoL. Examples of such studies include “Assessing health-related quality of life with diabetes in Nigeria using the **EQ-5D-5L**” Jackson et al., (2023). Another study by Witts et al., (2024), also examined the “Quality of life of people with diabetes in Benin using **WHOQoL-BREF**”. The **SF-36** tool has also been used to examine the “relationship between the number of NCDs and HRQoL in Chinese older adults” Jiang et al., (2009). Furthermore, (Truong et al. (2023) used the **SF-12** tool to assess “HRQoL in patients with chronic Heart failure”. Also, the **WHOQoL-BREF** tool has been used in several other studies to measure QoL. (Proeschold-Bell et al., 2011; Agyei et al., 2022; Wong et al., 2018a; Nwakile et al., 2023; Feder et al., 2015; Gajere Adamu et al., 2024). The WHOQOL-BREF

instrument demonstrated satisfactory internal consistency across all domains, with Cronbach's alpha values ranging from 0.65 to 0.88. Quality of life (QOL) among hypertensive assessed with WHOQoL-BREF reported that patients were generally moderate across most domains, Skevington, Lotfy, & O'Connell, (2004). Studies assessing QoL among hypertensive patients using WHOQOL-BREF have reported moderate scores across most domains, with the psychosocial domain comparatively lower (Odetunde, Akyinyemi, & Odetunde, (2014); Amadu, Konlan, Amadu & Dzansi, (2025)). In Ghana, studies applying WHOQOL-BREF to hypertensive and diabetic populations confirm moderate QoL scores across most domains, with psychological health comparatively lower Boima et al. (2022).

Studies also suggested a backward multiple linear regression analysis identified several positive predictors of QOL, including male gender, marital status, higher educational attainment, engagement in moderate physical activity, and treatment adherence. Conversely, advanced age and the existence of comorbidities were negatively associated with QOL Ha et al., (2014).

Hernández-Segura et al., (2022), There is a need for robust instruments with strong psychometric properties, particularly concerning mobility. Instrument selection depends on research objectives and target population characteristics, highlighting the necessity of considering both the specific aspects of HRQoL of interest and the cultural suitability of the assessment instrument. Various elements can influence QoL in these domains, including demographic factors such as age, gender, and residential environment (e.g., rural vs. urban settings), as well as health status. Growing awareness of how environmental quality affects general health and QoL has emphasized the role of both physical and built environments in shaping individuals' perceptions of health and well-being, particularly for younger and elderly populations Wong et al., (2018).

2.4 The Factors associated with HRQOL among clergymen

Numerous factors influence HRQoL, including socioeconomic factors (income, education, occupation), with clear differences in HRQoL Jackson et al., (2023); Leung et al., (2024). Clergy members generally have high education levels (many hold Master's degrees) Weaver et al., (2008), but their salaries often lag behind other professionals with similar education (ranking 325th out of 432 occupations) Weaver et al., (2008) potentially contributing to socioeconomic disparities and poorer health outcomes. Higher education is associated with lower BMI Manister, (2012) while lower socioeconomic status is linked to increased stress, limited healthcare access, and poorer health outcomes Ferguson et al., (2015). Age, gender, and marital status also significantly affect HRQoL Jackson et al., (2023); Jarab et al., (2023). Younger clergy (under 35) often cite financial limitations as a major obstacle to optimal health Miles et al., (2011); Proeschold-Bell et al., (2011) and often prioritize congregational needs over their own, leading to boundary issues and guilt. Psychosocial factors like social support, depression, and stress are critical Mulugeta et al., (2023). Workload, community pressures, and spiritual well-being further shape HRQoL. The relationship between spirituality/religiosity and HRQoL is complex, varying based on context and practices (Counted et al., (2018); Ellison & Lee, (2010). Stress and burnout significantly reduce HRQoL, compounded by access to healthcare and support systems Amin et al., (2022a); Wells et al., (2023). Limited research has examined the unique health challenges of rural clergy, who often serve smaller congregations with fewer resources Miles et al., (2011). Clergy residing in rural settings demonstrated lower scores across all domains of health-related quality of life (HRQoL) than their urban counterparts. Additionally, individuals with one or more chronic conditions reported significantly reduced HRQoL measures Khamaiseh & Habashneh, (2024), likewise Miles et al.

(2011) found that United Methodist clergy in rural settings reported substantially lower HRQoL than their urban counterparts.

2.5 Health-Related Quality of Life and Physical Health, psychological Wellbeing

Extensive research consistently shows a strong positive association between physical health and HRQoL across healthy and clinical populations Rodríguez-Fernández et al., (2017); Xu et al., (2018). Regular physical activity significantly enhances HRQoL, improving physical and psychological well-being, and general health status, and reducing unhealthy days.

These positive effects stem from physical activity's well-established benefits on both physical and mental health. Exercise reduces blood pressure, improves metabolic function, and lowers the risk of chronic diseases Haskell et al., (2007). Furthermore, A healthy diet amplifies physical activity's positive effects on HRQoL, especially in older adults Xu et al., (2018). A complete healthy diet rich in fruits and vegetables, whole grains, and lean protein offers essential nutrients for optimal physical and cognitive function Hu, (2002), and reduces the risk of chronic diseases like heart disease and diabetes Willett, (2012). These findings emphasize the importance of incorporating physical activity and a healthy diet for maintaining and improving HRQoL, significantly enhancing both physical and mental health.

Physical Health: This domain includes functional capacity (e.g., mobility and physical endurance), symptom management (e.g., blood sugar fluctuations, blood pressure control), and adherence to treatment (medication, dietary guidelines, and physical activity). Diabetes and hypertension directly impair physical health, reducing energy and overall functional capacity, and necessitating continuous symptom management Hernández-Segura et al., (2022).

Psychological Health: Psychological well-being includes mental health factors such as stress, anxiety, coping strategies (resilience, spirituality), and purpose (sense of religious calling). Chronic diseases often exacerbate psychological challenges, especially stress from long-term disease management and role-related demands Tamene et al., (2024).

2.5.1 Lifestyle characteristics and HRQOL among the clergy

Research documents the detrimental impact of stress and burnout on clergymen's emotional well-being and professional satisfaction B. R. Doolittle, (2010) Younger clergy, those experiencing depression, and those with traumatic church placements are particularly vulnerable Doolittle, (2010). Years of service and reported depression are key predictors of burnout Jacobson et al., (2013); Barnard & Curry, (2012). Blanton and Morris, (1999), highlighted work-related stressors' role in predicting physical symptoms and emotional well-being, exacerbated by socioeconomic factors like low income and limited healthcare access. These factors contribute to poorer health outcomes among clergy who are expected to maintain high levels of physical and emotional well-being. In addition, high-stress environments are common among clergy due to their pastoral and community responsibilities, contributing to the progression of these diseases. High levels of stress are known to exacerbate both diabetes and hypertension, creating a cyclical impact on physical health and mental health well-being. Wong et al., (2018). Additionally, clergymen may face specific stressors related to their roles such as psychological stress from community responsibilities and limited time for self-care which can further deteriorate their HRQoL, since stress levels have been linked to poorer health Amin et al., (2022).

Emerging evidence links lifestyle factors—diet, physical activity, and substance use—to the development of chronic diseases among clergymen. Huang et al., (2013), identified a correlation between obesity, lower physical activity, lower fruit and vegetable intake, higher rates of chronic

diseases, and lower health beliefs, suggesting healthy lifestyle practices are crucial for improving overall health status.

2.5.2 HRQOL and Social and Environmental Well-being

Nooney, (2002), emphasized the importance of religious coping and church-based social support in predicting mental health outcomes, suggesting supportive services like counseling and coping strategy training could improve health. Hill et al., (2003) identified boundary-related stressors time constraints, isolation, and limited mobility as particularly challenging, contributing to burnout and adverse mental health outcomes. Coping mechanisms such as mindfulness meditation, social support, and cognitive-behavioural therapy can mitigate these stressors. Doolittle et al., (2015) highlighted the association between burnout, coping strategies, and spiritual attitudes, a conclusion that coping strategies like acceptance and positive reframing protect against burnout. Regardless, strong family and congregational support networks improve HRQoL Wong et al., (2018a).

Social Relationships: This domain involves support networks (family, congregation), social roles (perceived role as spiritual leader), and social integration (community participation). Effective management of chronic conditions often depends on the strength of support systems that help clergy navigate the balance between physical limitations and role expectations Wong et al., (2018a)

Environmental Factors: External influences, including healthcare access (clinic availability, medication affordability), living environment (safety, cleanliness), and socioeconomic factors (income stability, health insurance), significantly shape HRQoL. Inadequate healthcare access or unstable living conditions exacerbate the challenges of managing diabetes and hypertension (Ansong et al., (2016).

2.6. Conceptual Framework of HRQOL of Clergymen with diabetes and Hypertension:

2.6.1 Theoretical Perspectives

The concept of health-related quality of life (HRQoL) is grounded in broader theories of quality of healthcare. Quality of healthcare has traditionally been defined through dimensions such as effectiveness, efficiency, accessibility, patient-centeredness, equity, and safety (Donabedian, (1988); Institute of Medicine [IOM], (2001)). Donabedian's seminal framework emphasises that healthcare quality is assessed through three interrelated components: structure (resources and organisational settings), process (interactions between providers and patients), and outcomes (changes in health status). Within this framework, HRQoL represents a critical outcome measure, reflecting not only clinical improvements but also the patient's subjective perception of physical, psychological, social, and environmental well-being.

The theoretical linkage between healthcare quality and HRQoL lies in the recognition that high-quality healthcare should extend beyond disease management to encompass holistic well-being. Patient-centered care models highlight that individuals' experiences, values, and satisfaction are integral to evaluating healthcare quality Berwick, Nolan, & Whittington, (2008). Consequently, HRQoL serves as a multidimensional indicator that captures the effectiveness of healthcare interventions in improving life beyond clinical parameters. For example, effective management of chronic conditions such as diabetes and hypertension is not only measured by biomedical outcomes (e.g., blood pressure control) but also by improvements in daily functioning, psychological resilience, and social participation Skevington, Lotfy, & O'Connell, (2004).

2.6.2 Conceptual Framework

The conceptual framework guiding this study is informed by two complementary theoretical models: the WHO Biopsychosocial Model (2004) and Donabedian's model of healthcare quality. The WHO Biopsychosocial Model conceptualises health as a dynamic interaction between biological, psychological, and social factors, emphasising that well-being is shaped not only by clinical conditions but also by individual perceptions, social relationships, and environmental contexts WHO (2004). This aligns with the multidimensional nature of health-related quality of life (HRQoL), which is measured across four domains—physical health, psychological health, social relationships, and environmental factors—based on the WHOQOL-BREF instrument Skevington, Lotfy, & O'Connell, (2004). Physical Health, Psychological Health, Social Relationships, and Environmental health. Each domain has been adapted to address the unique challenges associated with diabetes and hypertension among clergymen in the Apostolic Church of Ghana. This framework also explores how these chronic conditions influence each domain and interact with the distinctive lifestyle and occupational responsibilities of clergy Wilson, (1995; Mulugeta et al., 2023; WHO (2023).

Donabedian's model complements this perspective by framing HRQoL as a key outcome of healthcare quality, influenced by structural and process factors within health systems Donabedian, (1988). Within this framework, non-communicable diseases (diabetes and hypertension) and socio-demographic characteristics (age, education, marital status, residence, lifestyle) are conceptualised as independent variables that influence HRQoL outcomes. The framework supports the study's general objective of assessing HRQoL among clergymen with diabetes and hypertension, and its specific objectives by identifying predictors and domains relevant to clergy health in Ghana

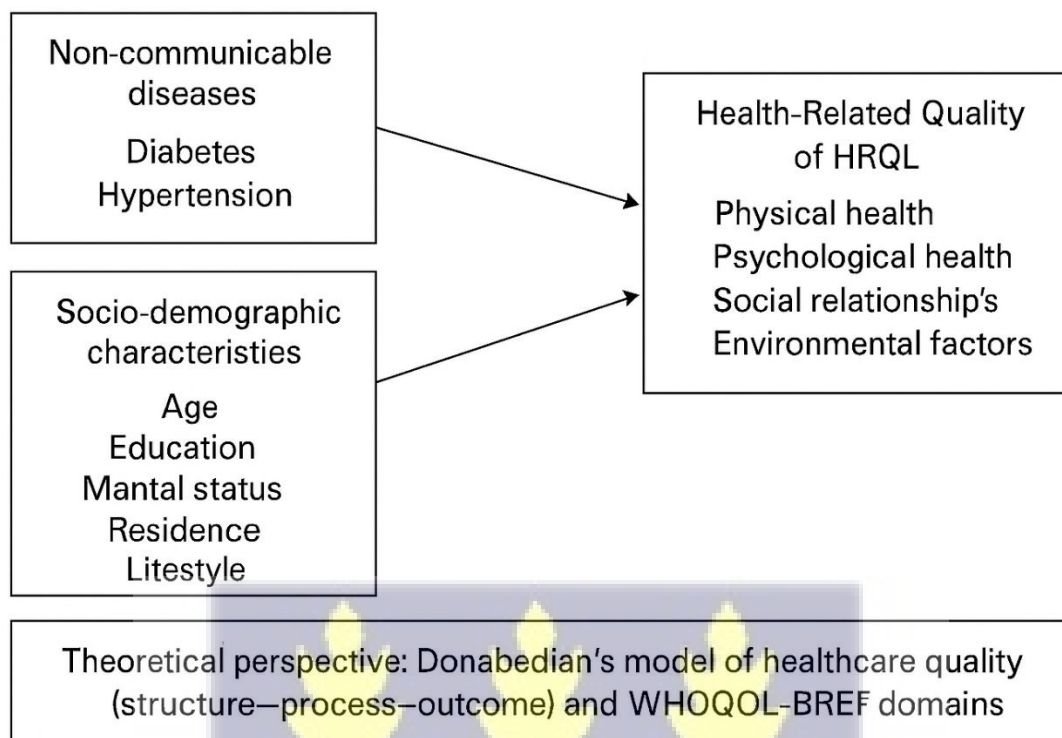


Figure 1.1 Conceptual framework showing relationships between HRQoL and NCDs, Diabetes, and hypertension. Source: WHO Biopsychosocial Model. (2004); Donabedian, (1988).

2.7. Summary of the Chapter

The reviewed literature provides a foundation for understanding the impact of NCDs on HRQoL. NCDs consistently negatively affect HRQoL across multiple domains. While research directly focusing on clergymen's HRQoL and NCDs is scarce, existing studies highlight crucial influencing factors: socioeconomic status, demographic characteristics, and psychosocial factors. The relationship between religiosity/spirituality and HRQoL is complex and influenced by context and individual practices. This research addresses a gap in the literature concerning the HRQoL of clergy within their specific communities. The prevalence of chronic conditions (diabetes,

hypertension, cardiac disease) among clergymen will likely significantly influence their QoL, requiring assessment through an appropriate methodology. Understanding these relationships will inform improved support systems and interventions to enhance the HRQoL of Clergymen in the Apostolic Church-Ghana. This evidence complements a biopsychosocial conceptual framework by situating hypertension as a clinical exposure interacting with psychosocial stressors, lifestyle behaviours, and environmental access to care to shape HRQoL outcomes. For Ghanaian clergy, denominational structures (e.g., union missions and conferences) constitute a practical layer for implementing risk reduction and HRQoL improvement initiatives informed by local prevalence studies. The next chapter addresses the methodology of the study.



CHAPTER THREE

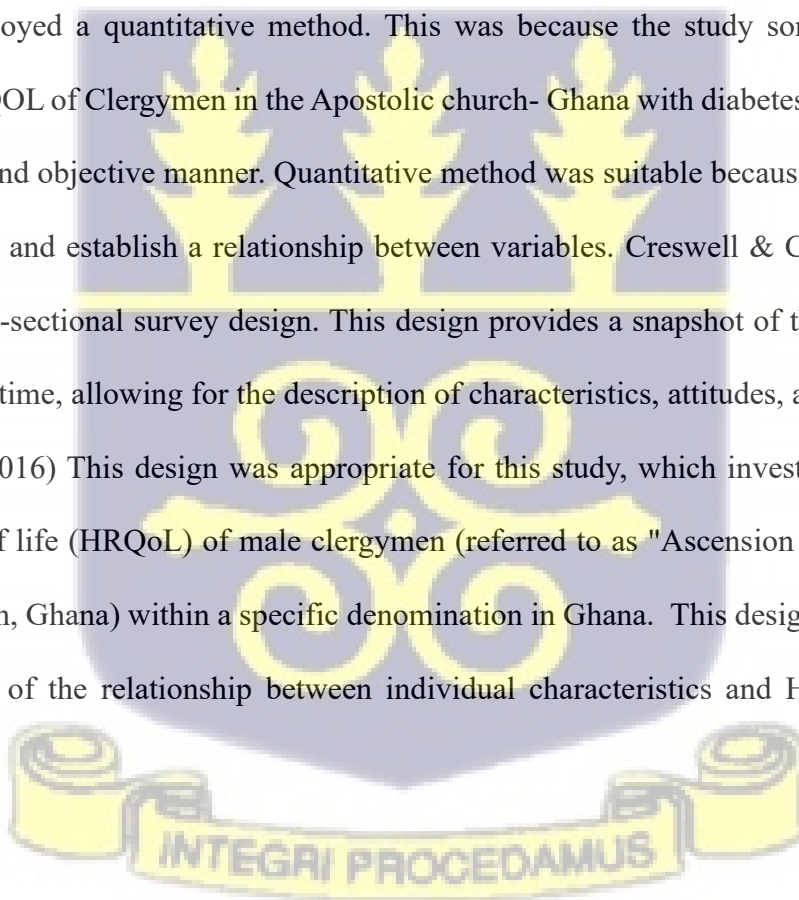
METHODS

3.0 Introduction

This chapter details the research design, study location, population, sampling technique, data collection methods, and data analysis procedures employed in this study.

3.1 Study Design

This study employed a quantitative method. This was because the study sort to measure and analyze the HRQOL of Clergymen in the Apostolic church- Ghana with diabetes and hypertension in a systematic and objective manner. Quantitative method was suitable because the research sort to generate data, and establish a relationship between variables. Creswell & Creswell (2018). A descriptive cross-sectional survey design. This design provides a snapshot of the population at a specific point in time, allowing for the description of characteristics, attitudes, and beliefs. Levin; (2006), Setia, (2016) This design was appropriate for this study, which investigated the health-related quality of life (HRQoL) of male clergymen (referred to as "Ascension Ministers" in The Apostolic Church, Ghana) within a specific denomination in Ghana. This design also allowed for the examination of the relationship between individual characteristics and HRQoL outcomes. Mann, (2003)



3.2 Study Area/Location

The study was conducted in Ghana, specifically among clergymen of The Apostolic Church, Ghana. Ghana is religiously diverse, with a substantial Christian population. According to the Ghana Statistical Service, 71.3% of the population identified as Christian in 2021, and 71% in 2023. (Quoted from the Ghana Statistical Service (GSS) Population and housing Census 2021 updated on 2023) The Apostolic Church in Ghana has 72 administrative areas across the country's 16 regions, further subdivided into districts and local churches. Clergymen are assigned to various locations, providing spiritual and pastoral care to church members.

3.3 Study Population

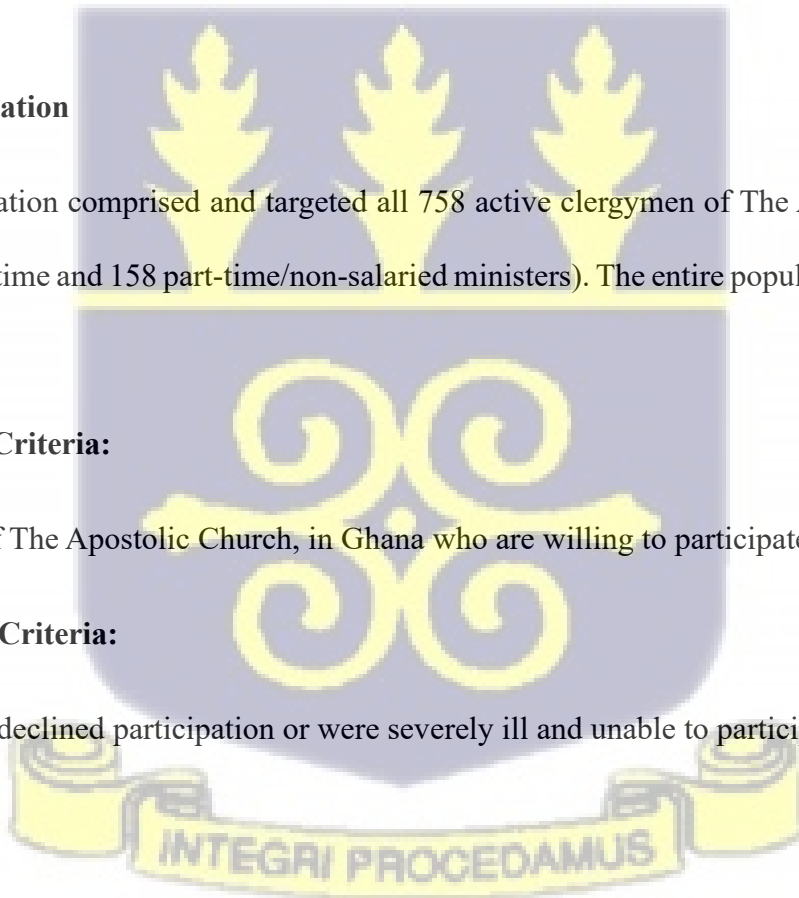
The study population comprised and targeted all 758 active clergymen of The Apostolic Church, Ghana (600 full-time and 158 part-time/non-salaried ministers). The entire population was targeted for this study.

3.3.1 Inclusion Criteria:

All clergymen of The Apostolic Church, in Ghana who are willing to participate.

3.3.2 Exclusion Criteria:

Clergymen who declined participation or were severely ill and unable to participate.



3.4 Study Variables

The study measured the HRQoL of clergymen, focusing on those with and without diabetes and hypertension. The relationship between HRQoL and these chronic conditions was investigated. Demographic variables included age, education, marital status, years of ministry service, and congregation location. The prevalence of diabetes and hypertension was also measured. Using the WHOQOL-BREF, exposure variables included physical health (sleep, rest, etc.), psychological well-being (self-esteem, etc.), social support, independence (mobility), and environmental health (home environment, etc.).

3.5 Sample Size Determination and Sampling Technique

A three-month census-based approach (August to October 2024) was used. This allowed for comprehensive data collection on HRQoL and the relationship between sociodemographic factors and HRQoL across the entire population of clergymen. This approach enhanced the generalizability of the findings. At the end of the study, 515 respondents were collected

3.6 Data Collection Tools and methods.

Collection of data involved a standardized questionnaire with closed-ended questions to comprehensively assess the population's characteristics and perspectives. The self-reported prevalence of diagnosed diabetes and hypertension was assessed using measures derived from responses to survey questions inquiring whether a physician had ever informed the individual of a diabetes or hypertension diagnosis (St Clair et al., 2017). The WHOQOL-BREF instrument was

used to assess an individual's perceived HRQoL. The tool have been tested and proven to be a reliable and valid instrument for assessing the HRQOL of persons with chronic illness. (Li, L., Young, D., Xiao, S., Zhou, X., & Zhou, L. (2004) This tool utilizes Likert scales (1-5) across four domains: physical health, psychological well-being, social support and relationships, and environmental health. Specific items within each domain are detailed below:

- **Physical Health:**

- Pain and discomfort
- Energy and fatigue
- Sexual activity
- Sleep and rest
- Sensory functions.

- **Psychological Well-being:**

- Positive feelings
- Thinking, learning, memory, and concentration
- Self-esteem
- Body image
- Negative feelings.

- **Social Support and Relationships:**

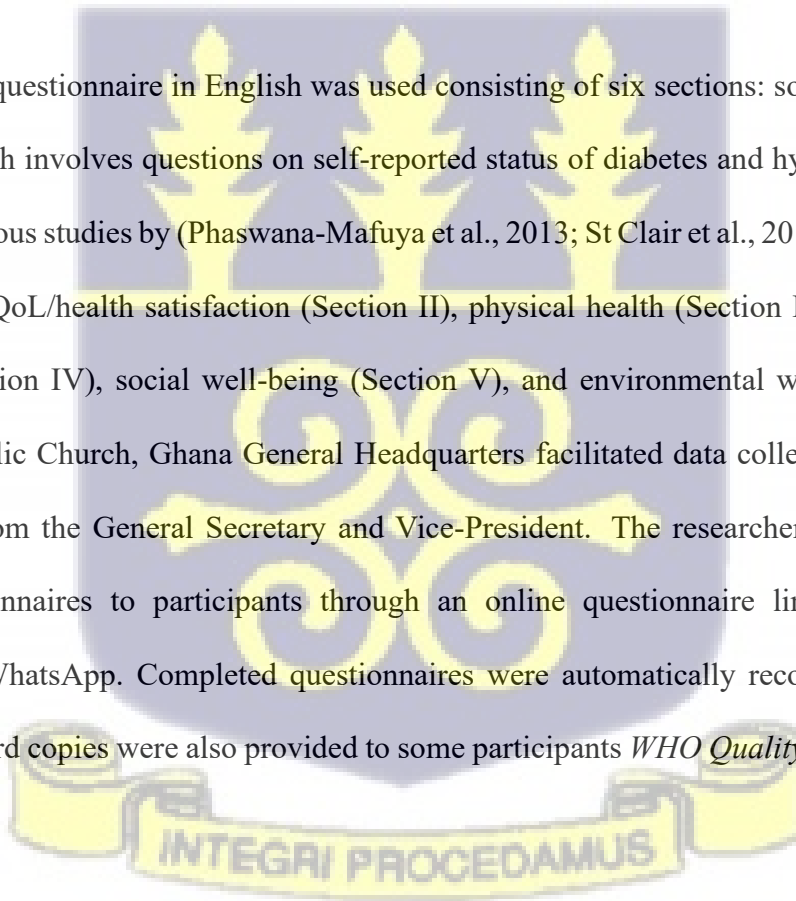
- Personal relationships
- Social support networks
- Activities as provider or supporter.

- **Environmental Health:**

- Freedom, safety and security

- Home environment
- Work satisfaction
- Financial resources
- Health, social care accessibility and quality
- Opportunities for learning/skills
- Recreation and leisure opportunities
- Physical environment (pollution/noise/traffic/climate)
- Transport.

A closed-ended questionnaire in English was used consisting of six sections: socio-demographics (Section I), which involves questions on self-reported status of diabetes and hypertension as was reported in previous studies by (Phaswana-Mafuya et al., 2013; St Clair et al., 2017). Other sections include overall QoL/health satisfaction (Section II), physical health (Section III), psychological well-being (Section IV), social well-being (Section V), and environmental well-being (Section VI). The Apostolic Church, Ghana General Headquarters facilitated data collection. Permission was obtained from the General Secretary and Vice-President. The researcher administered the research questionnaires to participants through an online questionnaire link via email and platforms like WhatsApp. Completed questionnaires were automatically recorded in a Google spreadsheet. Hard copies were also provided to some participants *WHO Quality of Life Scale QQ*, (1998).



3.7 Quality Control

- Pilot Testing: The instrument was piloted with 20 clergymen to assess internal validity.
- Review and Approval: The instrument was reviewed and approved by academic supervisors. The principal investigator was actively involved in data collection.

3.7.1 Validity and Reliability of the Tool

The validity and reliability of the WHOQOL-BREF have been established in various studies demonstrating strong psychometric properties (Burckhardt & Anderson, 2003). These studies confirm the instrument's effectiveness in measuring HRQoL across diverse populations and settings.

3.7.2 Data Processing and Management

Data processing and management ensured the accuracy and integrity of the data.

Data Cleaning: Each received completed questionnaire was reviewed to identify any inconsistencies, errors, or missing values. This process involved checking for illogical responses, missing information, or duplicate entries.

Outlier Removal: Outlier responses, which are significantly different from most of the data and may skew the results, were removed to maintain data consistency and ensure the validity of statistical analysis.

Variable Coding: Where necessary, variables were assigned codes to facilitate data analysis using Microsoft Excel. This involves assigning numerical values or categories to different responses or characteristics, making it easier to analyze relationships and trends.

3.8 Data Analysis

Data were analyzed using STATA version 18. Descriptive statistics (means, medians, standard deviations, interquartile range) were used to present socio-demographic, self-reported prevalence of diabetes and hypertension, lifestyle, and self-reported clinical data, along with WHOQOL-BREF domain scores. Normality was tested using the Shapiro-Wilk test. Inferential statistics, including the Mann-Whitney U test, were used to compare HRQoL between clergymen with and without chronic conditions (hypertension and diabetes). Multiple linear regression analysis determined factors independently associated with QoL domains. The alpha level was set at $p < 0.05$. QoL scores were transformed into a 100-point scale (*WHOQOL-BREF*, n.d.). Results were presented using tables and charts.

3.9 Ethical Considerations

Ethical clearance is a cornerstone of public health research, ensuring that participants' rights, dignity, and welfare are safeguarded throughout the study. For this research, approval was obtained from the appropriate institutional review board in Ghana, in line with both national and international standards. The Ghana Health Service (GHS) Ethical Review Committee provides oversight for biomedical and public health studies, requiring researchers to demonstrate adherence to principles of informed consent, confidentiality, voluntary participation, and minimisation of harm (Ghana Health Service, 2015). This section provides the process of obtaining ethical study for the study.

3.9.1. Ethical Clearance

Ethical clearance was obtained from the Noguchi Memorial Medical Research Institute – Institutional Review Board (NMMR-IRB). IRB 00001276. NMIMR-IRB CPN 144/2023-24

3.9.2 Notification of Authorities and Permission

The Church authorities approved before the study. A letter of introduction was provided by the head of the Health Policy, Planning and Management department, School of Public Health.

3.9.3 Participants' Informed Consent Process

Participants received detailed information about the study's purpose, procedures, risks, and benefits (in the questionnaire introduction/consent form). Electronic participants ticked a consent box, while hard-copy participants signed a consent form.

3.9.4 Privacy and Confidentiality, and Voluntariness

Anonymity was ensured; participants were not required to provide identifying information. Participants could withdraw at any time. Participation was voluntary.

3.9.5 Potential Benefits and Risks

Study outcomes will be shared with church leadership and may inform health policy reforms. Participants were assured of no physical risks. They could skip any question causing discomfort.



3.9.6 Potential Emotional Discomfort

Precautions were taken to address potential emotional discomfort; participants were informed of their rights and access to emotional support, and debriefing sessions were offered as needed. This was communicated in the introductory memo.

3.9.7 Compensation

No material or monetary compensation was offered.

3.9.8 Funding and Cost

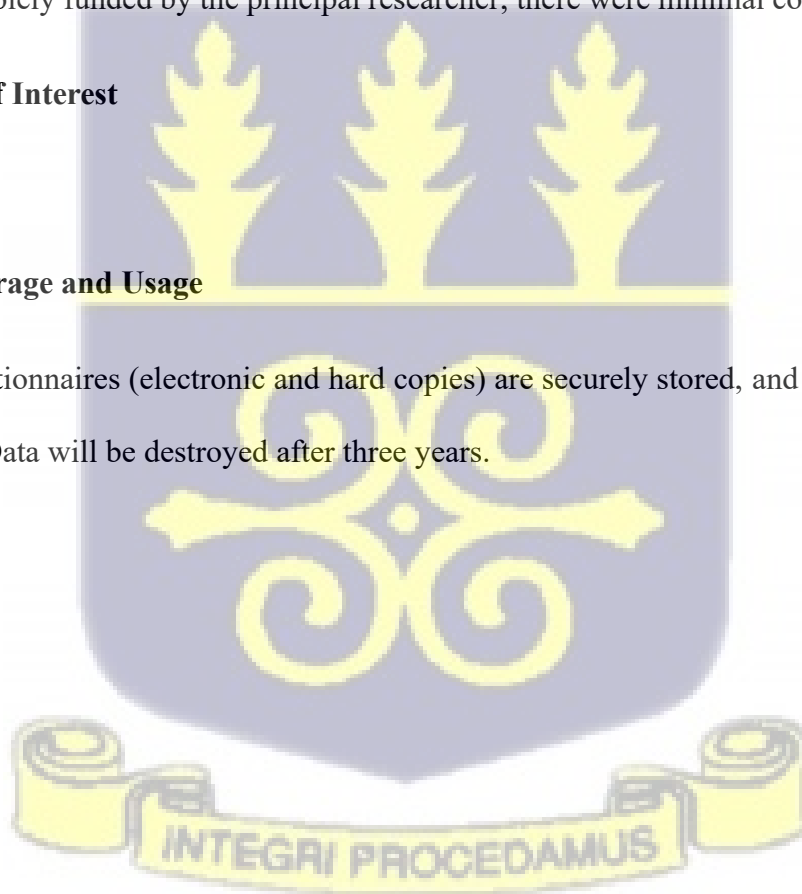
The study was solely funded by the principal researcher; there were minimal costs to participants.

3.9.9 Conflict of Interest

None declared.

3.9.10 Data Storage and Usage

Completed questionnaires (electronic and hard copies) are securely stored, and accessible only to the researcher. Data will be destroyed after three years.



CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the findings of the study on health-related quality of life among clergymen with diabetes and hypertension in The Apostolic Church – Ghana. The results are organised according to the research objectives and analysed using appropriate statistical methods. Relationships are highlighted to provide insight into the impact of chronic conditions on physical, psychological, social, and environmental domains of health-related quality of life. The discussion integrates these findings with existing literature, offering critical interpretation and contextual relevance to the Ghanaian clergy population.

4.1 Socio-demographic Characteristics of the Clergymen

The socio-demographic characteristics of the Clergymen (Table 4.1) revealed a predominance of middle-aged individuals, with a mean age of 47.34 years (SD ± 7.98). Most participants 214 (41.5%) fall within the 40-49 age group and a smaller proportion that were greater than or equal to 60 years was 41 (8.0%). In terms of educational attainment, majority of participants 160 (31.1%) have completed college education. The study reported, nearly all respondents 508 (98.6%) are married. Ethnicity distribution indicates that the Akan group constitutes the largest segment (49.3%), followed by Ga and Ga-Dangbe (24.7%), Ewe (16.7%), Northern Tribe (5.6%), Nzema (2.7%), and others (1.0%). In addition, the type of ministry shows that most Clergymen serve in a full-time capacity 413(80.2%), while 102(19.2%) work part-time or are non-salaried Clergymen. Concerning the location of service, 38.7% serve in urban areas, 35.5% in rural locations, and 25.8% in urban-rural areas. Income levels vary, with a significant proportion (65.2%) earning

between GHS 1000- GHS1500 GHS per month. Fewer respondents reported earning between GHS 2000- GHS2500 GHS (10.7%). A majority (68.9%) do not have an alternative income source, although 31.1% do. The years of service reveal that over half of respondents (52.4%) have served for less than 10 years, with 35.9% having served 10-19 years, and smaller percentages for 20-29 years (8.9%), 30-39 years (1.6%) and above 40 years (1.2%). The mean duration of service is approximately 10.97 years (10.97 ± 7.63). In addition, 44.7% hold another profession, primarily in fields such as government employment (12.0%), private practice (17.7%), and business or trading (6.6%). Transportation access is relatively high, with 65.8% indicating they have a means of transport, predominantly personal vehicles (34.6%) or church-owned motorcycles (16.5%).

Table 4.1: Patient socio-demographic characteristics

Variable	Frequency	Percent (%)
Age (years):		
<40	107	20.8
40- 49	214	41.5
50- 59	153	29.7
≥ 60	41	8.0
Mean $\pm$ SD	47.34 ± 7.98	
Education:		
None	4	0.8
Primary/JHS	21	4.1
Secondary/High School	106	20.6
Undergraduate/Professional	127	24.6
College	160	31.1
Postgraduate	97	18.8
Marital status:		
Single	2	0.4
Married	508	98.6
Separated	1	0.2
Widowed	3	0.6
Divorced	1	0.2
Ethnicity:		

Akan	254	49.3
Ewe	86	16.7
Ga and Ga-Dangbe	127	24.7
Northern Tribe	29	5.6
Nzema	14	2.7
Others	5	1.0
Type of Ministry:		
Full-time	413	80.2
Part-Time/Non-salaried	102	19.2
Place of serving:		
Rural	183	35.5
Urban	199	38.7
Urban-rural	133	25.8
Monthly income level (GHS):		
1000-1500	336	65.2
2000-2500	55	10.7
3000-3500	67	13.0
Above 3500	57	11.1
Alternative source of income:		
Yes	160	31.1
No	355	68.9
Years of service:		
<10	270	52.4
10-19	185	35.9
20-29	46	8.9
30-39	8	1.6
≥40	6	1.2
Mean ±SD	10.97 ±7.63	
Another profession:		
Yes	230	44.7
No	285	55.3
Area of profession:		
Artisan	21	4.1
Business or trading	34	6.6
Government employee/Civil or	62	12.0
Public	91	17.7
Private practice	22	4.3
Self-employed	285	55.3
None		

Means of transport		
Yes	339	65.8
No	176	34.2
Means of transport used:		
Personal vehicle	178	34.6
Personal Motor Cycle	25	4.8
Church-owned vehicle	51	9.9
Church-owned motorcycle	85	16.5
None	176	34.2
Total	515	100.0

4.2 Self-reported Prevalence of Hypertension and Diabetes

The health profile of the clergymen in the sample (Table 4.2) reflects a notable self-reported prevalence of chronic non-communicable diseases (NCDs). About 157 respondents, (29.9%) of respondents reported having chronic NCD, with hypertension being particularly common; 154 (29.9%) reported having high blood pressure. Additionally, 13.4% have been diagnosed with diabetes or high blood sugar levels. Stress levels appear to be a significant concern, as 75.1% of clergymen reported having experienced stress at some point. Furthermore, a small proportion (8.7%) of respondents reported being currently ill, while a majority (91.3%) were not dealing with illness at the time of the survey. These figures demonstrate that hypertension is the most prevalent non-communicable disease among clergymen in The Apostolic Church – Ghana, with diabetes also contributing significantly to the overall disease burden. The co-existence of both conditions in a subset of respondents highlights the risk of multimorbidity, which has important implications for health-related quality of life.

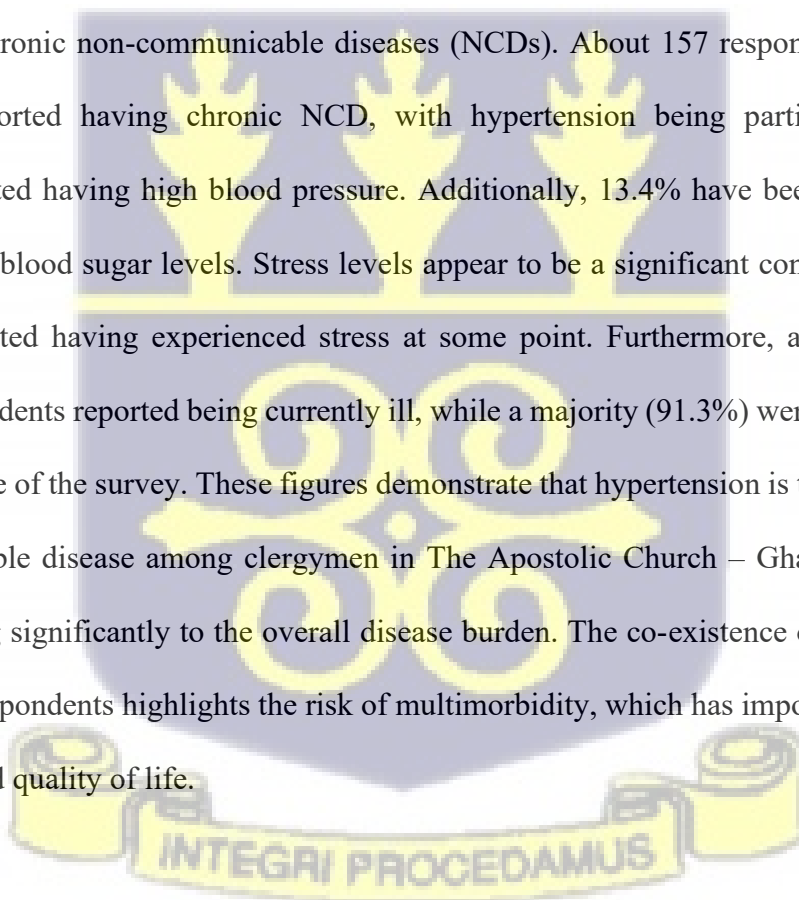


Table 4.2: Self-reported Prevalence of Hypertension and Diabetes among Clergymen

Variable	Frequency	Percent (%)
Chronic NCDs:		
Yes	154	29.9
No	361	70.1
High blood sugar level or diabetes:		
Yes	69	13.4
No	446	86.6
High blood pressure or hypertension:		
Yes	154	29.9
No	361	70.1
Ever been under stress:		
Yes	387	75.1
No	128	24.9
Currently ill:		
Yes	45	8.7
No	470	91.3
Total	515	100.0

4.3: Health-related Quality of Life of Clergymen with Hypertension and Diabetes

The analysis of HRQoL among clergymen with diabetes and hypertension revealed significant differences across various quality-of-life domains.

Clergymen with Diabetes reported lower physical health scores (median 60.71, IQR 53.57–71.43) compared to those without diabetes (71.43, IQR 60.71–78.57, $p < 0.001$).

Clergymen in Hypertension similarly experience reduced physical health (60.71, IQR 50.00–67.86) relative to their non-hypertensive counterparts (75.00, IQR 64.29–80.36, $p < 0.001$).

Psychological well-being is notably impacted by hypertension (median 75.00, IQR 62.50–75.00

vs. 75.00, IQR 66.67–79.17, $p = 0.004$), though diabetes does not have a significant effect in this domain ($p = 0.323$). Both conditions significantly reduce scores in the social relationship domain, with lower median scores for clergymen with diabetes (58.33, IQR 50.00–66.67 vs. 66.67, IQR 58.33–75.00, $p < 0.001$) and hypertension (58.33, IQR 50.00–66.67 vs. 75.00, IQR 58.33–75.00, $p < 0.001$). However, environmental quality of life appears unaffected by either condition, as there are no significant differences in scores between those with diabetes or hypertension and those without.

Table 4.3: HRQoL of Clergymen with Hypertension and Diabetes

Characteristics	Physical health domain Median (IQR)	Psychological domain Median (IQR)	Social relationship domain Median (IQR)	Environmental domain Median (IQR)
High blood sugar level or diabetes:				
Yes	60.71(53.57,71.43)	75.00(62.50,79.17)	58.33(50.00,66.67)	59.38(53.13,65.63)
No	71.43(60.71,78.57)	75.00(66.67,79.17)	66.67(58.33,75.00)	62.50(56.25,68.75)
Test-statistics (p -value)	4.496 (<0.001)	0.988 (0.323)	5.030 (<0.001)	1.324 (0.1856)
High blood pressure or hypertension:				
Yes	60.71(50.00,67.86)	75.00(62.50,75.00)	58.33(50.00,66.67)	62.50(56.25,68.75)
No	75.00(64.29,80.36)	75.00(66.67,79.17)	75.00(58.33,75.00)	62.50(53.13,68.75)
Test statistics (p -value)	8.841 (<0.001)	2.845(0.004)	7.225(<0.001)	-0.253(0.801)

Mann-Whitney U test

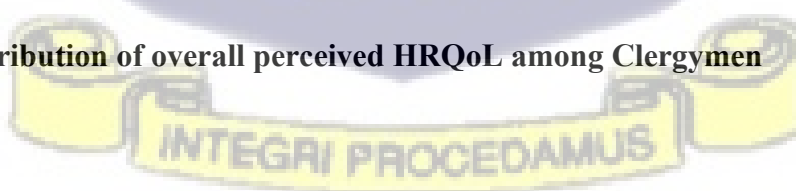
Bold figures are significant at $p < 0.05$

4.4 Overall perceived HRQOL of Clergymen

Figure 4.1 below presents the distribution of perceived overall HRQoL among clergymen, with the majority (69.32%) rating their HRQoL as "good" and 8.74% as "very good." A smaller portion of respondents report more neutral or less favorable perceptions: 19.22% rate their HRQoL as "neither poor nor good," while only 1.55% and 1.17% rate it as "poor" and "very poor," respectively. The mean HRQoL score is ($SD 70.72 \pm 16.17$).



Figure 4.1: Distribution of overall perceived HRQoL among Clergymen



4.5. Perceived satisfaction with health among clergymen

Figure 4.2 Illustrates the distribution of perceived satisfaction with health among clergymen. Majority of respondents report positive health satisfaction, with 60.19% indicating they are "satisfied" and 11.46% "very satisfied." A smaller proportion of clergymen report neutral or less favorable satisfaction levels: 24.27% are "neither satisfied nor dissatisfied," while 3.11% are "dissatisfied," and only 0.97% are "very dissatisfied." The mean satisfaction score is 69.51 (SD 69.51±18.06).

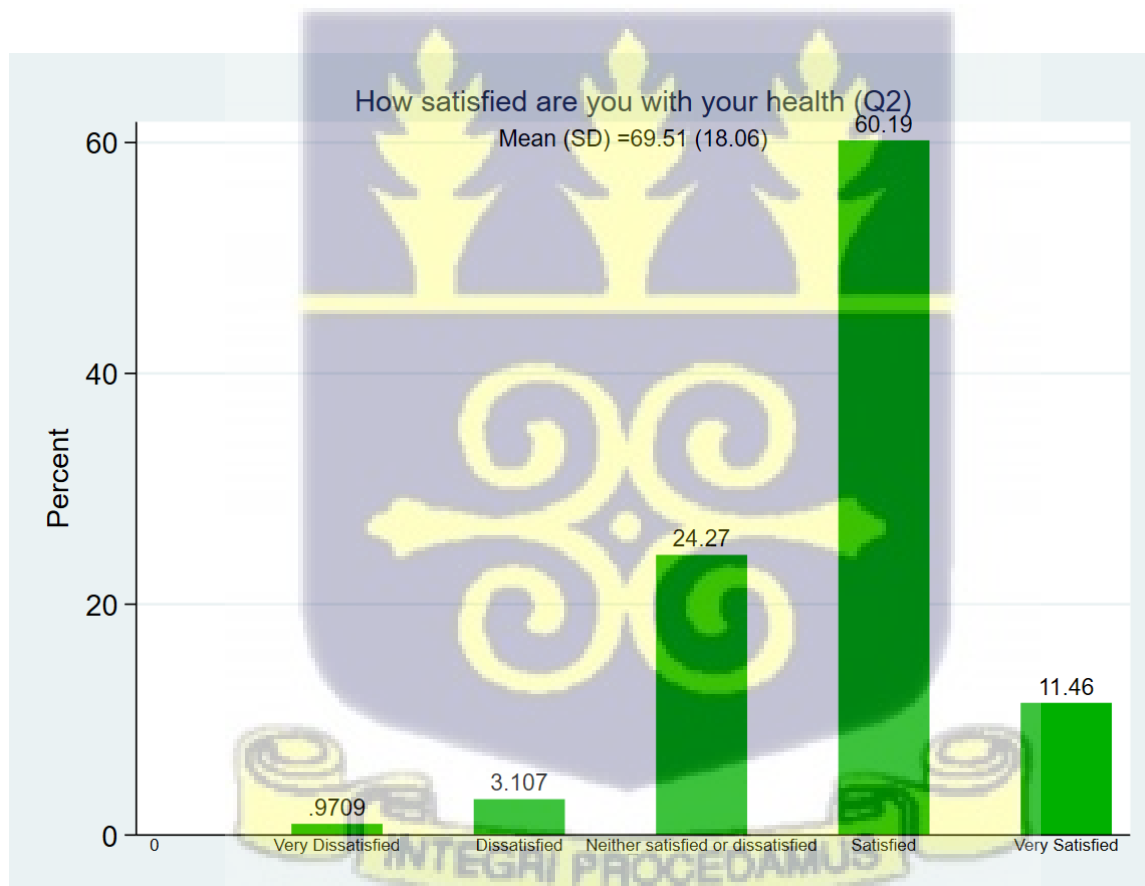


Figure 4.2: Perceived satisfaction with the health of Clergymen

4.6 HRQoL Related Quality of life among the Clergy

Table 4.4, Provides an overview of the health-related quality of life (HRQoL) domain scores among clergymen, showing scores across four domains: physical health, psychological, social relationships, and environment. The physical health domain (DOM1) has scores ranging from 17.86 to 100.00, with a mean score of 68.89 ($M=68.89$, $SD=14.03$), indicating moderate satisfaction in physical well-being. The psychological domain (DOM2) scores range from 29.17 to 100.00, with a mean of ($M=72.52$, $SD = 11.71$), reflecting relatively high psychological well-being. Social relationships (DOM3) have a broader range from 0 to 100.00, with a mean score of ($M=65.19$, $SD = 17.91$), suggesting variability in social satisfaction. The environment domain (DOM4) scores vary from 12.50 to 90.63, with a mean score of ($M=61.04$, $SD = 11.54$), indicating slightly lower perceived quality in environmental factors.

Table 4.4: Health related Quality of life among the Clergy. scores (N=515)

QoL domains	Min	Max	Mean (SD)
Physical (DOM1)	17.86	100.00	68.89 (14.03)
Psychological (DOM2)	29.17	100.00	72.52 (11.71)
Social relationships (DOM3)	0	100.00	65.19 (17.91)
Environment (DOM4)	12.50	90.63	61.04 (11.54)

4.7 Factors associated with HRQOL among Clergymen

The multiple linear regression analysis shows significant associations between several factors and HRQoL across physical health, psychological, social relationship, and environmental domains

among clergymen. For education, compared to clergymen with up to senior high school (SHS), those with a postgraduate education show a 7.25-point higher physical health score (AOR: 7.26, 95%CI: 0.082-0.418, $P=0.001$), a 4.74-point higher psychological score ($p = 0.011$), and a 5.98-point higher social relationships score ($p = 0.040$). Similarly, those with an undergraduate or professional, or college education score 3.10 points higher in physical health ($p = 0.025$) and 2.79 points higher in psychological well-being ($p = 0.036$) compared to those with Up to SHS education. In ethnicity, Ga and Ga-Dangbe individuals score 2.91 points lower in physical health ($p = 0.050$) and 3.02 points lower in psychological well-being ($p = 0.025$) compared to the Akan group, while individuals from other tribes score 2.91 points lower in psychological well-being ($p = 0.015$) and 3.30 points lower in the environmental domain ($p = 0.005$). Regarding ministry type, part-time or non-salaried roles are associated with a 3.61-point higher psychological score ($p = 0.017$) and a 6.82-point higher environmental score ($p < 0.001$) compared to full-time roles. Place of service also shows notable differences, with clergymen serving in urban areas scoring 2.96 points higher in the environmental domain ($p = 0.023$) than those in rural areas. Years of service is negatively associated with the environmental domain of HRQoL, a 1-year increase in the years of service will lead to 0.15 points decrease in the environmental domain score ($p = 0.04$). Additionally, having access to transportation shows a 3.33-point higher physical health score ($p = 0.007$) compared to those without transportation access, highlighting the importance of mobility for physical well-being. Health conditions have substantial impacts as well; clergymen with hypertension score 7.90 points lower in physical health ($p < 0.001$) and 11.12 points lower in social relationships ($p < 0.001$) compared to those without hypertension. Those with diabetes report a 6.56-point lower social relationships score ($p = 0.014$). Additionally, experiencing stress is associated with a 5.03-point lower physical health score ($p = 0.001$) and a 2.53-point lower

environmental score ($p = 0.041$). Lastly, being currently ill corresponds to a 5.64-point lower physical health score ($p = 0.015$), a 5.41-point lower psychological score ($p = 0.020$), and a 6.31-point lower environmental score ($p = 0.001$) compared to those not currently ill.

Table 4.5: Multiple linear regression showing factors associated with four domains of quality of life of Clergymen.

	Quality of life domains							
	Physical health		Psychological		Social relationship		Environmental	
	β (95%CI)	P value	β (95%CI)	P value	β (95%CI)	P value	β (95%CI)	P value
Age	0.082	0.418	0.131	0.159	0.084	0.540	0.059	0.436
Education								
Up to SHS	Ref		Ref		Ref		Ref	
Undergraduate/ Professional/ College	3.104	0.025	2.788	0.036	2.332	0.214	-1.042	0.389
Postgraduate	7.245	0.000	4.738	0.011	5.985	0.040	-0.643	0.685
Ethnicity								
Akan	Ref		Ref		Ref		Ref	
Ga and Ga- Dangbe	-2.908	0.05	-3.024	0.025	-2.271	0.242	-2.077	0.077
Other Tribes	-1.630	0.206	-2.910	0.015	-1.518	0.402	-3.302	0.005
Type of Ministry								
Full-time	Ref		Ref		Ref		Ref	
Part- Time/Non- salaried	1.674	0.368	3.613	0.017	3.054	0.210	6.823	0.000
Place of serving								
Rural	Ref		Ref		Ref		Ref	
Urban	-1.713	0.287	-1.245	0.395	-2.551	0.231	2.960	0.023
Urban-rural	-1.341	0.321	0.542	0.688	-2.245	0.276	2.134	0.095

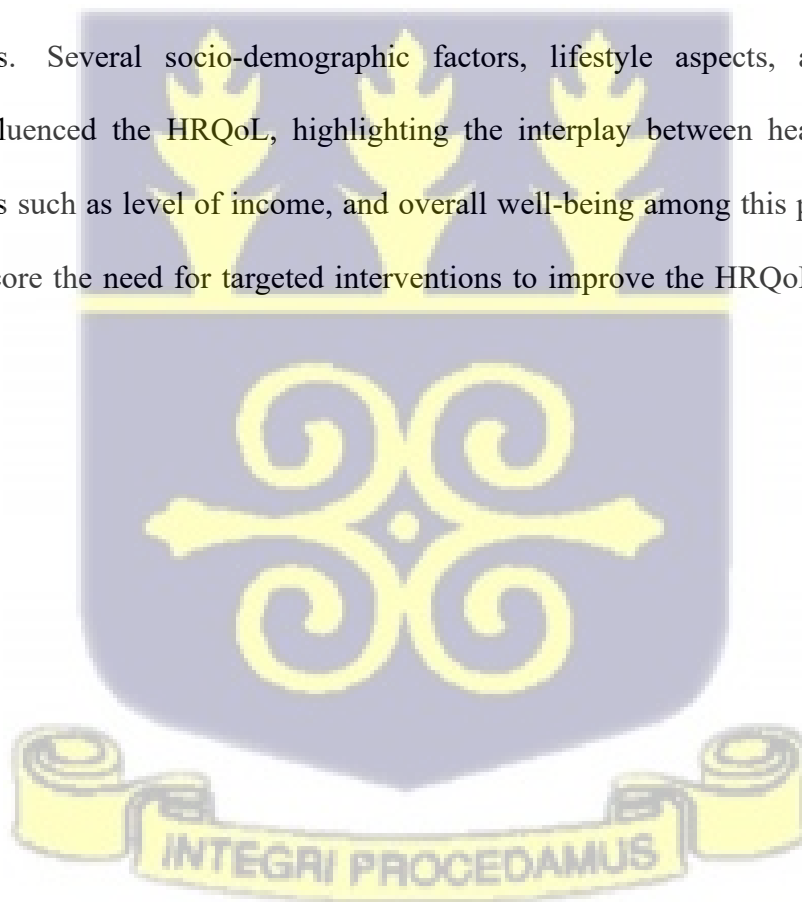
Monthly income level (GHS)								
1000-1500	Ref		Ref		Ref		Ref	
Above 1500	-0.754	0.626	1.865	0.132	-1.938	0.344	1.524	0.180
Alternative source of income								
No	Ref		Ref		Ref		Ref	
Yes	-1.052	0.436	1.291	0.275	-0.250	0.895	1.068	0.346
Years of service	-0.110	0.290	-0.166	0.108	-0.022	0.872	-0.150	0.040
Another profession								
No	Ref		Ref		Ref		Ref	
Yes	0.503	0.693	-0.592	0.604	0.512	0.768	-0.807	0.468
Means of transport								
No	Ref		Ref		Ref		Ref	
Yes	3.332	0.007	-0.443	0.682	1.686	0.283	-0.059	0.955
Chronic NCDs								
No	Ref		Ref		Ref		Ref	
Yes	-1.365	0.423	0.336	0.837	2.580	0.363	3.450	0.010
High blood sugar level or diabetes								
No	Ref		Ref		Ref		Ref	
Yes	-1.426	0.407	-0.079	0.964	-6.564	0.014	-1.925	0.191
High blood pressure or hypertension								
No	Ref		Ref		Ref		Ref	
Yes	-7.899	0.000	-2.222	0.154	-11.120	0.000	0.985	0.450
Ever been under stress								
No	Ref		Ref		Ref		Ref	
Yes	-5.034	0.001	-0.432	0.741	-0.431	0.816	-2.528	0.041
Currently ill								

No	Ref		Ref		Ref		Ref	
Yes	-5.640	0.015	-5.414	0.020	-3.390	0.151	-6.310	0.001

SHS: Senior High School *Bold figures are significant at $p < 0.05$*

4.8 Summary of Findings

This study revealed a significant self-reported prevalence of hypertension and diabetes among clergymen in the Apostolic Church of Ghana. Clergymen with these NCDs experienced significantly lower HRQoL scores across various domains compared to their counterparts without these conditions. Several socio-demographic factors, lifestyle aspects, and stress levels significantly influenced the HRQoL, highlighting the interplay between health status, socio-economic factors such as level of income, and overall well-being among this population. These findings underscore the need for targeted interventions to improve the HRQoL of clergymen in Ghana.



CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Introduction

This chapter presents the results of the study, organised in line with the research objectives outlined earlier. It provided a detailed account of the socio-demographic characteristics of the respondents, followed by findings on the prevalence of diabetes and hypertension among clergymen. The chapter further reports on the health-related quality of life (HRQoL) scores across physical, psychological, social, and environmental domains, highlighting variations between participants with and without chronic conditions.

5.1 Socio-demographic characteristics and HRQoL of Clergymen

This study examined the socio-demographic characteristics of 515 clergymen and their associations with health-related quality of life (HRQoL), focusing on age, marital status, employment, income, education, and geographic location. Participants were predominantly middle-aged (mean age 47.34 years), married (98.6%), and employed full-time (80.2%), with most earning GHS 1000-1500 GHS monthly (65.2%), aligning with a research finding that reported that clergymen often lag in salaries compared to other professionals with similar educational attainment (Weaver et al., 2008). Higher educational attainment was observed in 49.9% of participants, suggesting improved health literacy and stress management potential. Income and education positively correlated with HRQoL, consistent with literature from (Wong et al., 2018b) indicating these factors enhance health awareness and treatment adherence.

Urban-rural representation highlighted potential disparities in healthcare access, with urban clergy potentially having better healthcare resources. Nearly half (44.7%) held additional employment,

suggesting multifactorial stress and time management demands that may affect HRQoL. (Wong et al., 2018b). These socio-demographic insights underscore the need for targeted health interventions that consider income constraints, educational needs, and urban-rural disparities to improve HRQoL among clergy with chronic health conditions.

5.2 Self-reported Prevalence of Diabetes and Hypertension among the clergy

Findings from the study revealed that the self-reported prevalence of hypertension (29.9%) and diabetes (13.4%) among the study participants was noteworthy. This prevalence is noteworthy as it approaches global averages for many adult populations for diabetes and hypertension (WHO, 2023.). The findings also align with studies from (St Clair et al., 2017) that reported an increase in self-reported prevalence of diabetes and hypertension and suggest that targeted measures for prevention are required. Likewise (Phaswana-Mafuya et al., (2013), reported on the higher prevalence of self-reported NCDs. The high report of self-reported diabetes and hypertension in these findings also aligns with global trends indicating a substantial burden of NCDs (WHO 2023; Martinez et al., 2020). Additionally, these findings also reflect higher rates observed in some prior studies in Ghana by (Ansong et al., 2016) which reported a high self-reported prevalence of hypertension among adults (Tetteh et al., 2020).

Furthermore, the high prevalence of self-reported diabetes and hypertension among these clergymen supports reports from a study carried out in Jordan which reported a higher prevalence of diabetes and hypertension among men than in women (Khamaiseh & Habashneh, 2024). The higher-than-expected prevalence highlights the need for targeted interventions within this specific religious community in Ghana. The high proportion of individuals without a reported chronic

disease is encouraging but could be influenced by underdiagnosis, especially for conditions like hypertension and diabetes, which are often asymptomatic in the early stages. This figure underscores the importance of regular health monitoring in populations that may not routinely engage with healthcare systems due to time constraints or cultural attitudes toward illness. This finding directly addresses the first research question.

Furthermore, the prevalence of hypertension among church workers, as reported by Amponsem Boateng (2017), reflects the broader burden of non-communicable diseases in Ghana's adult population and highlights clergy-specific risk profiles. His study emphasised the need to quantify hypertension and map associated risks among gospel workers in the Northern Ghana Union Mission of the Seventh-Day Adventist Church. In comparison, the present study similarly identified a considerable proportion of clergymen living with hypertension, reinforcing the evidence that clergy are a vulnerable occupational group within Ghana's health landscape.

While Amponsem-Boateng's findings were denominationally specific, focusing on Seventh-Day Adventist gospel workers, the current study broadens the scope by including clergymen across different denominations. Both studies converge on the conclusion that hypertension is a significant health challenge among clergy, shaped by occupational stress, lifestyle factors, and limited self-care. The consistency between these findings strengthens the argument that clergy health requires targeted interventions, not only within individual denominations but across the wider religious community in Ghana.



5.3 HRQoL scores of Clergymen with Hypertension and Diabetes

The study revealed that clergymen with diabetes reported significantly lower HRQoL scores recorded in the physical and social relationship domains, while those with hypertension showed significantly lower scores in the physical, psychological, and social relationship domains. These findings are consistent with existing literature demonstrating a negative correlation between NCDs and HRQoL across diverse populations Jiang et al., (2009; Leung et al., (2024); Jackson et al., (2023); Mulugeta et al., (2023); Mook, (2024); Witts et al., (2024). It also supports findings from some research that showed a strong association between physical well-being and HRQoL across healthy and clinical populations (Rodríguez-Fernández et al., (2017); Xu et al., (2018). Again, these findings are consistent with existing literature that showed a low level of HRQoL scores in the social domains (Witts et al., (2024).

The findings of the study also suggested a different level of impact for hypertension and diabetes, with significantly lower HRQoL scores recorded in the physical and social relationship domains, and hypertension reporting lower scores in the physical, psychological, and social relationship domains. This is associated with a study that was carried out in Ghana by (Witts et al., (2024), which noted that the specific impact of an NCD on HRQoL may vary depending on the disease condition.

Similarly, another study reported that QOL among hypertensive assessed with WHOQoL-BREF patients was generally moderate across most domains, except the psychological domain, which was comparatively lower Ha et al., (2014). The impact on social relationships is particularly relevant, given the clergyman's crucial role in pastoral care and community engagement. These findings support Nooney. (2002) emphasize the importance of religious coping and church-based social support and psychological, suggesting supportive services like counseling and coping

strategy training could improve health and well-being. This directly answers the second and third research questions.

The present study found that clergymen living with hypertension and diabetes reported moderate HRQoL scores, with the psychological domain consistently lower than other domains. This aligns with Boima et al. (2022), who observed that insomnia and sexual desire dysfunction negatively impacted HRQoL among male hypertensive patients in Ghana. Both studies underscore the importance of psychosocial and lifestyle factors in determining HRQoL outcomes. However, while Boima et al. (2022) identified income as a positive determinant, the current study revealed that clergy often face financial constraints due to modest stipends, which may limit their ability to access healthcare and maintain healthy lifestyles. This divergence highlights the occupational specificity of clergy health, where economic vulnerability interacts with pastoral stress to shape HRQoL.

5.4 Factors influencing HRQoL among the Clergy

Higher education levels (Undergraduate/Professional/College and Postgraduate) were positively associated with psychological and social well-being. This is consistent with findings that higher socioeconomic status is linked to better HRQoL (Jackson et al., (2023); Leung et al., (2024). This suggests that educational attainment may empower clergy to better manage stress and navigate the complexities of their roles. Furthermore, the finding suggests improved health literacy and stress management potential. Income and education positively correlated with HRQoL, consistent with literature from Wong et al., (2018) indicating these factors enhance health awareness and treatment adherence. Interestingly, part-time ministry showed a positive correlation with environmental

well-being, possibly indicating reduced work-related stress associated with a less demanding workload. The study also found that urban location correlated positively with environmental well-being.

However, the presence of Diabetes and Hypertension, stress, and current illness had significant negative impacts on various HRQoL domains, which aligns with a report from (Doolittle et al. (2015), who posited that coping strategies like acceptance and positive reframing protect against burnout, underscoring the critical importance of managing these factors to improve the overall health and well-being of the clergymen. Furthermore, the study revealed a higher percentage (65.2%) of clergy who received lower income between (GHS 1000- GHS 1500) which supports the report from Ferguson et al., (2015), that lower socioeconomic status is linked to increased stress and poorer health outcomes. This justifies the low salary income of clergy and their higher report rate of being under stress. This comprehensively answers the fourth research question.

5.5 Summary

The chapter presented the empirical findings of the study in line with its stated objectives. The socio-demographic characteristics of the clergymen were first outlined, highlighting variations in age, marital status, educational attainment, and years in ministry. The prevalence of diabetes and hypertension among participants was reported, showing that a significant proportion of clergy are affected by these chronic conditions.

The chapter further examined health-related quality of life (HRQoL) across physical, psychological, social, and environmental domains using the WHOQOL-BREF instrument. Results

indicated that overall HRQoL scores were moderate, with the psychological domain consistently lower compared to other domains.

The results provide valuable insights into the self-perceived health status of clergymen in Ghana, establishing a strong empirical foundation for the discussion, conclusions, and recommendations presented in Chapter Six.



CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This chapter presents the discussion, conclusions, and recommendations arising from the study. It synthesises the findings in relation to the objectives of the research and situates them within the broader body of literature reviewed in earlier chapters. The conclusions drawn provide a concise summary of the key insights, emphasising the contribution of the study to public health knowledge and clergy health research. Finally, the recommendations outline practical strategies for policy, practice, and future research. These are directed towards health authorities, church leadership, and researchers, with the aim of improving health outcomes and enhancing HRQoL among clergy populations. By integrating empirical evidence with contextual analysis, this chapter serves as the bridge between research findings and actionable interventions, ensuring that the study's results are both academically rigorous and socially relevant.

6.1 Summary of the study

This study investigated the HRQoL of clergymen in the Apostolic Church of Ghana, focusing on those with diabetes and hypertension. The findings address the research objectives and questions outlined in Chapter 1, revealing significant insights into the well-being of this population.

The study provided valuable insights into the HRQoL of clergymen within the Apostolic Church in Ghana. A significant prevalence of hypertension and diabetes was found, resulting in substantial reductions in HRQoL, particularly impacting physical and social domains. Educational attainment and part-time ministry demonstrated positive associations with certain aspects of well-being, whereas chronic NCDs, stress, and current illness were strongly associated with reduced HRQoL.

6.2 Conclusion of the Study

The study's findings underscore the importance of comprehensive health interventions for the clergy men in the Apostolic church-Ghana. A notable number (29.9%) of respondents reported having chronic NCD, with hypertension being particularly common 29.9%. Additionally, (13.4%) had been diagnosed with diabetes. The high prevalence of these NCDs necessitates tailored programmes for early detection, treatment, and disease management. This would directly address the significant decline in HRQoL observed amongst those suffering from Diabetes and hypertension.

Again, the results of the study revealed that Clergymen with Diabetes reported a lower physical health score compared to those without diabetes. Hypertension similarly experienced reduced physical health relative to their non-hypertensive counterparts. Psychological well-being is notably impacted by hypertension though diabetes does not have a significant effect in this domain. Both conditions significantly reduced scores in the social relationship's domain, with lower median scores for clergymen with diabetes and hypertension. However, environmental quality of life appears unaffected by either condition, as there were no significant differences in scores between those with diabetes or hypertension and those without.

Further, the findings showed that socio-demographic factors, lifestyle aspects, and stress levels significantly influenced the HRQoL, highlighting the interplay between health status, socio-economic factors such as income, and overall well-being among this population.

Strategies to address occupational stress, promote healthy lifestyles (diet, physical activity), and enhance social support within the Apostolic Church community are crucial for improving the well-being of clergymen.

The WHOQOL BREF tool was found to be very helpful in determining the HRQoL of the clergymen. The tool helps to establish the fact that hypertension and diabetes may be associated with a lower HRQoL score.

6.3 Recommendations of the study

Based on the findings of the study, the following recommendations are made:

Firstly, the church authority is encouraged to develop culturally sensitive health promotion programmes and Implement interventions targeting modifiable risk factors for NCDs, considering the unique cultural context and occupational stressors experienced by Ghanaian Apostolic Church clergymen. These programmes should focus on diet, physical activity, stress management, and early detection of hypertension and diabetes.

Secondly, the leadership of the church, must strengthen support systems within the church: Establish or improve support mechanisms within the church structure to provide emotional, social, and spiritual support for clergymen. Peer support networks and pastoral care may prove beneficial in alleviating work-related stress.

6.3.1 Contribution to knowledge in terms of policy and practice,

Thirdly, I would like to advocate for better access to healthcare: Explore initiatives to improve healthcare accessibility and affordability for clergymen, particularly in rural areas. This may include negotiating favorable healthcare packages or partnering with healthcare providers by community stakeholders and the church leadership.

6.4 Future research.

Future research should utilize longitudinal study designs to establish causal relationships between the identified factors and HRQoL outcomes. This will provide a deeper understanding of the long-term impacts of various factors on the health and well-being of clergymen.

The unique role of clergy and their potentially unique risk profiles and healthcare experiences warrant a focused approach to this under-researched area. Future studies should explore the interplay of spiritual beliefs, pastoral work pressures, and health outcomes.

Furthermore, there is the need to explore the role of spirituality and faith: Investigate how religious beliefs and practices impact coping mechanisms, stress management, and overall well-being among this group.

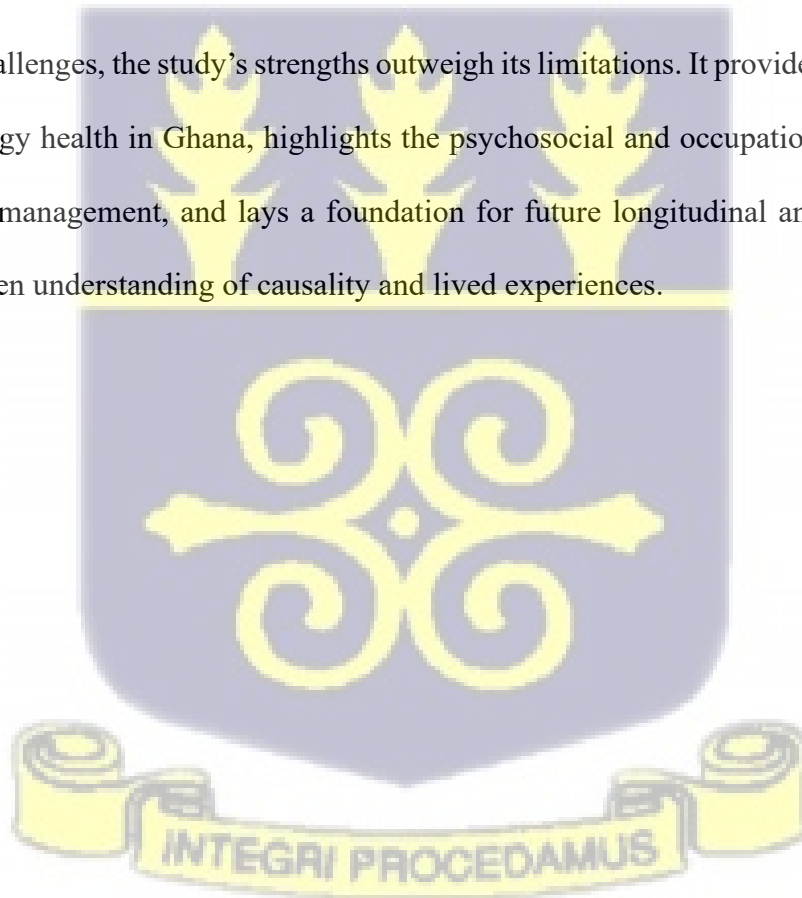
By addressing these recommendations, significant improvements can be made in the HRQoL of clergymen within the Apostolic Church in Ghana, benefiting both the clergy and their congregations.

6.5 Study Strengths and Limitations

This study makes an important contribution to understanding the self-perceived health status and health-related quality of life among clergymen living with diabetes and hypertension in Ghana. By employing a cross-sectional survey design, it provides valuable insights into the prevalence and correlates of HRQoL within this unique occupational group. The relatively large sample size and the use of a standardized instrument enhanced the reliability of the findings and allowed for meaningful comparisons across domains.

Nevertheless, certain limitations must be acknowledged. The cross-sectional design restricts the ability to establish causal relationships between socio-demographic factors, chronic conditions, and HRQoL outcomes. Response bias may also have occurred, as some participants expressed privacy concerns, had busy schedules, or preferred open-ended responses over closed-ended survey items. In addition, technological barriers were encountered: a number of participants were unable to use Google Forms, necessitating the distribution of hard copies of the questionnaire. Furthermore, a few clergymen with lower educational attainment required assistance and explanations to complete the survey, which may have introduced interviewer bias or influenced the accuracy of responses.

Despite these challenges, the study's strengths outweigh its limitations. It provides context-specific evidence on clergy health in Ghana, highlights the psychosocial and occupational dimensions of chronic disease management, and lays a foundation for future longitudinal and mixed-methods research to deepen understanding of causality and lived experiences.



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APPENDICES

APPENDIX A: CONSENT FORM

Office Use
Only

Protocol
Number:

NMIMR-IRB CONSENT FORM TEMPLATE

Title: Assessing health-related quality of life among clergymen with diabetes and hypertension: a case study of The Apostolic Church-Ghana

Principal Investigator: Esther Ofori-Wilson

Address: Department of HPPM-School of Public Health, University of Ghana-Legon

General Information about Research

You have been invited to participate in a research study aimed at assessing the quality of life among clergymen in The Apostolic Church-Ghana, with a specific focus on those with non-communicable diseases (NCDs). And to establish a relationship between sociodemographic data and the health-related quality of life. This study will help us understand the general health and well-being of clergy and the impact of NCDs on clergymen's well-being and identify areas where support may be needed. you are therefore requested to dedicate five minutes minimum of your time to answering these questionnaires.

Possible Risks and Discomforts

Participation in this study involves completing questionnaires about your health, lifestyle, and quality of life. Some questions may touch on sensitive topics, which might cause emotional discomfort. There are no physical risks associated with this study.

Emotional discomfort

The study will take necessary precautions to handle potential emotional discomfort among participants. Participants will be informed of their rights and provided with resources for emotional support if needed. voluntary participation will be emphasized and where necessary debriefing session will be carried out to address any emotional concerns.

Possible Benefits

While there may be no direct benefit to you from participating in this study, the information gained may help improve health support and interventions for clergymen with NCDs in the future.

Alternatives to Participation

Participation in this study is entirely voluntary. If you choose not to participate, it will not affect your standing or role within The Apostolic Church-Ghana.

Confidentiality

All information collected in this study will be kept confidential. Your responses will be anonymized, and no identifying information will be included in the study reports. Data will be stored securely and only accessible to the research team.

Compensation

There is no compensation for participating in this study.

Additional Cost

There are no additional costs for participating in this study.

Voluntary Participation and Right to Leave the Research

Your participation in this study is completely voluntary. You may choose to withdraw from the study at any time without any penalty or loss of benefits to which you are otherwise entitled.

Termination of Participation by the Researcher

The researcher may terminate your participation in this study if you are unable to follow the study procedures or for other reasons deemed necessary for your safety or the integrity of the research.

Notification of Significant New Findings

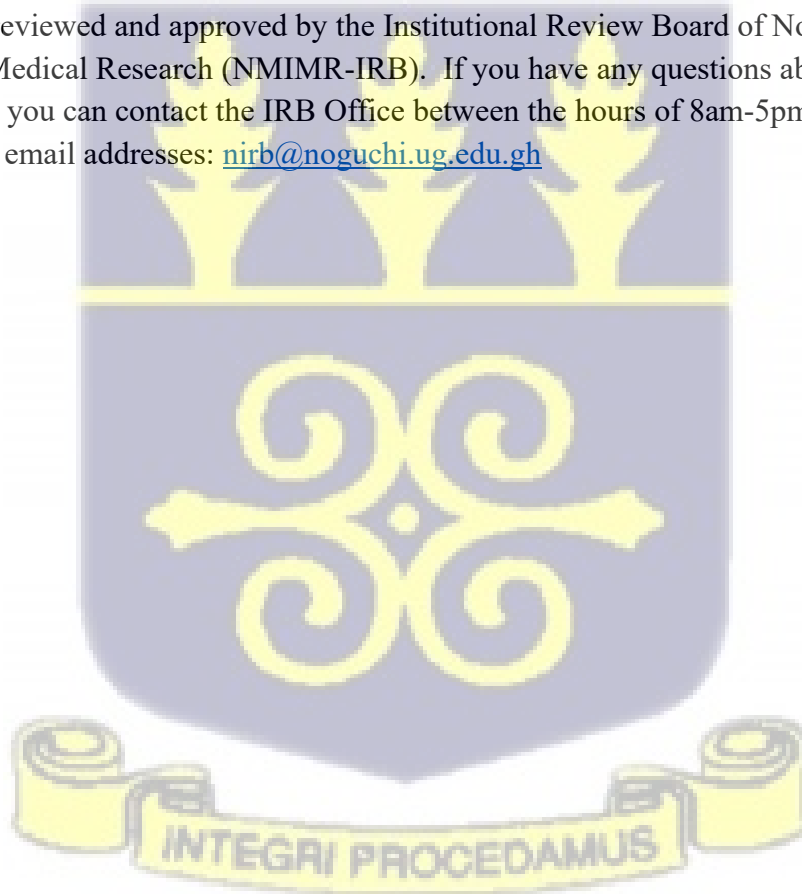
(Not applicable to this study)

Contacts for Additional Information

You may contact this number and email address if you need any further information or explanations on the questionnaire research. (0208633353, eofori-wilson.st.ug.edu.gh).

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.ug.edu.gh



VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title *(name of research)* has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

Date

Name and signature or mark of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered, and the volunteer has agreed to take part in the research

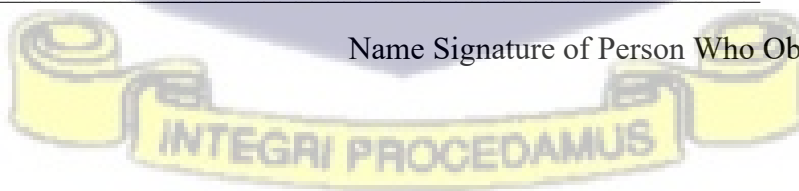
Date

Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

Date

Name Signature of Person Who Obtained Consent



APPENDIX B:

QUESTIONNAIRE

UNIVERSITY OF GHANA-LEGON - SCHOOL OF PUBLIC HEALTH

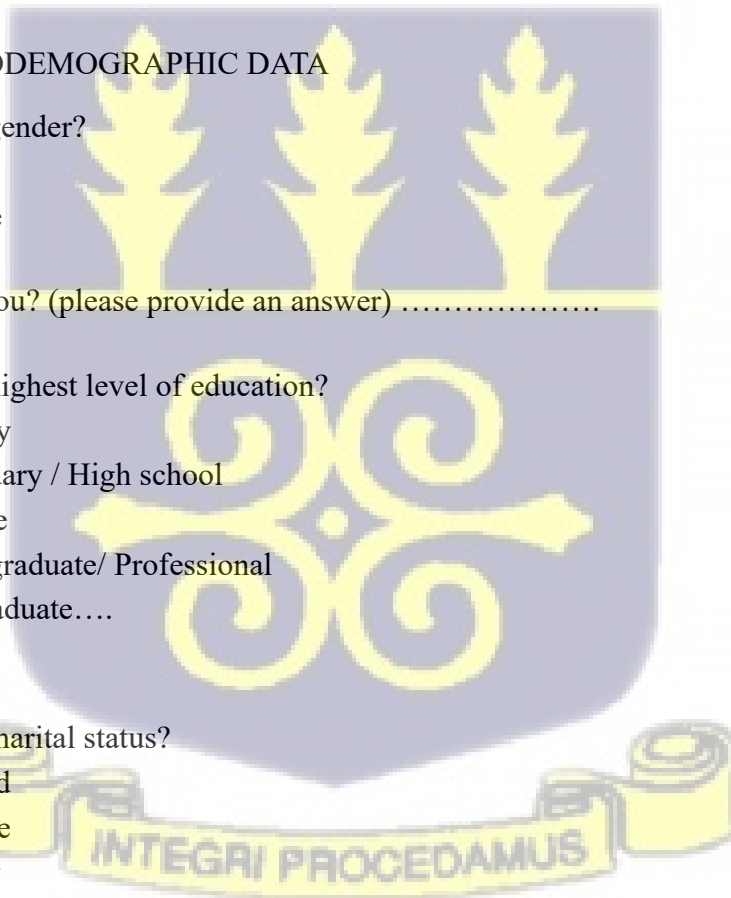
DEPARTMENT OF HEALTH POLICY PLANNING AND MANAGEMENT

**STUDY TITLE: ASSESSING HEALTH-RELATED QUALITY OF LIFE AMONG
CLERGYMEN WITH DIABETES AND HYPERTENSION: A CASE STUDY OF THE
APOSTOLIC CHURCH - GHANA**

QUESTIONNAIRE

SECTION I: SOCIODEMOGRAPHIC DATA

1. What is your gender?
 - ☐ Male
 - ☐ Female
2. How old are you? (please provide an answer)
3. What is your highest level of education?
 - ☐ Primary
 - ☐ Secondary / High school
 - ☐ College
 - ☐ Undergraduate/ Professional
 - ☐ Postgraduate....
 - ☐ None
4. What is your marital status?
 - ☐ Married
 - ☐ Divorce
 - ☐ Widow
 - ☐ Separated
 - ☐ Single



5. What ethnicity

- ☐ Akan
- ☐ Ga and Ga- Dangbe
- ☐ Ewe
- ☐ Northern Tribe
- ☐ Nzema
- ☐ Others

6. What is your basic monthly income.

- ☐ Below 1000 cedis
- ☐ 1000 – 1500
- ☐ 2000 – 2500
- ☐ 3000 – 3500
- ☐ Above 3500

7. Do you have any alternate source of income

- ☐ Yes
- ☐ No

8. Where are you currently serving?

- ☐ Urban
- ☐ Rural
- ☐ Urban-rural

9. What is your present employment status?

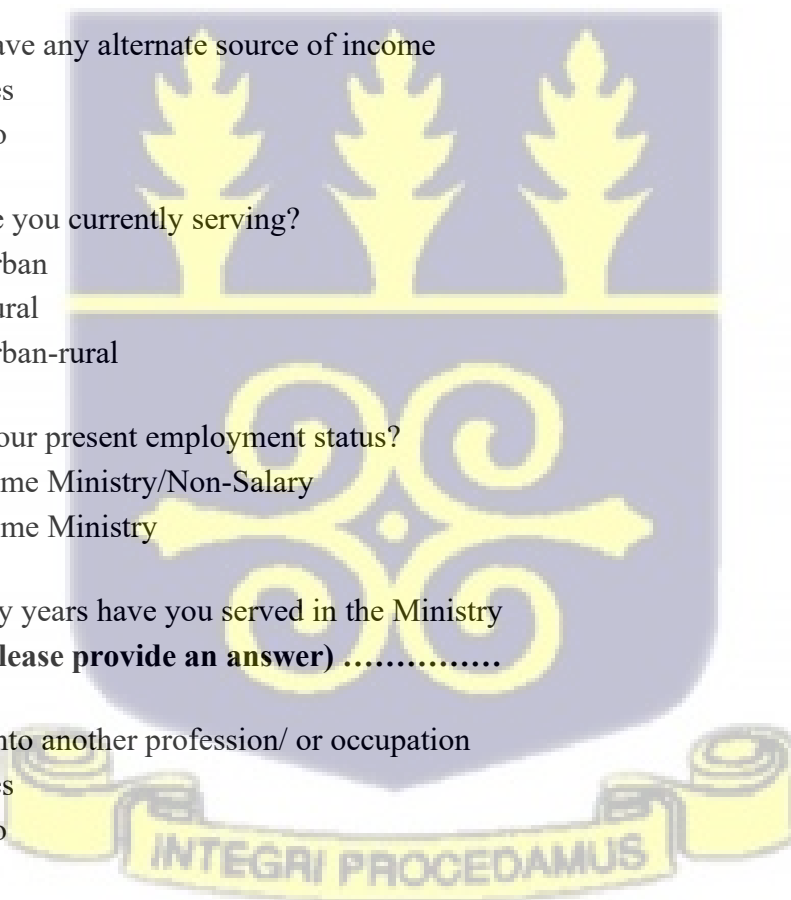
- ☐ Part-time Ministry/Non-Salary
- ☐ Full-time Ministry

10. How many years have you served in the Ministry

- ☐ **(Please provide an answer)**

11. Are you into another profession/ or occupation

- ☐ Yes
- ☐ No



12. What area of practice or profession

- ☐ Artisan
- ☐ Self-employed
- ☐ Government employee/Civil or Public
- ☐ Private practice
- ☐ Business or trading
- ☐ Others

13. Have you ever been diagnosed with any chronic non-communicable disease?

- ☐ Yes
- ☐ No

14. Have you ever been told by a doctor that your blood sugar level is high or you have diabetes?

- ☐ Yes
- ☐ No

15. Have you ever been told by your Doctor that your blood pressure is high or you have hypertension?

- ☐ Yes
- ☐ No

16. Have you ever been under stress?

- ☐ Yes
- ☐ No

17. Are you currently ill?

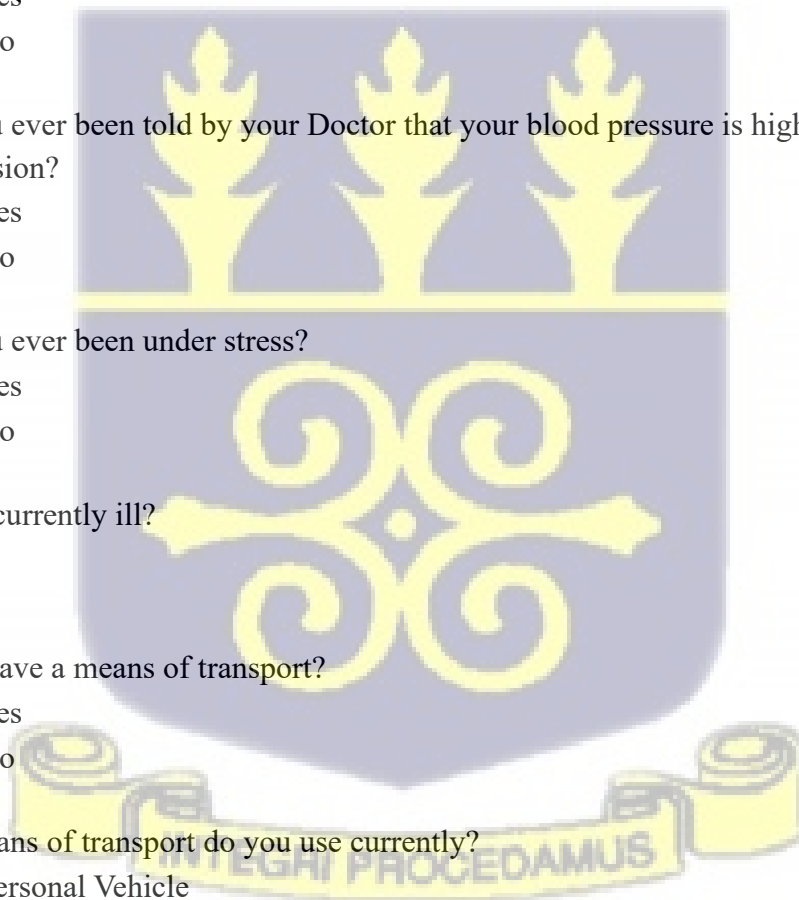
- ☐ Yes
- ☐ No

18. Do you have a means of transport?

- ☐ Yes
- ☐ No

19. What means of transport do you use currently?

- ☐ Personal Vehicle
- ☐ Personal Motor bicycle
- ☐ Church own vehicle
- ☐ Church own motor bicycle
- ☐ None



Instructions

The next section asks about how you feel about health-related quality of life or other areas of your life, please answer all the questions. If you doubt what response to give, please select that appears to be most appropriate.

SECTION II

Please read the questions carefully, assess your feelings, and choose the number on the scale the best answer for you for each question.

		(Please circle the number)				
1	How would you rate your quality of life?	Very poor 1	Poor 2	Neither poor nor good 3	Good 4	Very good 5
2	How satisfied are you with your health?	Very Dissatisfied 1	Dissatisfied 2	Neither satisfied or dissatisfied 3	Satisfied 4	Very satisfied 5

SECTION III**DOMAIN 1 - PHYSICAL WELL-BEING**

The questions in this section ask about how much you perceive your Physical well-being.

		(Please circle the number)				
		Not at all 1	A little 2	A moderate amount 3	Very much 4	An extreme amount 5
3.	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
4.	How much do you need any medical treatment to function in your life?	1	2	3	4	5

N

		Not at all 1	A little 2	Moderately 3	Mostly 4	Completely 5
--	--	------------------------	----------------------	------------------------	--------------------	------------------------

5.	Do you have enough energy for everyday life?	1	2	3	4	5
----	--	---	---	---	---	---

N

		Very poor	poor	Neither poor nor well	well	Very well
6.	How well are you able to get around?	1	2	3	4	5

N

		(Please circle the number)				
		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very Satisfied
		1	2	3	4	5
7.	How satisfied are you with your sleep?	1	2	3	4	5
8.	How satisfied are you with your ability to perform your daily living?	1	2	3	4	5
9.	How satisfied are you with your work for capacity?	1	2	3	4	5

SECTION IV

DOMAIN 2 - PSYCHOLOGICAL WELL-BEING

The following questions ask about how you perceive you psychological wellbeing.

		(Please circle the number)				
		Not at all	A little	A moderate amount	Very much	An extreme amount
		1	2	3	4	5
10.	How much do you enjoy life?	1	2	3	4	5
11.	To what extent do you feel your life is meaningful?	1	2	3	4	5
12.	How well are you able to concentrate?	1	2	3	4	5

N

	(Please circle the number)
--	-----------------------------

		Not at all 1	A little 2	Moderately 3	Mostly 4	Completely 5
13.	Are you able to accept your bodily appearance?	1	2	3	4	5

N

		(Please circle the number)				
		Very dissatisfied 1	Dissatisfied 2	Neither satisfied nor dissatisfied 3	Satisfied 4	Very Satisfied 5
14.	How satisfied are you with yourself?	1	2	3	4	5

		(Please circle the number)				
		Never 1	Seldom 2	Quite often 3	Very 4	Always 5
15.	How often do you have negative feelings, such as blue mood, despair, anxiety, or depression?	1	2	3	4	5

SECTION V

DOMAIN 3 SOCIAL WELL-BEING

The following questions ask you to say how good or how satisfied you feel about your social well-being.

		(Please circle the number)				
		Very dissatisfied 1	Dissatisfied 2	Neither satisfied nor dissatisfied 3	Satisfied 4	Very Satisfied 5
16	How satisfied are you with your personal relationships?	1	2	3	4	5
	How satisfied are you with your sex life?	1	2	3	4	5

17.	How satisfied are you with the support you get from your friends?	1	2	3	4	5
18..						

N

SECTION VI**DOMAIN 4 – ENVIRONMENTAL HEALTH**

The questions in this section ask about how you feel about your environmental well-being.

		(Please circle the number)				
		Not at all	A little	A moderate amount	Very much	An extreme amount
		1	2	3	4	5
19.	How safe do you feel in your daily life?	1	2	3	4	5
20.	How healthy is your physical environment?	1	2	3	4	5

		(Please circle the number)				
		Not at all	A little	Moderately	Mostly	Completely
		1	2	3	4	5
21.	Have you enough money to meet your needs?	1	2	3	4	5
22.	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
23.	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		(Please circle the number)				
		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very Satisfied
		1	2	3	4	5
24.	How satisfied are you with the conditions of your living place?	1	2	3	4	5

25.	How satisfied are you with your access to health services	1	2	3	4	5
26.	How satisfied are you with your mode of transportation?	1	2	3	4	5

Did someone help you to fill out this form?

☐ Yes

☐ No

How long did it take you to fill out this form? _____



APPENDIX C:
ETHICAL APPROVAL LETTER



**NOGUCHI MEMORIAL INSTITUTE
FOR MEDICAL RESEARCH (NMIMR)
COLLEGE OF HEALTH SCIENCES
INSTITUTIONAL REVIEW BOARD**

3rd July 2024

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824

IRB 00001276

NMIMR-IRB CPN 144/2023-24

IORG 0000908

On 3rd July 2024, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) Conducted an expedited continuing review and renewed your protocol titled:

TITLE OF PROTOCOL : **Assessing health-related quality of life among clergymen with diabetes and hypertension: a case study of the Apostolic Church-Ghana**

PRINCIPAL INVESTIGATOR : **Ofori-Wilson Esther**

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 2nd July 2025. You are to submit annual reports for continuing review.

Signature of Chair:

Dr. Abraham Hodgson
(NMIMR – IRB CHAIR)

INTEGRI PROCEDAMUS