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COLLEGE OF HUMANITIES
UNIVERSITY OF GHANA

GENDER DIMENSIONS OF POPULATION AGEING AND OLDER ADULTS' HEALTH-RELATED QUALITY OF LIFE (HRQoL) IN GHANA

BY

ANDREW KWEKU CONDUAH (10259454)

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DECLARATION

I, ANDREW KWEKU CONDUAH, hereby declare that, except for references to other people's work, which has been duly cited, this thesis is the result of my own research, and it has neither in part nor in whole been presented for another degree elsewhere.

…… 24th November, 2024

ANDREW KWEKU CONDUAH Date

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ACCEPTANCE

Accepted by the Regional Institute for Population Studies, College of Humanities, University of Ghana, Legon, in partial fulfillment of the requirements for the award of the PhD Population Studies degree.

THESIS SUPERVISORS

21 December 2025

Dr. Fidelia A. A. Dake — Date

Principal Supervisor

22 December 2025

Dr. Aaron Kobina Christian — Date

Co-Supervisor

22 December 2025

Dr. Lily N. A. Kpobi — Date

Co-Supervisor

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ABSTRACT

The global rise in life expectancy has led to a growing proportion of older adults, particularly in sub-Saharan Africa, including Ghana. This demographic shift presents both challenges and opportunities for health systems, as older persons experience distinctive and often complex health needs. Despite improvements in longevity, understanding of health-related quality of life among older adults in Ghana remains limited, especially with regard to gender differences. The health survival paradox, in which women outlive men but often experience poorer health outcomes, highlights the need for a deeper exploration of gendered ageing experiences.

This study examines the gendered dimensions of HRQoL among older adults in Ghana across physical, psychological, social, and environmental domains. It analyses how socio-demographic factors such as age, marital status, education, and employment influence HRQoL, and how these associations differ between men and women. The study addresses a critical knowledge gap by providing evidence on gender-specific health patterns among older adults and offering insights for policy formulation.

A cross-sectional design was employed using data from the World Health Organisation's SAGE Wave 2 survey for Ghana. Multinomial logistic regression analysis was used to assess the associations between socio-demographic variables and HRQoL domains. The analysis also explored how gender shapes these relationships, considering key factors such as occupation, education, and marital status.

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The study found significant associations between socio-demographic characteristics and HRQoL among older adults. Age emerged as a key determinant, with individuals aged sixty to sixty-four reporting higher physical and psychological health satisfactions compared with those aged eighty and above. Clear gender differences were observed. Men reported better physical health outcomes, while women experienced sharper declines in psychological well-being as they grew older. Marital status was associated with improved social and psychological outcomes, with married individuals reporting better levels of satisfaction. Employment, especially within the informal sector, played an important role in strengthening overall well-being and perceptions of quality of life in later years.

The findings underscore the need to incorporate both gender and socio-demographic contexts into policies and interventions targeting the health of older adults in Ghana. While men report relatively better physical health, women face greater psychological vulnerabilities in later life. These disparities call for gender-sensitive health strategies and social support systems tailored to the diverse needs of older men and women. The study also highlights the significance of informal sector work in sustaining older adults' well-being, underscoring the importance of extending social protection to informal workers.

This research enriches the limited literature on gendered HRQoL in Ghana by providing empirical evidence that supports gender-sensitive health and social policy development. It demonstrates the multidimensional nature of ageing and emphasises the interplay between gender, socio-demographic factors, and wellbeing. The findings serve as a foundation for future research on ageing in sub-Saharan Africa, including comparative analyses across similar contexts.

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Keywords: Gender; Ageing; HRQoL; Older Adults; Ghana; Socio-Demographic Factors; Public Health.

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LIST OF ABBREVIATIONS

AGEQOL	Ageing, Gender, and Quality of Life
AGES	African Gerontological Society
AU	African Union
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HRQoL	Health-Related Quality of Life
LMICs	Lower Middle- Income Countries
MIPAA	Madrid International Plan of Action on Ageing
NCDs	Non-Communicable Diseases
NHIS	National Health Insurance Scheme
PAYG	Pay-As-You- Go
PHC	Population and Housing Census
QoL	Quality of Life
SAGE	Study on Global AGEing and Adult Health
SDG	Sustainable Development Goals
SDOH	Social Determinants of Health
SES	Social Economic Status
SIDS	Small Island Developing States
SSA	Sub-Saharan Africa
SSNIT	Social Security and National Insurance Trust
UN	United Nations

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UNDESA	United Nations Department for Economic and Social Affairs
UNDP	United Nations Development Programme
UNESCO	United Nations Education, Scientific, and Cultural Organisation
UNFPA	United Nations Fund for Population Affairs
VAS	Visual Analog Scale
WHO	World Health Organisation

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Globally, life expectancy across many countries is improving, and many people are now living into older age compared to four decades ago (WHO, 2022). Population ageing is a sign of improved health and represents a prerequisite for social and economic development. Among the four global demographic "megatrends," population ageing is an essential element, alongside population growth, international migration, and urbanisation (Nguyen, 2021). The literature suggests that declining fertility and increasing longevity are the primary drivers of population ageing, as countries experience a steady rise in the median age and the proportion of older persons (WHO, 2021). According to the United Nations Population Fund (UNFPA, 2002), population ageing occurs when the age distribution tilts towards older ages due to lower birth rates and higher life expectancy.

Scholars such as Rowe and Kahn (1997) described population ageing nearly three decades ago as the demographic trend in which the proportion of older persons increases, with profound implications for the economy, society, and healthcare systems. More recent contributions by Bloom et al. (2011) and Bloom and Luca (2016) similarly conceptualize population ageing as an increasing share of older people resulting from declining fertility and longer life expectancy, shaping labour markets, pensions, health care, and social protection systems. Thus, as both global and scholarly accounts have suggested, population ageing constitutes a major demographic transformation whose advantages and disadvantages demand attention from policymakers across all regions. Countries such as China, for instance, are experiencing rapid ageing that presents

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opportunities for economic restructuring as well as challenges for long-term care and social systems (UNESCAP, 2022).

However, the experience and implications of population ageing differ significantly across regions. In Africa, population ageing is unfolding within a context characterised by persistent poverty, limited formal social protection systems, high dependency on informal family support, and longstanding gender inequalities (Aboderin, 2022). Sub-Saharan Africa remains the youngest region globally, yet it is projected to experience the fastest growth in its older population, doubling by 2050 (UNDESA, 2022). The region's demographic transition is also occurring amid epidemiological shifts marked by a rising burden of non-communicable diseases (NCDs), reduced fertility, and continued strain on healthcare systems. These broader structural factors have important implications for older adults' health and well-being and make gender-sensitive analyses of ageing increasingly necessary.

Across the African continent, ageing is deeply gendered. Women constitute the majority of the older population and tend to live longer than men but often do so with far fewer economic resources, lower social protection coverage, and significantly higher risks of chronic illness and disability (Gibson, 2011; Knodel & Ofstedal, 2003). These disadvantages are rooted in lifelong gender inequalities in education, employment, asset ownership, and access to healthcare. The intersection of age and gender often produces what Chappell and Havens (1980) termed a "double jeopardy," where older women experience compounded vulnerability due to both ageism and gender-based discrimination. In many African settings, older women also disproportionately bear caregiving responsibilities while simultaneously lacking adequate support for their own health and well-being (Serrao, 2015).

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Ghana reflects these broader African patterns but also presents unique demographic and social dynamics. The number of older persons in Ghana has increased more than sevenfold since the 1960 census, rising from 213,477 to 1.64 million in 2010 and reaching approximately 2.37 million in 2021 (GSS, 2013; GSS, 2021). Ghana's ageing population is characterised by notable gender disparities: women constitute 56% of the elderly population and men 44%. These disparities are more pronounced in rural areas, where older women face greater economic insecurity, limited access to healthcare, and stronger dependence on informal support systems. Shifts in family structures, driven by migration and urbanisation, have weakened traditional support networks, making older women particularly vulnerable (Pappoe, 2020).

Several studies in Ghana and other African contexts have examined aspects of ageing, including socio-demographic conditions (Almeida et al., 2013; Mosher et al., 2015; Schulz et al., 2003), rising healthcare expenditure and long-term care burdens (Bloom et al., 2015; Kingston et al., 2018), labour force participation among older adults (Beach, 2008; Skirbekk, 2008; Bloom et al., 2022), and financial security in later life (Holzmann et al., 2019; Hurd & Rohwedder, 2013). Other studies have focused on psychological health and well-being (Cohen-Mansfield & Perach, 2015; Lindwall et al., 2017). While these studies provide valuable insights, very few have comprehensively examined the Health-Related Quality of Life (HRQoL) of older adults in Ghana, especially from a gender perspective. This is particularly concerning given that nearly a quarter of the global burden of illness and mortality is now borne by persons aged 60 years and older (Fitzmaurice et al., 2018; WHO, 2014), and evidence shows significant gender disparities in health outcomes in older age.

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The limited attention to gender-specific determinants of HRQoL among older adults represents a critical gap in the literature. As Ghana works toward achieving Sustainable Development Goal (SDG) 3-ensuring healthy lives and promoting well-being for all at all ages-understanding the gender dimensions of ageing becomes essential (Bennett, 2018). Evidence on how gender shapes HRQoL in older age is needed to inform equitable health policies, strengthen social protection systems, and design targeted interventions that address the unique vulnerabilities of older men and women.

Against this backdrop, the present study investigates the gender dimensions of population ageing and the Health-Related Quality of Life of older adults in Ghana. By situating the analysis within the broader African context and the specific demographic conditions of Ghana, the study fills an important research gap and contributes to ongoing national and regional discussions on healthy and dignified ageing.

1.2 Problem statement

Over the past two decades, Ghana has significantly improved life expectancy, increasing from 59.2 years in 2000 to 66.1 years in 2021 (Ghana Statistical Service, 2021). This improvement reflects advancements in healthcare, living conditions, and public health interventions (Ghana Statistical Service, 2021; UNDESA, 2022). However, this progress has also contributed to a demographic shift, with a growing proportion of the population aged 60 years and above. While the increasing number of older persons signifies notable health improvements, it simultaneously introduces new public health concerns, particularly regarding the health outcomes and quality of life of older adults in Ghana.

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Globally, the prevalence of non-communicable diseases (NCDs) has surged, disproportionately affecting older adults in low- and middle-income countries. In 2023, global reports indicated 245 million deaths attributed to NCDs, with sub-Saharan Africa (SSA) and Asia collectively accounting for 95% of these cases (WHO Africa, 2023). In Ghana, NCDs accounted for 65% of total mortality in 2022, underscoring the significant disease burden older adults bear (WHO, 2022). This epidemiological transition has created a dual burden of disease, where chronic conditions coexist with infectious diseases, complicating health outcomes for ageing populations (Sanuade, 2016). Although the number of persons living beyond 60 years continues to increase, there remains limited understanding of their health-related quality of life (HRQoL), which is a critical measure of well-being and functional health.

This knowledge gap is particularly concerning because older adults in Ghana are highly vulnerable to conditions such as stroke, hypertension, arthritis, and diabetes—factors that substantially reduce HRQoL (Sanuade, 2016; Minicuci et al., 2014). Furthermore, high poverty rates among the elderly, limited pension coverage, and unequal access to healthcare exacerbate poor health outcomes (Holzmann et al., 2009; Fonta et al., 2020). From a scientific standpoint, examining HRQoL among older adults is essential because HRQoL acts as a robust predictor of morbidity, disability, and mortality (Cohen-Mansfield & Perach, 2015). Poor HRQoL has been associated with increased healthcare utilisation, higher caregiver burden, and greater risk of institutionalisation, demonstrating that understanding HRQoL is not merely descriptive but central to health planning and policy formation.

The Sustainable Development Goal 3 emphasises the importance of ensuring healthy lives and promoting well-being for all ages; however, population health research in Ghana remains heavily

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skewed towards maternal and child health (Adu & Owusu, 2023; Awoonor-Williams et al., 2013; Azaare et al., 2023). This imbalance creates a research and policy vacuum regarding the elderly, despite their increasing numbers and growing health needs (Bawah et al., 2019). The neglect of elderly health in national research priorities limits Ghana's ability to design responsive health interventions, allocate health resources efficiently, and develop evidence-informed policies that meet the needs of an ageing population.

Although several studies have explored aspects of elderly health in Ghana (Debpuur et al., 2010; Fonta et al., 2017, 2020; Gyasi & Phillips, 2020; Minicuci et al., 2014; Sanuade, 2016), there is a notable lack of sex-disaggregated data and other sociodemographic analysis of gender dynamics in the country. This absence prevents a deeper understanding of gender-specific vulnerabilities and patterns of ageing. Scientifically, this gap is significant because gender plays a decisive role across the life course, influencing exposure to health risks, access to resources, functioning, resilience, and patterns of disease in later life (Oksuzyan et al., 2010; Crimmins et al., 2010). Examining gendered health dynamics is therefore not only an academic exercise but fundamental for designing equitable interventions that meet the distinct needs of older men and women.

This gender dimension becomes even more important within the framework of the health-survival paradox. The paradox describes how women, despite having longer life expectancy, often experience poorer health, higher disability, and greater morbidity than men (Crimmins et al., 2010; Verbrugge, 1985). Women report higher non-fatal chronic conditions such as arthritis and depression, while men are more susceptible to life-threatening illnesses and riskier behaviours, resulting in higher mortality at younger ages (Austad, 2006). Biological factors, such as the protective effects of estrogen, and socio-cultural factors, such as men's lower healthcare

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utilisation, partly explain these differences (Luy & Gast, 2014). In Ghana, where cultural norms shape household decision-making, economic dependence, and health-seeking behaviour, these gendered disparities may manifest more strongly (Gyasi, 2018). Understanding this paradox in Ghana's context provides scientific insight into how longevity and quality of life intersect differently for men and women.

Moreover, existing data sources such as the SAGE survey do not provide sex-disaggregated analyses of HRQoL, limiting policymakers' ability to design gender-responsive health programmes. This represents a missed opportunity, as HRQoL is closely linked to functional independence, emotional well-being, and social participation critical components of healthy ageing (Van Oyen et al., 2013). Without understanding how these dimensions differ by gender, national strategies risk being ineffective for large segments of the ageing population.

As Ghana's population continues to grow-projected to reach approximately 53 million by 2050 (UNDESA, 2022)-the proportion of elderly persons is expected to rise significantly. This shift will increase pressure on healthcare systems, old-age social protection, and community support structures. Rapid urbanisation further complicates these dynamics, increasing the risks of isolation, inadequate social support, and difficulties in accessing health care for older adults. These demographic and structural challenges underscore the urgency of research that examines how gender shapes the lived experiences and health outcomes of older adults in Ghana.

In light of these complexities, this study seeks to fill the gap by examining the gender dimensions of population ageing and HRQoL in Ghana. It explores how socio-demographic characteristics and the health-survival paradox influence HRQoL outcomes among older adults, providing evidence that is critical for gender-responsive and age-sensitive health policy. Such evidence is

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vital as Ghana prepares to address the needs of its ageing population and advance its progress toward SDG 3.

In summary, although Ghana has made commendable progress in improving life expectancy, significant gaps remain in understanding how gender influences the health-related quality of life of older adults. Addressing these gendered dynamics is essential for developing policies and interventions that promote equitable health outcomes and improve the well-being of Ghana's rapidly growing elderly population.

1.3 Study Objectives

This study examines how population ageing and gender influence Health-Related Quality of Life (HRQoL) outcomes among the elderly in Ghana. Specifically, it aims to explore the intersection between ageing, gender, and HRQoL among older adults in Ghana.

1.3.1 Research Questions

1. What are the demographic and socio-economic characteristics of older adults in Ghana?
2. How do the socio-demographic characteristics of older adults influence their health-related quality of life?
3. What are the gender differences in the health-related quality of life among older adults in Ghana?
4. What are the determinants of physical, psychological, social and environmental domains of HRQoL among older adults in Ghana?

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1.3.2 Objectives

The main objective of the study was to examine the gender dimensions of population ageing and older adults' health-related quality of life (HRQoL) in Ghana. Specifically, the sought;

1. To describe the demographic and socio-economic characteristics of older adults in Ghana.
2. To assess the socio-demographic characteristics of older adults that influence their health-related quality of life.
3. To analyse identify the gender differences in the health-related quality of life among older adults in Ghana.
4. To evaluate and identify the determinants of physical, psychological, social, and environmental domains of HRQoL among older adults in Ghana.

1.4 Rationale

Across the globe, there are approximately 670 million people over the age of 60, constituting about 10.4% of the world's population (UNDESA, 2023). This proportion is projected to increase to around 2 billion by 2050, making up 21.7% of the world population (UNDESA, 2023). In 2015, more than 67% of individuals over 60 were in developing countries, and this number is expected to rise to over 80%, or around 1.6 billion people, by 2050 (UNDESA, 2015). Approximately 342 million older adults live in poverty worldwide (Holzmann et al., 2009). Without significant efforts to address this issue, it is projected that by 2050, more than 102 million older individuals will lack access to stable wages (UNDESA, 2023).

This study is closely aligned with Sustainable Development Goal 3, which encourages countries to ensure good health for all ages. Information generated from this work can guide policy and policymakers in their efforts to promote health and improve the livelihoods of older adults in Ghana. Furthermore, debates on gender equality and gender equity in health have gained

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prominence in both national and international policy discussions. Given this evolving policy landscape, there is an urgent need for context-specific evidence on Ghana's gendered dynamics of health-related quality of life. The relevance of this study is underscored by its focus on gender differences in HRQoL, an area that has received limited scholarly attention in many developing countries.

Ghana's demographic transition has led to a significant increase in the elderly population, with individuals aged 60 years and above now constituting approximately 7.4% of the total population, according to the 2021 Population and Housing Census (Ghana Statistical Service, 2021). This shift has been accompanied by a growing burden of non-communicable diseases (NCDs), which account for more than 65% of all deaths, surpassing communicable diseases (World Health Organization, 2022). These epidemiological changes have created a double burden of disease among older adults, many of whom face multiple chronic conditions, limited access to healthcare, and inadequate social protection (Minicuci et al., 2014; Gyasi & Phillips, 2020). In this context, examining the HRQoL of older adults is both timely and essential. Importantly, the timeliness of this study is reinforced by three contemporary developments. First, Ghana is currently entering the critical phase of its demographic transition, where the pace of ageing is accelerating more rapidly than the expansion of its health and social protection systems. Evidence suggests that countries that delay responding to ageing populations often face higher long-term health expenditures, increased old-age poverty, and worsening inequalities (UNFPA, 2022). Second, the Government of Ghana is rolling out renewed commitments to universal health coverage and national ageing policies, such as the National Ageing Policy and the National Health Insurance reforms. These policy shifts require up-to-date, gender-sensitive data on older adults' health outcomes to guide their implementation. Third, most of the existing studies on ageing in Ghana draw on older datasets

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or focus broadly on elderly health without examining gendered HRQoL disparities-despite increasing evidence globally that gender is a key determinant of well-being in later life (Oksuzyan et al., 2010; Crimmins et al., 2010). Thus, new gender-disaggregated analyses are urgently needed to reflect current demographic realities.

Given the limited empirical research on gendered dimensions of HRQoL in Ghana, this study provides a timely and policy-relevant contribution to the discourse on ageing, health equity, and social development. In responding to contemporary demographic and policy transitions, this work provides timely insight to guide practical interventions that support healthy and dignified ageing in Ghana.

1.5 Organisation of the Study

This study is organised into seven chapters. Chapter One introduces the study, presenting the background, problem statement, research questions, objectives, and significance. It highlights the relevance of investigating ageing, gender, and health-related quality of life (HRQoL) within the context of Ghana's demographic transition and the Sustainable Development Goals (SDGs).

Chapter Two reviews the relevant literature and theoretical frameworks. It discusses key concepts such as ageing and the ageing process, the gender dimensions of ageing, pensions and social protection in Ghana, and the quality-of-life framework, linking these to global and national ageing policies. Chapter Three outlines the research methodology. It describes the quantitative research design, study population and sampling procedures, data collection instruments, analytical techniques, and considerations of validity, reliability, and ethical standards. Chapter Four presents the descriptive results on the demographic and socio-economic characteristics of older adults and their HRQoL domains being physical, psychological, social, and environmental.

Chapter Five examines gender differences in HRQoL among older adults in Ghana, analysing the

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associations between gender, background characteristics, and the HRQoL domains. Chapter Six evaluates the determinants of HRQoL across physical, social, psychological, and environmental dimensions using multivariate statistical analysis. Chapter Seven provides the summary, conclusions, and recommendations. It synthesises the key findings, highlights their theoretical and policy implications, and offers directions for future research on population ageing and HRQoL in Ghana.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews relevant theoretical and empirical literature related to ageing, gender, and health-related quality of life (HRQoL). It begins by examining key concepts such as ageing and the ageing process, the gender dimensions of ageing, and the situation of older adults in Ghana. The review also explores issues of pensions and social protection, the quality-of-life framework, and global and national ageing policies, including their links to the Sustainable Development Goals (SDGs). The chapter further discusses the theoretical and conceptual frameworks that guide this study and identifies gaps in the existing literature that the research seeks to address.

2.2 The concept and definition of ageing

Growing old is not a disease but rather the progression into growing older, which is genetically determined and influenced by one's surroundings. Fundamentally, ageing is caused by an inborn genetic clock in conjunction with a person's way of life. Trauma and disease, on the other hand, are believed to produce consequential ageing (Dorrens & Rennie, 2003). Following age 30, the body's tissues steadily lose their ability to operate correctly. Disease resistance decreases as the immune system grows older. Skin, hair, and body shape changes appear" (Bode, 2012; Boudiny, 2013).

Older people are 60 years or older as defined in the Ghana National Ageing Policy: Ageing with Security and Dignity (Government of Ghana, 2010), and the Madrid International Plan of Action

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on Ageing (Madrid, 2002). The Madrid International Plan of Action is for people aged 65 and up in certain circumstances. This term includes both conventional and legal aspects.

Over the last century, human life expectancy has experienced significant growth due to advancements in nutrition, healthcare, and overall living conditions. Globally, life expectancy increased from 45 years in 1945 to 69 years in 2000, with forecasts suggesting it will reach 78 years by 2050 (UNDESA, 2019). This demographic change is causing older adults to become the fastest-expanding population group. In 2050, the global population of people aged 60 and over is projected to surge from 606 million to almost 2 billion. This would signify that nearly one in four individuals worldwide will be 60 years or older, marking a notable demographic milestone where, for the first time, older adults will outnumber younger generations. Additionally, growth will be particularly significant within the oldest age group, those 80 years and older, who are expected to increase from 69 million to 379 million by 2050, a more than fivefold increase (UNDESA, 2019).

These trends underscore the profound changes societies will face as they adapt to an ageing global population. The implications are vast, ranging from increased demand for healthcare services to more comprehensive social support systems, particularly for older adults, who will comprise a significant portion of the global population by mid-century.

The global population continues to rise, but growth rates differ significantly across regions. In 2019, the world's population stood at 7.7 billion and is projected to reach 8.5 billion by 2030, reflecting a 10% increase. In 2050, the population is expected to grow to 9.7 billion, a 26% increase, eventually peaking at 10.9 billion by 2100, a total increase of 42% from 2019. Again, in 2050, the population of sub-Saharan Africa is forecasted to nearly double, increasing by 99%. Likewise, Oceania (excluding Australia and New Zealand) is expected to grow by 56%, and

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Northern Africa and Western Asia by 46%. Australia and New Zealand are projected to see a 28% increase. Central and Southern Asia will grow by 25%, Latin America and the Caribbean by 18%, and Eastern and South-Eastern Asia by just 3%. Europe and North America are expected to experience minimal growth at 3% between 2019 and 2050 (UNDESA, 2019).

Nine countries are predicted to account for more than half of the global population growth by 2050. These countries include India, Nigeria, Pakistan, the Democratic Republic of the Congo, Ethiopia, Tanzania, Indonesia, Egypt, and the United States, listed in descending order of expected growth. India is anticipated to surpass China as the world's most populous nation by 2023 (UNDESA, 2022).

Rapid population growth, particularly in some of the world's poorest areas, poses significant challenges to long-term development. These growing populations make it more difficult to achieve Sustainable Development Goals (SDGs), including eradicating poverty (SDG 1), promoting equality (SDGs 5 and 10), reducing hunger and malnutrition (SDG 2), and improving access to quality healthcare and education (SDGs 3 and 4) (UNDESA, 2019).

People over 65 are the age group whose numbers are expanding the fastest as the world's population ages. One in six people on the earth will be over 65 by the year 2050 (16%), up from one in every eleven in 2019. Between 2019 and 2050, the percentage of people aged 65 and over will increase threefold in several regions, including Asia, Central and Southern Asia, Eastern and South-Eastern Asia, Northern Africa, Western Asia, Latin America, and the Caribbean. These regions are expected to experience a significant rise in their elderly populations during this period (UNDESA, 2019).

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One in four people in Europe and North America could be 65 or older by 2050. In 2018, the number of individuals 65 and over surpassed that of children under five for the first time in history. Many people are 80 years or older. According to projections, the number of people 80 or older will quadruple from 143 million in 2019 to 426 million in 2050 (UNDESA, 2019).

At the turn of the millennium, scientists convened in Athens, the capital city of Greece, to dialogue about ageing as it relates to longevity and the genetic and non-genetic factors involved. They concluded that ageing is primarily observed in economically developed nations and results from the breakdown of self-regulating systems and a limited capacity to adapt to environmental changes (Pakulski, 2016). This aligns with the fact that most developed countries began preparing for that stratum well before problems appeared (Lehman, 2017). Ageing processes increase a subject's susceptibility to conditions that lead to death as they age (Stolzing & Grune, 2001).

Old age has not been assigned ecumenical characterisation since it is highly context-dependent. For the reason of the high life expectancy level in most industrialised nations, the chronological age of 65 has come to be regarded as a definition of 'elderly' or older person (Sabharwal et al., 2015). In Africa, however, 60+ years has been designated as the start of old age by the World Health Organisation, owing to the low life span (Sabharwal et al., 2015). However, this definition is likely to change shortly as Africa advances in life expectancy, owing to more modernity, healthier nutrition, and better-quality health technologies (UNDESA, 2019).

The World Health Organisation (WHO) acknowledges that in many developing regions, old age is often defined more by shifts in social roles and activities than chronological age. In these contexts, ageing is recognised as a biological process and a social phenomenon influenced by

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various social determinants such as income, education, social support, and living conditions (WHO, 2015). Older individuals often describe this stage of life as characterised by diminishing functional, cognitive, or physical abilities, which can significantly hinder their participation in both social and economic spheres (Pakulski, 2016). Additionally, factors such as poverty, limited access to healthcare, and social isolation intensify the difficulties experienced by older adults, especially in low- and middle-income nations (World Health Organisation, 2015). These social determinants lead to disparities in how ageing is perceived and experienced, ultimately affecting health-related quality of life and well-being in later years.

In many developing countries, old age is often defined similarly to developed nations, with governments setting a specific retirement age. However, this model is ill-suited to sub-Saharan Africa, where many older adults live in rural areas, engage in informal economic activities, and do not expect to retire or receive retirement benefits. This externally imposed logic does not align with the realities faced by many elderly people in these regions.

The relevance of this concept is further severely constrained when applied to areas with significantly lower relative life expectancies and smaller ageing populations.

In the late 1970s, conducted an international anthropological study that explored the definition of ageing across various African regions. Their findings identified several critical factors associated with ageing, including "chronology, changes in social roles (e.g., job shifts, children reaching adulthood, and menopause), and changes in capacities (e.g., physical decline, senility, and invalid status)." The study revealed that in many African societies, ageing is most commonly defined by

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shifts in social standing. However, when chronological age was used as a marker, it was often combined with other indicators.

While scholars such as demographers, sociologists, and anthropologists often rely on singular definitions such as chronological age or social and functional markers in Africa, a more nuanced approach is frequently used. Ageing is defined using chronological, social, and functional criteria. However, there remains a challenge in adapting the concept of "pensionable age" to include a multidimensional understanding of ageing. In selecting 60 as the benchmark, this thesis inadvertently incorporates various definitions in alignment with Ghana's legal retirement age of 60 (Brubaker & Powers, 1976; Freund & Smith, 1997).

Over the last four decades, population ageing has emerged as one of the most critical societal challenges. Individuals aged 60 and above account for around 11% of the global population; by 2050, this proportion is expected to rise to 21.1%. Although ageing is a universal phenomenon, it is particularly prominent in developing economies, home to about 60% of the world's elderly population (Kowal & Dowd, 2001). In 2013, there were 841 million people aged 60 or older, but by 2050, this figure will reach two billion, doubling the current number. At that time, older adults will outnumber those under 14, marking the first time in history that the elderly population surpasses the global youth population. Connoisseurs believe that the drift regarding elderly populations is essentially irremediable and that young people are unlikely to reappear.

Ageing is shaped by a complex interaction of chronological progression, changing social roles, and evolving functional capacities. In many parts of the world, individuals experience transitions such as the end of formal work, children reaching adulthood, and biological changes, including menopause, alongside shifts in cognitive, physical, and social functioning. At the population level, ageing occurs when the median age rises and the age structure gradually becomes weighted toward

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older adults. This demographic shift is driven primarily by sustained declines in fertility, reductions in premature mortality, and steady improvements in life expectancy

Population ageing has been a long-standing trend in more affluent countries, but is relatively new in developing nations. The rate at which the elderly population is increasing in emerging economies is significantly higher than in wealthier nations. As a result, it is projected that a substantial portion of the global elderly population will gradually be concentrated in developing countries.

Our world of decreased birth rates and higher life expectancy makes population ageing a global problem. Women have fewer children in every region of the world than four decades ago, when population growth began to decline. The global total fertility rate was estimated at 4.5 children per woman in the early 1970s, compared to 2.7 today (Anderson & Hickey, 2023; Holzmann et al., 2009).

2.3 Perceptions of Gender

Gender perceptions are deeply rooted in cultural, historical, and socio-political contexts and vary significantly across regions. These perceptions influence the roles, opportunities, and expectations placed upon individuals based on their gender. This section provides a detailed examination of how gender is perceived in North America, Europe, Asia, sub-Saharan Africa, and Ghana, highlighting universal trends and regional specificities.

2.3.1 North America

In the United States and Canada, countries located in North America, gender perceptions have undergone significant transformations, influenced by the feminist movements of the 20th century. These movements were pivotal in challenging traditional gender roles, advocating for gender

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equality, and promoting the idea that gender is a social construct rather than an innate, biologically determined characteristic (Lorber, 1994).

The notion of gender as fluid has gained traction in recent decades, with increasing recognition of non-binary and transgender identities. This shift has been supported by legal changes, such as the legalisation of same-sex marriage and the protection of transgender rights (Westbrook & Schilt, 2014). Despite these advances, traditional gender norms persist, particularly in more conservative regions. Issues such as wage inequality, the underrepresentation of women in political leadership, and the burden of unpaid domestic labour continue to reflect deeply entrenched gender disparities (Hegewisch et al., 2019). Additionally, intersectional perspectives have highlighted the compounded challenges faced by women of colour, LGBTQ+ individuals, and those from lower socio-economic backgrounds (Crenshaw, 1991).

The #MeToo movement, which began in the United States in 2017, further underscores the ongoing struggle against gender-based violence and harassment. The movement has brought global attention to the prevalence of sexual misconduct and has empowered individuals to speak out against their abusers, challenging patriarchal structures that have long silenced victims (Fileborn & Loney-Howes, 2019).

2.3.2 Europe

Europe has a long history of gender discourse, particularly in Western and Northern Europe, where gender equality is often enshrined in social policies and legal frameworks. The European Union has promoted gender equality through directives to reduce gender disparities in employment, political representation, and social welfare (Inglehart & Norris, 2003).

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In countries like Sweden, Norway, and Finland, gender equality is a core societal value, reflected in policies such as parental leave, which is equally available to both men and women and in efforts to close the gender pay gap (Griffin, 2018). These countries consistently rank high on global gender equality indices, reflecting a broad societal commitment to egalitarian principles (World Economic Forum, 2019).

However, gender perceptions are not uniform across Europe. In Eastern and Southern Europe, more traditional views on gender roles persist, often influenced by religious and cultural norms. For example, in countries like Poland and Hungary, there has been a resurgence of conservative values, with political leaders advocating for traditional family structures and opposing what they term "gender ideology" (Korolczuk, 2020). This has led to conflicts between progressive movements advocating for gender rights and conservative forces seeking to maintain traditional gender roles.

The European response to gender issues is also shaped by its colonial history and the legacy of migration. The presence of large immigrant communities from Africa, Asia, and the Middle East has introduced diverse gender norms, sometimes leading to tensions over issues such as women's rights, dress codes, and gender roles within these communities (Kofman, 2000; Kofman et al., 2005).

2.3.3 Asia

In Asia, views on gender are influenced by a multifaceted combination of cultural traditions, religious beliefs, and socio-economic conditions. The region is home to diverse cultures with historical and contemporary understandings of gender. In many parts of Asia, traditional gender roles are strongly upheld, often reinforced by religious teachings and cultural practices (Sen, 2007). In South Asia, particularly in countries like India, Pakistan, and Bangladesh, patriarchal norms

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dominate, leading to significant gender disparities in areas such as education, employment, and healthcare (Kabeer, 2005). These societies often value sons over daughters, leading to practices such as dowry and, in extreme cases, female infanticide and sex-selective abortions (Sen, 1990). Women are often expected to prioritise family responsibilities over personal ambitions, with their roles primarily confined to the domestic sphere (Desai & Banerji, 2008).

On the other hand, certain East Asian nations, including Japan and South Korea, while economically advanced, continue to grapple with deeply entrenched gender norms. Despite high levels of education among women, their participation in the workforce remains limited, particularly in leadership positions (Takeuchi & Tsutsui, 2016). The concept of "salaryman" culture in Japan, where long working hours and corporate loyalty are highly valued, often excludes women, who are expected to focus on household responsibilities (Brinton et al., 2014).

However, there are also signs of change in Asia. In urban areas and among younger generations, there is growing recognition of gender equality, with increasing numbers of women pursuing higher education and careers outside the home (Chen & Fan, 2018). Countries like the Philippines and Indonesia have seen significant female political leadership, challenging traditional gender norms and paving the way for greater gender equality (Hauser, 2017).

2.3.4 Sub-Saharan Africa

Views on gender in sub-Saharan Africa are as varied as the region, reflecting various cultural, ethnic, and religious influences. In many African societies, traditional gender roles are closely tied to cultural practices and kinship systems. Women are often seen as the primary caregivers, responsible for maintaining the household and caring for children, while men are expected to be the breadwinners (Ampofo et al., 2004).

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However, these roles are not static. In many parts of Sub-Saharan Africa, gender roles are being renegotiated in response to economic pressures, urbanisation, and the influence of global gender equality norms (Mama, 2001). For instance, in urban areas, women increasingly participate in the workforce and political life, challenging traditional perceptions of gender (Tamale, 2020). The rise of women's movements across the continent has also played a crucial role in advocating for gender equality and addressing issues such as gender-based violence, reproductive rights, and access to education (Ampofo et al., 2004).

Nonetheless, significant challenges remain. Gender-based violence is a pervasive issue in many Sub-Saharan African countries, exacerbated by conflicts, poverty, and weak legal frameworks (Hodgkinson et al., 2016). In certain areas, cultural traditions like female genital mutilation (FGM) and child marriage persist, negatively impacting the rights and welfare of women and girls (African Union, 2015). Efforts to address these issues often face resistance, as they are deeply embedded in cultural traditions and social norms (Southall, 1971).

2.3.5 Ghana

In Ghana, gender perceptions are shaped by a blend of traditional, cultural, and modern influences. Traditional Ghanaian society is mainly patriarchal, with men typically holding positions of power and authority in the family and the community (Manuh, 2007). This patriarchal structure is reflected in various aspects of life, including inheritance practices, land ownership, and decision-making processes (Tsikata, 2009).

However, women in Ghana have historically played significant roles in both the economy and social life, particularly in the informal sector, where they dominate activities, such as trading and agriculture (Cho et al., 2013). Despite this, women face significant barriers to accessing education,

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formal employment, and leadership opportunities. These challenges are compounded by societal expectations that women should prioritise their roles as wives and mothers (Sossou, 2006).

In recent years, Ghana has made strides in promoting gender equality, particularly in education and healthcare. The government has implemented policies to increase girls' school enrollment, improve maternal health, and reduce gender-based violence (Adusah-Karikari, 2008). Additionally, the representation of women in politics and public life has seen gradual improvement, although progress remains slow and uneven (Ofei-Aboagye, 2000).

The Ghanaian feminist movement, though relatively small, has been instrumental in advocating for women's rights and challenging discriminatory practices. Organisations such as the Network for Women's Rights in Ghana (NETRIGHT) have worked to raise awareness about gender issues and push for legal reforms (Tsikata, 2009). However, changing deeply entrenched societal norms remains a significant challenge, particularly in rural areas where traditional beliefs and practices are more prevalent (Obiri-Yeboah & Obiri-Yeboah, 2014).

Finally, gender perceptions worldwide are complex and multifaceted, reflecting each region's diverse cultural, social, and political landscapes. While significant progress has been made in challenging traditional gender roles and promoting gender equality, these efforts are uneven and often met with resistance. Understanding the contexts in which these perceptions are formed is crucial for addressing gender inequalities and fostering a more inclusive global society.

2.4 Gender Dimensions of Ageing and Quality of Life

The gender dimensions of ageing and quality of life (QoL) are highly intricate and influenced by a dynamic interplay of social, economic, and health-related factors. These factors tend to

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disproportionately affect women as they grow older, often exacerbating inequalities they faced earlier in life. The United Nations Development Programme (UNDP), in its 1995 Human Development Report, highlighted that "in no society do women enjoy the same chances as males," indicating the pervasive nature of gender-based inequalities (UNDP, 1995). This observation was reiterated during the 2000 United Nations General Assembly special session, which emphasised that, despite the progress made since the Beijing Declaration, barriers remain, particularly affecting the lives of older women (United Nations, 2000).

2.4.1 Gender and Ageing: A Life-Course Perspective

Gender influences all stages of life, from birth to old age, shaping access to resources, life opportunities, and individual choices. These cumulative experiences result in significant gender disparities in old age. Cumulative life-course experiences create pronounced gender disparities in old age. As Alaazi et al., (2021) observe, women's limited access to education and employment opportunities earlier in life contributes to their socio-economic vulnerabilities in later years. Women, especially in low-income settings like Ghana, often encounter precarious positions during old age due to gender norms that disadvantage them throughout their lifetime (Attafuah et al., 2021).

In the context of ageing, Serrao (2015) explains that population ageing has distinct gender dimensions, primarily because women constitute most of the older population due to their longer life expectancy. However, this longevity does not equate to a better quality of life; women face multiple vulnerabilities, including economic insecurity, limited healthcare access, and social isolation, compounded by gender-based discrimination throughout their lives. The cumulative disadvantage theory posits that the inequalities women face during their working years often

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persist into old age, translating into more significant financial and social challenges. This theory is particularly relevant in understanding the ageing process and health-related quality of life (HRQoL) for women in low-income settings such as Ghana (Serrao, 2015).

2.4.2 Feminisation of Ageing

The feminisation of ageing refers to the fact that women outlive men and thus form the majority of the elderly population in many societies. This phenomenon is especially critical in understanding the gendered dimensions of ageing. Serrao (2015) explains that the feminisation of ageing results in heightened vulnerabilities for older women, who are more likely to experience poverty, social isolation, and health challenges. Often, older women lack access to formal pensions or employment benefits, leaving them financially dependent on informal support networks.

In the Ghanaian context, the feminisation of ageing is particularly concerning, as older women disproportionately face economic hardships compounded by societal norms and caregiving responsibilities**.** Widowhood further exacerbates their financial insecurity, and access to social protections remains limited. According to the World Health Organisation (WHO)**,** this growing trend highlights the urgent need for gender-sensitive policies that give older women access to healthcare, pensions, and social services (Kim & Moen, 2002).

2.4.3 Economic and Social Vulnerabilities

The economic and social vulnerabilities experienced by older women often stem from cumulative disadvantages that begin early in life. Limited educational attainment and restricted access to formal employment opportunities reduce women's earning capacity and undermine their ability to build financial security over the life course. As Serrao (2015) observes, these lifelong structural constraints significantly increase the risk of economic hardship in old age. In Ghana, this challenge

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is particularly pronounced, as many older women lack access to pensions and remain outside formal social protection systems. The financial precarity facing older Ghanaian women reflects broader global patterns in which gendered inequalities in education and labour market participation contribute to elevated poverty levels among women in later life (Kumar & Talukdar, 2019).

Moreover, the lack of adequate social protection systems in many developing countries leaves older women reliant on family or informal networks, further increasing their vulnerability. The intersection of gender and economic disparities exacerbates the challenges faced by ageing women, limiting their ability to maintain financial independence and contributing to their overall reduced quality of life (Serrao, 2015).

2.4.4 Caregiving Burden

The double burden of caregiving is a reality for many older women, who are often responsible for providing unpaid care to elderly relatives, grandchildren, or other family members. Serrao (2015) emphasises that caregiving responsibilities impose significant physical, emotional, and financial strain on women, particularly in societies with strong family ties, such as Ghana. Even as they age, older women frequently serve as primary caregivers, further impacting their financial security and health.

In many cultures, caregiving is undervalued, which leads to the under-compensation of women's efforts and further compounds the gender disparities in older age. Although caregiving is essential for family and societal well-being, it often leaves women with fewer financial resources and more significant physical strain as they enter old age (Paltasingh & Tyagi, 2012). This dynamic contributes to a lower quality of life for older women, as their caregiving responsibilities limit their ability to focus on their health and well-being.

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2.4.5 Gender-Based Disparities in Health

The health-survival paradox is a widely recognised occurrence in studies on ageing. Although women tend to have a longer lifespan than men, they frequently spend more years in poor health. (Serrao, 2015) highlights that women face worse health outcomes in old age due to factors such as lifelong malnutrition, lack of access to healthcare, and higher rates of chronic illness. While women tend to live longer, they are more likely to spend those additional years in poor health, making access to quality healthcare critical for improving their HRQoL.

In countries like Ghana, where healthcare infrastructure is still developing, access to gender-sensitive healthcare services is limited. This poses significant challenges for older women, who often face barriers to obtaining the healthcare they need to manage chronic conditions and maintain a good quality of life (Forchheimer et al., 2004).

2.4.6 Cultural and Social Influences on Ageing and Quality of Life

Cultural norms and gender stereotypes continue to shape the experiences of older women, often negatively. In many societies, older women are considered burdens, particularly in rural areas where they may lack independent income or assets. The media often amplifies these stereotypes, portraying older women as dependent and unproductive, further marginalising them from social and economic participation (Schladitz et al., 2022).

In contrast, older men are frequently seen as community elders and respected figures, providing them with social capital and status in later life. This discrepancy in social roles contributes to the gender disparities in ageing, affecting the mental and emotional well-being of older women. Cultural attitudes toward ageing, particularly undervaluing women's contributions in old age, further reinforce these gendered inequalities (Schladitz et al., 2022).

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2.4.7 Quality of Life (QoL) for Older Women

Quality of Life (QoL) has gained significance in research on ageing, especially with the global increase in life expectancy. According to the World Health Organisation (WHO), QoL refers to how individuals view their circumstances and their aspirations, expectations, and worries within their cultural framework (WHO, 2020). For older women, QoL encompasses not only their physical and mental health but also their social well-being.

However, gender-based disparities, such as unequal access to healthcare and financial resources, often mean that older women experience a lower QoL compared to men. In Ghana, national population policy recognises the dual challenges and opportunities posed by older adults, particularly women. While older women face significant economic and social hardships, they also have the potential to contribute meaningfully to their families and communities, provided they receive the necessary support (De Vries et al., 2019).

2.5 Overview of pensions in Ghana

Pension systems in Ghana play a critical role in providing income security for individuals after retirement, particularly in a context where extended family support structures are gradually weakening. Over the years, the country has implemented a series of reforms to strengthen its pension architecture, culminating in the three-tier pension scheme introduced under the National Pensions Act, 2008 (Act 766). This section provides an overview of the structure, governance, and key features of Ghana's pension system, highlighting how these mechanisms aim to ensure financial protection for older adults.

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2.5.1 Introduction: The importance of social security

Due to the vagaries of life, social insurance has been man's preoccupation on a planet of astounding scientific and medical achievements. Traditional African cultures acknowledged the importance of implementing protective measures for significant contingencies through collective security and mutual assistance well before the arrival of Europeans and the establishment of contemporary nation-states. In Ghanaian societies, for instance, the kinship network served as the institution that provided social and economic support to family members in times of need. When kindred members grow old and are threatened by economic distress, ailment or social sequestration, the relatives have traditionally been the primary source of support. Society provides a social net for individuals who grow up without a family (Abukari & Kreitzer, 2016).

It has been suggested that traditional extended family practices offered psychological stability, moral support, and socioeconomic protection. However, with the decline of the extended family structure, there has been a gradual shift from reliance on this system toward more semi-formal social security services in contemporary society. The challenges posed by economic growth and social mobility, along with the significant resource limitations facing traditional systems, are straining the extended family as an effective and cohesive unit that ensures income security for the elderly and disabled, provides care for sick or unemployed family members, supports newborns and mothers, looks after orphans, and even assists strangers.

Exit strategies include public sector redeployment or layoffs, wage restrictions, revisions, and transfer payments. The shortcomings of traditional social safety nets were further intensified in the 1980s by a new economic framework emphasising market-driven growth strategies. The critical components of this new economic model that have impacted social protection levels include:

- Policies promoting deregulation and divestment of state-owned enterprises alongside

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stabilisation and structural adjustment measures.

- The elimination of subsidies as part of income reform aimed at incentivising performance in line with allocative efficiency principles and enhancing cost-effectiveness in producing and delivering goods and services, particularly those from the public sector.
- Exit strategies involving public sector redeployment or layoffs, wage restrictions, revisions, and transfer payments.

2.5.2 Historical/ post-independence implementation of the Social Security Scheme

The post-World War II era established official social protection programs for retired workers. During the tumultuous years of World War II (1939–1945), the first social institution aimed at the welfare of the indigenous communities of the Gold Coast was founded. This initiative was led by the United Trading Company, a global firm established in 1921 by the Basel Mission to serve its African workers. As a result, the African Pensions Fund was created, becoming the first social institution dedicated to the welfare of the Gold Coast's indigenous population (Hanson & Obiri-Yeboah, 2014). It is important to note that the African Pension Fund was exclusive to U.T.C. personnel and did not constitute a government-run social security system.

Following World War II, the Gold Coast's colonial administration ratified an International Labour Convention regarding workers' compensation and monetary payments to injured workers. Subsequently, the Pension Ordinance of 1946 was enacted (Gockel, 1996), establishing a non-contributory pension program for senior African civil servants, their widows, orphans, and children. In 1955, the Teachers' Pension Ordinance expanded the benefits to "certified teachers" under the 1946 pension framework. Additionally, senior members of the University of Gold Coast, now the University of Ghana, were included in a superannuation plan.

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Before Ghana achieved independence from British colonial rule in 1957, the pension program was shaped by its colonial history, a common scenario in many former British colonies. The colonies' economic resources often constrained the adoption of pension programs in British colonies across Africa and Latin America (Künzler, 2016; Schmitt, 2015). Ghana's social security pension program evolved from the first pension legislation established in 1946, which served as a non-contributory scheme primarily for senior civil officials.

According to Kludze (1988) and Obiri-Yeboah & Obiri-Yeboah, (2014), the British colonial authority only accepted the International Labour Organisation's (ILO) Convention on monetary compensation for injured workers after World War II. The 1946 Pensions Ordinance Act represented the first formal attempt to establish a national pension scheme in the Gold Coast (Ofori-Abebrese et al., 2017). Before this, the Basel Mission had founded the African Pension Fund in 1921, specifically for its African employees at the United Trading Company (UTC). However, this was not a public pension plan but exclusively for the UTC's African workforce (Ofori-Abebrese et al., 2017).

The pension program was based on Chapter 30 of the Pensions Ordinance Act of 1946, commonly referred to as CAP 30. However, this system excluded senior civil workers, military personnel, police, and prison services. The Instructors Pension Ordinance of 1955 expanded coverage to include certified teachers, and during this period, public university professors were also granted non-contributory pension plans. Retired workers under these programs received a lump sum payment from the government budget, as the plans were non-contributory. Over time, this arrangement strained the national budget, necessitating reforms (Asamoah, 2012; Boon, 2007).

Following independence in 1957, Dr. Kwame Nkrumah's government established a consolidated

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fund where all public sector workers' salaries were deducted. Ofori-Abebrese et al., (2017) describe how this unified fund was mismanaged, creating a provident fund under the new Social Security Act (1965) to cover private and public sector employees not included in the CAP 30 system. This new scheme coexisted with the existing one and was designed as a defined benefit plan, with employees contributing 5% of their gross salary and employers contributing 15%. Subsequently, employee contributions remained at 5%, while employer contributions were adjusted to 12.5%. Employers with over five employees were required to enroll them in the scheme, with deductions directed to a social security fund. The Act establishing this plan also created a Social Security Fund (SSF), initially administered by the State Insurance Company and the Department of Pensions. Retirement benefits were paid as a single lump sum. However, the system faced challenges due to ineffective fund investments and economic hardships, prompting worker protests for improvements (Boon, 2007; Darkwa, 1997).

In 1972, the military government introduced the National Redemption Council Decree (NRCD) 127 to address demands for reform. This decree established the Social Security and National Insurance Trust (SSNIT) to manage the SSF, applying to all civil and public personnel and employees of multinational corporations and private firms not covered by CAP 30, to reduce government expenditure under CAP 30. Workers in the civil and public sector hired after January 1, 1972, were automatically enrolled in the new SSNIT scheme. Under the CAP 30 scheme, workers could transition to the new plan or remain with CAP 30. In 1974, amendments to NRCD 127 mandated migration from CAP 30 to the SSNIT Fund after 12 months, excluding military personnel and university teachers. This migration ultimately brought all civil servants under the SSNIT Fund, which maintained a shared contribution model of 5% from employees and 12.5% from employers while still disbursing benefits as a defined lump sum (Darkwa, 1997; Obiri-

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Yeboah & Obiri-Yeboah, 2014).

In 1991, the new military government of the Provisional National Redemption Council (PNDC) replaced NRCD 127 with PNDC Law 247, known as the Social Security Law. This law aimed to transition from lump-sum payments to periodic monthly payments to members from retirement until death, managed by SSNIT. The scheme began covering contingencies such as old age (retirement at 60 years), permanent disability, and survivor benefits for contributors who died before retirement. This new law also allowed informal sector workers to enroll in the scheme voluntarily. Thus, until this point, Ghana operated parallel public pension schemes comprising the Social Security and National Insurance Trust (SSNIT), PAYG social insurance, and the CAP 30 scheme, which primarily covered formal sector workers (Kpessa, 2011a).

This policy approach, particularly the retention of defined benefit programs for public-sector employees established under colonial rule, may have been motivated by a desire to avoid unrest among civil servants. More broadly, establishing a publicly managed National Provident Fund (NPF) to provide retirement income may have been viewed as a means to meet old-age income security demands while accumulating domestic resources for economic development (Dixon, 1982, 1989; Gerdes, 1971). However, in 1991, Ghana's NPF was transformed into a PAYG social insurance scheme to provide defined benefits due to challenges such as poor economic management, rampant inflation, and unfavourable market conditions, which devalued the national currency (Cheta, 2005; Kpessa, 2011a; Mkulo, 1994).

In the early 1990s, the NPF transitioned into social insurance programs, resulting in two independent public, defined benefit pension programs managed by separate administrations. In Ghana, CAP 30 participants primarily comprised civil officials, with benefits funded from general

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government resources, while the SSNIT managed PAYG social insurance systems that evolved from post-colonial NPFs (Ofori, 1976). This shift to PAYG-defined benefit social insurance programs could be perceived positively, as periodic retirement payments replaced previous lump-sum benefits. However, the social security systems remained fragmented, leading to disparities in benefit distribution and facing governance and management challenges (Olivier, 2005)

Less than five years after the transition to PAYG defined-benefit programs, Ghana's Auditor-General uncovered significant corporate fraud and political manipulation within the social insurance scheme's investment practices. In its 1994 annual report, the Auditor-General revealed that SSNIT management had violated the scheme's investment code by granting loans to several companies, including Makola Market Ltd and Golden Beach Resort, without comprehensive repayment terms. Consequently, many of these enterprises defaulted on their loans, and SSNIT management failed to enforce repayment. Furthermore, substantial loans were made to individuals and companies with no evidence of repayment or proper documentation, indicating severe deficiencies in banking transaction monitoring and a lackadaisical attitude towards reconciliation and inquiry in operations (Osei, 2001).

According to Olivier (2005), such poor management practices stemmed from inadequate training and a lack of understanding of sound social security management principles. These administrative issues in Ghana resulted, in part, from the public's limited knowledge of the scheme's operations. Some officials exploited this ignorance, disregarding established procedures and norms. Additionally, the national government held the authority to appoint SSNIT's governing bodies, compromising the independence of these members and diminishing the schemes' efficiency. Although the management board's composition adhered to tripartite principles, representation was

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limited mainly to employer associations, government representatives, and a few labour groups, excluding a significant number of trade unions and pensioners' associations whose members were also stakeholders. This lack of broad stakeholder participation in scheme management has undermined the influence of social partners in policy-making and scheme management, enabling political interference and misappropriation of social security funds over time (Olivier, 2005).

Beyond governance issues, the persistent fragmentation of pension systems has undermined efforts to establish a coherent and sustainable pension system. Ghana's historical journey from colonial pension plans to the contemporary social insurance program reflects broader trends in many developing countries, where pension reforms have become imperative. Future reforms must prioritise unification and harmonisation across existing schemes to enhance coverage and benefits while ensuring efficient management practices.

2.5.3 New Social Security Pension Scheme

The transition to a new social security pension scheme in Ghana marked a significant evolution in the country's approach to retirement income security. This new scheme emerged in response to the growing challenges within the existing pension systems, including inefficiencies, mismanagement, and insufficient coverage.

In 2008, the Government of Ghana introduced a new pension scheme as part of the Social Security Act to consolidate various pension schemes into a more coherent one. This new scheme was designed to provide a more sustainable and equitable approach to retirement benefits, addressing the shortcomings of previous arrangements.

Key features of the New Social Security Pension Scheme include:

- **Three-Tier Structure**: The new scheme operates on a three-tier system. The first tier is

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a mandatory, pay-as-you-go social security scheme managed by the Social Security and National Insurance Trust (SSNIT), providing basic pensions. The second tier consists of mandatory occupational pension schemes, while the third tier offers voluntary personal pension plans, allowing individuals to save more for retirement.

- **Increased Coverage**: The new scheme aims to expand coverage beyond formal sector workers, encouraging participation from informal sector employees, self-employed individuals, and those previously excluded from the pension system.
- **Defined Benefits and Contributions**: The first tier of the scheme continues to provide defined benefits based on a contributor's salary and years of service. The second and third tiers involve defined contributions, allowing participants to accumulate savings for retirement based on their contributions.
- **Investment Strategy**: The new pension scheme emphasises prudent investment strategies to ensure sustainable growth of the pension funds. This approach aims to enhance the long-term viability of the pension system while providing adequate returns for contributors.
- **Regulatory Framework**: A robust regulatory framework has been established to oversee the operations of the pension schemes, ensuring transparency, accountability, and protection of contributors' rights.

The introduction of the New Social Security Pension Scheme signifies a crucial step toward addressing the challenges of Ghana's existing pension systems. Focusing on inclusivity, sustainability, and effective management, the scheme aims to provide a reliable safety net for all Ghanaians as they retire.

INTEGRI PROCEDAMUS

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Table 2.1: Characteristics of Ghana's pension programme

Key features	Tier 1	Tier 2	Tier 3
Type of scheme	**National basic scheme**	**Occupational scheme**	**Private personal plan**
Principle	Employment and earnings-related.	Employment and earning related.	Individual
Type of Coverage	Mandatory for all formal workers.	Mandatory for all formal sector workers.	Voluntary participation for all citizens (including informal sector workers). An incentive in the form of a tax waiver is attached.
Nature of contributions	Shared contribution between employment and employees (11% of the total contribution of 18.5%).	Shared contribution between employers and employees (5.0% and total contribution of 18.5%).	Voluntary contribution is based on the preference of the contributor.
Nature of benefits	Periodic payment of pensions based on a defined formula.	Lump sum payment at retirement based on contributions plus accrued interest (no guarantee of minimum returns.)	Lump sum payment at retirement based on contributions plus accrued interest (no guarantee of minimum returns)
Eligibility criteria	Attainment of retirement age of 60 years, minimum. Contribution of 15 years, permanent invalidity.	Attainment of retirement age of 60 years, minimum. Contribution of 15 years, permanent invalidity.	Attainment of retirement age of 60 years, permanent invalidity.

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Administration of funds	SSNIT (manages 11.5% of the contribution, and 2.5% of the total 18.5% goes to NHIS for the health care of contributors).	Appointed Trustees (manage 5.0% of the contributions).	Appointed Trustees.
Objective	Income replacement risk-pooling and intergenerational transfer.	Supplementary benefits, diversifying sources of retirement income.	Supplementary benefits foster savings among informal sector workers.
Regulatory body	NPRA	NPRA	NPRA

Source: Constructed from desk study on various SSNIT reports, 2022.

According to Table 2.1 above, the National Social Security Scheme (NSSS) is designed to encompass all workers in the formal sector. The Social Security and National Insurance Trust (SSNIT) oversees the enhanced benefits package, which includes regular monthly payments. This pension plan provides benefits of 50 percent of the average salary from a retiree's highest three earning years. Additionally, there is an increment of 1.5 percent for each year of contributions that exceed the minimum requirement of 15 years. However, the formula limits the maximum pension benefit to 70 percent of the average salary from the best three years of employment (Darko, 2016; Kpessa, 2013). Under the new legislation, individuals must contribute for at least 15 years and reach retirement age of 60 to qualify for benefits. However, voluntary retirement is permitted at 55, provided the minimum contribution requirement is met or in cases of permanent disability. A lump-sum payment is made to their designated dependents if a contributor passes away before retirement.

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The pension system is structured into tiers. The first tier consists of a mandatory, work-based pension scheme aimed at providing lump-sum payments upon retirement. The second tier offers a voluntary provident fund and personal pension options. Employees also have the option to contribute to a third tier while actively employed. To encourage participation in the third tier, tax incentives, including tax waivers, were introduced for contributing employees, thus enhancing their overall pension benefits. The amounts contributed are managed by appointed trustees, and benefits from this tier are also disbursed as a lump sum upon retirement (Darko, 2016).

This new pension law arrangement ensures that pension benefits are adequate to provide income security for workers in their later years. A notable aspect of Ghana's new pension scheme is the increase in contribution rates for employees and employers, which rose from 5.0 percent to 5.5 percent for employees and from 12.5 percent to 13.0 percent for employers. This change raised the total contribution rate from 17.5 percent to 18.5 percent (Kpessa, 2011b). The 2008 reform enhances retirement benefits in three primary ways: first, retirees receive monthly payments calculated according to a specific formula in the first tier; second, they benefit from free medical care under the National Health Insurance Scheme; and third, they receive lump-sum payments from the second and third tiers. Additionally, 2.5 percent of contributions can be allocated to the National Health Insurance Authority (NHIA). The 2008 pension scheme employs a multi-tier, multi-pillar structure that aligns with the objectives of pension systems (Holzmann, 2013), addressing both healthcare needs during employment and post-retirement. SSNIT manages the first tier, while the second tier is overseen by appointed trustees (Biritwum et al., 2013).

Despite existing for over three decades, formal social security pensions in Ghana only cover about 13 percent of the workforce (Boon, 2007). Another critical point is the scheme's limited coverage

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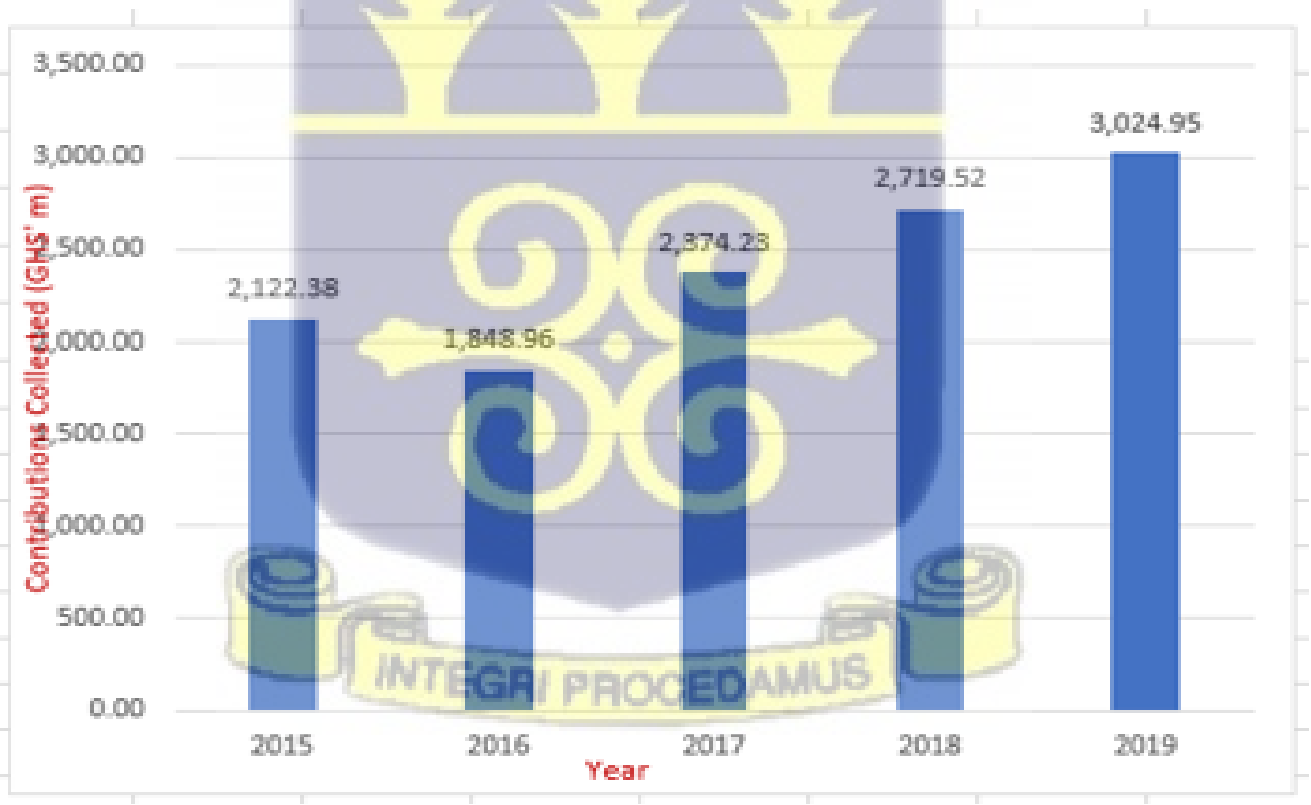
since its inception; (Kaseke, 2010) noted that this is a common issue globally. Ghana's regular social security pension programme has not attracted informal workers sufficiently (Kpessa, 2011b; Kumado & Gockel, 2003; Schwarz, 2006). Participation in the various reforms has been voluntary, mainly due to the limited scale of operations.

2.5.4 Trends in the number of SSNIT contributions and beneficiaries (2015- 2019).

The Trust received a total of GH¢3,024.95 million in contributions, an increase of 11.23% compared to the GH¢2,719.52 million collected in 2018. Table 2.2 and Chart 2.1 illustrate a five-year trend of these contributions.

Figure 2. 1: Trends in the number of SSNIT contributions and beneficiaries



Compiled from the SSNIT annual report, 2019

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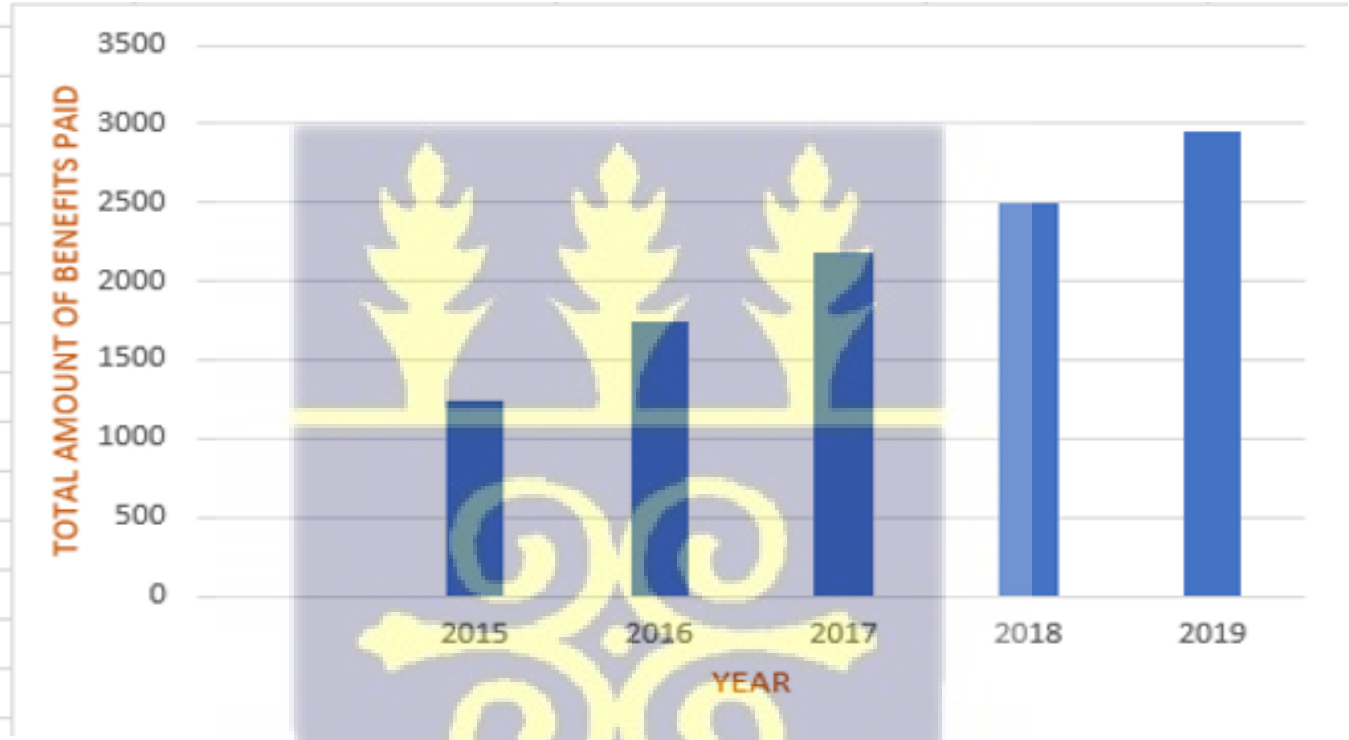
A rise in Social Security benefits further highlighted the system's capacity to support the elderly. In 2019, GH¢2,945.71 million was disbursed, reflecting an 18.04% increase from the GH¢2,495.45 million paid in 2018. Of the total amount distributed in 2019, GH¢2,608.38 million (88.55%) was allocated to Pensions, while GH¢337.33 million (11.45%) was disbursed as a Lump Sum. Table 2.3 and Chart 2.2 present the benefits paid out from 2015 to 2019.

Figure 2.2: Trend in Benefit Payment (2015-2019)



Compiled from SSNIT annual report, 2019.

2.6 Ageing Plans in the World and Ghana's Ageing Plan

As populations age globally, countries have developed national ageing plans to ensure the well-being, inclusion, and protection of older persons. These frameworks typically outline strategies for

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health care, social protection, economic participation, and age-friendly environments. Ghana has also adopted its own National Ageing Policy to address the increasing needs of older adults and align with global best practices. This section reviews international approaches to ageing and situates Ghana's ageing plan within this broader context.

2.6.1 Global Context of Ageing

Grasping the concept of ageing is vital due to its intricate and multifaceted nature, with interpretations differing across cultures and academic fields. The World Health Organisation (WHO) defines ageing as a natural and gradual process that brings about physical, social, and psychological changes over time (WHO, 2020). These changes can manifest as declines in functional capacity, cognitive abilities, and social roles, often worsened by chronic health issues. In numerous low- and middle-income countries (LMICs), however, old age is often defined not solely by chronological age but by the onset of physical deterioration or the end of active work (Pakulski, 2016). This culturally specific understanding of ageing is essential for crafting policies and interventions that effectively meet the needs of older adults in varied contexts.

The global trend of an ageing population is unprecedented. According to the Ghana Statistical Service (Ghana Statistical Service, 2013), Ghana's elderly demographic has increased sevenfold in the last fifty years, from 213,477 in 1960 to 1,643,381 in 2010. The 2021 Population and Housing Census indicates that this figure rose to approximately 2,122,715, accounting for about 7.4% of the population (Ghana Statistical Service, 2021).

In 2050, it is projected that 80% of the world's elderly will live in LMICs, with a considerable portion in sub-Saharan Africa (Rafalimanana & Lai, 2013b). This demographic shift will significantly affect various sectors, including healthcare systems and social security frameworks.

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As global life expectancy continues to rise from an average of 45 years in 1945 to an expected 78 years by 2050 (UNDESA, 2019), the population of individuals aged 60 and older is predicted to increase more than threefold, from 606 million to nearly 2 billion by mid-century. This growth will be significantly marked in sub-Saharan Africa, with the elderly population anticipated to increase fivefold, from 69 million to 379 million (UNDESA, 2019). Such demographic transformations require thorough ageing strategies to address the social and economic hurdles an ageing population poses.

The United Nations has been active in tackling these challenges. The first World Assembly on Ageing was held in Vienna in 1982, paving the way for global discussions on ageing. The Madrid International Plan of Action on Ageing (MIPAA), established during the Second United Nations World Assembly on Ageing in 2002, outlined three key areas of focus: the development of older persons, promoting health and well-being into old age, and ensuring supportive and enabling environments (United Nations Population Fund (UNFPA), 2002). These focus areas have directed subsequent international efforts, such as HelpAge International's Global AgeWatch Index, which evaluates older adults' social and economic well-being across various nations (Index, 2015).

Despite these global initiatives, the swiftly ageing populations in LMICs, including Ghana, face distinct challenges. Many of these countries have underdeveloped social security systems and inadequate healthcare infrastructure to address the rising prevalence of age-related illnesses such as dementia, Alzheimer's disease, diabetes, hypertension, and strokes (Rafalimanana & Lai, 2013a). Furthermore, the gender dimensions of ageing, in which women generally outlive men, particularly in the 60+ and 80+ age groups, highlight critical issues regarding the sufficiency of social care systems, the economic roles of older adults, and the unique vulnerabilities encountered by elderly women (Rafalimanana & Lai, 2013a)

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2.6.2 The Process of Ageing

Ageing is an ongoing, multifaceted process shaped by the intricate interaction of biological, psychological, and social influences. Biologically, it is marked by a progressive deterioration of bodily functions, such as a weakened immune system, loss of muscle strength, and decreased metabolic activity (Kirkwood, 2005). This decline makes older adults more susceptible to chronic conditions and frailty, which can significantly impair their quality of life.

Psychologically, ageing is associated with changes in cognitive function, such as memory loss, slower information processing, and reduced problem-solving abilities (Salthouse, 2019). However, these changes are not uniform, and cognitive decline can be mitigated through lifestyle factors like mental stimulation, physical activity, and social engagement (Hertzog et al., 2008).

Socially, the ageing process is influenced by an individual's environment, including their access to healthcare, social support networks, and economic resources. In many cultures, older adults experience a shift in social roles, often transitioning from active contributors in the workforce to dependents within the family or community. This transition can impact their social status and self-esteem, particularly in societies where ageing is viewed negatively (Ani, 2014). Factors like income, education, and access to healthcare, known as social determinants of health, significantly influence the ageing experience and contribute to inequalities in health outcomes among older individuals (Marmot & Wilkinson, 2005).

2.6.3 The Ageing Population in sub-Saharan Africa and Ghana

Sub-Saharan Africa, traditionally characterised by a youthful demographic, is undergoing a significant demographic shift with a rising population of older adults. The population of people

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aged 60 and above in the region has experienced a twofold increase over the last few decades, rising from 23 million in 1990 to 46 million in 2015 (United Nations, 2016). This trend is projected to continue, with the older adult population expected to increase by 64% over the next 15 years, reaching 161 million by 2050 (UNDESA, 2015; United Nations, 2016). However, the extent of population ageing varies significantly across countries within the region. For instance, Mauritius reports that approximately 15% of its population comprises older adults, while countries like Senegal and Uganda report significantly lower proportions, at 11% and less than 4%, respectively (United Nations, 2016).

In Ghana, socio-cultural, economic, and infrastructural factors further complicate the ageing process. The elderly population in Ghana, which constitutes about 5% of the total population, is growing rapidly and is expected to increase faster than in high-income countries (Aikins & Apt, 2016; Ayernor, 2012; Ghana Statistical Service, 2013). This demographic shift is occurring alongside the erosion of traditional family structures due to urbanisation, migration, and changing socioeconomic conditions, leaving many older adults without the support systems that previous generations relied upon (Aboderin, 2010).

Ghana's ageing plan must address these local realities. Policies and programs tailored to the Ghanaian context should consider the socio-economic challenges that older adults face, such as inadequate pensions, limited access to healthcare, and the high prevalence of age-related diseases (Minicuci et al., 2014). Moreover, these initiatives should be informed by robust, multidisciplinary research that explores ageing at both micro and macro levels, from individual health experiences to broader social security issues (Apt, 1996; Bohman, 2008).

Despite recognising ageing as a critical issue, Ghana's response has been somewhat fragmented. Although studies on ageing have been conducted for over six decades, there is a pressing need to

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synthesise this research to inform contemporary policy and practice (Bohman, 2008). The necessity for a comprehensive and cohesive ageing strategy is underscored by the socio-economic vulnerabilities many older Ghanaians face, including poverty, limited access to healthcare, and social isolation (Aboderin & Oyetayo, 2006). Addressing these issues is crucial to ensuring that the ageing population in Ghana can live with dignity and security.

Similar to broader trends observed across the region, Ghana has witnessed a significant rise in its elderly population over the past decades. The number of individuals aged 60 and above has increased considerably, from 215,258 in 1960 to 1,643,978 by 2010, as reported in the 2010 Population and Housing Census (Council, 2014). Future projections indicate that this upward trend will persist, with Ghana's elderly population expected to reach 2.3 million by 2025 and 5.6 million by 2050 (WHO, 2014). These estimates are presented in Table 2.3.

Table 2.2: Actual and Projected Population of Older Adults (60 Years and Older) in Ghana, 1960 – 2050

Age Group	1960	1970	1984	2000	2010	2020*	2030*	2040*	2050*
60-64	118,039	146,378	225,776	366,351	475,849	667,892	989,840	1,418,131	1,911,096
65-69	60,958	94,218	145,309	258,709	293,871	475,550	728,508	1,065,316	1,513,288
70-74	56,529	82,392	128,866	225,158	351,330	363,517	489,350	743,971	1,090,699
75-79	30,961	42,262	71,813	144,830	205,953	219,708	284,338	451,772	681,441
80+	61,107	205,164	341,533	370,243	316,378	175,553	221,084	306,408	485,014
Total	**327,594**	**570,414**	**913,297**	**1,365,291**	**1,643,381**	**1,902,220**	**2,713,120**	**3,985,598**	**5,681,538**

Source: Ghana Statistical Service, Census Report, and National Population Council 2014 (Projections)

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2.6.4 Ghana's Involvement in the Global Healthy Ageing Strategy

The Ghana Statistical Service, as the lead institution for the "Healthy Ageing Case Study" in Ghana, has adopted a collaborative framework to understand and promote the concept of "Healthy Ageing." This framework includes active participation from various stakeholders, such as academic institutions, government ministries, departments and agencies, civil society organisations, and international donors. Through joint efforts, these stakeholders have developed a strategy that addresses the specific needs and aspirations for promoting healthy ageing across the country. The case study's main objective is to evaluate the current conditions of older adults in Ghana, outline future priorities, and chart a path for achieving these goals. With sufficient resources and backing, Ghana is dedicated to implementing these strategies to cater to the needs of its ageing population. The multi-stakeholder team is committed to raising awareness among decision-makers by releasing various statistical reports on ageing by 2021, supporting the national agenda to ensure inclusivity in pursuing the Sustainable Development Goals (SDGs) and Ghana's overarching development objectives.

2.6.5 Analysing Policies on Ageing

The global demographic transition poses considerable implications for numerous economic sectors, creating complex policy challenges. The African Development Bank has described this demographic shift as a "ticking time bomb," especially for developing nations where policy development and implementation have not kept pace (World Health Organization, 2019). It is crucial for governments to proactively address these challenges by formulating comprehensive policies that tackle the diverse social, economic, psychological, and political aspects of population ageing, given its close relationship with national development. In Ghana, the government acknowledges the critical nature of population ageing and has crafted various national policies and

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social protection programs to support the needs of the elderly. Key policy documents, such as the 1992 Constitution of Ghana, the Ghana Shared Growth and Development Agenda (2010-2013), the Revised Edition of the National Population Policy (1994), the National Ageing Policy (2010), the National Health Insurance Act 2003 (Act 650), and the National Social Protection Strategy, include provisions to enhance the quality of life for older adults. Ghana's commitment to the welfare of its ageing population is evident through initiatives like including citizens aged 70 and above in the National Health Insurance Scheme (NHIS) and cash transfers to households with elderly members under the Livelihood Empowerment Against Poverty (LEAP) program. These efforts highlight the country's dedication to ensuring the health and well-being of its older adults.

2.6.6 Ghana's National Ageing Policy: A Review

Population policies are pivotal in shaping demographic patterns and influencing individual behaviours (Goldscheider et al., 2015). A country's population structure is primarily determined by the interplay of fertility, mortality, and migration, which considerably impact socio-economic development. After World War II, developing nations like Ghana experienced high fertility and mortality rates, underscoring the need for policy interventions to lower fertility rates and promote socio-economic growth (Kwankye & Cofie, 2015). Ghana was among the first countries in Africa to introduce a comprehensive population policy in 1969, known as "Population Planning for National Progress and Prosperity" (Ghana, 1969). The policy aimed to curb the high population growth rate of 2.4% annually between 1960 and 1970. However, various obstacles hindered its success, including cultural norms favouring large family sizes, inconsistent government commitment, an overburdened healthcare system, and excluding men and rural communities from family planning initiatives. Due to these challenges, the policy fell short of achieving the intended reduction in fertility rates, prompting the government to introduce a Revised Population Policy in

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1994. This updated policy aimed to align population growth with economic development and sustainability goals. Key targets included reducing the total fertility rate from 5.5 children per woman to 5.0 by the year 2000, to 4.0 by 2010, and 3.0 by 2020. Additionally, the policy sought to raise contraceptive use to 15% by 2000, 28% by 2010, and 50% by 2020. Despite some notable achievements, such as a steady decline in fertility and mortality rates, the country faces challenges in fully meeting these ambitious targets.

2.6.7 Challenges and Social Protection Mechanisms for Older Adults in sub- Saharan Africa and Ghana

Although reflective of advancements in life expectancy and socio-economic development, the increasing number of older adults in sub-Saharan Africa presents numerous challenges, particularly concerning health and social welfare. Across many countries in the region, older adults encounter a range of socio-economic and health-related difficulties. For example, social pensions remain limited, with only a few countries like South Africa offering significant support through such programs (Kuuire et al., 2021). Health insurance schemes designed specifically for older adults are also scarce, with notable exceptions in countries like Ghana and Senegal (World Health Organization, 2019).

Ghana has rolled out several social protections measures to address these issues to assist its ageing population. One such initiative is the Livelihood Empowerment Against Poverty (LEAP) program, which provides cash transfers to households that include older adults as eligible recipients (World Health Organization, 2019). Moreover, Ghana's National Health Insurance Scheme (NHIS) grants premium exemptions to those aged 70 years and above, allowing them to join the scheme without paying premiums. However, they are still responsible for registration and annual renewal fees.

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Ghana has also implemented a three-tier national pension system comprising mandatory and voluntary components. The first and second tiers are compulsory for formal sector workers, while the third tier is a voluntary scheme accessible to everyone. The total pension contribution is 18.5% of an employee's salary, with 5.5% contributed by the employee and 13% by the employer. Of this amount, 13.5% is allocated to the first tier, and 5% is directed to the second tier, while additional contributions can be made to the third tier voluntarily.

Despite these initiatives, gaps still exist. There has been no comprehensive evaluation of the living conditions of older adults in Ghana, indicating the need for further research and more targeted policy measures to address the growing needs of this group. While programs like LEAP and NHIS represent necessary steps forward, a more holistic strategy is required to ensure the comprehensive well-being of older adults in Ghana and the wider sub-Saharan Africa region. This would entail expanding social pensions, improving health insurance coverage, and implementing targeted policies to address older adults' distinct challenges (Aboderin & Oyetayo, 2006; Apt, 1996; Bohman, 2008; Minicuci et al., 2014).

As the ageing population continues to expand in sub-Saharan Africa and Ghana, policymakers must consider this demographic trend's broad social and economic consequences. Although some progress has been made through introducing social protection programs in Ghana, a more comprehensive approach is necessary. This should include broadening access to social pensions, enhancing health insurance options, and designing interventions to tackle the unique difficulties older adults face across the region. Addressing these issues is essential to ensuring that the ageing population can enjoy lives marked by dignity and security.

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2.7 Exploring Ageing-Related Research

Research on ageing has traditionally relied on quantitative methods to explore the intricacies of the ageing process. Globally, studies on this topic have utilised cohort studies, randomised controlled trials, and systematic reviews, often conducted by experts from disciplines such as anthropology, gerontology, psychology, sociology, social work, public health, and social policy. Despite this, research on ageing in Ghana remains limited, and older adults are frequently underrepresented in academic studies, policy discussions, and national development agendas.

In Ghana, research on ageing has primarily employed two approaches: qualitative and quantitative (Apt, 1993; 2016; Mba, 2010). These methods are essential for addressing the diverse needs of older adults, as they shed light on various aspects of ageing, including social, mental, physical, psychological, and economic dimensions. Quantitative studies provide critical statistical data, offering valuable insights into ageing trends. Although the field of ageing research in Ghana is still developing, there is an urgent need to deepen the understanding of practical strategies and interventions suitable for the local context.

2.8 Policy Responses and Future Directions

To tackle the challenges an ageing population brings, the Ghanaian government and relevant stakeholders must create and execute policies tailored to the local context and supported by empirical evidence. These policies should prioritise the health and well-being of older adults, ensure their economic security, and promote social inclusion. Additionally, Ghana's strategy for ageing should be harmonised with international frameworks like the MIPAA while also catering to the specific needs of the nation's older adults.

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The creation of the African Gerontological Society (AGES) and the African Research on Ageing Network (AFRAN) has established essential platforms to promote ageing research across Africa. These networks have been instrumental in encouraging interdisciplinary studies and pushing for the integration of ageing-related issues into national and regional policy frameworks (Busolo & Nhongo, 2010). Despite these efforts, there is still a significant need to convert research outcomes into actionable policies that effectively enhance the quality of life for older adults in Ghana and the broader African continent.

In conclusion, as Ghana's population ages, policymakers, researchers, and practitioners must collaborate to develop ageing plans that are aligned with global standards and responsive to local needs. Addressing the complex requirements of older Ghanaians through comprehensive and context-specific strategies, the country can better manage the challenges of an ageing population and ensure that its elderly citizens enjoy a high quality of life in their later years.

2.9 The South African Pension System: A Model of Non-Contributory Social Security

South Africa's pension system stands as one of the most remarkable social protection programs on the African continent, often cited as a model for its comprehensive coverage and innovative integration of public and private mechanisms (Affairs, 2020). Unlike many countries in the region, where formal employment structures dominate access to retirement security, South Africa has designed a system capable of embracing both formal and informal labour markets, thereby extending a safety net to a broad spectrum of its elderly population.

The historical roots of the system stretch back to the early 20th century, with the Old Age Pension Act of 1928 marking a pivotal moment in the institutionalization of social welfare in South Africa. Initially, the program was a racially exclusive policy, providing support solely to elderly white

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South Africans within a colonial framework that codified societal inequalities (Lund, 2002). Over time, this exclusionary model began to erode, particularly as the nation grappled with mounting political pressure to extend benefits to the broader population. The Social Pensions Act of 1965 represented an incremental, yet significant step towards inclusion, offering limited pensions to black South Africans, albeit at substantially lower levels than their white counterparts (Affairs, 2020; Seekings, 2021).

The democratic transition in 1994 heralded a profound transformation. Under Nelson Mandela's leadership, the post-apartheid government prioritized social justice, seeking to dismantle structural inequities that had persisted for decades. The full implementation of the Social Assistance Act of 1992, after the end of apartheid, extended non-contributory pensions to all citizens aged 60 and above, provided they met the means test criteria, marking the creation of a truly universal pension system (Devereux, 2007). This reform not only addressed historical injustices but also became a cornerstone in South Africa's broader social protection architecture, reflecting a national commitment to reducing poverty and fostering dignity among older adults.

2.9.1 Key Features of the South African Pension System

The contemporary pension system embodies several characteristics that underline both its uniqueness and effectiveness:

1. Eligibility Criteria: The pension is accessible to all South African citizens and permanent residents aged 60 years and older, irrespective of their work history or participation in formal retirement schemes. Eligibility is determined through a means test that assesses income and assets, with thresholds regularly adjusted to reflect inflation and changing living standards (Affairs, 2020). This ensures that support reaches those most in need,

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particularly individuals who have labored in informal sectors without access to conventional retirement savings.

2. Benefit Structure: While the monthly pension—ZAR 2,080 as of 2024 (approximately USD 110)—may appear modest, its impact on recipients' livelihoods is profound. Periodic adjustments maintain the pension's real value, safeguarding older adults against the corrosive effects of inflation (Questions, 2024). Furthermore, the means test ensures fiscal sustainability by proportionally reducing benefits for those with other income or assets.
3. Administration and Delivery: The South African Social Security Agency (SASSA), established in 2005, oversees the pension system's administration. Its innovations, including biometric verification and direct bank or mobile payments, have enhanced both efficiency and transparency, ensuring that benefits reach even those in geographically isolated regions (SASSA, 2024).
4. Universal Coverage: A defining hallmark of the system is its inclusiveness. Unlike contributory pension schemes that privilege formal sector workers, South Africa's model embraces all elderly citizens who satisfy the age and means criteria, thus offering a safety net to individuals who would otherwise be excluded from retirement security (Seekings, 2021).

2.9.2 Benefits and Impact

The pension's significance extends far beyond mere financial support. Its multifaceted impact encompasses poverty alleviation, social cohesion, intergenerational support, and health improvements.

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- Poverty Alleviation: Empirical evidence underscores the pension's role in significantly reducing poverty among older South Africans, particularly in rural communities with limited alternative income sources (Case & Deaton, 1998). For female-headed households, often bereft of a male breadwinner, the pension provides a lifeline, enabling access to food, healthcare, and shelter, thereby preserving dignity and autonomy (Barrientos, 2003).
- Social Inclusion and Intergenerational Support: The pension often serves multiple generations, extending its reach to children and grandchildren within households. This transfer of resources strengthens familial bonds and supports household resilience, while simultaneously elevating the social status of elderly recipients, allowing them to participate meaningfully in community life (Affairs, 2020; Barrientos, 2003).
- Health and Well-Being: Access to a predictable income enables older adults to procure medications, healthcare services, and make home adaptations that improve safety and mobility. Research demonstrates that pension receipt correlates with lower malnutrition rates, better mental health, and overall improved well-being (Barrientos, 2003; Devereux, 2007).

2.9.3 Challenges and Sustainability

Despite its successes, the South African pension system faces formidable challenges.

- **Fiscal Pressures**: Fully funded by general taxation, the system's sustainability is strained by demographic changes, slow economic growth, high unemployment, and mounting public debt (Komp & Johansson, 2016). Policy options may include revising means test thresholds, increasing tax revenues, or introducing complementary contributory schemes.

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- **Means Test Limitations**: While designed to target resources efficiently, the means test can inadvertently exclude vulnerable individuals marginally above threshold limits and may disincentivize work or savings among older adults (Seekings, 2021).
- **Administrative Hurdles**: Despite SASSA's advancements, rural beneficiaries still face delays, access difficulties, and occasional fraud, highlighting the ongoing need for administrative vigilance and process optimization.

In sum, South Africa's pension system exemplifies a social protection model that balances universality, fiscal prudence, and social impact, providing a blueprint for the continent while emphasizing the importance of continual adaptation and policy innovation.

2.10 Lessons for Ghana and Sub-Saharan Africa

The South African experience offers instructive lessons for Ghana and neighboring countries seeking to expand social protection for older adults:

1. **Universal Coverage and Inclusivity**: Non-contributory schemes can effectively protect informal sector workers and mitigate elderly poverty (Affairs, 2020).
2. **Robust Institutional Frameworks**: Agencies with operational capacity, akin to SASSA, can ensure efficient delivery of benefits, even in remote or underserved regions (SASSA, 2024).
3. **Addressing Social Inequalities**: Gender-sensitive design ensures women, often disadvantaged by interrupted or informal employment histories, gain equitable access to pensions (Seekings, 2021).

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4. **Balancing Sustainability and Equity**: Financially viable schemes require careful calibration of inclusivity with long-term fiscal capacity, potentially blending contributory and non-contributory mechanisms (Van der Berg & Bredenkamp, 2002).
5. **Integrated Social Protection**: Aligning pensions with other social grants strengthens poverty reduction, social equity, and intergenerational solidarity (Case & Deaton, 1998).

Adapting these lessons demands careful consideration of local demographics, economic realities, and social policy frameworks, ensuring that pension systems in Ghana and across sub-Saharan Africa are both practical and sustainable, while enhancing the well-being and dignity of ageing populations.

In summary, the South African pension system offers essential lessons for Ghana and other nations within sub-Saharan Africa. In focusing on universal coverage, effective administration, gender inclusivity, financial sustainability, and integration within broader social protection systems, these countries can enhance their pension schemes and, by extension, the quality of life for their ageing populations. However, adapting these lessons must consider local contexts, including demographic trends, economic conditions, and existing social security frameworks, to ensure that the systems developed are both practical and sustainable in the long term.

2.11 Theoretical framework

The importance of a theoretical framework in research cannot be overstated. It serves as a guide to either support or challenge a phenomenon. The transformation of an issue into a research problem, supported by the theoretical framework, provides a rationale for its investigation. This framework helps the researcher connect their study to existing knowledge, guiding them through

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relevant theories and laying the foundation for hypothesis development and methodological decisions. Clarifying the underlying theory is crucial in any study as it allows researchers to delve into its intricacies, limitations, and competing theories.

2.11.1 Contemporary Development Life-Course Perspective

Researchers examining life courses study individuals over time, as proposed by Elder (1994). The "life course" concept refers to an individual's life progression through various social roles from birth to death. Life experiences are pivotal events that significantly influence the trajectory of one's life (Settersten & Mayer, 1997). Demographers rely on key life events such as births, deaths, and migration to calculate demographic indicators like fertility, mortality, and migration rates (Chesnais, 1992; Settersten & Mayer, 1997). This convergence has combined demographic and life course perspectives to better understand population ageing (Hobcraft, 2006).

Elder argues that an individual's ability to maintain preferred habits, activities, roles, and life patterns is critical for adjustment. Therefore, these theories influence the different quality of life outcomes between men and women, and one's capacity and ability upon retirement will determine this life course. Human agency is central to this, as individuals can choose their paths based on the opportunities and constraints provided by social structures and culture.

Elder's Contemporary Development Life-Course Perspective provides a comprehensive framework for examining how life paths, timing, and social environments influence retirees' health-related quality of life. It highlights the interdependence of life events and supports a holistic approach to understanding the long-term impact of retirement on health and overall well-being. This perspective is essential for informing research, shaping policy, and developing interventions to improve retirees' quality of life for retirees.

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2.11.2 Social Determinants of Health

Social determinants of health (SDOH) encompass the economic and social conditions contributing to health inequalities among individuals and communities (Wilkinson & Marmot, 2003) Rather than individual risk factors like behaviour or genetics that affect disease or injury risk, these determinants are anchored in one's living and working environments and include dimensions such as income distribution, wealth, power, and influence (Braveman & Gottlieb, 2014). The allocation of these social factors is influenced by public policies, which often reflect the dominant political ideologies (Health & Organization, 2008).

According to the (Health & Organization, 2008), lifestyle choices and healthcare are less likely to substantially impact health outcomes than social determinants. They contend that rather than being a result of chance, the unequal distribution of events that harm one's health is caused by bad social policies, unjust economic structures, and inept politicians. While perspectives on the most critical social determinants differ, commonly recognised determinants include gender, race, economic conditions, education, employment, housing, and food security (Wilkinson & Marmot, 2003)

Health is shaped by the environments where individuals live, learn, work, and engage in recreational activities. Social determinants of health (SDOH) encompass the circumstances and surroundings in which people are born, reside, work, play, worship, and age. These factors significantly influence various health outcomes, functional abilities, and quality-of-life measures. Non-medical determinants closely linked to health equity include access to health education, social and community support, high-quality healthcare services, food security, neighbourhood and physical environment, and financial stability. It is estimated that up to 80% of an individual's health is determined by these social factors rather than clinical care or genetic makeup (Magnan, 2017).

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Worldwide, there are differences in health. Several theoretical frameworks, including the life-course approach, examine social determinants. Chronic stress is associated with poor health outcomes and is more prevalent in people who experience unfavourable social and economic circumstances (McEwen, 1998). Evaluating the effectiveness of these interventions is still tricky despite efforts to improve global health conditions (Solar & Irwin, 2010). Public policy continuously shapes social determinants, crucial factors to consider in clinical settings (Braveman & Gottlieb, 2014).

2.11.3 Active Ageing Framework

The World Health Organisation's Active Ageing Framework advocates enhancing healthy life expectancy and maintaining the quality of life for older adults by maximising opportunities for health, participation, and security as individuals age. This framework emphasises that older adults must be rejuvenated to remain active contributors to society, which can directly influence their quality of life and well-being (Perry & Hammond, 2002).

2.11.4 Social Capital Theory

Social Capital Theory pertains to the resources available to individuals and communities through their social networks, encompassing relationships, trust, and norms of reciprocity (Siisiäinen, 2000). This theory is pertinent to this study as it elucidates how social relationships and community engagement can impact the health and well-being of the elderly population (Siisiäinen, 2000).

2.11.5 Successful Ageing Theory

The Successful Ageing Theory posits that ageing well involves minimising the risk of disease and disability, preserving high mental and physical functioning levels, and staying actively involved in life (Rowe & Kahn, 1997). This framework is particularly relevant for studying the health-related quality of life among older adults, focusing on how maintaining health, functioning, and

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social engagement can improve their quality of life.

2.11.6 Feminist Gerontology Theory: An Overview and Its Relevance to Ageing and Health in Ghana

Feminist Gerontology offers a critical lens for understanding how gender shapes the experiences and outcomes of ageing. By examining the intersection of gender, social structures, and the ageing process, this perspective highlights the lifelong inequalities that often result in distinct health, economic, and social challenges for older women. In the Ghanaian context-where gender norms, access to resources, and social roles significantly influence wellbeing in later life-Feminist Gerontology provides a valuable framework for analysing disparities in ageing and health. This section explores the core principles of the theory and discusses its relevance for understanding ageing in Ghana.

2.11.7 Introduction to Feminist Gerontology

Feminist Gerontology is an interdisciplinary framework that emerged in the late 20th century, significantly influenced by scholars such as Toni M. Calasanti and Margaret Cruikshank. This theory challenges traditional approaches in gerontology by emphasising the need to consider gender as a critical factor in understanding ageing. It highlights the importance of analysing how gender, alongside other social categories like race and class, affects the experiences of ageing individuals, especially women.

Proponents and Evolution

The theory gained traction in the 1980s and 1990s, with Toni M. Calasanti and Margaret Cruikshank pivotal in advancing its concepts. Calasanti's work, in particular, underscores the idea that societal norms, cultural expectations, and power dynamics shape the ageing experience

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differently for men and women. Feminist Gerontology critiques the male-centric perspectives in traditional gerontological research and advocates for a more inclusive understanding that considers the intersecting effects of gender and other social factors.

Feminist Gerontology and Gendered Ageing

Feminist Gerontology provides a valuable lens for exploring the gender-specific challenges and experiences associated with ageing. It brings to light the systemic inequalities that women often face as they grow older, such as economic disadvantages due to lower lifetime earnings, reduced access to pensions, and a higher likelihood of living in poverty. These challenges are not solely due to biological factors, but they are deeply entrenched in societal structures that have historically marginalised women.

In many societies, caregiving roles are predominantly assigned to women, which can lead to economic disadvantages in later life. Feminist Gerontology emphasises the need to recognise these gendered roles and their impact on ageing populations, advocating for policy interventions that address these disparities and promote equitable ageing opportunities for both men and women.

2.11.7.1 Relevance to Health-Related Quality of Life in Ghana

Utilising Feminist Gerontology to examine health-related quality of life (HRQoL) among older adults in Ghana is highly relevant, given the gender-specific aspects of ageing in the country. As in many other parts of the world, older women in Ghana often face additional challenges that can negatively affect their HRQoL. These challenges include lower educational levels, limited healthcare access, and economic dependence on family members, all of which are influenced by traditional gender roles and expectations.

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Feminist Gerontology offers a framework to critically examine how these gendered social determinants influence the HRQoL of older adults in Ghana. For instance, older women are more likely to suffer from chronic illnesses and disabilities, partly due to lifelong unequal access to resources and healthcare. The theory also highlights how existing social policies and healthcare systems may perpetuate gender disparities, advocating for more gender-sensitive approaches to improving HRQoL.

2.11.7.2 Justification and Policy Implications

It is crucial to apply Feminist Gerontology to understand the gender dimensions of population ageing and HRQoL in Ghana. By focusing on the intersection of gender and ageing, this theory provides a comprehensive framework for addressing older women's specific challenges. It calls for re-evaluating social policies, healthcare systems, and community support structures to ensure they are inclusive and equitable.

For policymakers in Ghana, incorporating insights from Feminist Gerontology into ageing-related policies can lead to more effective interventions that cater to the unique needs of older women. This could include financial support programs, gender-sensitive healthcare services, and initiatives that promote social inclusion and counteract the isolation often experienced by older women.

Healthcare professionals and social workers can also apply Feminist Gerontology principles to better assess and address older adults' needs, ensuring their interventions consider the gendered aspects of ageing. This approach enhances the HRQoL of older adults and supports broader social justice goals by addressing the structural inequalities contributing to gender disparities in ageing.

In conclusion, feminist Gerontology offers a valuable and transformative perspective for analysing the gender- specific aspects of population ageing and HRQoL among older adults in Ghana.

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Recognising and addressing the distinct challenges experienced by older women, this approach provides a solid basis to developing more equitable and inclusive policies and practices that enhance the well-being of all elderly individuals. Its use in the Ghanaian context is crucial for promoting gender equity in ageing and ensuring that older adults can lead healthy and fulfilling lives.

2.12 Conceptual Framework

This study's conceptual framework aims to clarify the intricate relationship between population ageing, gender disparities, and health-related quality of life (HRQoL) among older adults in Ghana. This framework, depicted in Figure 2.3, illustrates how various factors associated with ageing and gender influence the HRQoL of the elderly population.

The conceptual framework illustrated how socio-demographic factors (independent variables), employment history (intermediate variables), and different aspects of Health-Related Quality of Life (HRQoL) (dependent variables) interact with one another. The framework is grounded in the theoretical understanding that socio-demographic characteristics influence individuals' experiences throughout their lives, including their work history, affecting various domains of HRQoL in old age. This model is adapted from the WHO's approach to HRQoL assessment, which emphasises a multidimensional perspective on health and well-being (WHOQOL Group, 1998).

The independent variables in this study are the socio-demographic factors, which include age, sex, level of education, marital status, religion, ethnicity, and place of residence. These socio-demographic factors are foundational in shaping an individual's life course, including their work history and subsequent health outcomes in old age.

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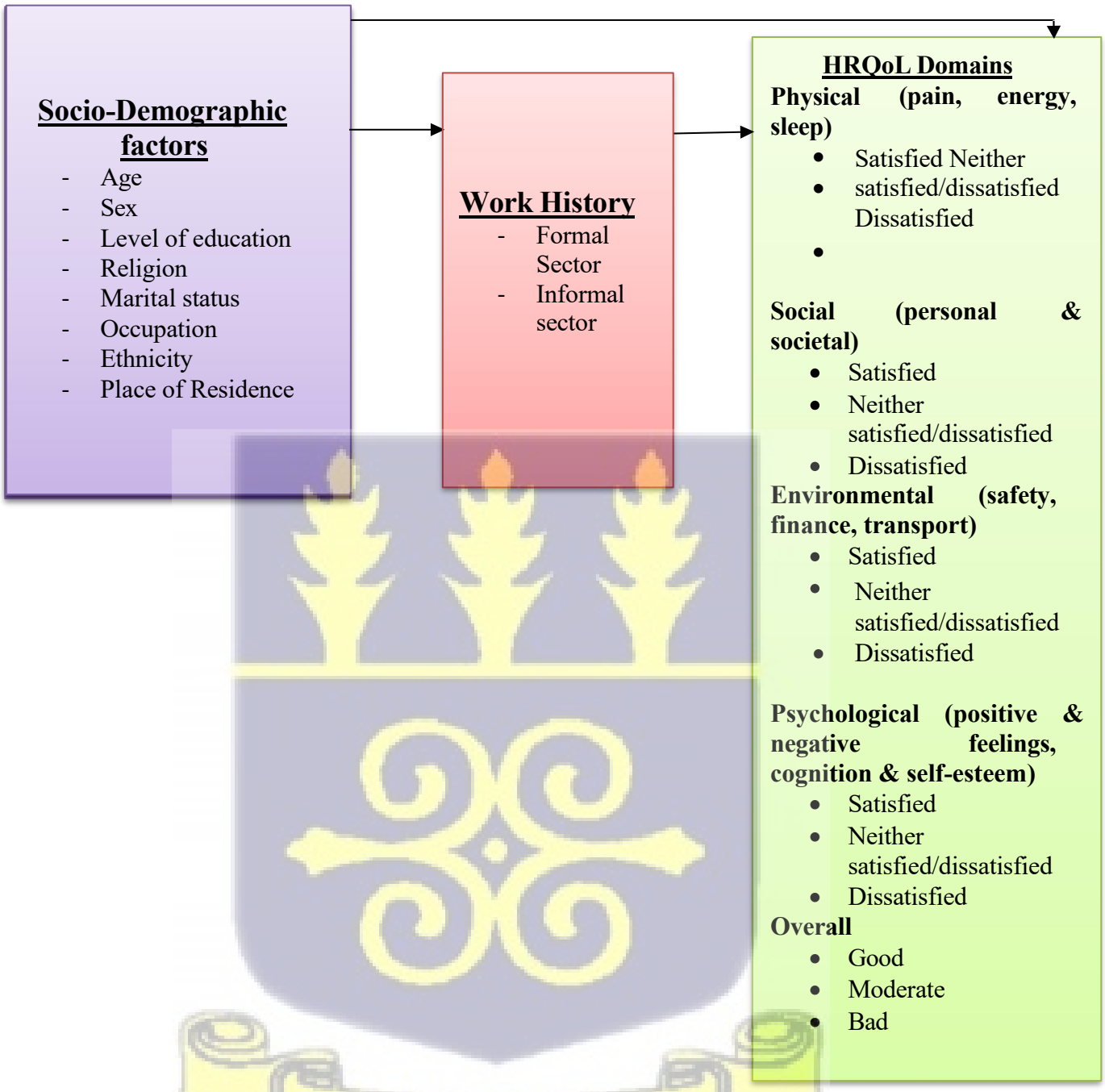
Figure 2.3: Conceptual Framework on how Population Ageing and Gender Differentials affect HRQoL



Source: Author's Construct, 2023

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Age is a primary factor in HRQoL, with older individuals likely to experience a decline in physical health, social engagement, and psychological well-being (Bowling, 2005). Also, gender differences significantly impact HRQoL, with women often reporting lower physical and psychological health outcomes compared to men, especially in later life (Girgus et al., 2017). Women generally live longer than men, but they also tend to experience higher rates of chronic diseases and disabilities, a phenomenon known as the health-survival paradox (Ansori, 2015). This framework incorporates gender differentials by highlighting how socio-cultural and economic factors impact men and women differently. For example, women may have less access to healthcare resources due to economic dependency or cultural norms (World Economic Forum, 2019), which can exacerbate health disparities and affect their HRQoL more severely than men.

The level of education influences health literacy, access to healthcare, and engagement in health-promoting behaviours, all of which affect HRQoL (Lleras-Muney, 2005). Religious beliefs and practices can provide emotional support and a sense of purpose, contributing positively to the psychological and social domains of HRQoL (Koenig et al., 2012). Marital status affects social support networks, crucial for maintaining mental and physical health in older age (Umberson & Karas Montez, 2010). The nature of one's occupation, whether physically demanding or mentally stimulating, has long-term implications for health outcomes in old age (Clougherty et al., 2010). Again, ethnic background may influence access to resources, cultural perceptions of ageing, and social support, impacting HRQoL (Williams & Sternthal, 2010). Urban vs. rural residency impacts access to healthcare, social services, and community support, essential determinants of HRQoL (Medical et al., 2006).

The work history impacts HRQoL by influencing the resources available to individuals as they age, such as financial security, healthcare access, and social support. Work history, categorised

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into formal and informal sectors, is an intermediate variable in this study. This classification highlights various employment types and their long-term impacts on health and overall well-being.

Formal Sector: Employment in the formal sector often provides better access to healthcare, pensions, and retirement benefits, which can positively affect HRQoL in old age (Banks, 2006). Formal sector jobs offer more stability and security, which are crucial for maintaining physical and mental health.

Informal Sector: Individuals employed in the informal sector often do not have access to social security, healthcare benefits, or consistent income, making them more susceptible to challenges in their later years (Van Ginneken, 2003). The physical demands of many informal sector jobs can lead to chronic health conditions, further deteriorating HRQoL.

The dependent variables in this framework are the domains of HRQoL, as outlined by the WHO (1998):

Physical Domain: This includes pain, energy levels, and sleep quality. Poor physical health can limit an individual's ability to engage in daily activities, affecting their overall quality of life (Bergland et al., 2018; Dragesund et al., 2021; Stewart et al., 1992)

Social Domain encompasses personal relationships, social support, and societal participation. Social isolation and lack of support can lead to decreased psychological well-being and lower overall QoL (Bergland et al., 2018; Shin & Park, 2022)

Psychological Domain: This domain involves emotional well-being, cognitive functioning, and self-esteem. Psychological distress can arise from life events, health problems, or lack of social support, significantly impacting QoL (Heidrich & Ryff, 2021; Ryff & Keyes, 1995). The self in later years of life: Changing perspectives on psychological well-being (UNFPA, 2012).

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Environmental Domain: This includes safety, financial security, and access to transport. A safe and supportive environment is essential for independence and well-being in old age (Edeholt & Joseph, 2022).

Overall Quality of Life: This is a composite measure that integrates the physical, social, psychological, and environmental domains to provide a holistic assessment of an individual's well-being.

Interrelationships Between Variables

The conceptual framework posits that socio-demographic factors influence both work history and HRQoL. For example, a higher level of education (independent variable) may lead to employment in the formal sector (intermediate variable), which provides better health benefits and financial security, thereby positively affecting all domains of HRQoL (dependent variables). Conversely, lower socio-economic status may limit access to formal employment, leading to poorer health outcomes in old age.

Moreover, the framework acknowledges that the impact of socio-demographic factors and work history on HRQoL is not unidirectional but involves feedback loops. For instance, poor HRQoL in older adults can lead to reduced participation in social activities, exacerbating feelings of isolation and further diminishing psychological well-being.

This framework serves as the foundation for the thesis, guiding the investigation into how ageing affects QoL among older adults in Ghana. Identifying and analysing the interrelationships between socio-demographic factors, work history, and HRQoL seeks to offer a thorough understanding of the factors that influence well-being in older adulthood. This understanding is crucial for informing policy interventions to improve the HRQoL of Ghana's ageing population.

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CHAPTER THREE

STUDY AREA AND RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology employed in this study, detailing the study area, research design, data sources, and analytical approach. The study adopts a quantitative research method**,** enabling rigorous statistical analysis of factors influencing the health-related quality of life of older adults in Ghana. The quantitative approach provides robust, generalizable findings suitable for informing policy and practice.

3.2 Study design

This study uses a quantitative cross-sectional design, drawing on data from Wave 2 of the World Health Organisation's (WHO) Study on Global Ageing and Health (SAGE) survey, conducted in Ghana between 2014 and 2015. The SAGE survey offers comprehensive information on multiple dimensions of ageing, including physical health, psychological well-being, social participation, and environmental conditions, all of which influence the overall quality of life among older adults. The dataset allows for statistical analysis across diverse demographic and socioeconomic groups, enabling the identification of patterns and determinants of health-related quality of life at the population level. The exclusive use of quantitative data ensures methodological clarity, analytical precision, and the ability to generate generalizable insights relevant to Ghanaian and sub-Saharan African contexts.

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3.3 Health-Related Domains of Quality of Life

Health-Related Quality of Life (HRQOL) is a multidimensional concept that reflects individuals' perceptions of their physical, psychological, social, and environmental well-being. In the context of ageing populations, HRQOL provides a holistic framework for assessing how older adults experience health, functional ability, social integration, and living conditions. This study adopts the widely used framework of HRQOL, which is divided into four interrelated domains, each critical for understanding the overall quality of life of older adults.

3.3.1 Physical Quality of Life

The physical domain of HRQOL encompasses aspects related to health status, functional capacity, and the ability to perform daily activities. This includes considerations of chronic disease prevalence, mobility, sensory functioning, pain management, and access to healthcare services. Evaluating physical quality of life allows researchers to understand the degree to which older adults can maintain independence, perform self-care, and engage in routine social and occupational activities.

3.3.2 Psychological Quality of Life

The psychological domain pertains to mental health, emotional well-being, and cognitive functioning. Key elements include stress, anxiety, depression, life satisfaction, and memory or cognitive decline. This domain captures the subjective experiences of older adults regarding their mental and emotional state, which may be influenced by life transitions, social roles, and coping mechanisms. Measuring psychological quality of life is essential to identify factors that affect emotional resilience, mental stability, and overall well-being among ageing populations.

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3.3.3 Social Quality of Life

The social domain examines the extent and quality of social interactions, support networks, community engagement, and family relationships. Social quality of life reflects how older adults maintain meaningful connections, receive emotional and practical support, and participate in community life. This domain is critical for understanding the social determinants of health and the role of interpersonal relationships in promoting or hindering well-being in later life.

3.3.4 Environmental Quality of Life

The environmental domain focuses on external conditions that influence daily living and well-being. This includes housing quality, neighborhood safety, access to essential services (such as water, sanitation, and healthcare), transportation, and financial resources. Environmental quality of life is fundamental for assessing the structural and contextual factors that enable or constrain healthy ageing.

3.3.5 Overall Quality of Life

Overall HRQOL integrates the physical, psychological, social, and environmental domains to provide a comprehensive measure of well-being among older adults. This multidimensional perspective allows researchers to capture the complex interplay of health, personal, social, and environmental factors that collectively shape the lived experiences of ageing populations. Assessing overall quality of life is essential for informing public health policy, designing interventions, and monitoring the effectiveness of social and health programs targeting older adults.

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3.4 Source of Data

The quantitative data for this study were obtained from the 2014–2015 Global Ageing and Adult Health (SAGE) Survey conducted in Ghana, which formed part of the second wave of the World Health Organization's (WHO) multi-country study on ageing and health. SAGE was designed to provide comprehensive, population-level information on the health status, functioning, and well-being of older adults aged 60 years and above. The dataset includes variables spanning physical health, psychological status, social engagement, and environmental conditions, which are central to assessing Health-Related Quality of Life (HRQOL).

The SAGE survey employed a multi-stage stratified sampling design, ensuring representativeness of both urban and rural populations, and included standardized questionnaires, objective health measures, and demographic data. The survey design enables the integration of health, socio-economic, and demographic variables, allowing rigorous quantitative analysis of factors influencing quality of life among older adults in Ghana.

Given the focus of this study on quantitative analyses, only the SAGE dataset was utilized, which provides robust statistical measures for examining patterns, associations, and determinants of HRQOL. The survey's methodological rigor ensures that the findings can inform policy discussions regarding ageing, social protection, and healthcare services in Ghana.

3.5 Study Area

Ghana is a West African country located along the Gulf of Guinea, bordered by Togo to the east, Côte d'Ivoire to the west, and Burkina Faso to the north. According to the 2021 Population and Housing Census (PHC), Ghana's population stands at 30,832,019, reflecting a growth rate of 2.1% from 2010 to 2021 (Ghana Statistical Service, 2021). The country is administratively divided into

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sixteen regions, with Greater Accra being the most populous, accounting for 17.7% of the total population (Ghana Statistical Service, 2021).

The population structure in Ghana is predominantly young: 38.3% of the population is under 15 years, while adults aged 60 and above constitute 6.4%. The demographic trend indicates a gradual shift, with a growing young-adult cohort (15–35 years) and a decreasing proportion of children under 15 years (Ghana Statistical Service, 2021). Urban areas host 51% of the population, whereas rural settlements account for 49%, reflecting ongoing urbanization trends.

Ethnically, the Akan group forms the majority (45.7%), while the Mande represent the smallest proportion (2.0%). Christianity is the predominant religion (74.7%), followed by Islam (20.4%), traditional religions (5.2%), and other affiliations or no religion (6.1%). Literacy among persons aged 11 years and older is approximately 70%, primarily in reading and writing English, while about 24% of individuals aged three years and above have never received formal education (Ghana Statistical Service, 2021).

3.6 The Health System in Ghana

Understanding the structure of the Ghanaian health system is essential for examining HRQOL among older adults, as it determines access to care, treatment quality, and health outcomes. Ghana's health system operates on a tiered framework, consisting of three main levels:

1. Primary Healthcare Level – This includes Community-based Health Planning and Services (CHPS) compounds, health centers, and clinics. These facilities focus on preventive care, maternal and child health, and basic outpatient services. CHPS zones, particularly in rural areas, are designed to bring healthcare closer to communities and promote equity in access.

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2. Secondary Healthcare Level – This comprises district and regional hospitals, which provide general medical services, inpatient care, and specialized outpatient services. District hospitals serve as referral centers for primary facilities, while regional hospitals offer more advanced diagnostic and therapeutic services.
3. Tertiary Healthcare Level – Teaching hospitals and specialized facilities operate at this level, delivering highly specialized services, complex surgical procedures, and advanced diagnostics. These institutions also serve as training and research centers.

Ghana operates a National Health Insurance Scheme (NHIS), established in 2003, to improve access to healthcare and reduce financial barriers, particularly for vulnerable populations, including older adults. The NHIS covers a range of essential services, from outpatient consultations to inpatient care, although gaps remain in the coverage of certain chronic disease treatments, rehabilitative care, and geriatric-specific services.

Despite notable achievements, the Ghanaian health system faces challenges such as unequal access between urban and rural populations, limited geriatric care services, shortages of trained healthcare professionals, and infrastructural deficits. These system-level factors directly influence the health-related quality of life of older adults, making them a critical consideration for studies assessing ageing and well-being.

To provide a clear visual context for the study, Figure 3.1 presents a map of Ghana delineating the specific regions included in the research. This map highlights the geographical distribution of the older adult population and situates the study within the national landscape, facilitating a better understanding of regional demographics and health system coverage relevant to the research focus.

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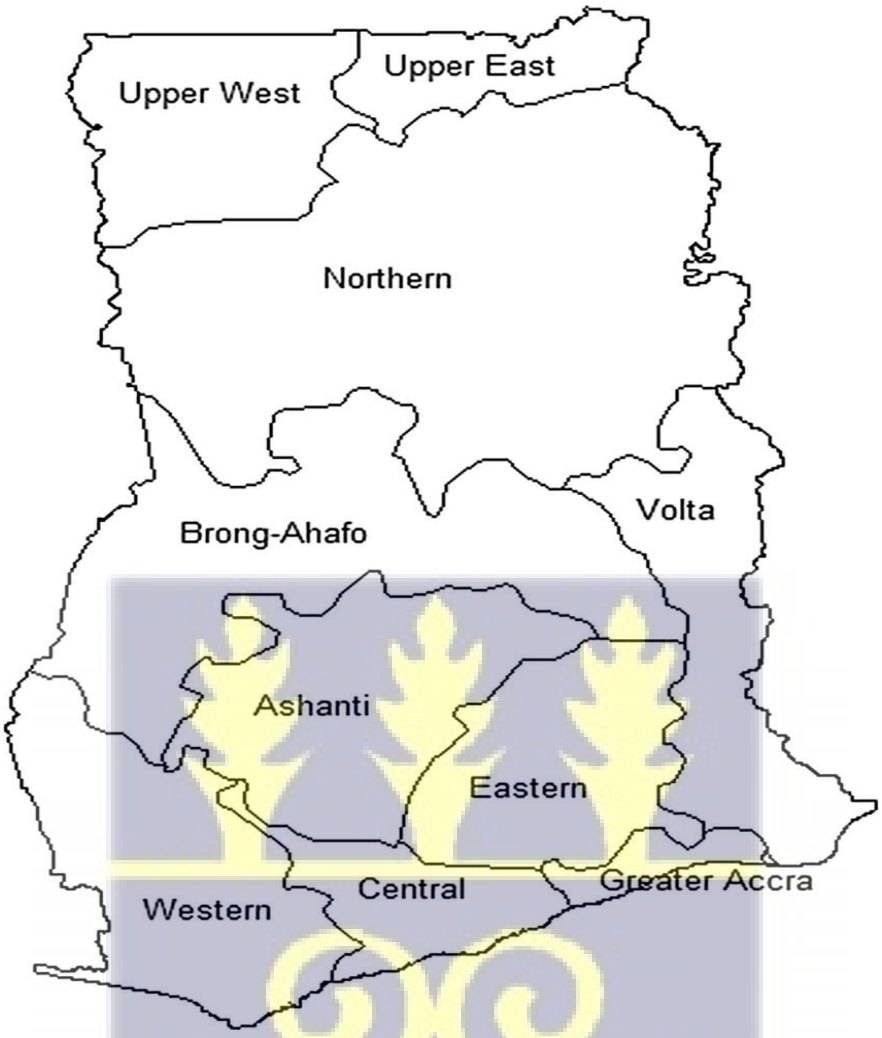
Figure 3.1: Ghana Map delineating the region of study location.



Source: *Ghana map: Map of Ghana in main regions (iStock, 2025).*

3.7 Sampling design

The Ghana SAGE Wave 2 survey employed a stratified, multistage cluster sampling method derived from the World Health Survey, ensuring national representation (Biritwum et al., 2013). Primary sampling units were categorised based on administrative regions (Ashanti, Brong Ahafo, Central, Eastern, Greater Accra, Northern, Upper East, Upper West, Volta, and Western) and locality types (urban or rural), resulting in a total of 20 strata (Biritwum et al., 2013; Minicuci et

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al., 2014). From each stratum, 10 to 15 Enumeration Areas (EAs) were selected, depending on the population size.

For each specified EA, household listings were created. Then, four households with people between the ages of 18 and 49 and 20 households with people over 50 were chosen for interviews (Biritwum et al., 2013). In "older" homes (those with at least one member above the age of 50), all adults were requested to participate, while in "younger" households, just one individual was chosen at random (households with no person aged 50-plus years). A proxy questionnaire was administered for individuals unable to participate in an interview due to health or cognitive impairments (Biritwum et al., 2013). All interviewers underwent standardised training covering all aspects of the interview process. The surveys were translated into appropriate local languages using a structured translation approach and adapted to fit the local context (Minicuci et al., 2014). As a result, 86% of the participants completed the interviews (Biritwum et al., 2013).

3.7.1 Study Sample Derivation

Figure 1 indicates how the final sample size was obtained. Initially, individuals aged 18 and above were selected from the dataset, resulting in a sample of 4,735 respondents. This sample was

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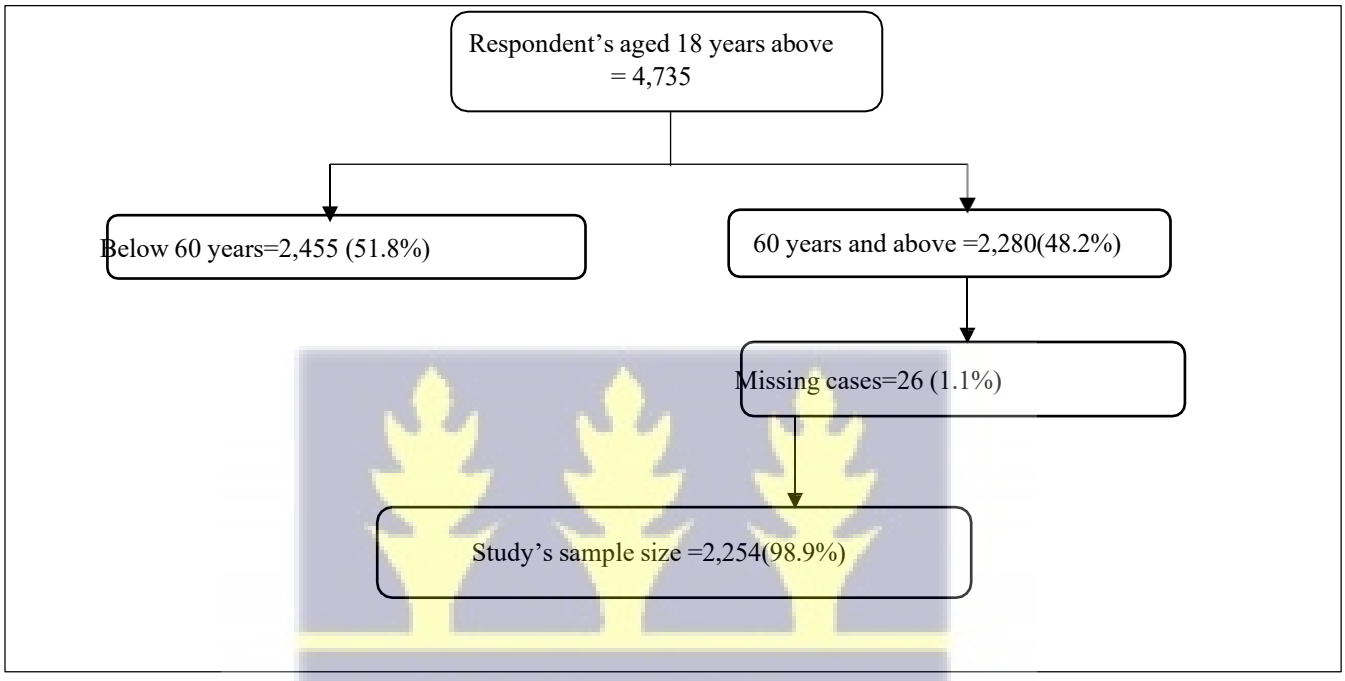
narrowed down to include only those aged 60 and older, totalling 2,280 participants. Missing cases of 26 were dropped from the datasets, resulting in a final dataset of 2254.

Figure 3.*2* Study sample derivation



Source: Authors Construct, World Health Organisation (WHO) Survey on Global Ageing and Health Survey (SAGE) 2014 and 2015 (Wave 2).

3.8 Measures and summary statistics of participant characteristics

This section outlines the key variables used in the study and provides summary statistics describing the characteristics of the participants. It details how each measure was operationalised and presents an overview of the demographic, socioeconomic, and health-related attributes of the study population. These statistics offer essential context for interpreting subsequent analyses and understanding patterns within the data.

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3.8.1 Measurement of independent variables

The independent variables in the study included socio-demographic factors such as age, gender, place of residence, marital status, highest level of education, ethnicity, religion, and employment status. Table 3.1 describes these variables´ measurements.

Table 3.1: Measurement of Independent Variable

Variable Type	Variable	Description/Measurement
Independent Variables	Age	60-64, 65-69, 70-74, 75-79, 80+
	Marital Status	Never Married, Married/co-habiting, Separated/Divorced, Widowed
	Highest Education	No education, Primary education, Secondary education, Tertiary
	Place of residence	Urban, Rural
	Ethnic Group	Akan, Ewe, Ga-Adangbe, Mande-Busanga, Grusi, Guan, Mole-Dagbon
	Religion	No religion, Christianity, Islam, African Traditional Religion, Others
	Sex	Male/ Female
	Main Occupation	Formal sector, Informal sector, Not working
Dependent Variables	Physical HRQoL (Pain, Energy, & Stress)	Satisfied, Neither satisfied/dissatisfied, Dissatisfied
	Psychological HRQoL (Positive & Negative Feelings, Cognition & Self-Esteem.)	Satisfied, Neither satisfied/dissatisfied, Dissatisfied
	Social HRQoL (Personal and Societal)	Satisfied, Neither satisfied/dissatisfied,
	Environment HRQoL (Safety, Finance & Transport)	Satisfied, Neither satisfied/dissatisfied, Dissatisfied
	Overall HRQoL (Physical, Psychological, Social, & Environmental)	**Good, Moderate, Bad**

Source: **Ghana SAGE Wave 2 (2014/2015)**

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3.8.2 Measurement of Intermediate Variable: Employment Status

Employment status serves as an intermediate variable in this study, representing participants' engagement in economic activity, which may mediate the relationship between socio-demographic characteristics (e.g., age, gender, education) and health-related quality of life (HRQoL) outcomes.

Employment status was categorized into three groups:

1. Formal sector employment: Participants engaged in structured wage-based work with recognized contracts and social protections, such as pensions or health insurance.
2. Informal sector employment: Participants engaged in self-employment, casual labor, or family-based economic activities without formal contracts or social protections.
3. Not working: Participants who were retired, unemployed, or not engaged in regular economic activity.

The information on employment status was obtained from self-reported responses in the WHO SAGE Wave 2 survey (2014/2015). No new data were collected for this study; the analysis relied entirely on the existing secondary dataset.

Rationale: Employment status can influence financial resources, social engagement, and psychosocial well-being, all of which affect physical, psychological, social, and environmental domains of quality of life. Including it as an intermediate variable allows examination of potential pathways through which socio-demographic factors may indirectly impact HRQoL among older adults in Ghana.

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3.9 Health-related quality of life

Quality of life is assessed using the World Health Organisation's Quality of Life Assessment (WHOQOL) tool. It has been simultaneously developed in several languages and contexts to make it culturally relevant (Group, 1998). QoL is now a frequently used endpoint in assessing multi-sector public policy, encompassing activities in the fields of health, social, community, and environmental policy (Sirgy et al., 2006)

Quality of life measures must be significant to people's lives, have social and policy importance, and be adequately conceptualised and constructed to evaluate policy outcomes with any validity. A well-known quadripartite notion of quality of life was created by Lawton (Lawton et al., 1996; Lawton, 1983b, 1983a, 1991), who proposed that behavioural and social competence (health, cognition, time usage, and social behaviour) may be utilised to express the "good life" (housing, economic indicators).

Health-Related Quality of Life (HRQoL) score used thirty-three items with four main domains and one individually scored item on the overall perception of quality of life and health of the elderly pensioners. The five domains were built using 31 items, each rated positively, with higher scores indicating more excellent quality of life. Each item received a score ranging from 1 to 5. (Figure 3.1). Using the WHOQoL scoring framework, the domain scores were standardised on a scale ranging from 0 to 10, where 0 represented the lowest level of health, and 10 indicated the highest level of health (Zimmerman et al., 2016). The quality of life was assessed across various categories, including physical health, psychological well-being, social relationships, environmental factors, and overall quality of life (refer to Tables 3.2 and 4.3 to 4.6). Four elements make up the physical health domain computation. These included how satisfied respondents were with their ability to carry out their daily activities, whether respondents had enough life energy

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daily, how frequently they felt powerless to influence the significant aspects of their lives, and how frequently they discovered they could not handle everything they had to do. The questions used to evaluate the overall quality of life were how older adults rate their HRQoL and how satisfied they are with their health. (Table 3.1). The item score ranged from 1 to 5, with the higher score indicating high functioning ability. The domain under psychology was calculated using two questions. This domain centred on the respondents' level of self-satisfaction and whether they were content with their current situation. The social interaction domain was computed using just one question, which asked participants about their satisfaction with interpersonal relationships. The environment domain asked participants about their perceptions of their financial situation and satisfaction with their living arrangements. The main topics of the overall quality of life survey were the respondents' satisfaction with their health and how they would assess their general well-being.

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Table 3.2: Quality of Life Domains and Response Coding

Question number	Question	Domain	CATEGORIES OF SATISFACTION				
	How satisfied are you with…		VERY SATISFIED	SATISFIED	NEITHER SATISFIED NOR DISSATISFIED	DISSATISFIED	VERY DISSATISFIED
Q7004	… yourself?	Psychological HRQoL	1	2	3	4	5
Q7005	… your ability to Perform your daily living activities?	Physical HRQoL	1	2	3	4	5
Q7006	…your personal relationships?	Social HRQoL	1	2	3	4	5
Q7007	… the conditions of your living place?	Environment HRQoL	1	2	3	4	5
Q7009	How would you rate your overall quality of life?	Overall HRQoL	1.Very Good	2.Good	3.Moderate	4.Bad	5.Very Bad

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3.9.1 Reliability Testing

Reliability testing is crucial for verifying the consistency and robustness of measurement tools utilised in research. In this study, the overall reliability of the HRQoL questionnaire was evaluated using Cronbach's Alpha coefficient. This statistical metric assesses internal consistency by determining the degree of correlation among the items within a scale (George & Mallery, 2019). (Bland & Altman, 1997) noted that Cronbach's Alpha values exceeding 0.7 are generally deemed satisfactory for confirming internal consistency in survey-based research instruments. The HRQoL index yielded an overall Cronbach's alpha coefficient of α = 0.788, reflecting solid internal consistency across the assessed dimensions (Cortina, 1993; Turner et al., 2018). This result indicates that the questionnaire items effectively capture the intended constructs of HRQoL.

Table 3.3: Reliability Statistics Case Processing Summary

Cases	**Valid**	Frequency	Percentage
		2254	100.0
	Excluded[a]	0	0.0
	Total	2254	100.0
	Cronbach's Alpha		**N of Items**
		0.788	5

a. Listwise deletion based on all variables in the procedure.

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3.10 Method of Analysis and Analytical Framework

Three analyses were carried out: univariate, bivariate, and multivariate. The analytical framework is shown in Table 3.4.

Table 3.4: Analytical Framework

Level	Method of Analysis	Objective
Univariate	Descriptive Analyses	To describe the demographic and socio-economic characteristics of older adults in Ghana.
Bivariate	Pearson chi-square	To assess the relationship between socio-demographic characteristics and the domains of HRQoL.
Multivariate	Multinomial logistic regression	To identify the determinants of physical, psychological, social, and environmental domains of HRQoL among older adults, focusing on gender differences.

3.11 Ethics of human subject research

An application for ethical clearance for this work was submitted to the Ethics Committee for Humanities (ECH) at the University of Ghana, and approval was given (Protocol number ECH 070/23-24). (Babbie, 2020), emphasises that compliance with ethical

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standards is essential in research, particularly when including human subjects and secondary data, to guarantee responsible and respectful interpretation. This quantitative analysis utilised solely secondary data from the SAGE Wave 2 survey performed by the World Health Organisation (WHO), implementing additional ethical procedures to ensure data integrity and protect respondent confidentiality.

Due to the utilisation of secondary data, there was no direct engagement with individuals, and the SAGE Wave 2 data had previously undergone ethical evaluations by WHO, ensuring adherence to (Aju Kumar et al., 2015). Confidentiality and anonymity were prioritised during data analysis by exclusively utilising de-identified data in all reports and refraining from any analysis that might mistakenly disclose individual identities. These measures ensured that the research adhered to ethical requirements for secondary data use and maintained participant confidentiality. Ethical approval was sought for this investigation. Ethical clearance for this work was obtained from the Ethics Committee for Humanities (ECH) at the University of Ghana, with approval given (Protocol number ECH 070/23-24). (Babbie, 2020) emphasises that compliance with ethical standards is essential in research, particularly for human subjects and secondary data, to guarantee responsible and respectful interpretation. This quantitative analysis utilised solely secondary data from the SAGE Wave 2 survey performed by the World Health Organisation (WHO), implementing additional ethical procedures to ensure data integrity and protect respondent confidentiality. These measures ensured that the research adhered to ethical norms for secondary data use and maintained participant confidentiality.

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CHAPTER FOUR

HEALTH-RELATED QUALITY OF LIFE

4.1 Introduction

This chapter presents a detailed examination of the demographic and socio-economic characteristics of older adults in Ghana and their influence on health-related quality of life (HRQoL). The socio-demographic factors considered include age, sex, ethnicity, place of residence, religion, marital status, educational level, and occupation. These characteristics serve as key predictors of HRQoL, shaping the social, economic, and physical contexts within which older adults experience ageing. Understanding these factors provides insight into disparities in well-being and informs policies aimed at promoting healthy and dignified ageing.

Health-related quality of life constitutes a multidimensional construct encompassing physical, psychological, social, and environmental domains. Physical health affects mobility, daily functioning, and participation in productive activities. Psychological well-being influences emotional resilience, cognitive functioning, and life satisfaction. Social factors reflect the availability of family and community support, while environmental conditions determine access to essential services, safety, and comfort in living environments.

The dataset used in this study contains diverse variables capturing these multiple dimensions, enabling a nuanced understanding of the experiences of older adults in Ghana. Integration of socio-demographic characteristics with HRQoL outcomes highlights patterns of inequality, identifies vulnerable subgroups, and provides evidence-based

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guidance for interventions and policy planning designed to enhance the quality of life among the ageing population.

4.2 Socio-demographic and Background Characteristics

Table 4.1 presents the distribution of study participants by sociodemographic and background characteristics. The results showed that the largest proportion of participants (26.8%) was aged 60-74 years, followed by those in the 65-69 age bracket (21.6%), while the smallest proportion (17.6%) was aged 80 and above. More than half (55.3%) of the study participants were females. The majority of the respondents were residing in the rural areas (60.8%), belonged to the Christian religious affiliation (72.0%), and close to half of them were married/cohabiting (49.1%).

Regarding the participants' educational attainment, more than half (55.5%) had no education, while the lowest proportion (3.5%) had tertiary education. While more than 2 in 10 (21.1) participants had a secondary education. More than 4 in 10 (21.1) of the participants had ever attended school. The majority (65.7%) of the respondents had the informal sector as their main occupation.

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Table 4. 1: Socio-Demographic and Characteristics of Respondents

Variable	Frequency	Percent
Age in 5-year group		
60-64	605	26.8
65-69	487	21.6
70-74	399	17.7
75-79	366	16.2
80+	397	17.6
Sex		
Male	1008	44.7
Female	1246	55.3
Place of residence		
Urban	883	39.2
Rural	1371	60.8
Religious Affiliation		
No religion	85	3.8
Christianity	1624	72.0
Islam	397	17.6
African Traditional Religion	112	5.0
Other	36	1.6
Marital Status		
Never Married	59	2.6
Married/ Cohabiting	1106	49.1
Separated/ Divorced	254	11.3
Widowed	835	37.0
Educational level		
No education	1250	55.5
Primary	451	20.0
Secondary	475	21.1
Tertiary	78	3.5
Main occupation		
Formal sector	206	9.1
Informal sector	1480	65.7
Not working	568	25.2
Total	**2254**	**100.0**

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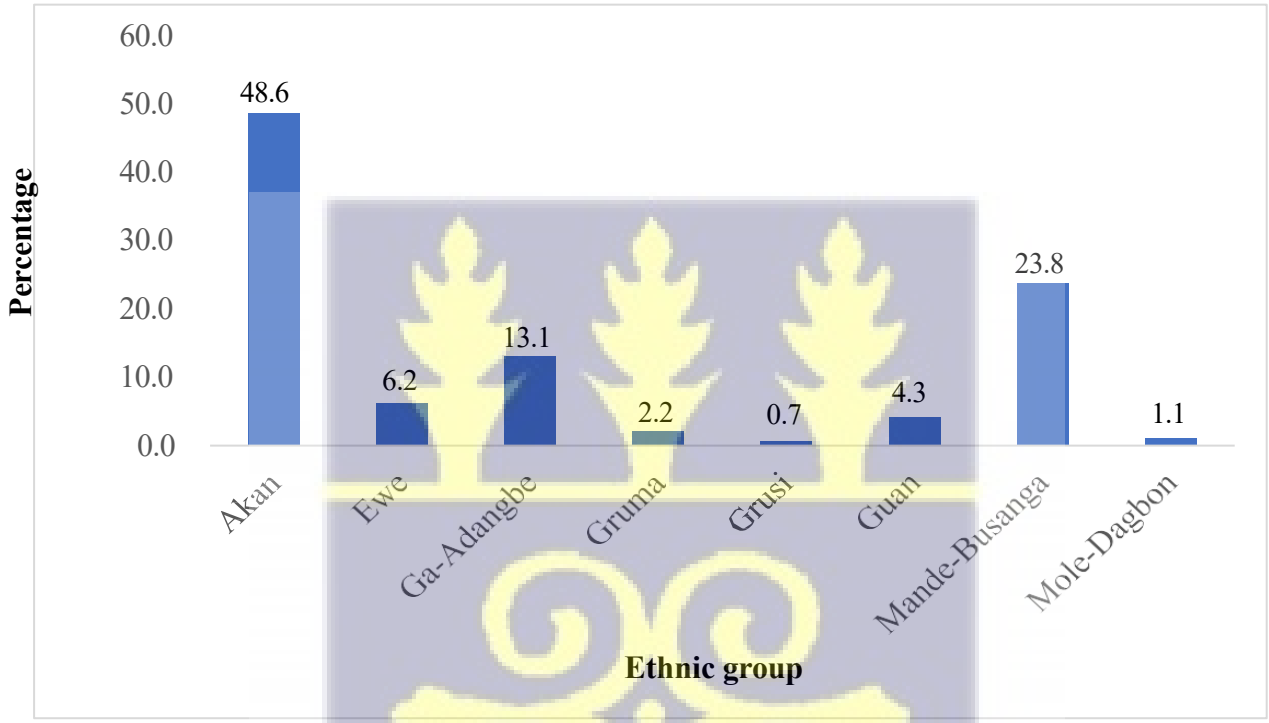
Figure 4.1 illustrates the distribution of respondents by ethnicity. Nearly half of the participants (48.6%) identified as belonging to the Akan ethnic group, while the Grusi ethnic group constituted the least proportion (0.7%) of the respondents. Other significant ethnic groups include Mande- Busanga (23.8%) and Ga-Adangbe (13.1%).

Figure 4. 1: Ethnic Composition



Source: Computed from SAGE Survey Wave 2 Data, 2014- 2015.

4.3 Quality of Life Domains

The study evaluated HRQoL across four key domains. Figure 4.2 presents the respondents' distribution according to these domains. Overall, 40.8% of participants rated their quality of life as good, indicating satisfaction with their overall QoL. In contrast, approximately 12% of respondents reported dissatisfaction with their overall quality of life, categorising their QoL as

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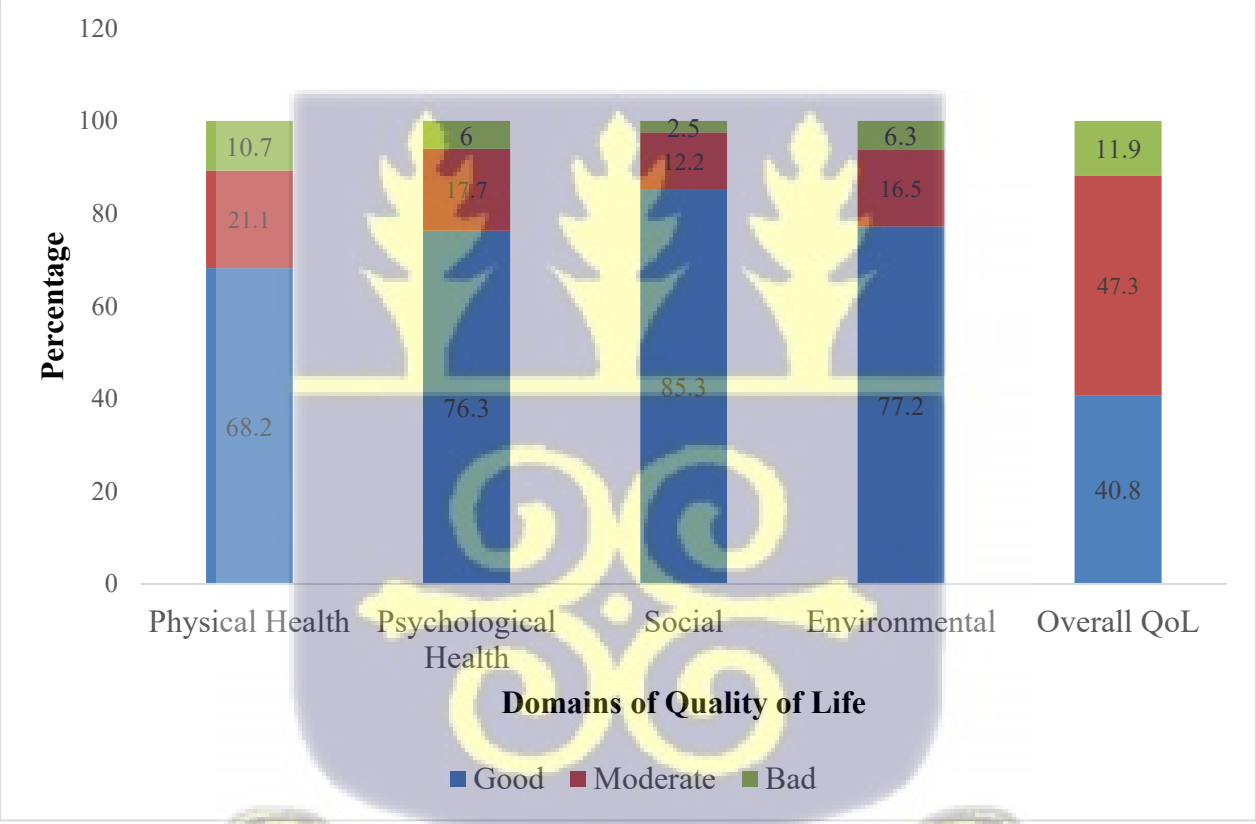
poor. The majority of participants expressed satisfaction with their physical health (68.2%), psychological well-being (76.3%), social relationships (85.3%), and environmental health (77.2%). Conversely, smaller proportions of respondents indicated dissatisfaction in the areas of physical health (10.7%), psychological well-being (6.0%), social relationships (2.5%), and environmental health (6.3%).

Figure 4. 2: Domains of HRQoL



Source: Computed from SAGE Survey Wave 2 Data, 2014- 2015.

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4.4 Chapter Summary

This chapter presents findings on the background characteristics of the study participants and emphasises the different domains of quality of life. The results indicate that most participants were between 60 and 64 years old, were female, married, lived in rural areas, identified as members of the Akan ethnic group, practised Christianity, and had no formal education. Regarding HRQoL domains, most respondents reported an overall sound quality of life. More specifically, a significant proportion rated their physical health, psychological well-being, social relationships, and environmental health as good.

The background characteristics of the respondents are observed in previous studies to influence health outcomes, and this finding is important for assessing the predictors of QoL. For instance, religious practices and beliefs affect health-related behaviours and results. Health inequalities and healthcare utilisation may be impacted by the dietary limitations, health habits, and attitudes toward medical treatment that vary throughout religious communities. Marital status, for instance, may influence the different parts of a person's life, and previous studies have suggested a positive correlation between marital status and health outcomes. Studies show that married people typically have better physical and mental health than single people, underscoring the need to comprehend the connection between marriage. Furthermore, policy consequences for marital status can be observed in various areas, including social assistance, inheritance, taxation, and healthcare access. The importance of marital status in creating and applying policies on marriage, divorce, and family law is highlighted by the possibility of policy variations based on it.

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CHAPTER FIVE

BACKGROUND CHARACTERISTICS AND HEALTH-RELATED QUALITY OF LIFE DOMAINS IN GHANA

5.1 Introduction

This chapter delves into a bivariate analysis to explore the relationship between socio-demographic characteristics and health-related quality of life domains among older adults in Ghana. It also provides an overview of the prevalence of these domains.

5.2 Relationship Between Sociodemographic Background Characteristics and Psychological Quality of Life

Table 5.2 shows the relationship between background characteristics and psychological health quality perception among older adults aged 60 years and above. The results show that age, educational level, marital status, and main occupation were associated with psychological-related quality of life.

Regarding age, it was observed that their age strongly influenced individual perception of psychological health ($p < 0.000$). Of the cohort aged 60-64, approximately 84 percent expressed satisfaction with their psychological health. In contrast, among individuals aged 80 and above, 62 percent. expressed satisfaction with their psychological health. The proportion of individuals who expressed dissatisfaction with their psychological health appeared lower (3.3 percent) for those aged 60-64 compared to the oldest age group of 80 and above (10.6 percent).

For marital status and perception of psychological health, a noted association emerges between one's marital status and the level of satisfaction regarding psychological health ($p < 0.000$).

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Notably, individuals who have never been married tend to exhibit the highest levels (86.4 percent) of satisfaction, whereas those who are widowed tend to report the lowest levels (69.9 percent). The proportion of individuals who expressed dissatisfaction with their psychological health appeared to be lower (4.6 percent) for those married/cohabiting compared to those who are widowed (7.9 percent), who recorded the highest percentage of dissatisfaction.

Educational Level was found to have a strong significant association with the perception of psychological health ($p < 0.000$). The highest proportion (82.1 percent) of individuals with tertiary education expressed contentment with their psychological health, contrasting with approximately 72 percent among those without formal education. The proportion of individuals who expressed dissatisfaction with their psychological health appeared to be lower (3.8 percent) for those with secondary school attainment, followed by those with tertiary school attainment (5.1 percent) in contradistinction with those who had no education (6.7 percent) who recorded the highest dissatisfaction.

Regarding main occupation and perception of psychological health, the result shows a significant association between individuals' primary occupation ($p < 0.000$). A higher proportion (81.6 percent) of those employed in the formal sector report higher levels of satisfaction with their psychological health than those not employed (71.7 percent).

Again, a higher proportion of respondents who had ever been to school was 82.1 percent, whereas those who never attended school were approximately 72 percent. For individuals who ever attended school, the dissatisfaction rate was 5.1 percent, whereas those never been to school had a dissatisfaction rate of approximately 7 percent.

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Table 5. 1: Association between socio-demographic characteristics and psychological health domain

Variable	Satisfied (%)	Neither satisfied/ dissatisfied (%)	Dissatisfied (%)	Number (N)	Chi-Square (x^2)	P-value
Age in the 5-year group					61.242	0.000
60-64	83.5	13.2	3.3	605		
65-69	81.9	13.1	4.9	487		
70-74	73.7	20.1	6.3	399		
75-79	70.8	22.7	6.6	366		
80+	66.2	23.2	10.6	397		
Sex					2.855	0.240
Male	78.0	16.6	5.5	1008		
Female	75.0	18.6	6.4	1246		
Marital Status					34.008	0.000
Never Married	86.4	6.8	6.8	59		
Married/ Cohabiting	80.3	15.1	4.6	1106		
Separated/ Divorced	77.6	16.9	5.5	254		
Widowed	69.9	22.2	7.9	835		
Place of Residence					5.897	0.052
Urban	77.2	15.7	7.0	883		
Rural	75.7	19.0	5.3	1371		
Educational Level					43.395	0.000
No education	71.7	21.6	6.7	1250		
Primary	77.8	15.7	6.4	451		
Secondary	86.1	10.1	3.8	475		
Tertiary	82.1	12.8	5.1	78		
Ethnicity					20.112	0.127
Akan	76.6	16.7	6.8	1096		

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Ewe	81.3	11.5	7.2	139		
Ga-Adangbe	79.1	15.9	5.1	296		
Gruma	75.5	24.5	0.0	49		
Grusi	62.5	37.5	0.0	16		
Guan	74.0	20.8	5.2	96		
Mande-Busanga	73.7	20.7	5.6	537		
Mole-Dagbon	80.0	16.0	4.0	25		
Main occupation					23.664	0.000
Formal sector	81.6	10.7	7.8	206		
Informal sector	77.4	18.0	4.6	1480		
Not working	71.7	19.4	9.0	568		
Religious Affiliation					10.387	0.239
No religion	72.9	20.0	7.1	85		
Christianity	77.2	16.7	6.1	1624		
Islam	72.8	21.9	5.3	397		
African Traditional Religion	75.0	17.0	8.0	112		
Other	86.1	13.9	0.0	36		
Total	**76.3**	**17.7**	**6.0**	**2254**		

Source: Computed from SAGE Survey Wave 2 Data, 2014- 2015

5.3 Relationship Between Sociodemographic Background Characteristics and Social Quality of Life

Table 5.3 illustrates the relationship between background characteristics and perceptions of social health quality among older adults aged 60 years and above. The findings reveal that perceptions of social health quality were linked to age, marital status, and educational level. With regards to

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age, it was observed that individual perception of social health was strongly influenced by their age ($p < 0.001$). Of the cohort aged 60-64, approximately 91.4 percent expressed satisfaction with their social health. In contrast, among individuals aged 80 and above, 76.6 percent expressed satisfaction with their social health. The proportion of individuals who expressed dissatisfaction with their social health appeared to be lower (1. 0 percent) for those aged 60-64 compared to the older age groups, such as 80 and above (5.5 percent).

For marital status and perception of social health, a noted association emerges between one's marital status and the level of satisfaction regarding social health ($p < 0.000$). Notably, individuals who have never been married tend to exhibit the highest levels (89.3 percent) of satisfaction, whereas those who are widowed tend to report the lowest levels (79.5 percent). This is followed by a tie position for married/ cohabiting (88.6 percent) and those separated (88.6 percent). On the dissatisfaction side, never married had the lowest rate of 1.7 percent, followed by separated/ divorced (2.0 percent), and those who are widowed had 3.8 percent.

Educational Level was found to have a strong and significant association with the perception of social health ($p< 0.000$). The highest proportion (92.3 percent) of individuals with tertiary education expressed contentment with their social health, followed by secondary level (91.8 percent) and primary school level (84.3 percent), contrasting with a dissatisfaction rate of 14.8 percent among those who had no formal education. In a succession of dissatisfaction indexes, primary, secondary, and tertiary education were 12.2, 6.5, and 6.4, respectively.

For individuals who have ever been to school, the satisfaction rate was 88.4 percent compared with those who have not ever attended school, 82.7 percent. Thus, the dissatisfaction rate recorded for those who attended school was 9.1 percent, and for those who attended school, it was 14.8 percent.

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Table 5.2: Association between socio-demographic background characteristics and the Social health domain

Variable	Satisfied (%)	Neither satisfied/ dissatisfied (%)	Dissatisfied (%)	Number (N)	Chi-Square (x^2)	P-value
Age in the 5-year group					62.409	0.000
60-64	91.4	7.6	1.0	605		
65-69	89.1	10.3	0.6	487		
70-74	83.0	13.5	3.5	399		
75-79	82.0	15.0	3.0	366		
80+	76.6	17.9	5.5	397		
Sex					3.924	0.141
Male	86.9	10.8	2.3	1008		
Female	83.9	13.4	2.6	1246		
Marital Status					36.022	0.000
Never Married	89.8	8.5	1.7	59		
Married/ Cohabiting	88.6	9.8	1.6	1106		
Separated/ Divorced	88.6	9.4	2.0	254		
Widowed	79.5	16.6	3.8	835		
Place of Residence					2.701	0.259
Urban	85.5	11.4	3.1	883		
Rural	85.1	12.8	2.1	1371		
Educational Level					29.078	0.000
No education	82.7	14.8	2.5	1250		
Primary	84.3	12.2	3.5	451		
Secondary	91.8	6.5	1.7	475		
Tertiary	92.3	6.4	1.3	78		
Ethnicity					8.536	0.860
Akan	84.6	12.8	2.6	1096		
Ewe	86.3	10.8	2.9	139		
Ga-Adangbe	85.8	11.8	2.4	296		
Gruma	89.8	10.2	0.0	49		
Grusi	75.0	25.0	0.0	16		
Guan	87.5	11.5	1.0	96		
Mande-Busanga	85.1	12.1	2.8	537		
Mole-Dagbon	96.0	4.0	0.0	25		
Main occupation					6.538	0.162
Formal sector	87.4	8.3	4.4	206		
Informal sector	85.3	12.4	2.3	1480		
Not working	84.5	13.2	2.3	568		
Religious Affiliation					8.141	0.420

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No religion	83.5	14.1	2.4	85
Christianity	85.4	12.1	2.5	1624
Islam	85.4	12.3	2.3	397
African Traditional Religion	87.5	8.9	3.6	112
Other	75.0	25.0	0.0	36
Total	85.3	12.2	2.5	**2254**

Source: Computed from SAGE Survey Wave 2 Data, 2014- 2015

5.4 Relationship Between Sociodemographic Background Characteristics and Environmental Health Quality of Life

Table 5.4 presents the association between background characteristics and perceptions of environmental health quality among older adults aged 60 years and above. The results indicate that perceptions of environmental health quality were influenced by factors such as age, gender, educational attainment, marital status, primary occupation, and religious affiliation. Regarding age, it was observed that individual perception of physical health was strongly influenced by their age ($p < 0.000$). Of the cohort aged 60-64, approximately 82 percent expressed satisfaction with their environmental health. In contrast, among individuals aged 80 and above, 72.3 percent expressed satisfaction with their environmental health. The proportion of individuals who expressed dissatisfaction with their environmental health appeared to be lower for those aged 60-64 (4.0 percent) compared to the oldest age groups of 80 and above (approximately 10 percent).

In the context of marital status and perception of environmental health, a noted association emerges between one's marital status and the level of satisfaction regarding environmental health ($p < 0.000$). Strikingly, individuals who have never been married tend to exhibit the highest levels (83.1 percent) of satisfaction, whereas those who are widowed tend to report the lowest levels

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(approximately 72 percent). Those married/ cohabiting churn out the lowest dissatisfaction rate of (5 .0 percent), as the widowed cohort characteristically had the highest dissatisfaction rate of 8.0 percent.

Educational attainment demonstrated a significant relationship with perceptions of environmental health ($p < 0.001$). In this regard, older adults in Ghana with higher educational qualifications tend to express greater satisfaction. For instance, individuals holding tertiary degrees (83.3%) demonstrate higher satisfaction levels than those without formal education (74.8%). It is striking that tertiary-level education holders had the highest dissatisfaction rate (9.0 percent) whereas secondary school educational holders had the lowest dissatisfaction rate of 4.4 percent.

On the subject of main occupation and perception of environmental health, the result shows a significant association between individuals' primary occupation ($p < 0.002$). The results demonstrate that satisfaction rates differ across occupational groups. Specifically, individuals employed in the formal sector reported a lower satisfaction rate of 72.8%. In comparison, those employed in the informal sector had a higher satisfaction rate of 78.0%, and individuals not currently employed reported a satisfaction rate of 76.4%.

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Table 5.3: Association between socio-demographic characteristics and environmental health domain

Variable	Satisfied (%)	Neither satisfied/dissatisfied (%)	Dissatisfied (%)	Number (N)	Chi-Square (x^2)	P-value
Age in the 5-year group					30.299	0.000
60-64	81.8	14.2	4.0	605		
65-69	81.1	13.3	5.5	487		
70-74	74.2	20.1	5.8	399		
75-79	72.7	18.9	8.5	366		
80+	72.3	18.1	9.6	397		
Sex					2.099	0.350
Male	78.5	15.3	6.3	1008		
Female	76.1	17.5	6.4	1246		
Marital Status					27.298	0.000
Never Married	83.1	10.2	6.8	59		
Married/ Cohabiting	81.3	13.7	5.0	1106		
Separated/ Divorced	76.0	17.3	6.7	254		
Widowed	71.6	20.4	8.0	835		
Place of Residence					2.297	0.317
Urban	77.3	15.5	7.1	883		
Rural	77.0	17.1	5.8	1371		
Educational Level					23.961	0.001
No education	74.8	18.6	6.6	1250		
Primary	75.2	17.5	7.3	451		
Secondary	84.2	11.4	4.4	475		
Tertiary	83.3	7.7	9.0	78		
Ethnicity					21.572	0.088
Akan	77.6	16.7	5.7	1096		
Ewe	76.3	15.1	8.6	139		
Ga-Adangbe	81.1	10.5	8.4	296		
Gruma	85.7	12.2	2.0	49		
Grusi	68.8	25.0	6.3	16		
Guan	79.2	13.5	7.3	96		
Mande-Busanga	73.4	20.5	6.1	537		
Mole-Dagbon	80.0	16.0	4.0	25		

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Main occupation					17.27	0.002
Formal sector	72.8	14.6	12.6	206		
Informal sector	78.0	16.0	5.9	1480		
Not working	76.4	18.5	5.1	568		
Religious Affiliation					17.767	0.023
No religion	76.5	12.9	10.6	85		
Christianity	77.4	16.4	6.2	1624		
Islam	75.6	17.6	6.8	397		
African Traditional Religion	84.8	10.7	4.5	112		
Other	61.1	36.1	2.8	36		
Total	**77.2**	**16.5**	**6.3**	**2254**		

Source: Computed from SAGE Survey Wave 2 Data, 2014- 2015

5.5 Relationship Between Sociodemographic Background Characteristics and Overall Health Quality of Life

Table 5.5 shows the relationship between background characteristics and perception of physical-related health quality among older adults aged 60 years and above. The results show that perception of overall-related health quality was associated with individual age, sex, educational level, marital status, main occupation, religious affiliation, and ever attended school. The analysis reveals a notable association between age and satisfaction concerning the overall QoL ($p < 0.000$). The overall health-related quality of life was categorised as good, moderate, and bad.

It was observed that among older adults aged 60-64, more than 4 in 10 (48.6 percent) of them said their overall-related health quality of life was good, while 6.6 percent perceived their overall-related health quality of life to be bad. It was noted that the proportion of perception about the overall health-related quality of life being good declines as one's age increases, implying an inverse relationship between and perception of overall health-related quality of life. For instance, among individuals aged 80 years and above, 27.2 percent said their overall health-related quality

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of life was good. In contrast, more than half (53.7 percent) reported that their overall-related health quality of life was neither good nor bad.

There is a significant association between sex and perception of overall-related health quality of life at the bivariate level of analysis with p-value = 0.000. More than 4 in 10 males (45.3 percent) reported that their overall-related health quality of life was good and about 3 in 10 females (37.2 percent) indicated the same regarding their overall-related health quality of life. It was observed that a slightly lower proportion of males (10.8 percent) than females (12.8 percent) reported that their overall-related health quality of life was bad.

Regarding marital status, the analysis shows a significant association between marital status and satisfaction with overall QoL. More than half (59.3 percent) of individuals who have never been married expressed that their overall health-related quality of life was neither good nor bad while more than 4 in 10 (45.4 percent) of those who were married/cohabiting expressed that their overall health-related quality of life was good. Among older adults who were separated or divorced, about 42 percent of them said their overall-related health quality of life was good. In comparison, almost 12 percent indicated that their overall-related health quality of life was bad. For the widowed, more than one-third (35.1 percent) of them said that their overall-related health quality of life was good while those who said their overall-related health quality of life was bad was 15 percent.

On the place of residence and overall health-related quality of life, the study found a statistically significant association between individual place of residence and perception of overall-related health quality of life at the bivariate level of analysis (p = 0.000). It was observed that more than 4 in 10 (47.3 percent) of urban dwellers indicated that their overall-related health quality of life was good while about 1 in 10 (10.8 percent) said their overall-related health quality of life was bad. On the other hand, among rural dwellers, more than one-third (36.6 percent) of them

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expressed that their overall-related health quality of life was good. In comparison, about 12.6 percent said their overall-related health quality of life was bad.

With education and overall health-related quality of life, the study observed a strong association with satisfaction in the overall QoL domain indicated by the chi-square test (p = 0.001). It was found that 7 out of 10 (73.1 percent) of tertiary level holders had an overall satisfaction of HRQoL of older adults in Ghana. Logically, therefore, respondents with secondary school recorded more than 5 out of 10 (56.0 percent) educational level at the secondary level to be good, while more than 4 out of 10 945.0 percent) At the primary level, they said their overall quality of life regarding education is good. Moreso, 3 out of 10 (31.5 percent) with primary education reported their overall quality of life with primary education to be good. On the other hand, more than 1 in 10 respondents (15.4 percent) with no education said their overall health-related quality of life is bad.

On the place of residence and overall health-related quality of life, the study found a statistically significant association between individual place of residence and perception of overall-related health quality of life at the bivariate level of analysis (p = 0.000). It was observed that more than 4 in 10 (47.3 percent) of urban dwellers indicated that their overall-related health quality of life was good, while about 1 in 10 (10.8 percent) said their overall-related health quality of life was bad. On the other hand, among rural dwellers, more than one-third (36.6 percent) of them expressed that their overall-related health quality of life was good. In comparison, about 12.6 percent said their overall-related health quality of life was bad.

Ethnicity and overall HRQoL were statistically significant (p = 0.002). Ewes had the highest satisfaction rate of more than 4 out of 10 (49.6 percent), followed by the Gruma, whom again 4 out of 10 (44.9 percent), and Akans, also 4 out of 10 (44.3 percent) as far as satisfaction relates to ethnicity and HRQoL is concerned for older adults in Ghana. The least in hierarchical order is the

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Grusi group, of which more than 1 in 10 (18.8 percent) followed by Mole–Dagbon, more than 2 in 10 (28.0 percent) had an overall good HRQoL.

Occupation and Overall HRQoL had a significant association (p = 0.000). The results demonstrate that the perception of overall HRQoL differs across occupational groups. Specifically, 5 out of 10 (52.4 percent) individuals employed in the formal sector reported their overall HRQoL to be good. In comparison, those employed in the informal sector followed, with 4 out of 10 (41.5 percent) reporting their overall HRQoL to be good. Incidentally, 3 out of 10 (34.9 percent) of those not working reported their overall HRQoL to be good. Nevertheless, more than 4 out of 10 (49.1 percent) said overall HRQoL is neither good nor bad, but emphatically, more than 1 out of 10 (18.8 percent said their overall HRQoL is bad.

Religious Affiliation was significantly associated with overall HRQoL (p = 0.002). The analysis showed that those who belong to other religions (Judaism, Jainism, Buddhism, Hinduism, etc.) had the highest level of satisfaction in terms of overall HRQoL. Notably, under the Bad/ Not Satisfied category, only 2.8% of them reported that religion is bad for them regarding their HRQoL. This was followed closely by Christianity (43.3%) and Islam (36.5%). African Traditional Religion recorded the least overall HRQoL satisfaction. Overall, the results show that socio-demographic factors such as age, marital status, gender, place of residence, ethnicity, level of education, occupation, religious affiliation, and educational attainment are significantly associated with satisfaction in the overall HRQoL domain among older adults in Ghana. These findings underscore the importance of considering various socio-demographic variables when assessing satisfaction with overall HRQOL of older adults in Ghana.

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Table 5.4: Association between socio-demographic characteristics and overall QoL

Variable	Good (%)	Moderate (%)	Bad (%)	Number (N)	Chi-Square (x^2)	P-value
Age in 5-year group					85.576[a]	0.000
60-64	48.6	44.8	6.6	605		
65-69	45.8	46.2	8.0	487		
70-74	42.9	44.1	13.0	399		
75-79	33.9	49.5	16.7	366		
80+	27.2	53.7	19.1	397		
Sex					15.483	0.000
Male	45.3	43.8	10.8	1008		
Female	37.2	50.1	12.8	1246		
Marital Status					30.104	0.000
Never Married	32.2	59.3	8.5	59		
Married/ Cohabiting	45.4	44.9	9.7	1106		
Separated/ Divorced	41.7	46.5	11.8	254		
Widowed	35.1	49.8	15.1	835		
Place of Residence					25.614	0.000
Urban	47.3	41.9	10.8	883		
Rural	36.6	50.8	12.6	1371		
Educational Level					134.623	0.000
No education	31.5	53.1	15.4	1250		
Primary	45.0	45.7	9.3	451		
Secondary	56.0	37.3	6.7	475		
Tertiary	73.1	24.4	2.6	78		
Ethnicity					34.199	0.002
Akan	44.3	44.5	11.2	1096		
Ewe	49.6	41.7	8.6	139		
Ga-Adangbe	39.5	45.3	15.2	296		
Gruma	44.9	49.0	6.1	49		
Grusi	18.8	68.8	12.5	16		
Guan	36.5	46.9	16.7	96		
Mande-Busanga	33.9	54.2	11.9	537		
Mole-Dagbon	28.0	60.0	12.0	25		
Main occupation					48.188	0.000
Formal sector	52.4	37.4	10.2	206		

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Informal sector	41.5	49.1	9.5	1480		
Not working	34.9	46.3	18.8	568		
Religious Affiliation					25.021	0.002
No religion	29.4	52.9	17.6	85		
Christianity	43.3	45.2	11.5	1624		
Islam	36.5	50.9	12.6	397		
African Traditional Religion	26.8	58.9	14.3	112		
Other	44.4	52.8	2.8	36		
Total	**40.8**	**47.3**	**11.9**	**2254**		

Source: Computed from SAGE Survey Wave 2 Data, 2014- 2015

5.6 Discussion

This chapter embarks on a comprehensive bivariate analysis to explore the connections between various socio-demographic background characteristics and health-related domains among Ghanaian older adults. At the bivariate level, age is significantly associated with HRQOL, even though the level of satisfaction is discernibly diminished with age advancement. The study by Etxeberria et al. (2019) demonstrated that chronological age significantly affects health-related quality of life (HRQoL). The research revealed that the oldest old (aged 85 and over) had lower HRQoL scores than the young-old (aged 65–84) across physical and psychological health dimensions. This suggests that as people age, there is a noticeable decline in their overall quality of life, highlighting the importance of age as a critical factor influencing HRQoL among older adults. These findings highlight the importance of accounting for age-related changes when evaluating and addressing the health and well-being of older adults. Similarly, a study by Robert et al. (2009) in the United States on socioeconomic status and age variations in health-related quality of life (HRQoL) found a significant relationship between age and HRQoL among older adults. The study revealed that HRQoL tends to decrease with advancing age, with older groups

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reporting lower HRQoL scores. Ageing is notably linked to HRQoL, resulting in an overall decline in well-being among older adults. As individuals grow older, there is a marked decrease in HRQoL scores across various domains, including physical, psychological, social, and environmental aspects of HRQoL.

The findings also indicate a significant association between gender and the HRQoL of older adults in Ghana. Similar results were observed in a study by Deck et al. (2002) on the health-related quality of life (HRQoL) of older adults in Germany. Their study provided several important insights into the male perspective on HRQoL. Specifically, the average age of male participants was 63 years, with the majority being married. Most had completed intermediate secondary education or higher, and more than half were no longer employed. Despite these demographic factors, men generally reported fairly good levels of well-being, with most describing their health as satisfactory to good. The study identified areas where older men experienced limitations in their quality of life, including muscle and joint pain, changes in skin and body, and a decline in sexual desire were among the most commonly mentioned complaints. The study highlighted the influence of sociodemographic factors and general satisfaction with life on HRQoL.

Earlier studies also underscore the role of gender on perceptions of quality of life, as found in the study by Ong et al. (2006), which highlighted the association between gender and health-related quality of life (HRQoL). Their research revealed that men and women exhibit differences in various aspects of HRQoL, indicating distinct levels of well-being between the genders. Although the exact nature of these differences varied depending on the study's specific context, their findings emphasised the significance of considering gender when evaluating and addressing HRQoL in both research and healthcare settings.

Similarly, Chen et al. (2020) observed that gender played a significant role in determining the

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health-related quality of life (HRQoL) among older adults living alone. The current results show that men generally reported higher HRQoL scores than women. However, despite these higher scores, men were more prone to reporting feelings of loneliness, depression, and frequent suicidal thoughts. Conversely, women, though having lower HRQoL scores, exhibited higher cognitive function and social support levels than men. This suggests that while men may have better overall HRQoL scores, they face challenges related to psychological health and social isolation. On the other hand, women, despite lower HRQoL scores, seem to have better cognitive function and more robust social support networks.

This dovetails into recommendations that interventions to improve HRQoL among older adults living alone should consider gender-specific needs. Strategies should address factors such as loneliness and mental health issues for men while focusing on enhancing cognitive function and social support for women. Tailoring interventions to address these gender-specific needs, it may be possible to improve the overall HRQoL of older adults living alone.

Marital status significantly influenced the perception of HRQoL in older adults in Ghana. It was observed that married men and those no longer in the workforce tended to have higher scores on measures of well-being. Additionally, satisfaction with various aspects of life, such as financial situation and leisure time, correlated positively with HRQoL. These results are consistent with earlier studies conducted by Gutiérrez-Vega et al. (2018) in Mexico, who reported a significant association between marital status and health-related quality of life among older adults living in a U.S.-Mexico border city. They found that in terms of psychological health, both single and married older adults reported higher scores compared to those who were widowed or divorced. Similarly, married older adults reported having a better quality of life regarding social relationships.

This suggests that marital status can significantly impact the quality of life among older adults.

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Being married appears to offer a protective mechanism against depressive symptoms and potentially mental illnesses during late adulthood. The effect of marital status on health-related quality of life among older adults has been reported in a previous study by Aneja & Yu (2014). These authors reported improved health outcomes, particularly physical health, for married individuals compared to their unmarried counterparts.

However, contrasting findings show a contrary association between marital status and psychological well-being (Gunderson & Barrett, 2017). The authors did not find any significant difference in depressive symptoms between continuously married individuals and those who are re-married or have never been married. In a nutshell, the association between marital status and health-related quality of life (HRQoL) is complex and varies across different dimensions of well-being. Overall, being married is often linked with better HRQoL, particularly in terms of lower levels of depression and higher levels of positive psychological states. However, this benefit is not uniform across all aspects of well-being or all marital statuses. The study underscores the importance of considering both the protective and constraining aspects of marriage and the stresses and opportunities for growth associated with marital transitions.

Gender differences play a significant role in the perception of HRQoL. A study by Olagundoye et al. (2020) on the impact of gender on the quality of life (QoL) of older individuals found a significant difference in the quality of life between male and female older persons. These authors submitted that more than 4 in 10 males (45.3 percent) reported that their overall-related health quality of life was good, and about 3 in 10 females (37.2 percent) indicated the same regarding their overall-related health quality of life. It was observed that a slightly lower proportion of males (10.8 percent) than females (12.8 percent) reported that their overall-related health quality of life was bad.

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In this study, the place of residence of older adults in Ghana was significantly associated with the perception of HRQoL. Similar findings were reported in previous studies conducted in this area. For example, Olagundoye et al. (2020) further posited that the state of residence significantly influenced the quality of life of older individuals in any country. This suggests that where older persons live affects their overall well-being. In essence, the study underscores the importance of considering the geographical location of older persons when addressing their quality-of-life concerns, highlighting the need for tailored interventions to meet the specific needs of older individuals based on their place of residence.

Another study in Greece by Lahana et al. (2010), to understand the effect of ethnicity, place of residence, and socio-economic status on health-related quality of life, found that socioeconomic status (SES), notably lower education levels and income, was strongly associated with poorer HRQoL in both physical and mental health. Interestingly, Albanians initially reported better HRQoL than Greeks, but these differences became insignificant after accounting for SES factors. However, rural residents reported better general and mental health than urban residents.

Overall, SES emerged as an independent predictor of HRQoL, while ethnicity and place of residence had weaker impacts. Specifically, lower education and income levels were linked to poorer HRQoL, while rural residency was associated with better health perceptions. The study underscores the importance of understanding the underlying mechanisms contributing to HRQoL disparities, particularly in disadvantaged groups, to inform policies addressing health inequalities.

The analysis indicates a notable relationship between ethnicity and quality of life satisfaction among older adults in Ghana ($p = 0.002$). The Ewe ethnic group reports the highest satisfaction at 49.6 percent, followed by the Gruma at 44.9 percent and the Akans at 44.3 percent. Conversely, the Grusi and Mole-Dagbon groups have the lowest satisfaction rates, at 18.8 percent and 28.0

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percent, respectively. This suggests significant ethnic disparities in perceived health-related quality of life.

Research by various authors has corroborated similar findings. For instance, (Watkinson et al., 2021) explore the increasing ethnic diversity within England's older adult population and the resulting disparities in health outcomes. An analysis of data from the English General Practice Patient Survey found significant disparities in health-related quality of life (HRQoL) among men and women across 17 ethnic groups, with 15 minority groups experiencing notably poorer HRQoL than White British individuals. Particularly pronounced differences were observed among Gypsy or Irish Travellers, Bangladeshi, Pakistani, and Arab ethnicities, with women generally experiencing more severe disparities. These inequalities are most apparent in aspects of self-care as measured by the EQ-5D-5L index (which refers to the ability to take care of personal hygiene, dressing, and other activities of daily living independently, with varying levels of difficulty being assessed). The study identifies a correlation between these HRQoL disparities and higher prevalence of chronic conditions, subpar experiences with primary healthcare, inadequate local support, low self-confidence in health management, and elevated levels of social deprivation within minority ethnic communities. The authors stress the need for further research to comprehensively understand the underlying factors driving these inequalities. Among other things, they advocate for policy reforms to improve socio-economic parity and equitable access to healthcare services for older adults from diverse ethnic backgrounds in England.

Again, the study titled "Health-related quality of life among the elderly: a population-based study using SF-36 survey," authored by Lima et al., (2009), examines the quality of life of individuals aged 60 years and older across various demographic and socio-economic factors with a cross-sectional approach involving 1,958 participants, the researchers employed the SF-36 questionnaire

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to assess health-related quality of life (HRQoL). The findings revealed that elderly women, older individuals, those with lower income and educational attainment, and practitioners of evangelical religions generally report poorer HRQoL. The study identified vitality, mental health, and general health as areas with the lowest scores, contrasting with higher scores in social functioning and role limitations due to emotional and physical factors. Significant disparities in HRQoL were observed mainly in functional capacity and physical health among different demographic groups. Therefore, the study emphasises the necessity for healthcare interventions that address these multi-dimensional health and social inequalities, advocating for targeted programs to improve HRQoL among the most vulnerable elderly populations.

Similarly, in their 2004 study, Moriarty & Butt (2004) addressed the underexplored topic of quality of life disparities among older adults from various ethnic backgrounds in Britain. Analysing data from a cross-sectional survey of 203 participants aged 55 and above, including White British, Asian, Black Caribbean, Black African, and Chinese individuals, the study revealed significant discrepancies in health status, income levels, and access to social support across these ethnic groups. Moriarty & Butt, (2004) advocated for future research that not only examines differences between ethnic groups but also delves into intra-group variations, considering factors such as differing health expectations, dynamics of income distribution within households, and the pervasive impact of racism. They highlighted how cumulative disadvantages in health and socio-economic status, compounded by experiences of racial discrimination, impact the overall quality of life among older ethnic minorities. Their findings underscored the critical need for targeted research initiatives and policy interventions to promote social inclusion and reduce inequalities among older adults from diverse ethnic backgrounds in Britain.

In addition to the above, the educational level of older adults in Ghana is significantly related to

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health-related quality of life in the overall domain ($p < 0.000$). This finding aligns with another article titled "Aging, Gender, and Quality of Life (AGEQOL) study where factors associated with good quality of life in older Brazilian community-dwelling adults" by Campos et al. (2014), investigated the factors that contribute to a good quality of life among older adults in Brazil. In their study, the authors specifically looked at how educational levels and various health factors affect the quality of life for these individuals.

The study, conducted between January and July 2012, included 2,052 participants aged 60 and older from Sete Lagoas, Brazil. The researchers collected data on the participants' socio-economic and demographic backgrounds, health and social situations, cognitive impairment, depressive symptoms, and family satisfaction. They used the Brazilian version of the World Health Organization Quality of Life Assessment (WHOQOL-BREF) and the WHOQOL-Old instrument to measure the quality of life.

One of the key findings of the study was the significant association between educational level and health-related quality of life. Campos et al. (2014) found that older adults with at least five years of education reported better quality of life. This suggests that education plays a crucial role in enhancing the overall well-being and satisfaction of older individuals. The study indicated that a higher level of education is associated with better self-rated health, fewer depressive symptoms, and more functional family relationships, all of which contribute to an improved health-related quality of life.

The findings emphasize that educational attainment can lead to better health outcomes and a higher quality of life in older adults. This relationship might be due to several factors. Educated individuals are more likely to have better access to healthcare information and services, healthier lifestyles, and improved social and economic conditions, which collectively enhance their quality

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of life. In summary, the AGEQOL study by Campos et al. (2014) highlighted the positive impact of education on the quality of life in older Brazilian adults. The research underscored the importance of educational opportunities in promoting better health and well-being among the ageing population.

In contrast to the above, another article titled "Determinants of health-related quality of life in the elderly in Tehran, Iran" by Tajvar et al. (2008), where the authors explored how different factors, including education, affect the health-related quality of life (HRQoL) of elderly people in Tehran, Iran. The study involved interviewing 400 elderly residents of Tehran and measuring their HRQoL using the Short Form Health Survey (SF-36).

One significant finding was the relationship between education level and HRQoL. The authors found that elderly individuals with lower levels of education tended to report poorer physical health-related quality of life. This conclusion was reached through multiple logistic regression analyses, which showed that education, along with age, gender, and economic status, significantly influenced the physical component summary score of the SF-36. In other words, those with less education experienced more difficulties with physical functioning and general health.

Additionally, the study highlighted that women and those with lower economic status also reported poorer mental and physical health-related quality of life. However, the most consistent and significant predictor of overall HRQoL was economic status. Despite the small sample size, the findings suggest that improving education and economic conditions could potentially enhance the quality of life for the elderly population in Tehran.

Hence, the study underscored the need for greater attention to the holistic well-being of older adults in Iran, addressing not only their health needs but also improving their educational opportunities and economic conditions to promote better quality of life outcomes. Similarly, the article titled

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"Impact of educational level on health-related quality of life (HRQL): results from Germany based on the EuroQol 5D (EQ-5D)" by Andreas Mielck, Peter Reitmeir, Martin Vogelmann, and Reiner Leidl, published in the European Journal of Public Health in 2012, investigated how education influences health-related quality of life (HRQL) among adults in Germany. The study used data from three national surveys conducted between 2006 and 2008, assessing HRQL with the EuroQol-5D (EQ-5D) instrument, which measures problems in five health dimensions and includes a visual analogue scale (VAS) to rate health from 0 (worst imaginable) to 100 (best imaginable).

The main focus of the study is on educational level, comparing individuals with high and low levels of education. The researchers included other variables like age, sex, income, and chronic disease in their analysis. The study found that individuals with lower education levels reported significantly worse health-related quality of life. For instance, in the dimension of pain/discomfort, 46.3 percent of those with low education levels experienced moderate or severe problems, compared to only 25.0 percent of those with higher education levels. Additionally, the average VAS score, which reflects overall health perception, was lower for those with lower education (75.3) than for those with higher education (83.6).

The study's multivariate analyses showed that these differences in HRQL persisted even among participants with chronic diseases, indicating that educational disparities in HRQL are robust. The findings suggested that people with lower educational status not only suffer more from health problems but also have a lower quality of life when their health is compromised. This indicates that traditional measures of health inequalities might underestimate the true extent of these disparities if HRQL is not considered. Therefore, the authors argue that understanding HRQL can provide deeper insights into health inequalities, revealing a double burden lower-status groups

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face: higher levels of health impairments and lower HRQL. This study highlighted the importance of addressing educational disparities to improve overall health outcomes and quality of life.

The overall model examining the relationship between occupation and health-related quality of life (HRQoL) produced a statistically significant result ($p < 0.000$). This aligns with findings from previous studies, such as the research titled "Health-Related Quality of Life Among United States of America Workers: Variability Across Occupation Groups" (Shockey et al., 2017), published in the American Journal of Public Health in 2017. Their study explored how various job types impact workers' HRQoL, using data from the 2013–2014 United States Behavioural Risk Factor Surveillance System. The analysis included HRQoL data from 155,839 currently employed adults across 17 states, categorised into 22 standard occupational groups.

The researchers assessed HRQoL through multiple indicators, including self-rated health, frequent physical distress, frequent mental distress, frequent activity limitation, and frequent overall unhealthy days. Considering the complex survey design, they used multiple logistic regression analyses to adjust for potential confounders. The study revealed significant variations in HRQoL across different occupational groups. Individuals working in arts, design, entertainment, sports, and media reported the highest levels of frequent physical and mental distress, activity limitations, and overall unhealthy days. Conversely, the personal care and service occupation group exhibited the highest fair or poor self-rated health prevalence. These results indicate that the type of occupation can significantly impact an individual's HRQoL, with specific job categories, such as arts and entertainment or personal care services, being particularly vulnerable to poorer HRQoL outcomes. This underscores the importance of considering occupational factors when designing health interventions aimed at enhancing HRQoL across different worker populations.

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Religious affiliation also showed a significant association with overall HRQoL among older adults ($p < 0.002$). This aligns with the findings of Thomas et al. (2001), who examined the relationship between religious coping and quality of life in older adults living independently in Iran. The study involved 200 participants aged 60 and above, recruited through systematic random sampling. Data collection employed the Short Form 36 (SF-36) questionnaire to assess quality of life, alongside a religious coping instrument developed by the authors, highlighting the influence of spiritual practices on well-being in later life.

Although there was no significant overall relationship between QoL and religious coping, specific aspects of QoL, namely, mental health and social function, showed significant associations with the total religious coping score. A positive correlation was observed between religious coping and both mental health ($r = 0.20$, $p = 0.003$) and social function ($r = 0.20$, $p = 0.004$). Moreover, a high level of religious coping was significantly linked to better mental health outcomes, as measured by the SF-36 ($p = 0.04$). These findings suggest that while religious coping may not directly influence overall QoL, it can positively impact certain domains, particularly mental health and social function.

The authors concluded that enhancing religious beliefs might improve older adults' mental health and social functioning. Since these aspects are linked to other QoL domains, promoting mental health and social function through religious coping could improve quality of life. In summary, this study suggests that while religious coping does not directly affect overall QoL, it positively impacts mental health and social functioning in older adults, which can indirectly contribute to better quality-of-life outcomes.

More so, Borges et al. (2021) explored how spirituality and religiousness (S/R) are linked to health-related quality of life (HRQoL) among healthy adults. The study aimed to understand this

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relationship in individuals aged 18 to 64 without chronic diseases.

The researchers systematically reviewed papers published over the past ten years, using data from four academic research databases and two grey literature databases. They focused on studies using validated instruments to measure S/R and HRQoL. Out of 1,952 studies initially reviewed, ten met the inclusion criteria, including nine cross-sectional studies and one longitudinal cohort study. Most participants in these studies were college students.

The findings indicated that nine out of ten studies demonstrated a positive relationship between higher spirituality and religiousness (S/R) and enhanced HRQoL. The primary areas positively influenced by S/R included psychological well-being, social relationships, and the overall environment. Critical factors of S/R that contributed to improved HRQoL were optimism, inner strength, peace, a sense of control, hope, and happiness.

Only one study did not identify a significant link between S/R and HRQoL. Overall, the review suggested that spirituality and religiousness could enhance well-being even in healthy adults without chronic illnesses, indicating that S/R may serve as a beneficial approach for enhancing the quality of life in the general population.

Additionally, the study by Idler et al. (2009), examined the impact of religious involvement on the quality of life (QoL) among elderly individuals in their final year of life. The study included 499 older adults who passed away within a year of their last interview. The researchers assessed public religious activities, such as attending services, and subjective religious involvement, like personal beliefs and comfort derived from religion. They evaluated multiple health-related and psychosocial QoL aspects, including health status, functional ability, social networks, depression, and overall well-being.

Findings revealed that more religiously involved individuals had better self-rated health,

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experienced fewer depressive symptoms, and were perceived by interviewers to have a more positive outlook on life. These individuals also maintained stronger social connections, frequently seeing friends and attending social events, even when accounting for their health conditions.

Interestingly, those who reported deriving strength and comfort from religion had poorer self-rated health. However, frequent attendance at religious services was linked to higher participation in social activities, indicating that public religious engagement helped maintain social involvement. Moreover, the study found that the benefits of religious involvement were more pronounced for disabled individuals, suggesting that religion provides significant psychosocial support for those with greater physical limitations.

Therefore, the study concludes that religious involvement, especially in its subjective aspects, is associated with a better quality of life in the last year of life for elderly individuals. This involvement enhances social connections, mental health, and overall well-being, particularly for those facing physical challenges. The bivariate analysis in this chapter provides valuable insights into the associations between socio-demographic characteristics and health-related quality of life (HRQoL) among older adults in Ghana. Using chi-square analysis, the study meticulously examines the relationships between categorical variables such as age, gender, marital status, education level, occupation, place of residence, ethnicity, religious affiliation, and school attendance and satisfaction within various HRQoL domains, including physical, psychological, social, environmental, and overall quality of life. These results highlight the substantial influence that socio-demographic factors have on the overall quality of life (QoL) for the elderly population in Ghana.

One of the primary findings is the significant association between age and HRQoL. As individuals age, there is a noticeable decline in HRQoL across physical, psychological, social, and

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environmental domains. This aligns with studies by Etxeberria et al. (2019) and Mondal (2021), which highlight the diminishing HRQoL scores with advancing age, emphasising the importance of addressing age-related health challenges to improve the well-being of older adults.

Gender also plays a crucial role in HRQoL. The analysis indicates significant differences in HRQoL between men and women. Early studies by Deck et al. (2002) and later by Ko et al. (2019) support these findings, revealing that while men generally report higher HRQoL scores, they also face more challenges related to mental health and social isolation. Conversely, despite lower overall HRQoL scores, women benefit from better cognitive function and social support networks. These gender-specific insights suggest that tailored interventions are necessary to address the unique health and social needs of older men and women in Ghana.

Marital status emerges as another significant factor influencing HRQoL. The analysis revealed that marriage is often associated with better HRQoL, particularly regarding psychological health and social relationships. This protective effect of marriage against depressive symptoms and mental health issues is supported by studies such as those by Gutiérrez-Vega et al. (2018) and Aneja & Yu (2014). However, the benefits of marital status are complex and multifaceted, as highlighted by Hsu & Barrett (2020), indicating that while marriage offers protective benefits, it may also constrain certain positive aspects of well-being.

Place of residence also significantly impacts HRQoL among older adults in Ghana. Rural residents report better HRQoL compared to their urban counterparts, a finding consistent with studies like those by Lahana et al. (2010). However, other research, such as that of Olagundoye et al. (2020), presents a more nuanced view, suggesting that the influence of place of residence on HRQoL may vary depending on the specific context and geographical location.

The analysis of the relationship between ethnicity and quality of life satisfaction among older

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adults in Ghana reveals significant disparities. The Ewe ethnic group reported the highest satisfaction levels, followed by the Gruma and Akans, while the Grusi and Mole-Dagbon groups reported the lowest satisfaction rates, respectively. This underscored notable ethnic disparities in perceived quality of life. Similar findings have been documented in other research contexts.

In their study, Watkinson et al. (2021) explore ethnic inequalities in health-related quality of life (HRQoL) among older adults in England, highlighting significant disparities across 17 ethnic groups. These disparities are closely linked to chronic conditions, subpar healthcare experiences, inadequate local support, low self-confidence in health management, and social deprivation. The authors call for further research to understand these inequalities and advocate for policy reforms to enhance socioeconomic equity and healthcare access.

Barros' study using the SF-36 survey similarly reveals disparities in HRQoL among older adults based on gender, income, education, and religion. Women, older individuals, and those with lower income and education, and evangelical practitioners report poorer HRQoL, particularly in functional capacity and physical health.

Moriarty & Butt (2004) study in Britain also highlights significant quality of life disparities among different ethnic groups, driven by health status, income, and social support variations. They emphasize the cumulative impact of health and socioeconomic disadvantages, compounded by racial discrimination, on older ethnic minorities' quality of life.

Educational attainment is another significant factor influencing health-related quality of life. (Campos et al., 2014) found that older Brazilian adults with higher education levels report better quality of life, associating education with improved self-rated health, fewer depressive symptoms, and better family relationships. Tajvar, Arab, and Montazeri (2008) also showed that lower education levels correlate with poorer physical health-related quality of life.

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Mielck et al.,'s (2013) study in Germany reinforces this by demonstrating that lower educational levels are associated with worse HRQoL, even among individuals with chronic diseases. These findings suggest that educational disparities contribute significantly to health inequalities, necessitating interventions to improve educational opportunities and overall health outcomes.

Occupation was also found to significantly impact HRQoL, as demonstrated in a study by Shockey et al. (2017) conducted in the United States. The research revealed that various job types influenced health-related quality of life differently, with individuals working in arts, design, entertainment, sports, and media experiencing higher levels of physical and mental distress. These findings highlight the importance of including occupational factors in developing health interventions.

Religious affiliation significantly influences health-related quality of life, particularly in relation to mental health and social functioning. According to Plante (2001), religious coping mechanisms positively affect older adults' mental health and social functioning. Similarly, Borges et al., (2021) found that spirituality and religiousness contribute to improvements in psychological well-being, social relationships, and overall living environment. Supporting this, Idler et al. (2009) observed that religious involvement enhances the quality of life during the final year, particularly for individuals with disabilities, by fostering stronger social connections and better mental health.

In summary, this bivariate analysis highlights the complex interactions between socio-demographic factors and health-related quality of life (HRQoL) among older adults in Ghana. The findings revealed that all socio-demographic variables, such as age, gender, marital status, and place of residence, were significantly associated with health-related quality of life. Furthermore, the study identified notable links between ethnicity, educational background, occupation, and religious affiliation, underscoring the importance of considering a comprehensive range of socio-demographic factors when evaluating the health and well-being of the elderly population. These

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results correspond with broader research and emphasise the need for targeted interventions and policies to address these disparities effectively. Formulating such strategies is vital to improving the quality of life for older adults in Ghana, ensuring that their unique needs and circumstances are sufficiently met. This understanding is essential for enhancing the overall well-being of diverse older adult populations.

The subsequent chapter (Chapter Six) will explore the proximate determinants of health-related quality of life (HRQoL) among the elderly, concentrating on the physical, psychological, social, environmental, and overall dimensions of HRQoL.

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CHAPTER SIX

PROXIMATE DETERMINANTS OF HEALTH-RELATED QUALITY OF LIFE OF OLDER ADULTS

6.1 Introduction

This chapter explores the key factors influencing older adults' health-related quality of life (HRQoL), emphasising the physical, social, environmental, psychological, and overall aspects of HRQoL. Investigating the HRQoL of the elderly involves a comprehensive evaluation of multiple dimensions, including physical health, social interactions, environmental conditions, psychological well-being, and a holistic assessment of overall quality of life. Tables 6.1 to 6.5 present in-depth statistical analyses, which include Relative Risk Ratios (RRRs) and 95% Confidence Intervals (CIs) for various predictors of HRQoL.

6.2 Proximate Determinants of Physical HRQoL

The results in Table 6.1 show that age significantly influences individual perceptions about their physical health-related quality of life (HRQoL). Individuals aged 60-64 are 3.89 times more likely to report that they are neither satisfied nor dissatisfied with their physical HRQoL than those aged 80 years and above (RRR = 3.89, 95% CI [2.32, 6.54]). This indicates that younger elderly individuals perceive their physical HRQoL more positively than the oldest group. Similarly, those aged 65-69 are 2.29 times as likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL (RRR = 2.29, 95% CI [1.45, 3.63]). As age increases, the likelihood of reporting satisfaction decreases, showing an inverse relationship between age and perceptions of physical HRQoL.

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Marital status is another significant factor influencing perceptions of physical HRQoL. Never-married individuals are 4.76 times more likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to widowed individuals (RRR = 4.76, 95% CI [1.11, 6.47]). Additionally, people who are married or cohabiting are 1.48 times as likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to widowed individuals (RRR = 1.48, 95% CI [1.02, 2.14]). Sex does not significantly influence perceptions of physical HRQoL. Males are 0.86 times as likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to females (RRR = 0.86, 95% CI [0.59, 1.23]). Similarly, males are 0.78 times as likely to report being satisfied compared to being dissatisfied with their physical HRQoL, relative to females (RRR = 0.78, 95% CI [0.51, 1.17]).

Ethnicity does not show significant effects on perceptions of physical HRQoL. For example, the Akan are 0.62 times as likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to other ethnic groups (RRR = 0.62, 95% CI [0.31, 1.24]). Similarly, the Ewe are 0.65 times as likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to other ethnic groups (RRR = 0.65, 95% CI [0.28, 1.54]).

The main occupation significantly affects perceptions of physical HRQoL. Those working in the informal sector are 2.27 times more likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to those not working (RRR = 2.27, 95% CI [1.65, 3.12]).

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The educational level shows varied influences on physical HRQoL perceptions. Individuals with no education are 2.54 times as likely to report being satisfied compared to being dissatisfied with their physical HRQoL, relative to those with tertiary education (RRR = 2.54, 95% CI [0.90, 7.14]). Similarly, those with primary education are 3.26 times more likely to report being satisfied compared to being dissatisfied with their physical HRQoL, relative to those with tertiary education (RRR = 3.26, 95% CI [1.14, 9.32]). Place of residence, whether urban or rural, does not significantly affect perceptions of physical HRQoL. Urban residents are 0.93 times as likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to rural residents (RRR = 0.93, 95% CI [0.68, 1.25]).

Religious affiliation significantly influences perceptions of physical HRQoL. Individuals with no religion are 4.16 times more likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to those of other religions (RRR = 4.16, 95% CI [1.28, 6.36]). Christians are 6.02 times more likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to those of other religions (RRR = 6.02, 95% CI [2.56, 7.08]). Muslims are 5.15 times more likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to those of other religions (RRR = 5.15, 95% CI [2.56, 6.80]). Lastly, those practicing African Traditional Religion are 3.15 times more likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL, relative to those of other religions (RRR = 3.15, 95% CI [2.16, 4.38]).

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Conversely, factors such as sex and ethnicity do not exhibit significant associations with physical HRQoL, suggesting their impacts may be mediated by other unmeasured variables or societal contexts not captured in this analysis.

In essence, this statistical analysis provides nuanced insights into the determinants of physical HRQoL among the elderly, highlighting key factors such as age, marital status, occupation, educational attainment, and religious affiliation. These findings underscore the importance of tailored interventions and policies addressing specific vulnerabilities within ageing populations, thereby promoting healthier and more resilient ageing trajectories in society.

Table 6. 1: Proximate Determinants of Physical HRQoL

Determinant	Neither Satisfy vs. Dissatisfied		Satisfied vs. Dissatisfied	
	RRR (SE)	95% CI	RRR (SE)	95% CI
Age Group (ref. 80+)				
60-64	3.89 (0.27) ***	[2.32, 6.54]	1.49 (0.29)	[0.84, 2.64]
65-69	2.29 (0.23) ***	[1.45, 3.63]	1.07 (0.26)	[0.64, 1.79]
70-74	1.64 (0.22) ***	[1.05, 2.56]	0.97 (0.25)	[0.59, 1.59]
75-79	0.97 (0.21)	[0.64, 1.46]	0.85 (0.23)	[0.54, 1.33]
Sex (ref. Female)				
Male	0.86 (0.19)	[0.59, 1.23]	0.78 (0.21)	[0.51, 1.17]
Marital Status (ref. Widowed)				
Never Married	4.76 (0.744) ***	[1.11, 6.47]	2.00 (0.81)	[0.41, 9.83]
Married/ Cohabiting	1.48 (0.19)***	[1.02, 2.14]	1.09 (0.21)	[0.73, 1.66]
Separated/ Divorced	0.95 (0.24)	[0.59, 1.52]	0.90 (0.27)	[0.53, 1.53]
Ethnicity (ref. Other)				
Akan	0.62 (0.35)	[0.31, 1.24]	0.68 (0.38)	[0.32, 1.44]
Ewe	0.65 (0.44)	[0.28, 1.54]	0.67 (0.49)	[0.26, 1.74]
Ga-Adangbe	0.64 (0.38)	[0.30, 1.36]	0.61 (0.42)	[0.27, 1.39]
Mande-Busanga	1.08 (0.33)	[0.56, 2.08]	0.96 (0.36)	[0.48, 1.96]
Main occupation (ref. Not working)				
Formal sector	1.44 (0.27)	[0.85, 2.42]	1.01 (0.32)	[0.54, 1.90]

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Informal sector	2.27 (0.16) ***	[1.65, 3.12]	1.92 (0.18)	[1.35, 2.74]
Educational Level (ref. Tertiary)				
No education	1.12 (0.39)	[0.53, 2.38]	2.54 (0.53)	[0.90, 7.14]
Primary	1.72 (.39)	[0.79, 3.72]	3.26 (0.54)	[1.14, 9.32]
Secondary	1.75 (0.38)	[0.83, 3.67]	2.62 (0.53)	[0.94, 7.35]
Tertiary				
Place of Residence (ref. Rural)				
Urban	0.93 (0.15)	[0.68, 1.25]	0.81 (0.17)	[0.58, 1.14]
Religious Affiliation (ref. Other)				
No religion	4.16 (0.60) ***	[1.28, 6.36]	1.63 (0.53)	[1.58, 4.64]
Christianity	6.02 (0.53) ***	[2.56, 7.08]	3.84 (0.38)	[2.08, 4.53]
Islam	5.15 (0.55) ***	[2.56, 6.80]	3.72 (0.41)	[1.62, 5.34]
African Traditional Religion	3.15 (0.45)***	[2.16, 4.38]	1.68 (0.40)	[1.58, 4.64]

log likelihood = 2618.26 **Pseudo R2 = 0.123** **Prob>chi2 = 0.000**

p<0.05

RRR = Relative Risk Ratio SE = Standard Error

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6.3 Proximate Determinants of Social HRQoL

The findings from Table 6.2 below provide further insights into the factors influencing elderly individuals' perceptions of their social health-related quality of life (HRQoL), encompassing a range of determinants. Age remains a critical factor, delineating perceptions in subtle ways. For instance, individuals aged 60-64 are approximately 5.93 times more likely to report being neither satisfied nor dissatisfied than those aged 80 and above. This age group also shows a notable inclination towards reporting satisfaction (RRR = 3.32, 95% CI [1.07, 5.34]), suggesting a positive view of their social interactions and support systems. Similarly, individuals aged 65-69 exhibit a pronounced preference for neutrality in their perceptions of social HRQoL, being about 3.56 times more likely to report neither satisfaction nor dissatisfaction compared to the oldest age group (RRR = 6.77, 95% CI [1.69, 7.05]). Moreover, this cohort demonstrates a heightened tendency towards reporting satisfaction (RRR = 6.77, 95% CI [1.69, 7.05]), highlighting their overall contentment with social aspects of life.

Marital status also significantly influences perceptions of social HRQoL among the elderly. Married/cohabiting individuals, for example, are 2.23 times more likely to report being neither satisfied nor dissatisfied compared to those who are widowed. However, with satisfaction matched against dissatisfaction, those who are married/ cohabiting are 1.33 times more likely to report satisfaction or dissatisfaction when compared with widowed individuals. (RRR = 2.23, 95% CI [1.01, 4.89]), indicating varied experiences based on marital status. Religious affiliation emerges as another significant determinant. Individuals with no religious affiliation are notably more inclined to report being neither satisfied nor dissatisfied compared to those of other religions (RRR = 3.21, 95% CI [1.20, 4.56]). This suggests that religious beliefs and practices may play a role in shaping social perceptions among the elderly.

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In contrast, the main occupation, while significant, shows a different trend. Those engaged in the formal sector are 0.28 times less likely to report being neither satisfied nor dissatisfied compared to those not working (RRR = 0.28, 95% CI [0.10, 0.76]). This underscores the impact of occupational engagement on how individuals assess their social HRQoL.

Conversely, educational level, sex, ethnicity, and place of residence (urban versus rural) do not significantly influence perceptions of social HRQoL among the elderly in this study. Regardless of educational attainment, sex, ethnicity, or residential setting, similar patterns are observed in satisfaction or dissatisfaction with social aspects of life.

In summary, these insights from Table 6.2 highlight the complex interplay of age, marital status, main occupation, and religious affiliation in shaping perceptions of social HRQoL among the elderly. Factors such as sex, ethnicity, educational level, and place of residence do not show significant associations, suggesting other unmeasured variables may mediate their impacts. These findings underscore the need for targeted interventions considering these diverse factors to enhance social well-being and support systems for aging populations in Ghana.

Table 6. 2: Proximate Determinants of Social HRQoL

Determinant	Neither Satisfy vs. Dissatisfied		Satisfied vs. Dissatisfied	
	RRR (SE)	95% CI		RRR (SE)
Age Group (ref. 80+)				
60-64	5.93 (0.54) ***	[2.40, 7.38]	3.32 (0.58) ***	[1.07, 5.34]
65-69	3.56 (0.68) ***	[2.89, 4.38]	6.77 (0.71) ***	[1.69, 7.05]
70-74	1.86 (0.39)	[0.85, 4.05]	1.49 (0.44)	[0.63, 3.50]
75-79	2.24 (0.42)	[0.98, 5.10]	1.94 (0.46)	[0.78, 4.73]
Sex (ref. Female)				
Male	0.79 (0.39)	[0.37, 1.69]	0.92 (0.42)	[0.40, 2.08]
Marital Status (ref. Widowed)				
Never Married	1.79 (1.12)	[0.20, 4.09]	0.77 (1.22)	[0.07, 3.73]

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Married/ Cohabiting	2.23 (0.40) ***	[1.01, 4.89]	1.33 (0.43)	[0.57, 3.10]
Separated/ Divorced	1.84 (0.55)	[0.63, 5.37]	1.06 (0.59)	[0.33, 3.37]
Ethnicity (ref. Other)				
Akan	0.18 (1.15)	[0.02, 1.69]	0.25 (1.18)	[0.03, 2.50]
Ewe	0.16 (1.23)	[0.01, 1.94]	0.20 (1.32)	[0.02, 2.65]
Ga-Adangbe	0.24 (1.21)	[0.02, 2.51]	0.28 (1.24)	[0.03, 3.24]
Mande-Busanga	0.17 (1.12)	[0.02, 1.53]	0.18 (1.15)	[0.02, 1.72]
Main occupation				
Formal sector	0.28 (0.52) ***	[0.10, 0.76]	0.26 (0.58)	[0.08, 0.81]
Informal sector	0.67 (0.37)	[0.32, 1.38]	0.72 (0.39)	[0.33, 1.56]
Educational Level (ref. Tertiary)				
No education	0.45 (1.17)	[0.06, 4.45]	0.89 (1.27)1	[0.08, 1.66]
Primary	0.22 (1.16)	[0.02, 2.15]	0.42 (1.26	[0.04, 1.50]
Secondary	0.56 (1.17)	[0.06, 5.48]	0.52 (1.28)	[0.04, 1.35]
Place of Residence (ref. Rural)				
Urban	0.65 (0.31)	[0.35, 1.19]	0.63 (0.33)	[0.33, 1.22]
Religious Affiliation (ref. Other)				
No religion	3.28 (1.15) ***	[2.45, 5.19]	2.94 (1.11) ***	[0.41, 4.35]
Christianity	2.02 (0.85) ***	[1.14, 3.19]	2.24 (0.75) ***	[1.04, 4.05]
Islam	4.28 (0.87) ***	[2.41, 5.10]	2.02 (0.78) ***	[0.34, 3.37]
African Traditional Religion	2.25 (0.56) ***	[1.40, 3.30]	1.01 (0.55)	[0.54, 2.35]

log likelihood = 1536.96 **Prob>chi2 = 0.000**
p<0.05
RRR = Relative Risk Ratio SE = Standard Error

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6.4 Proximate Determinants of Environmental HRQoL

Table 6.3 shows the proximate determinants of Environmental Health-Related Quality of Life (HRQoL). The table compares different demographic and socioeconomic factors concerning their impact on two categories of Environmental HRQoL: "Neither Satisfy nor Dissatisfied" and "Satisfied. Dissatisfied." Relative Risk Ratio (RRR) is a measure used in multinomial logistic regression that compares the relative likelihood of an outcome occurring in one group relative to a reference group. This ratio is crucial for understanding how much more or less likely the outcome is in the study group compared to the reference group. For instance, if the RRR is greater than one, it suggests that the outcome is more likely in the study group than in the reference group; if it is less than one, the outcome is less likely in the study group.

Standard Error (SE) indicates the accuracy of the RRR estimate. A smaller SE suggests a more precise estimate, meaning the RRR value is likely closer to the true value in the population. Essentially, the SE reflects the extent to which the estimated RRR might vary if the study were repeated multiple times. It is a critical component in assessing the reliability of the RRR estimate.

The 95% Confidence Interval (95% CI) provides an interval estimate of where the true RRR is likely to fall, with 95% confidence. This interval helps in understanding the range within which the true value of the RRR lies. If the confidence interval does not include the value of one, the result is typically considered statistically significant, indicating a high probability that the observed effect is not due to random chance. The 95% CI is essential for evaluating the robustness and precision of the RRR estimate, as it provides insight into the potential variability and reliability of the findings.

These key terms are fundamental in interpreting the results of multinomial logistic regression. They offer insights into the relative likelihood of outcomes, the precision of the estimates, and the

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statistical significance of the results, helping researchers draw meaningful conclusions from their data. Age remains a critical factor, delineating perceptions in subtle ways. For instance, individuals aged 60-64 are 2.68 times more likely to report being neither satisfied nor dissatisfied compared to those aged 80 and above. This age group also shows a notable inclination towards reporting satisfaction (RRR = 2.38, 95% CI [1.23, 4.61]), suggesting a positive view of their environmental interactions.

Similarly, the age cohort of 65-69 is significant. Here, there is a 1.91 times likelihood that they are "Neither Satisfy vs. Dissatisfied": RRR = 1.91 (SE = 0.28), CI = [1.10, 3.29]. This age group is significantly more likely to be "Neither Satisfy" than "Dissatisfied" compared to the 80+ group. With "Satisfied against Dissatisfied" the RRR = 1.51 (SE = 0.32), CI = [0.81, 2.84]. The result is not statistically significant since the CI includes 1. What is more, 70-74 this age cohort portrays "Neither Satisfy against Dissatisfied" with the RRR= 1.75 (SE = 0.29), CI = [0.99, 3.08]. This is not statistically significant. Concerning "Satisfied and Dissatisfied," the computed RRR = 2.15 (SE = 0.32), CI = [1.14, 4.04]. Indeed, this age group is significantly more likely to be "Satisfied" compared to "Dissatisfied" than the 80+ group. Along with the age cohort of 75-79, the results show that "Neither Satisfy nor Dissatisfied" reported an RRR = 1.25 (SE = 0.27), CI = [0.74, 2.09]. This connotes that it is not statistically significant, whereas the "Satisfied nor Dissatisfied" reported an RRR = 1.39 (SE = 0.30), CI = [0.77, 2.52]. Likewise, this is not statistically significant.

Sex is another important determinant when analyzing predictor variables in the study. The results show that for males who fall into the "Neither Satisfied nor Dissatisfied" category compared to the "Dissatisfied" category, the relative risk ratio (RRR) is 0.76 with a standard error (SE) of 0.23 and a confidence interval (CI) ranging from 0.49 to 1.19. This finding is not statistically significant,

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indicating that there is no meaningful difference in the likelihood of being "Neither Satisfied nor Dissatisfied" between males and females.

Similarly, when examining those who are "Satisfied" compared to "Dissatisfied," males have an RRR of 0.89 with an SE of 0.26 and a CI of 0.54 to 1.48. This result is also not statistically significant, suggesting that the likelihood of being "Satisfied" rather than "Dissatisfied" does not significantly differ between males and females.

In essence, the analysis shows that sex does not significantly impact the satisfaction levels in either the "Neither Satisfied nor Dissatisfied" or the "Satisfied vs. Dissatisfied" categories. The lack of statistical significance in both comparisons indicates that, within the scope of this study, being male or female does not substantially alter the relative likelihood of experiencing different levels of satisfaction as far as the environmental domain of HRQoL is concerned.

The analysis of marital status as a determinant of satisfaction levels, compared to the reference group of widowed individuals, reveals varied outcomes. For those who have never married, the relative risk ratio (RRR) for being "Neither Satisfied nor Dissatisfied" versus "Dissatisfied" is 1.26 with a standard error (SE) of 0.55, and a confidence interval (CI) ranging from 0.43 to 3.72. This result is not statistically significant, indicating no meaningful difference in satisfaction levels between those who have never married and those who are widowed. Similarly, for the "Satisfied vs. Dissatisfied" category, the RRR is 0.46 with an SE of 0.68, and a CI of 0.12 to 1.74, which is also not statistically significant.

In contrast, married or cohabiting individuals show a notable difference. The RRR for being "Neither Satisfied nor Dissatisfied" versus "Dissatisfied" is 1.84, with an SE of 0.24 and a CI of 1.16 to 2.91. This result is statistically significant, suggesting that married or cohabiting individuals

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are significantly more likely to be in the "Neither Satisfied nor Dissatisfied" category compared to those who are widowed. However, for the "Satisfied vs. Dissatisfied" category, the RRR is 1.07 with an SE of 0.27 and a CI of 0.64 to 1.78, which is not statistically significant.

For individuals who are separated or divorced, the results do not show significant differences compared to widowed individuals. The RRR for "Neither Satisfy vs. Dissatisfied" is 1.17, with an SE of 0.29 and a CI of 0.65 to 2.11, indicating no significant difference. Similarly, the RRR for "Satisfied vs. Dissatisfied" is 1.01, with an SE of 0.34 and a CI of 0.52 to 1.95, which is also not statistically significant. In summary, marital status influences satisfaction levels differently across categories. While married or cohabiting individuals are significantly more likely to be in the "Neither Satisfied nor Dissatisfied" category compared to widowed individuals, those who have never married or are separated/divorced do not show significant differences in satisfaction levels compared to widowed individuals. Ethnicity, as another determinant, shows that none of the ethnic groups exhibit statistically significant relative risk ratios (RRRs) in both the "Neither Satisfied nor Dissatisfied" versus "Dissatisfied" and the "Satisfied versus Dissatisfied" comparisons when compared to the reference group labeled as "Other." For the Akan ethnic group, the RRR for "Neither Satisfied nor Dissatisfied" compared to "Dissatisfied" is 0.81 with a standard error (SE) of 0.41 and a confidence interval (CI) ranging from 0.36 to 1.80. This CI includes 1, indicating that the result is not statistically significant. Similarly, for the "Satisfied versus Dissatisfied" category, the Akan group has an RRR of 0.92 with an SE of 0.46 and a CI of 0.38 to 2.25, which is also not statistically significant.

The Ewe ethnic group shows an RRR of 0.51 for "Neither Satisfied nor Dissatisfied" versus "Dissatisfied," with an SE of 0.49 and a CI of 0.19 to 1.34, which is not statistically significant. For the "Satisfied versus Dissatisfied" comparison, the Ewe group has an RRR of 0.57 with an SE

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of 0.57 and a CI of 0.19 to 1.75, indicating no significant difference.

Similarly, the Ga-Adangbe group has an RRR of 0.61 for "Neither Satisfied nor Dissatisfied" compared to "Dissatisfied," with an SE of 0.45 and a CI of 0.25 to 1.41, which is not statistically significant. For the "Satisfied versus Dissatisfied" comparison, the RRR is 0.42 with an SE of 0.52 and a CI of 0.15 to 1.16, showing no significant difference.

Lastly, for the Mande-Busanga ethnic group, the RRR for "Neither Satisfied nor Dissatisfied" versus "Dissatisfied" is 0.71 with an SE of 0.38 and a CI of 0.34 to 1.51, which is not statistically significant. For the "Satisfied versus Dissatisfied" comparison, the RRR is 1.08 with an SE of 0.43 and a CI of 0.47 to 2.52, indicating no significant difference.

Thus, the analysis reveals that ethnicity does not significantly impact satisfaction levels in either the "Neither Satisfied nor Dissatisfied" or the "Satisfied versus Dissatisfied" categories. The confidence intervals for all ethnic groups (Akan, Ewe, Ga-Adangbe, Mande-Busanga) include 1, indicating that there are no meaningful differences in satisfaction levels compared to the reference group.

When considering main occupation as a determinant, it becomes evident that individuals working in the formal sector are significantly less likely to fall into the "Neither Satisfied nor Dissatisfied" category compared to the "Dissatisfied" group when referenced against those with no education. The Relative Risk Ratio (RRR) for this comparison is 0.26, with a standard error (SE) of 0.31 and a confidence interval (CI) ranging from 0.14 to 0.48. This CI does not include 1, indicating statistical significance. This means that people employed in the formal sector are less likely to be "Neither Satisfied nor Dissatisfied" than "Dissatisfied."

Similarly, for the "Satisfied versus Dissatisfied" comparison, individuals in the formal sector also

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show a significant difference. The RRR is 0.29, with an SE of 0.36 and a CI of 0.14 to 0.59. Since the CI does not include 1, it indicates statistical significance, suggesting that individuals in the formal sector are also significantly less likely to be "Satisfied" than "Dissatisfied" compared to those with no education.

Therefore, the analysis highlights that those working in the formal sector are significantly less likely to be "Neither Satisfied nor Dissatisfied" or "Satisfied" when compared to the "Dissatisfied" group, relative to individuals with no education. This suggests that formal sector employment might be associated with lower levels of environmental HRQoL satisfaction.

When examining the main occupation as a determinant, the data for individuals working in the informal sector reveal differing levels of statistical significance. For the "Neither Satisfied nor Dissatisfied" category compared to the "Dissatisfied" group, the Relative Risk Ratio (RRR) is 0.68 with a standard error (SE) of 0.23 and a confidence interval (CI) of 0.44 to 1.08. Since the CI includes 1, this result is not statistically significant, indicating that people in the informal sector are not significantly different in their likelihood of being "Neither Satisfied nor Dissatisfied" compared to being "Dissatisfied" relative to those with no education.

On the other hand, for the "Satisfied versus Dissatisfied" comparison, individuals in the informal sector show a significant difference. The RRR is 0.58, with an SE of 0.25 and a CI of 0.35 to 0.95. Because this CI does not include 1, it indicates statistical significance. This means that individuals working in the informal sector are significantly less likely to be "Satisfied" than "Dissatisfied" compared to those with no education.

In summary, the analysis demonstrates that while working in the informal sector does not significantly affect the likelihood of being "Neither Satisfied nor Dissatisfied" compared to being

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"Dissatisfied," it does significantly reduce the likelihood of being "Satisfied" compared to being "Dissatisfied." This suggests that informal sector employment is associated with lower levels of environmental HRQoL satisfaction when compared to those with no education.

When considering educational level as a determinant, the analysis reveals that none of the educational categories (No education, Primary, Secondary) show statistically significant results in either of the comparisons.

For individuals with no education, the Relative Risk Ratio (RRR) for the "Neither Satisfied nor Dissatisfied" group compared to the "Dissatisfied" group is 0.91 with a standard error (SE) of 0.48 and a confidence interval (CI) of 0.36 to 2.32. Similarly, for the "Satisfied versus Dissatisfied" comparison, the RRR is 2.34 with an SE of 0.63 and a CI of 0.69 to 4.98. Both CIs include 1, indicating that the results are not statistically significant.

For those with primary education, the RRR for the "Neither Satisfied nor Dissatisfied" group compared to the "Dissatisfied" group is 0.72 with an SE of 0.47 and a CI of 0.29 to 1.82. For the "Satisfied versus Dissatisfied" comparison, the RRR is 1.94 with an SE of 0.62 and a CI of 0.57 to 5.58. Again, both CIs include 1, indicating no statistical significance.

Finally, for individuals with secondary education, the RRR for the "Neither Satisfied nor Dissatisfied" group compared to the "Dissatisfied" group is 1.59 with an SE of 0.47 and a CI of 0.63 to 4.02. For the "Satisfied versus Dissatisfied" comparison, the RRR is 2.44 with an SE of 0.62 and a CI of 0.72 to 4.26. Both of these results also include 1 in their CIs, making them not statistically significant.

In summary, the data indicate that the level of education (whether no education, primary, or

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secondary) does not significantly affect the likelihood of being "Neither Satisfied nor Dissatisfied" or "Satisfied" compared to being "Dissatisfied" in terms of environmental HRQoL. This suggests that education level does not play a significant role in determining satisfaction with the environmental quality of life in this analysis.

In examining the place of residence as a determinant of environmental Health-Related Quality of Life (HRQoL), particularly comparing urban and rural settings, the analysis reveals that these factors do not show statistically significant differences in either comparison.

For individuals living in urban areas compared to their rural counterparts, the Relative Risk Ratio (RRR) for the "Neither Satisfy nor Dissatisfied" group versus the "Dissatisfied" is 0.81, with a Standard Error (SE) of 0.19 and a confidence interval (CI) ranging from 0.56 to 1.17. This result is not statistically significant as the CI includes the value 1. Similarly, in the comparison of "Satisfied versus Dissatisfied," the RRR is 0.76, with an SE of 0.21 and a CI from 0.50 to 1.15. Like the previous comparison, this result is not statistically significant as the CI includes 1.

These findings suggest that residing in urban areas relative to rural areas does not significantly affect the likelihood of reporting neutral satisfaction levels or satisfaction with environmental HRQoL. Thus, according to the data analyzed, the place of residence alone may not be a decisive factor in determining satisfaction with the environmental quality of life.

In examining religious affiliation as a factor influencing Health-Related Quality of Life (HRQoL), particularly comparing various affiliations such as no religion, Christianity, Islam, and African Traditional Religion to a reference group labeled as 'Other,' the analysis reveals that none of these affiliations show statistically significant differences in either comparison.

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For the comparison of "Neither Satisfied nor Dissatisfied" versus "Dissatisfied," the Relative Risk Ratios (RRRs) and their associated confidence intervals (CIs) all include the value 1. This indicates that the likelihood of reporting neutral satisfaction levels versus dissatisfaction does not significantly differ between these religious groups.

Similarly, in the comparison of "Satisfied versus Dissatisfied," the RRRs and CIs for all religious affiliations also include 1. This suggests that there is no statistically significant variation in the likelihood of reporting satisfaction versus dissatisfaction with HRQoL across different religious groups compared to the reference category.

These findings imply that religious affiliation alone may not be a decisive factor in determining satisfaction levels with health-related quality of life-based on the analyzed data. Other factors beyond religious identity might play a more prominent role in influencing perceptions of HRQoL. Therefore, while religious beliefs and practices can be significant to individuals, their impact on perceived health-related quality of life does not appear to be statistically significant in this study.

In summary, the analysis underscores several significant determinants affecting Health-Related Quality of Life (HRQoL) across different comparisons. Specifically:

For the comparison of "Neither Satisfy versus Dissatisfied," statistically significant factors include age groups 60-64 and 65-69, being married/cohabiting, and working in the Formal sector. These variables show a notable influence on the likelihood of reporting neutral satisfaction levels compared to dissatisfaction with HRQoL. In the comparison of "Satisfied versus Dissatisfied," significant determinants include age groups 60-64 and 70-74, as well as employment in the Formal sector. These factors contribute significantly to the likelihood of reporting satisfaction versus

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dissatisfaction with HRQoL.

These findings highlight the relative importance of age, marital status, and employment sector in shaping perceptions of environmental HRQoL. The statistical significance and confidence intervals associated with these determinants provide robust insights into their reliability and the extent of their impact on HRQoL perceptions.

Table 6.3: Proximate Determinants of Environmental HRQoL

Determinant	Neither Satisfy vs. Dissatisfied		Satisfied vs. Dissatisfied	
	RRR (SE)	95% CI	RRR (SE)	95% CI
Age Group (ref. 80+)				
60-64	2.68 (0.29) ***	[1.49, 4.79]	2.38 (0.34)***	[1.23, 4.61]
65-69	1.91 (0.28) ***	[1.10, 3.29]	1.51 (0.32)	[0.81, 2.84]
70-74	1.75 (0.29)	[0.99, 3.08]	2.15 (0.32)***	[1.14, 4.04]
75-79	1.25 (0.27)	[0.74, 2.09]	1.39 (0.30)	[0.77, 2.52]
Sex (ref. Female)				
Male	0.76 (0.23)	[0.49, 1.19]	0.89 (0.26)	[0.54, 1.48]
Marital Status (ref. Widowed)				
Never Married	1.26 (0.55)	[0.43, 3.72]	0.46 (0.68)	[0.12, 1.74]
Married/ Cohabiting	1.84*** (0.24)	[1.16, 2.91]	1.07 (0.27)	[0.64, 1.78]
Separated/ Divorced	1.17 (0.29)	[0.65, 2.11]	1.01 (0.34)	[0.52, 1.95]
Ethnicity (ref. Other)				
Akan	0.81 (0.41	[0.36, 1.80]	0.92 (0.46)	[0.38, 2.25]
Ewe	0.51 (0.49)	[0.19, 1.34]	0.57 (0.57)	[0.19, 1.75]
Ga-Adangbe	0.61 (0.45)	[0.25, 1.418	0.42 (0.52)	[0.15, 1.16]
Mande-Busanga	0.71 (0.38)	[0.34, 1.51]	1.08 (0.43)	[0.47, 2.52]
Main occupation				

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Formal sector	0.26 (0.31)***	[0.14, 0.48]	0.29 (0.36)***	[0.14, 0.59]
Informal sector	0.68 (0.23)	[0.44, 1.08]	0.58 (0.25)***	[0.35, 0.95]
Educational Level (ref. Tertiary)				
No education	0.91 (0.48)	[0.36, 2.32]	2.34 (0.63)	[0.69, 4.98]
Primary	0.72 (0.47)	[0.29, 1.82]	1.94 (0.62)	[0.57, 5.58]
Secondary	1.59 (0.47)	[0.63, 4.02]	2.44 (0.62)	[0.72, 4.26]
Place of Residence (ref. Rural)				
Urban	0.81 (0.19)	[0.56, 1.17]	0.76 (0.21)	[0.50, 1.15]
Religious Affiliation (ref. Other)				
No religion	0.45 (1.11)	[0.05, 4.01]	0.16 (1.16)	[0.02, 1.59]
Christianity	0.57 (1.05)	[0.07, 4.48]	0.23 (1.07)	[0.03, 1.89]
Islam	0.47 (1.05)	[0.06, 3.67]	0.17 (1.08)	[0.02, 1.39]
African Traditional Religion	0.93 (1.13)	[0.10, 4.51]	0.18 (1.18)	[0.02, 1.79]

log likelihood = 2120.86 **Pseudo R2 = 0.074 Prob>chi2 = 0.000**

p<0.05

RRR = Relative Risk Ratio SE = Standard Error

6.1 Proximate Determinants of Psychological HRQoL

Age is a pivotal factor influencing Psychological Health-Related Quality of Life (HRQoL), as revealed in Table 6.4 of the study. The analysis examines various age groups in comparison to individuals aged 80 and above, serving as the reference category.

Individuals aged 60-64 exhibit a significant likelihood, with a Relative Risk Ratio (RRR) of 2.79 (Standard Error, SE = 0.32), and a Confidence Interval (CI) of [1.50, 5.19], to report being "Neither satisfied" compared to "Dissatisfied" regarding their HRQoL. This suggests that this age group is markedly more prone to express moderate satisfaction levels with their psychological well-being. Similarly, they are also more likely to report being "Satisfied" than "Dissatisfied," although this

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finding did not reach statistical significance.

In the 65-69 age bracket, the likelihood of reporting "Neither Satisfy" versus "Dissatisfied" remains significant, with an RRR of 2.05 (SE = 0.29), CI = [1.16, 3.60]. This indicates a pronounced inclination towards moderate satisfaction levels. Conversely, the likelihood of being "Satisfied" versus "Dissatisfied" in this age group, with an RRR of 1.16 (SE = 0.33), CI = [0.62, 2.20], did not show statistical significance, suggesting no clear trend toward satisfaction.

Among those aged 70-74 and 75-79, the analysis reveals no statistically significant differences in either "Neither Satisfy" versus "Dissatisfied" or "Satisfied" versus "Dissatisfied" comparisons. This suggests that these age groups do not exhibit a distinct pattern in their psychological HRQoL perceptions compared to those aged 80 and above.

In general, the findings underscore the varying impact of age on psychological HRQoL perceptions. While individuals aged 60-64 and 65-69 are significantly more likely to report moderate satisfaction levels, older age groups do not show clear distinctions in their satisfaction or dissatisfaction with psychological well-being. These insights are crucial for understanding how age-related factors influence subjective perceptions of psychological HRQoL of older adults in Ghana.

Sexual dimorphism plays a role in how individuals perceive their Psychological Health-Related Quality of Life (HRQoL), as illustrated in Table 6.4 of the study. The analysis compares males to females, with females serving as the reference category.

For males, the analysis reveals a Relative Risk Ratio (RRR) of 0.79 (Standard Error, SE = 0.24), and a Confidence Interval (CI) of [1.49, 1.26] in the comparison of "Neither Satisfy" versus

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"Dissatisfied" with their HRQoL. This finding indicates no statistically significant difference between males and females in reporting moderate satisfaction levels with their psychological well-being. Similarly, in the comparison of "Satisfied" versus "Dissatisfied," males show an RRR of 0.95 (SE = 0.27), CI = [0.56, 1.59], suggesting no significant difference in their likelihood of reporting satisfaction levels compared to females.

These results suggest that while sex is a variable in understanding psychological HRQoL, there are no clear differences between males and females in their perceptions of satisfaction or dissatisfaction with their mental well-being. This underscores the importance of considering various demographic factors when assessing subjective experiences of mental health. Understanding how sex influences psychological HRQoL can help tailor interventions and support systems to better address the unique needs and perceptions of different gender groups. Further research may explore nuanced factors that contribute to these perceptions, such as societal expectations, biological differences, and individual coping mechanisms.

Marital status is a significant aspect of life that can influence psychological Health-Related Quality of Life (HRQoL), as reflected in various studies and analyses. The thesis explores how different marital statuses impact individuals' psychological well-being based on the findings from Table 6.4. Marital status plays a role in shaping how individuals perceive and experience their psychological HRQoL. The study examines three primary marital statuses: Never Married, Married/Cohabiting, and Separated/Divorced, comparing their effects on two aspects: "Neither Satisfy vs. Dissatisfied" and "Satisfied vs. Dissatisfied".

Individuals who have never married showed no statistically significant differences in their likelihood of reporting satisfaction or dissatisfaction compared to those who are widowed.

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Whether they reported being "Neither Satisfy" or "Satisfied," the Relative Risk Ratios (RRRs) did not reach statistical significance. This suggests that marital status alone may not significantly influence psychological HRQoL in this context.

Those who were married or in a cohabiting relationship exhibited a slightly higher likelihood of reporting "Neither Satisfy" compared to the widowed group, although this difference was not statistically significant. Similarly, when comparing "Satisfied" to "Dissatisfied," the RRRs did not show significant differences. This implies that while being married or in a stable relationship might influence some aspects of psychological well-being, it did not show a clear statistical advantage in this study.

Individuals who were separated or divorced also did not show significant differences in their likelihood of reporting psychological satisfaction or dissatisfaction compared to the widowed group. The RRRs for both "Neither Satisfy" and "Satisfied" were not statistically significant, indicating that marital dissolution alone may not significantly alter one's psychological HRQoL in this particular study.

Altogether, the analysis suggests that marital status, as outlined in Table 6.4, does not emerge as a statistically significant predictor of psychological HRQoL in these comparisons. This finding underscores the complexity of factors influencing psychological well-being, where marital status alone may not dictate one's overall satisfaction or dissatisfaction in life. Future research could delve deeper into specific aspects of marital relationships or transitions to better understand their nuanced impacts on psychological health outcomes.

Ethnicity is a diverse aspect of human identity that can influence various aspects of life, including

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psychological Health-Related Quality of Life (HRQoL). This essay explores how different ethnic groups impact individuals' psychological well-being based on the findings from Table 6.4. The study examines several ethnic groups, including Akan, Ewe, Ga-Adangbe, and Mande- Busanga, comparing their effects on two aspects: "Neither Satisfy against. Dissatisfied" and "Satisfied against. Dissatisfied."

Ethnic groups such as Akan, Ga-Adangbe, and Mande-Busanga according to the findings show that none of these ethnic groups demonstrated statistically significant Relative Risk Ratios (RRRs) in either comparison when compared to the reference group (Other). This means that the likelihood of individuals from these ethnic backgrounds reporting psychological satisfaction or dissatisfaction did not significantly differ from those in the other reference group. Strikingly, that of the Ewes ethnic group was significant for the satisfaction against the dissatisfied group- RRR of 0.24 (SE = 0.66), CI = [0.07, 0.87].

These results indicate that in this particular study, ethnicity alone may not be a decisive factor in predicting psychological HRQoL. Other factors such as socio-economic status, cultural practices, or community dynamics could potentially play more influential roles in shaping individuals' psychological well-being across different ethnic groups.

Understanding the impact of ethnicity on psychological HRQoL requires considering broader contexts beyond ethnic identity alone. Factors like socioeconomic disparities, access to healthcare, cultural values, and experiences of discrimination may collectively influence how individuals from various ethnic backgrounds perceive and experience their psychological health.

Future research could delve deeper into specific cultural factors or historical contexts that might interact with ethnicity to better elucidate its role in shaping psychological HRQoL outcomes. This

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would contribute to a more comprehensive understanding of how ethnicity intersects with psychological well-being, offering insights for targeted interventions and support strategies aimed at promoting mental health equity across diverse populations. Occupation plays a crucial role in shaping individuals' Psychological Health-Related Quality of Life (HRQoL), influencing their satisfaction and overall well-being. This essay explores how different occupational sectors impact psychological HRQoL based on the findings from Table 6.4.

In the study, individuals employed in the formal sector did not show statistically significant differences in either "Neither Satisfy vs. Dissatisfied" or "Satisfied vs. Dissatisfied" compared to the reference group (No education). This suggests that, in this context, working in the formal sector alone may not strongly correlate with higher or lower levels of psychological satisfaction.

Conversely, those working in the informal sector exhibited notable findings. They were significantly more likely to report being "Neither Satisfied" compared to "Dissatisfied" and also more likely to report being "Satisfied" compared to "Dissatisfied." These results suggest that informal sector employment may influence psychological HRQoL differently than formal sector employment or no education.

The findings underscore the complexity of how occupational sectors can impact psychological well-being. Factors such as job security, income stability, work hours, and job satisfaction likely play roles in shaping individuals' perceptions of their psychological health.

Understanding these dynamics can inform policies and interventions aimed at promoting mental well-being among different occupational groups. For instance, supporting job security and improving working conditions in both formal and informal sectors could potentially enhance psychological HRQoL outcomes.

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Further research could delve deeper into specific occupational factors, such as job autonomy, social support at work, and stress levels, to better understand their contributions to psychological HRQoL. Such insights are crucial for developing targeted strategies to foster a supportive work environment that promotes positive mental health outcomes across diverse occupational settings.

On the balance, while formal sector employment in this study did not show significant associations with psychological HRQoL, the informal sector demonstrated notable impacts. This highlights the need for nuanced approaches in addressing occupational influences on mental well-being, aiming to create environments that support positive psychological outcomes for all workers. Education serves as a fundamental factor influencing Psychological Health-Related Quality of Life (HRQoL), shaping perceptions of satisfaction and well-being among individuals. This essay explores the findings from Table 6.4 regarding how different educational levels impact psychological HRQoL.

Educational Levels and "Neither Satisfy vs. Dissatisfied": The study did not find statistically significant differences across educational levels (No education, Primary, Secondary) compared to the reference group (Tertiary) in terms of reporting "Neither Satisfy" vs. "Dissatisfied." This suggests that educational attainment alone may not significantly alter individuals' likelihood of feeling neither satisfied nor dissatisfied with their psychological health.

Educational Levels and "Satisfied vs. Dissatisfied": Similarly, there were no statistically significant differences found in the likelihood of reporting "Satisfied" vs. "Dissatisfied" across educational levels compared to the reference group (Tertiary). This indicates that higher educational attainment, such as tertiary education, does not necessarily guarantee higher levels of psychological satisfaction compared to lower levels of education in this context. The results imply

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that while education is widely recognized for its potential to improve various aspects of life, including income and social mobility, its direct impact on psychological HRQoL in this study appears nuanced. Factors beyond educational attainment, such as socio-economic status, access to healthcare, and social support networks, likely interact to shape individuals' perceptions of psychological well-being.

Understanding these dynamics is crucial for developing interventions and policies aimed at improving psychological HRQoL across different educational levels. For instance, promoting mental health literacy and support services within educational institutions could help mitigate stressors and enhance coping mechanisms among students and graduates. Further research could explore additional dimensions of education, such as educational quality, lifelong learning opportunities, and the role of education in fostering resilience and adaptive strategies. Such insights would provide a more comprehensive understanding of how educational experiences influence psychological well-being over the lifespan.

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In this wise, while educational levels did not show significant associations with psychological HRQoL in this study, education remains a vital determinant in shaping overall life outcomes. Efforts to support mental health initiatives across all educational levels can contribute to fostering a society where individuals experience improved psychological well-being and quality of life. Place of residence, whether rural or urban, plays a pivotal role in shaping individuals' perceptions of Psychological Health-Related Quality of Life (HRQoL). Analyzing the findings from Table 6.4 sheds light on how urban residency compares to rural settings in terms of psychological satisfaction and overall well-being.

The study did not find statistically significant differences between urban and rural residents regarding reporting "Neither Satisfy" nor "Dissatisfied" with their psychological health. This suggests that residing in urban areas does not necessarily increase or decrease the likelihood of feeling neither satisfied nor dissatisfied compared to rural areas. Factors such as access to healthcare, social support networks, and economic opportunities likely influence this perception across different residential settings.

Similarly, there were no statistically significant differences found in the likelihood of reporting "Satisfied" nor "Dissatisfied" between urban and rural residents. This indicates that the level of psychological satisfaction does not significantly differ based solely on whether individuals live in urban or rural environments. Other factors, including community infrastructure, environmental stressors, and cultural norms, may also play crucial roles in shaping individuals' perceptions of satisfaction with their psychological well-being. The results underscore the complex interplay between place of residence and psychological HRQoL. While urban areas often offer better access to specialized healthcare services and employment opportunities, they may also present challenges

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such as higher living costs and increased stress levels. Conversely, rural areas may provide a quieter environment and stronger community ties but may lack the resources and infrastructure that urban settings offer.

Understanding these nuances is vital for policymakers and healthcare professionals aiming to improve psychological HRQoL across different residential settings. Interventions that address specific challenges faced by urban and rural residents, such as mental health services accessibility and community support programs, can help enhance overall well-being and quality of life.

Future research could delve deeper into specific factors within urban and rural contexts that contribute to psychological HRQoL, such as neighborhood characteristics, commuting patterns, and social cohesion. By gaining a more nuanced understanding of these dynamics, tailored strategies can be developed to promote psychological resilience and well-being across diverse residential environments.

Overall, while place of residence did not show significant associations with psychological HRQoL in this study, its impact is multifaceted and warrants further investigation. Efforts to create supportive environments and equitable access to mental health resources can contribute to fostering healthier communities and enhancing overall psychological well-being for all residents, regardless of where they live. The role of religious affiliation in influencing Psychological Health-Related Quality of Life (HRQoL) is explored through an analysis of various religious groups and their reported levels of satisfaction or dissatisfaction. No Religion, Christianity, Islam, African Traditional Religion, and Psychological HRQoL. The study reveals statistically significant associations between religious affiliation and both aspects of psychological well-being, feeling "Neither Satisfied" and feeling "Satisfied", compared to "Dissatisfied."

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For individuals identifying with No Religion, findings indicate they are less likely to report feeling "Neither Satisfy" compared to feeling "Dissatisfied" with their psychological health. This suggests that lack of religious affiliation may influence perceptions of psychological well-being, possibly due to differing sources of emotional and social support outside of religious communities. Christianity and Islam also show significant associations with psychological HRQoL. Individuals identifying with these faiths are more likely to report feeling "Neither Satisfy" compared to "Dissatisfied." This could reflect the supportive role of religious beliefs and practices in coping with life stressors and maintaining emotional balance.

Similarly, African Traditional Religion exhibits significant associations where followers are more likely to report being "Neither Satisfy" relative to feeling "Dissatisfied" with their psychological health. This underscores the cultural and spiritual dimensions that traditional beliefs provide, influencing perceptions of well-being among adherents. These findings underscore the diverse ways in which religious beliefs and practices intersect with psychological HRQoL. Religious communities often offer social support networks, ethical frameworks, and rituals that can enhance resilience and promote a sense of purpose and meaning in life. This can positively impact mental health outcomes, fostering greater psychological well- being.

However, it's important to note that the relationship between religious affiliation and psychological HRQoL is complex and multifaceted. Factors such as the intensity of religious practice, community engagement, and personal interpretations of faith can vary widely among individuals within each religious group. These nuances highlight the need for tailored approaches in healthcare and mental health services that respect and integrate diverse religious beliefs and practices.

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In conclusion, while religious affiliation shows significant associations with psychological HRQoL in this study, further research is essential to explore the underlying mechanisms and variations across different religious contexts. Understanding these dynamics can inform culturally sensitive interventions that support mental health and well-being across diverse religious communities, ultimately contributing to a more holistic approach to healthcare.

Therefore, the analysis of Psychological Health-Related Quality of Life (HRQoL) reveals a nuanced interplay of demographic, socioeconomic, and cultural factors that significantly influence individuals' satisfaction and dissatisfaction levels with their psychological well-being. Age emerges as a critical determinant, with adults aged 60-69 showing higher likelihoods of feeling "Neither Satisfy" compared to "Dissatisfied." This suggests varying perceptions of psychological well-being across different stages of adulthood. Additionally, employment in the informal sector and certain religious affiliations demonstrate notable impacts on individuals' psychological HRQoL, indicating the role of the work environment and spiritual beliefs in shaping mental health outcomes.

Ethnicity, particularly among the Ewe ethnic group, also stands out as a significant factor influencing feelings of satisfaction relative to dissatisfaction with psychological HRQoL. This underscores the cultural dimensions that influence how individuals perceive and experience their mental health. The findings highlight the importance of considering diverse socio-cultural contexts in understanding and promoting psychological well-being. Tailored interventions that acknowledge and respect these varied influences can better support individuals in achieving optimal mental health outcomes. Moreover, the statistical rigor of the analysis, as reflected in significant relative risk ratios and confidence intervals, strengthens the reliability of these findings.

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Moving forward, further research is needed to delve deeper into the mechanisms through which these factors exert their influence on psychological HRQoL. Such insights will be invaluable in developing targeted policies and interventions that enhance mental health support across diverse populations, ultimately fostering a society where individuals can thrive emotionally and psychologically. In essence, this study underscores the complexity of psychological HRQoL and the importance of holistic approaches that integrate socio-demographic and cultural perspectives into mental health care strategies. By doing so, we can advance towards a more inclusive and effective framework for promoting well-being and resilience among all individuals.

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Table 6.4: Proximate Determinants of Psychological HRQoL

Determinant	Neither Satisfy vs. Dissatisfied		Satisfied vs. Dissatisfied	
	RRR (SE)	95% CI	RRR (SE)	95% CI
Age Group (ref. 80+)			1.025	373.139
60-64	2.79 (0.32)***	[1.50, 5.19]	1.74 (0.35)	[1.50, 5.19]
65-69	2.05 (0.29)***	[1.16, 3.60]	1.16 (0.33)	[0.62, 2.20]
70-74	1.56 (0.28)	[0.89, 2.72]	1.39 (0.31)	[0.75, 2.58]
75-79	1.59 (0.28)	[0.92, 2.77]	1.62 (0.31)	[0.89, 2.98]
Sex (ref. Female)				
Male	0.79 (0.24)	[1.49, 1.26]	0.95 (0.27)	[0.56, 1.59]
Marital Status (ref. Widowed)				
Never Married	1.33 (0.56)	[0.44, 3.98]	0.36 (0.75)	[0.08, 1.54]
Married/ Cohabiting	1.60 (0.25)	[0.99, 2.59]	1.01 (0.27)	[0.59, 1.73]
Separated/ Divorced	1.29 (0.33)	[0.68, 2.44]	1.07 (0.36)	[0.53, 2.16]
Ethnicity (ref. Other)				
Akan	0.44 (0.50)	[0.16, 1.16]	0.35 (0.53)	[0.13, 1.00]
Ewe	0.43 (0.59)	[0.13, 1.37]	0.24 (0.66)***	[0.07, 0.87]
Ga-Adangbe	0.70 (0.56)	[0.23, 2.12]	0.49 (0.59)	[0.15, 1.58]
Mande-Busanga	0.59 (0.48)	[0.23, 1.49]	0.55 (0.50)	[0.21, 1.47]
Main occupation				
Formal sector	0.80 (0.34)	[1.50, 5.19]	0.53 (0.39)	[0.24, 1.15]
Informal sector	1.77 (0.21)***	[1.50, 5.19]	1.59 (0.23)***	[1.01, 2.52]
Educational Level (ref. Tertiary)				
No education	0.51 (0.59)	[0.16, 1.62	0.68 (0.67)	[0.18, 2.51
Primary	0.54 (0.59)	[0.17, 1.69]	0.57 (0.67)	[0.15, 2.12
Secondary	1.18 (0.59)	[0.37, 3.76]	0.80 (0.68)	[0.21, 3.01
Place of Residence (ref. Rural)				
Urban	0.74 (0.19)	[0.51, 1.08]	0.66 (0.22)	[0.42, 1.00]
Religious Affiliation (ref. Other)				
No religion	2.56 (0.81)***	[1.20, 3.19]	1.56 (0.68)***	[1.20, 2.90]
Christianity	1.56 (0.69)***	[0.70, 2.28]	1.46 (0.48)***	[0.50, 2.37]
Islam	2.23 (0.70)***	[1.10, 3.10]	2.23 (0.51)***	[0.90, 2.76]
African Traditional Religion	2.61(0.56)***	[1.15, 4.17]	2.01 (0.56)***	[1.35, 3.27]

log likelihood = 2144.51 **Pseudo R2 = 0.084 Prob>chi2 = 0.000**
p<0.05
RRR = Relative Risk Ratio SE = Standard Error

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6.2 Proximate Determinants of Overall HRQoL

The analysis of age cohorts and their impact on Overall Health-Related Quality of Life (HRQoL) in Table 6.5 reveals significant insights into how different stages of adulthood influence individuals' perceptions of their health status.

Among adults aged 60-64, there is a notable likelihood of reporting "Moderate" HRQoL compared to "Bad," as indicated by a Relative Risk Ratio (RRR) of 2.62. This suggests that individuals in this age group are significantly more inclined to perceive their health as moderate rather than poor. Similarly, they show a tendency towards "Good" HRQoL, although this finding is not statistically significant, implying variability in how they perceive higher levels of well-being.

For those aged 65-69, the pattern continues with an RRR of 2.44 for "Moderate" HRQoL compared to "Bad," underscoring a significant preference for moderate health perceptions in this age bracket. However, their likelihood of reporting "Good" HRQoL does not reach statistical significance, indicating mixed perceptions of excellent health outcomes.

In the 70-74 age group, individuals also exhibit a heightened likelihood of perceiving their HRQoL as "Moderate" rather than "Bad" (RRR = 1.62). Conversely, their likelihood of reporting "Good" HRQoL is not statistically significant, suggesting a more conservative assessment of their highest health status. Finally, adults aged 75-79 show no statistically significant differences in their likelihood of perceiving their HRQoL as either "Moderate" or "Good" compared to "Bad." This age group demonstrates a more stable perception of health, with no strong inclination towards either moderate or excellent HRQoL.

Overall, these findings underscore the evolving perceptions of health across different stages of

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older adulthood. Age plays a critical role in shaping how individuals evaluate their overall health status, with distinct patterns emerging in terms of moderate versus poor health perceptions. While some age groups show clear preferences for moderate health outcomes, the assessment of excellent health varies, reflecting nuanced perspectives on well-being.

These insights are crucial for tailoring health interventions and policies that address the diverse needs of aging populations. By understanding these age-related dynamics in HRQoL perceptions, healthcare providers and policymakers can better support older adults in achieving and maintaining optimal health and well-being throughout their later years. The analysis of sex differences in Overall Health-Related Quality of Life (HRQoL) sheds light on how gender influences individuals' perceptions of their health status.

Comparing males to females, the findings reveal no statistically significant differences in their likelihood of perceiving "Moderate" HRQoL compared to "Bad." The Relative Risk Ratio (RRR) of 0.89 suggests that males are not significantly more or less inclined than females to report moderate health perceptions. Similarly, when evaluating "Good" HRQoL versus "Bad," the RRR of 0.75 indicates no statistically significant difference between males and females, implying that both genders have similar perspectives on excellent health outcomes.

These results suggest that gender alone may not be a strong determinant of how individuals assess their overall health status. Rather, other factors such as age, socio-economic status, and cultural influences may play more significant roles in shaping perceptions of health-related quality of life. Understanding these nuances is essential for healthcare providers and policymakers in tailoring interventions that address the diverse needs and perspectives within different gender groups. Recognizing the complexities of how males and females perceive and

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prioritize their health, efforts can be better directed toward improving overall well-being across all segments of the population.

In conclusion, while this study finds no significant gender differences in HRQoL perceptions, further research could delve deeper into the interaction between sex and other socio-demographic factors to provide a more comprehensive understanding of health outcomes among diverse populations. Such insights are crucial for developing equitable healthcare strategies that promote optimal health and quality of life for all individuals, regardless of gender. Examining marital status as a factor influencing Overall Health-Related Quality of Life (HRQoL) provides insights into how different relationship statuses may impact individuals' perceptions of their health.

For those who have never married, the analysis shows no statistically significant differences in their likelihood of reporting "Moderate" HRQoL compared to "Bad." Similarly, when considering "Good" HRQoL versus "Bad," the findings indicate no significant difference. This suggests that being unmarried does not inherently lead to distinctly different health perceptions compared to those who are widowed. The study finds that the likelihood of perceiving "Moderate" HRQoL compared to "Bad" is not statistically significant among married or cohabiting individuals. Similarly, when evaluating "Good" HRQoL versus "Bad," there is no significant difference noted. This implies that being in a marital or cohabiting relationship does not significantly alter how individuals assess their overall health compared to widowed individuals.

For those who are separated or divorced, the analysis also shows no statistically significant differences in their likelihood of reporting "Moderate" HRQoL compared to "Bad." Likewise,

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when assessing "Good" HRQoL versus "Bad," the results indicate no significant difference. This suggests that the experience of separation or divorce does not lead to markedly different health perceptions compared to widowed individuals.

Overall, these findings suggest that marital status alone may not be a decisive factor in shaping individuals' perceptions of their overall health. Other factors such as age, socio-economic status, and cultural influences may play more significant roles in influencing HRQoL perceptions. Understanding these dynamics is crucial for healthcare providers and policymakers aiming to address the diverse needs and challenges faced by individuals across different marital statuses.

Altogether, while this study finds no significant relationship between marital status and HRQoL perceptions, further exploration into the interplay between relationship status and other socio- demographic factors could provide deeper insights into how to improve overall well-being and quality of life among diverse populations. Exploring the influence of ethnicity on Overall Health-Related Quality of Life (HRQoL) provides valuable insights into how cultural backgrounds may shape individuals' perceptions of their health status. In this study, ethnic groups including Akan, Ewe, Ga-Adangbe, and Mande-Busanga did not exhibit statistically significant differences in their likelihood of reporting "Moderate" HRQoL compared to "Bad." Similarly, when considering "Good" HRQoL versus "Bad," none of these ethnic groups showed significant differences. This suggests that, in the context of overall health perceptions, ethnicity alone may not be a significant determinant.

The lack of statistically significant findings across these ethnic groups implies that other factors such as socioeconomic status, access to healthcare, and cultural practices may play more

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influential roles in shaping how individuals perceive and rate their overall health. It underscores the complexity of health-related outcomes and the need for nuanced approaches in healthcare interventions that consider diverse cultural backgrounds.

Understanding these nuances is crucial for healthcare providers and policymakers to tailor interventions effectively and address disparities in health outcomes among various ethnic groups. By acknowledging and respecting cultural diversity in health assessments and interventions, healthcare systems can better meet the diverse needs of populations and promote equitable health outcomes for all individuals, regardless of their ethnic background. In conclusion, while this study did not find significant associations between ethnicity and Overall HRQoL, continued research into how cultural factors intersect with broader health determinants can provide deeper insights into improving health equity and quality of life across diverse ethnic groups.

Understanding how main occupation influences Overall Health-Related Quality of Life (HRQoL) sheds light on the diverse impacts of work environments on individuals' perceptions of their health. In this study, individuals employed in the informal sector demonstrated significant differences in their HRQoL compared to those with no education as their reference group. Specifically, those in the informal sector were notably more likely to report "Moderate" HRQoL compared to "Bad," as well as "Good" HRQoL compared to "Bad." These findings suggest that informal sector employment may offer certain advantages or conditions that contribute positively to overall health perceptions.

Conversely, individuals in the formal sector did not show statistically significant differences in their likelihood of reporting "Moderate" or "Good" HRQoL compared to "Bad" HRQoL

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when compared to the reference group of those with no education. This lack of significant findings may indicate that the formal work environment, despite its structured nature, may not inherently contribute to better or worse health perceptions compared to those without formal education.

The significant associations observed among those in the informal sector highlight the potential influence of job flexibility, social support networks, or other factors specific to informal employment settings that may enhance individuals' overall perceptions of their health. These findings underscore the importance of considering occupational contexts when assessing and addressing health-related outcomes, as different work environments can exert varying impacts on individuals' well-being. In conclusion, while informal sector employment appears to positively influence Overall HRQoL in this study, further research is needed to explore the specific mechanisms through which different occupations affect health perceptions. In understanding these dynamics, healthcare providers and policymakers can better tailor interventions to promote healthier work environments and improve the overall quality of life for individuals across diverse occupational settings.

Assessing the impact of educational level on Overall Health-Related Quality of Life (HRQoL) provides valuable insights into how varying degrees of education influence individuals' health perceptions. In this analysis, individuals with no education, primary education, or secondary education were compared to those with tertiary education to understand their impact on HRQoL. The results indicate that none of these educational levels showed statistically significant differences in their likelihood of reporting either "Moderate" HRQoL compared to "Bad" or "Good" HRQoL compared to "Bad." This finding suggests that the level of formal

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education, ranging from no education to secondary education, does not significantly influence individuals' overall health perceptions when compared to those with tertiary education.

The lack of significant differences across these educational levels may imply that factors beyond formal education, such as socio-economic status, access to healthcare, and social support, play a more critical role in shaping individuals' perceptions of their health. While higher educational attainment is often associated with better health outcomes, this study's findings suggest that the benefits of tertiary education over lower educational levels may not be as pronounced in terms of perceived overall health quality. It is essential to consider that education's impact on health can be multifaceted, involving various indirect effects such as improved health literacy, better job opportunities, and healthier lifestyle choices. However, the absence of significant differences in this study highlights that education alone may not be the sole determinant of HRQoL. Other contextual and individual factors likely contribute to how people perceive their overall health.

Notwithstanding the above, while educational attainment is a crucial factor in many aspects of life, this study indicates that its direct impact on overall HRQoL may be limited. These findings emphasize the need for a more comprehensive approach to health improvement that considers multiple determinants, including socio-economic conditions and access to resources, to enhance individuals' overall quality of life. The analysis of the impact of place of residence on Overall Health-Related Quality of Life (HRQoL) sheds light on whether living in urban or rural areas influences individuals' perceptions of their health. In this context, the comparison was made between residents of urban and rural areas.

The results show that living in an urban area does not significantly affect the likelihood of

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reporting "Moderate" HRQoL compared to "Bad" HRQoL. The relative risk ratio (RRR) of 1.33, with a confidence interval (CI) ranging from 0.98 to 1.79, indicates no statistically significant difference between urban and rural residents in this regard. This suggests that individuals living in urban areas are not significantly more likely to report moderate health quality than their rural counterparts. Similarly, the likelihood of reporting "Good" HRQoL compared to "Bad" HRQoL does not differ significantly between urban and rural residents. The RRR of 0.97, with a CI ranging from 0.73 to 1.31, again shows no statistically significant difference. This indicates that living in an urban area does not significantly influence the probability of reporting good health quality compared to living in a rural area.

These findings suggest that the place of residence, whether urban or rural, does not play a decisive role in shaping individuals' perceptions of their overall health quality. This could imply that factors such as access to healthcare, environmental conditions, and lifestyle choices in urban and rural areas may have a more complex interplay that does not result in a straightforward difference in perceived HRQoL. It is also possible that improvements in healthcare infrastructure and services in rural areas have narrowed the gap between urban and rural health perceptions. Alternatively, urban areas might face unique challenges such as pollution, stress, and lifestyle-related health issues that counterbalance the advantages of better access to healthcare and resources typically found in cities.

In a nutshell, the analysis indicates that the place of residence alone does not significantly determine overall HRQoL. This highlights the importance of considering other determinants, such as socioeconomic status, healthcare access, and individual lifestyle choices, when addressing health-related quality of life issues across different geographic locations. The

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findings underscore the need for tailored health policies and interventions that address the specific needs and challenges of both urban and rural populations to improve overall health outcomes.

The relationship between religious affiliation and Overall Health-Related Quality of Life (HRQoL) provides an interesting lens through which to understand the broader impacts of cultural and spiritual practices on health perceptions. In this analysis, various religious affiliations, including No religion, Christianity, Islam, and African Traditional Religion, were examined to see if they significantly influenced individuals' reported HRQoL.

The results indicate that none of the religious affiliations show statistically significant relative risk ratios (RRRs) in either the "Moderate vs. Bad" or "Good vs. Bad" comparisons. This means that regardless of whether individuals identified with no religion, Christianity, Islam, or African Traditional Religion, their likelihood of reporting moderate or good health compared to bad health did not significantly differ from the reference group, which includes other unspecified religious affiliations. The confidence intervals for all these comparisons included 1, which further supports the lack of significant differences. This suggests that religious affiliation itself does not play a decisive role in determining overall HRQoL among the studied population.

One possible interpretation of these findings is that the benefits associated with religious involvement, such as community support, a sense of purpose, and spiritual comfort, might be equally accessible across different religious groups. Therefore, the positive aspects of religious affiliation on psychological and social well-being may be offset by common factors such as the universal experiences of stress, illness, and other life challenges, which impact health

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perceptions similarly across different religious groups.

Another aspect to consider is that the individual's depth of religious engagement or spirituality might be more influential on HRQoL than their specific religious affiliation. Individuals deeply engaged in their faith might experience better health outcomes due to stronger social networks, improved coping mechanisms, and greater psychological resilience. However, these nuanced personal experiences may not be fully captured by simply categorizing individuals based on their religious affiliation.

Additionally, cultural and societal norms around religion might also play a role. In some societies, religious affiliation is deeply intertwined with cultural identity and social practices, while in others, it might be a more personal and less publicly influential aspect of life. This variability can dilute the measurable impact of religious affiliation on HRQoL in a broad analysis. The absence of significant differences in health-related quality of life across religious affiliations suggests that other factors, such as socio-economic status, access to healthcare, lifestyle behaviours, and personal spirituality, may exert a stronger influence on individuals' health perceptions. This finding underscores the importance of adopting a holistic approach to understanding health-related quality of life, one that considers a wide range of determinants beyond religious affiliation. Accordingly, health interventions should be tailored to reflect these diverse influences to effectively promote the well-being of individuals across different religious backgrounds.

In conclusion, the analysis of Overall Health-Related Quality of Life (HRQoL) reveals a nuanced understanding of how demographic and socioeconomic factors influence individuals' perceptions of their health and well-being. The significant associations found for age groups 60-64 and 65-69, and for those employed in the informal sector, highlight the critical impact of aging and

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employment conditions on health outcomes. Older adults often face unique health challenges that affect their quality of life, while informal sector workers deal with unstable employment and limited access to healthcare and social benefits, all of which contribute to lower HRQoL.

The educational level also emerges as a crucial determinant, with lower educational attainment linked to poorer health literacy and outcomes, further influencing individuals' perceptions of their health status. These findings emphasize the importance of addressing socio-economic disparities and providing targeted interventions to improve HRQoL, particularly for vulnerable groups such as older adults, informal sector workers, and those with lower educational levels.

The results underscore the need for comprehensive public health strategies that consider the complex interplay of age, employment, and education in shaping health outcomes. Policymakers and healthcare providers must prioritize these determinants to enhance overall well-being and reduce health inequalities. Future research should continue to explore these relationships and develop tailored interventions that address the specific needs of different demographic groups, ultimately fostering a healthier and more equitable society.

Table 6.5: Proximate Determinants of Overall HRQoL

Determinant	Moderate vs. Bad		Good vs. Bad	
	RRR (SE)	95% CI	RRR (SE)	95% CI
Age Group (ref. 80+)			1.334	7.094
60-64	2.62 (0.25)***		1.62 (0.23)***	[1.02, 2.58]
65-69	2.44 (0.24)***	[1.51, 3.93]	1.53 (0.23)	[0.97, 2.40]
70-74	1.62 (0.23)***	[1.03, 2.54]	0.95 (0.22)	[0.63, 1.46]
75-79	1.17 (0.23)	[0.72, 1.74]	0.94 (0.21)	[0.63, 1.41]
Sex (ref. Female)				
Male	0.89 (0.19)	[0.62, 1.28]	0.75 (0.18)	[0.53, 1.07]
Marital Status (ref. Widowed)				
Never Married	1.18 (0.54)	[0.41, 3.38]	1.91 (0.50)	[0.72, 5.09]

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Married/ Cohabiting	1.42 (0.19)	[0.98, 2.06]	1.26 (0.18)	[0.88, 1.79]
Separated/ Divorced	0.97 (0.25)	[1.00, 1.58]	1.03 (0.24)	[0.64, 1.41]
Ethnicity (ref. Other)				
Akan	1.38 (0.32)	[0.74, 2.56]	0.97 (0.30)	[0.54, 1.76]
Ewe	1.74 (0.44)	[0.73, 4.13]	1.14 (0.43)	[0.49, 2.65]
Ga-Adangbe	1.11 (0.36)	[0.55, 2.24]	0.79 (0.34)	[0.41, 1.541
Mande-Busanga	1.21 (0.29)	[0.68, 2.15]	1.17 (0.28)	[0.67, 2.02]
Main occupation				
Formal sector	1.44 (0.29)	[0.82, 2.53]	1.17 (0.29)	[0.67, 2.05]
Informal sector	2.34 (0.17)***	[1.69, 3.24]	1.98 (0.16)***	[1.46, 2.68]
Educational Level (ref. Tertiary)				
No education	0.09 (0.75)***	[0.02, 0.37]	0.29 (0.77)	[0.07, 1.31]
Primary	0.17 (0.75)***	[0.04, 0.74]	0.43 (0.77)	[0.09, 1.95]
Secondary	0.28 (0.75)	[0.07, 1.22]	0.53 (0.77)	[0.12, 2.39]
Place of Residence (ref. Rural)				
Urban	1.33 (0.16)	[0.98, 1.79]	0.97 (0.15)	[0.73, 1.31]
Religious Affiliation (ref. Other)				
No religion	0.12 (1.11)	[0.01, 1.07]	0.23 (1.08)	[0.03, 1.92]
Christianity	0.16 (1.05)	[0.02, 1.25]	0.21 (1.04)	[0.03, 1.63]
Islam	0.19 (1.06)	[0.02, 1.47]	0.22 (1.04)	[0.03, 1.73]
African Traditional Religion	0.12 (1.07)	[0.01, 1.05]	0.22 (1.07)	[0.03, 1.79]

log likelihood = 2958.16 **Pseudo R2 = 0.124 Prob>chi2 = 0.000**
p<0.05
RRR = Relative Risk Ratio SE = Standard Error

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6.3 Discussion

The multinomial regression analysis of health-related quality of life (HRQoL) among the elderly highlights several significant determinants, including age, main occupation, and educational level. This discussion section will explore these findings in light of existing literature, presenting supporting, contradictory, and inconclusive evidence to contextualise the results.

6.4.1.1.1 Age and HRQoL

The analysis of health-related quality of life (HRQoL) in the Ghanaian context, encompassing physical, psychological, social, and environmental domains, reveals a significant inverse relationship between age and overall HRQoL. Younger elderly individuals report higher satisfaction levels across these domains. This observation aligns with Helliwell et al., 2024) comprehensive study on happiness trends in the United States, which demonstrated an upward trend in happiness with advancing age, fluctuating patterns over time, and notably lower happiness levels among baby-boomer cohorts. Significant social disparities in happiness were identified, converging with age over the past thirty years. Disparities based on sex and race have diminished, though the racial gap remains significant, and the net sex difference has recently disappeared. These findings underscore the influence of early life conditions, societal changes, and differential exposure to social conditions on subjective well-being.

Helliwell's study also found an inverse relationship between age and physical HRQoL, with younger elderly individuals reporting higher satisfaction levels, aligning with findings from (Lee et al., 2020)2 and (Bowling, 2005). These studies observed that younger elderly populations generally enjoy better physical health and higher quality of life due to greater mobility, fewer chronic health issues, and more engagement in physical activities.

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In the Ghanaian context, further analysis from the model highlights that age, main occupation, and educational level significantly influence overall HRQoL, spanning physical, psychological, social, and environmental aspects. For instance, individuals aged 60-64 are significantly more likely to report moderate versus bad HRQoL than those aged 80 and above, with a relative risk ratio (RRR) of 2.62. This likelihood decreases with increasing age, as those aged 65-69 and 70-74 also report higher but progressively lower RRRs of 2.44 and 1.62, respectively. This trend is consistent across the physical, psychological, social, and environmental domains, reflecting the overall better HRQoL of younger elderly individuals.

The main occupation also plays a crucial role across all HRQoL domains. Those engaged in the informal sector are significantly more likely to report better HRQoL than those in other sectors. Specifically, individuals in the informal sector have an RRR of 2.34 for moderate versus bad HRQoL and 1.98 for good versus bad HRQoL, suggesting that employment in this sector may provide more flexibility and physical activity, contributing to better health outcomes across physical, psychological, social, and environmental domains.

Educational level further influences HRQoL in all aspects, with higher educational attainment associated with better health outcomes. Individuals with no education or primary education have significantly lower odds of reporting good HRQoL than those with tertiary education. The RRR for those with no education is notably low at 0.09 for moderate versus bad HRQoL and 0.29 for good versus bad HRQoL. This highlights the importance of education for better health outcomes and overall quality of life across physical, psychological, social, and environmental domains.

However, Marquez et al., (2020) present inconclusive evidence, reporting mixed findings on the relationship between age and health-related quality of life. Their results indicate that factors such

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as social support and mental health may play more decisive roles in shaping HRQoL outcomes than age alone. This highlights the complexity of HRQoL determinants and points to the need for a multifaceted approach to understanding and improving the well-being of older adults.

Similarly, Veenhoven (1984) observed that although happiness tends to increase with age, its relationship with health-related quality of life is not straightforward and is influenced by a range of factors, including social networks and psychological resilience. In the same vein, Blane et al., (2008) found that the effect of age on HRQoL is moderated by socioeconomic status and living conditions, indicating that the relationship is far from linear and requires a nuanced interpretation.

As a concluding observation, findings from both international and Ghanaian contexts demonstrate the complex interaction between age, occupation, education, and health-related quality of life across multiple domains. Younger older adults generally report better HRQoL, while factors such as occupation and educational attainment exert a significant influence on physical, psychological, social, and environmental well-being. These patterns reinforce evidence from earlier studies showing that the relationship between age and HRQoL is shaped by broader socioeconomic and psychosocial conditions rather than age alone, as documented by Blane et al., (2008), Marquez et al., (2020), and Veenhoven (1984). Such insights are essential for informing targeted interventions aimed at improving the quality of life of older adults in Ghana.

6.4.1.1.2 Main Occupation and HRQoL

The impact of main occupation on health-related quality of life (HRQoL) is multifaceted and encompasses various socio-economic and psychological dimensions. The analysis of the proximate determinants of overall HRQoL, as presented in Table 6.5, highlights significant

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associations between different types of occupations and HRQoL outcomes. Notably, individuals working in the informal sector report higher HRQoL than those in other occupational categories. This suggests that engagement in informal sector activities might provide certain benefits contributing to better HRQoL outcomes.

Huntjens et al., (2024) support this finding by emphasising that engagement in any form of work, including informal sector activities, provides individuals, particularly older adults, with a sense of purpose and opportunities for social interaction. These factors are essential for maintaining and improving health-related quality of life, as they contribute positively to mental and social well-being. Participation in work can also reduce feelings of isolation and provide structure to daily life, thereby enhancing psychological stability and overall life satisfaction.

However, Kalwij and Vermeulen (2008) present contradictory evidence, arguing that informal sector employment often lacks the stability and social protection typically associated with formal employment. Such instability may result in financial insecurity and limited access to essential healthcare services, which can adversely affect health-related quality of life. The precarious nature of informal sector work further exposes individuals to heightened stress and uncertainty, with negative implications for psychological health and overall well-being.

The multinomial regression analysis of HRQoL determinants further underscores the complex relationship between occupation and HRQoL. The results indicate that individuals in the informal sector have significantly higher relative risk ratios (RRR) for moderate versus bad HRQoL (2.34 with a standard error (SE) of 0.17, 95% CI [1.69, 3.24]) and good versus bad HRQoL (1.98 with a SE of 0.16, 95% CI [1.46, 2.68]). These findings suggest that while the informal sector may offer

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certain psychological and social benefits, these must be weighed against the potential economic and health insecurities inherent in such employment.

The analysis also reveals that other sociodemographic factors interact with occupation to influence HRQoL. For instance, age group, sex, marital status, ethnicity, educational level, place of residence, and religious affiliation all play significant roles in determining HRQoL outcomes. For example, older adults (particularly those aged 60-64) demonstrate higher RRRs for better HRQoL than those aged 80 and above. Additionally, individuals with no education or only primary education have significantly lower RRRs for better HRQoL than those with tertiary education, highlighting the critical role of educational attainment in influencing life quality.

Educational level, in particular, is a significant determinant of HRQoL. The regression analysis shows that individuals with no education have a markedly lower RRR for moderate versus bad HRQoL (0.09 with a SE of 0.75, 95% CI [0.02, 0.37]) and for good versus bad HRQoL (0.29 with a SE of 0.77, 95% CI [0.07, 1.31]). Similarly, those with only primary education also have lower RRRs for moderate versus bad HRQoL (0.17 with a SE of 0.75, 95% CI [0.04, 0.74]) and good versus bad HRQoL (0.43 with a SE of 0.77, 95% CI [0.09, 1.95]). This aligns with the findings of (Dudovitz et al., 2016), who emphasise that higher education levels lead to better health literacy, healthier lifestyles, and greater access to healthcare resources, all of which contribute to improved HRQoL.

Contradictory evidence from Mackenbach et al., (2008) suggests that although education generally improves health outcomes, its influence on health-related quality of life may be mediated by other socioeconomic factors, such as income and occupation. Similarly, inconclusive evidence reported by Van Dijk et al., (2007) indicates that the relationship between education and HRQoL is shaped

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by a range of contextual influences, including cultural and regional differences, thereby complicating straightforward interpretations.

In conclusion, the relationship between main occupation and health-related quality of life is complex and influenced by multiple sociodemographic factors. While engagement in informal sector work may offer psychological and social benefits, it also presents notable challenges due to instability and limited social protection. This complexity highlights the importance of adopting comprehensive approaches that take broader socioeconomic conditions into account when addressing the determinants of HRQoL. Reducing educational disparities and improving job security within the informal sector may contribute to improved HRQoL outcomes, thereby narrowing health inequalities and promoting overall well-being.

6.4.1.1.3 Educational Level and HRQoL

Educational attainment has a notable impact on health-related quality of life (HRQoL), with higher levels of education correlating with improved HRQoL outcomes. highlight that individuals with higher education tend to have better health literacy, healthier lifestyles, and greater access to healthcare resources, collectively enhancing HRQoL. Their study specifically examined how long-term health outcomes are influenced by the quality of high schools, focusing on the interaction between educational attainment and HRQoL. They found that while individual academic achievements are significant, the quality of the educational environment plays a crucial role in shaping long-term health outcomes.

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In conclusion, the relationship between main occupation and health-related quality of life is complex and influenced by multiple sociodemographic factors. While engagement in informal sector work may offer psychological and social benefits, it also presents notable challenges due to

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instability and limited social protection. This complexity highlights the importance of adopting comprehensive approaches that take broader socioeconomic conditions into account when addressing the determinants of HRQoL. Reducing educational disparities and improving job security within the informal sector may contribute to improved HRQoL outcomes, thereby narrowing health inequalities and promoting overall well-being.

Dudovitz et al., (2016) examined multiple indicators of school quality, including average daily attendance, school promotion rates, parental involvement, and teacher experience, to assess their influence on adult health outcomes such as self-rated health, depression, and obesity. Using data from the National Longitudinal Study of Adolescent to Adult Health, the study demonstrated that the quality of the school environment significantly predicts adult health outcomes, independent of individual academic performance and sociodemographic characteristics.

The findings indicated that both educational attainment and the quality of the high school environment exert substantial effects on long term health. For instance, attendance at high schools with lower average daily attendance was associated with poorer self-rated health and a higher likelihood of depression in adulthood. Conversely, higher levels of parental involvement were linked to reduced odds of obesity. These results underscore the importance of the educational environment during adolescence as a critical developmental period that shapes later health trajectories.

The study concluded that high school quality influences long-term health outcomes through multiple pathways, positioning it as a key social determinant of health. Accordingly, comprehensive educational strategies that extend beyond academic achievement to encompass broader dimensions of school quality are necessary to promote favourable health outcomes across

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the life course. Addressing inequalities in school quality may therefore contribute to reducing health disparities and improving public health outcomes, highlighting the close interconnection between health and education policy.

However, conflicting evidence reported by Mackenbach et al., (2008) suggests that although education generally improves health outcomes, its effect on health-related quality of life may be mediated by other socioeconomic factors such as income and occupation. Similarly, Van Dijk et al., (2007) present inconclusive findings, arguing that the relationship between education and HRQoL is complex and shaped by a range of contextual influences, including cultural and regional differences.

In the context of Ghana, the overall HRQoL analysis revealed that educational level is a significant determinant across physical, psychological, social, and environmental domains. The multinomial regression results indicated that individuals with higher levels of education reported better HRQoL outcomes. Specifically, those with tertiary education demonstrated significantly higher HRQoL compared with individuals who had no formal education or only primary education. For example, respondents with no education were substantially less likely to report moderate or good HRQoL than those with tertiary education, as reflected in relative risk ratios of 0.09 and 0.29, respectively.

Higher educational attainment appears to confer important advantages across multiple HRQoL domains. In the physical domain, education is associated with healthier lifestyle practices and improved access to healthcare services, which can reduce the burden of chronic conditions and enhance physical well-being. Psychological outcomes also tend to improve with education, as higher educational levels are linked to better mental health, lower levels of depression, and greater life satisfaction. Socially, education strengthens social networks and promotes community

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participation, thereby supporting social well-being. Within the environmental domain, higher education facilitates access to safer living environments and healthier housing conditions, further contributing to improved quality of life.

These results indicate that higher educational attainment is associated with improved HRQoL outcomes, while the strength of this association depends on broader socioeconomic conditions that influence access to resources, opportunities, and living environments. Educational disparities interact with factors such as income, occupation, and living conditions to shape quality of life across physical, psychological, social, and environmental domains. Improving educational access alongside wider socioeconomic conditions is therefore essential for enhancing health-related quality of life among older adults in Ghana.

6.5 Chapter Summary

This chapter presented a detailed quantitative analysis aimed at identifying the key determinants of overall health-related quality of life among older adults in Ghana. Health-related quality of life was conceptualised as a multidimensional construct comprising physical, psychological, social, and environmental domains. The findings demonstrated that age, educational attainment, and main occupation were the most significant predictors of overall HRQoL within the estimated models.

In contrast, other sociodemographic characteristics, including marital status and religious affiliation, did not show statistically significant associations with overall HRQoL. Nonetheless, insights from existing literature provide important contextual understanding. Bailey et al., (2013), Thomas et al., (2017), and Pienta et al., (2000) show that marital status plays a meaningful role in shaping health outcomes and subjective well-being, with never married or married and cohabiting individuals often reporting higher life satisfaction than widowed older adults, who may face

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increased risks of social isolation and emotional distress. Similarly, Koenig et al., (2001) highlight the potential positive influence of religious affiliation on health-related quality of life through mechanisms such as social support, coping resources, and a sense of purpose. At the same time, Sloan et al., (1999) and Idler et al., (2003) report mixed and inconclusive findings, suggesting that the benefits associated with religion may depend more on the quality of social networks and personal spirituality than on formal religious affiliation alone.

The interpretation of the findings in this chapter was guided by three complementary theoretical frameworks. The Life Course Perspective, as articulated by Elder Jr. (1994), emphasises the cumulative influence of earlier life experiences and social transitions on health outcomes in later life. The Social Determinants of Health framework developed by Wilkinson and Marmot (2003) underscores the central role of socioeconomic conditions, including education and employment, in shaping health inequalities across the life course. In addition, the Active Ageing Framework proposed by Jacobsen (2017) provides a useful lens for understanding the importance of continued occupational engagement and social participation in supporting well-being among older adults.

Building on the insights generated in this chapter, Chapter Seven shifts the analytical focus to gender differences in health-related quality of life. It examines how male and female older adults differ in the determinants of physical, psychological, social, and environmental domains of HRQoL, with particular attention to the implications for gender sensitive policies and interventions within the Ghanaian context.

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CHAPTER SEVEN

GENDER DIFFERENCES IN HEALTH-RELATED QUALITY OF LIFE (HRQOL) IN GHANA

7.1 Introduction

Understanding the health-related quality of life (HRQoL) among older adults is crucial for addressing the health needs of ageing populations worldwide. This understanding becomes even more pressing in Ghana, a nation experiencing a rapid demographic shift toward an older population. Gender plays a pivotal role in influencing HRQoL, as men and women often face distinct health risks, social expectations, and access to resources. This chapter explores how gender affects HRQoL among older adults in Ghana, providing insights into the underlying factors shaping these differences and the implications for health policy.

Separate multinomial regression analyses for males and females were conducted to understand how each gender's HRQoL is affected differently by background characteristics. This was useful in gauging the gender-specific factors influencing HRQoL, which is particularly valuable in a context like Ghana, where cultural and socioeconomic factors might impact men and women differently. The chapter helps to understand the gender differences in HRQoL and the significant interactions between gender and other background factors.

7.2 Proximate Determinants of Women's HRQoL

This section presents the results of the analysis examining the factors associated with the different domains of health-related quality of life among older women. It highlights how selected background characteristics relate to women's physical, psychological, social, and environmental

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well-being, reflecting the specific conditions and life experiences that shape quality of life in later adulthood.

7.2.1 Proximate Determinants of Women's Physical HRQoL

The multinomial logistic regression analysis provides a comprehensive understanding of how various factors affect the physical HRQoL among older female adults, with relative risk ratios (RRRs) indicating the likelihood of being in different satisfaction levels.

The results in Table 7.1 indicate that age significantly influences women's perceptions about their physical health-related quality of life (HRQoL). Women aged 60-64 are 5.57 times more likely to report that they are neither satisfied nor dissatisfied with their physical HRQoL than women aged 80 years and above (RRR = 5.57, 95% CI [2.55, 7.15]). This indicates that younger elderly women perceive their physical HRQoL more positively than the oldest group. Similarly, those aged 65-69 are 2.01 times as likely to report being neither satisfied nor dissatisfied compared to being dissatisfied with their physical HRQoL (RRR = 2.01, 95% CI [1.09, 3.69]). As age increases, the likelihood of reporting satisfaction decreases, showing an inverse relationship between age and perceptions of physical HRQoL. In other words, the likelihood of reporting satisfaction decreases with age, with no significant differences found for those aged 70-74 and older. This suggests that younger female older adults generally report higher HRQoL than the oldest cohort.

Regarding marital status, never married or cohabiting increases the likelihood of being neither satisfied nor dissatisfied with one's physical HRQoL compared to being widowed. However, only the former reaches significance (RRR = 3.26, 95% CI [1.11, 5.47]). Those who are separated/divorced do not show significant differences from widowed individuals in either satisfaction category.

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Regarding occupation and perceptions about physical health-related quality of life (HRQoL), engaging in informal sector work is significantly associated with higher satisfaction (RRR = 2.36, 95% CI [1.54, 3.62]). At the same time, no significant relationship is observed with the formal sector employment. Educational attainment shows mixed effects, with primary and secondary education associated with higher likelihoods of satisfaction, though the effect is not consistent across levels.

In relation to religious affiliation and perceptions about physical health-related quality of life (HRQoL), notable differences emerged from religious affiliation. For example, individuals affiliated with no religion or Christianity show a significantly higher likelihood of being in both satisfaction categories than other religions, indicating that religious affiliation may be a strong determinant of HRQoL in this demographic.

The model suggests that younger age, religious affiliation, and informal sector employment significantly influence the likelihood of higher physical HRQoL among older female adults in Ghana. At the same time, the effects of marital status, occupation, and education vary. The overall model fit, with a pseudo-R-squared of 0.148, shows moderate explanatory power, while the significant chi-square test ($p < 0.05$) indicates that the model is statistically significant.

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Table 7.1: Determinants of Women's Physical HRQoL

Determinant	Neither Satisfy vs. Dissatisfied		Satisfied vs. Dissatisfied	
	RRR	95% CI	RRR	95% CI
Age Group (ref. 80+)				
60-64	5.57***	[2.55, 7.15]	2.98***	[1.29, 3.64]
65-69	2.01***	[1.09, 3.69]	1.31	[0.67, 2.55]
70-74	1.33	[0.75, 2.38]	0.98	[0.52, 1.84]
75-79	1.04	[0.59, 1.86]	1.17	[0.63, 2.17]
Marital Status (ref. Widowed)				
Never Married	3.26	[1.11, 5.47]	0.86	[0.49, 1.62]
Married/ Cohabiting	1.68	[0.99, 2.85]	0.90	[0.73, 1.66]
Separated/ Divorced	0.72	[0.41, 1.26]	0.63	[0.53, 1.53]
Ethnicity (ref. Other)				
Akan	0.74	[0.30, 1.81]	0.74	[0.28, 1.91]
Ewe	0.64	[0.21, 1.97]	0.64	[0.19, 2.16]
Ga-Adangbe	0.63	[0.24, 1.67]	0.58	[0.20, 1.65]
Mande-Busanga	1.92	[0.77, 4.79]	1.21	[0.46, 3.18]
Main occupation (ref. Not working)				
Formal sector	0.84	[0.39, 1.80]	0.81	[0.34, 1.95]
Informal sector	2.36***	[1.54, 3.62]	1.91	[1.19, 3.05]
Educational Level (ref. Tertiary)				
No education	0.75	[0.18, 3.19]	2.54	[0.90, 4.14]
Primary	1.46	[0.33, 3.72]	2.26	[1.14, 5.32]
Secondary	1.20	[0.27, 4.24]	2.62	[0.94, 4.35]
Place of Residence (ref. Rural)				
Urban	0.89	[0.59, 1.34]	0.89	[0.57, 1.40]
Religious Affiliation (ref. Other)				
No religion	2.40***	[1.68, 3.42]	1.4	[1.58, 4.64]
Christianity	1.70***	[1.40, 2.06]	2.14	[2.08, 4.53]
Islam	1.23***	[2.56, 3.80]	2.08	[1.62, 3.34]
African Traditional Religion	1.15***	[2.16, 4.38]	1.19	[1.58, 3.64]

log likelihood = 1282.16 Pseudo R2 = 0.148 Prob>chi2 = 0.000
p<0.05

RRR = Relative Risk Ratio SE = Standard Error

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7.2.2 Proximate Determinants of Women's Psychological HRQoL

Table 7.2 shows the multinomial logistic regression analysis results on psychological HRQoL among older adult women in Ghana. The result shows notable relationships between demographic and socioeconomic factors and the likelihood of being in different HRQoL satisfaction categories.

Women aged 60–64 have significantly higher relative risks of reporting that they are neither satisfied nor dissatisfied (RRR = 2.98, 95% CI [1.24, 6.15]) and satisfied (RRR = 3.04, 95% CI [1.16, 4.64]) psychological HRQoL compared to those aged 80 and above. This suggests that younger seniors, particularly those in their early 60s, are more likely to have better psychological health than their oldest counterparts. On the other hand, women in older age groups (65-79) do not show significant differences, which may indicate decreasing age-related differences in psychological HRQoL among female seniors. Religious affiliation significantly influences perceptions about the psychological HRQoL of older women. Women with no religious affiliation and those practising Christianity, Islam, and African Traditional Religions all show significantly higher relative risks of perceiving that they are neither satisfied nor dissatisfied with their psychological HRQoL compared to those with other religious affiliations. For instance, Christians are more likely to perceive that they are neither satisfied nor dissatisfied with their psychological HRQoL (RRR = 2.70, 95% CI [1.40, 4.06]) than those with other religious affiliations. Those with no religion are also more likely to perceive that they are neither satisfied nor dissatisfied with their psychological HRQoL (RRR = 1.40, 95% CI [1.68, 3.42]) than those with other religious affiliations. These findings suggest that religious affiliation may provide social support or coping mechanisms that enhance the psychological well-being of older women.

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Table 7.2: Determinants of Women's Psychological HRQoL

Determinant	Neither Satisfy vs. Dissatisfied		Satisfied vs. Dissatisfied	
	RRR	95% CI	RRR	95% CI
Age Group (ref. 80+)				
60-64	2.98***	[1.24, 6.15]	3.04***	[1.16, 4.64]
65-69	1.42	[1.69, 2.92]	1.44	[0.64, 3.24]
70-74	0.98	[0.49, 1.94]	1.29	[0.59, 2.77]
75-79	1.45	[0.68, 3.11]	2.12	[0.92, 2.17]
Marital Status (ref. Widowed)				
Never Married	3.97	[0.51, 5.47]	2.33	[0.49, 3.62]
Married/ Cohabiting	1.68	[0.87, 3.25]	0.89	[0.73, 2.06]
Separated/ Divorced	1.01	[0.49, 2.08]	0.63	[0.37, 1.83]
Ethnicity (ref. Other)				
Akan	0.51	[0.15, 1.68]	0.42	[0.12, 1.48]
Ewe	0.59	[0.13, 2.58]	0.36	[0.07, 1.83]
Ga-Adangbe	0.67	[0.18, 2.55]	0.44	[0.10, 1.85]
Mande-Busanga	0.74	[0.22, 2.44]	0.68	[0.19, 2.40]
Main occupation (ref. Not working)				
Formal sector	0.56	[0.23, 1.39]	0.37	[0.13, 1.10]
Informal sector	1.73***	[1.02, 2.94]	1.29	[1.72, 2.31]
Educational Level (ref. Tertiary)				
No education	0.72	[0.13, 3.91]	1.35	[0.15, 4.14]
Primary	0.98	[0.18, 3.72]	1.40	[0.16, 3.32]
Secondary	2.77	[0.27, 3.24]	2.22	[0.21, 3.35]
Place of Residence (ref. Rural)				
Urban	0.79	[0.48, 1.29]	0.85	[0.49, 1.46]
Religious Affiliation (ref. Other)				
No religion	1.40***	[1.68, 3.42]	1.40	[1.58, 3.64]
Christianity	2.70***	[1.40, 4.06]	1.34	[1.08, 3.51]
Islam	1.10***	[2.01, 2.80]	1.47	[0.34, 3.34]
African Traditional Religion	1.20***	[2.17, 3.38]	0.82	[1.58, 3.64]

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log likelihood = 1072.54 **Pseudo R2 = 0.099** **Prob>chi2 = 0.000**
p<0.05
RRR = Relative Risk Ratio SE = Standard Error

Engaging in informal sector employment significantly increases the likelihood of being neither satisfied nor dissatisfied with psychological HRQoL (RRR = 1.73, 95% CI [1.02, 2.94]) compared to being unemployed (not working). This may imply that informal work offers a degree of social interaction or purpose, contributing positively to the psychological well-being of older women. It was observed that factors like marital status, education, and ethnicity do not show significant associations across satisfaction categories, indicating that these may have less impact on psychological HRQoL among female older adults.

These results underscore the importance of considering age, religious affiliation, and employment status in understanding psychological HRQoL among older women. With a pseudo-R-squared of 0.099 and a significant chi-square test, the model is moderately predictive and statistically significant. These insights can guide targeted interventions that address the specific needs of older women, emphasising the roles of social engagement, religious support, and age-specific care.

7.2.3 Proximate Determinants of Women's Social HRQoL

Table 7.3 shows the results of multinomial logistic regression analysis on social HRQoL among older adult women in Ghana. The results show that women aged 60–64 have significantly higher odds of perceiving that they are neither satisfied nor dissatisfied with the social HRQoL (RRR = 3.23, 95% CI [1.24, 6.15]) compared to those aged 80 years and above. Women aged 60–64 have a higher likelihood of being satisfied than dissatisfied with their social HRQoL (RRR = 2.88, 95%

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CI [1.50, 5.64]) compared to those aged 80 and above. Additionally, those aged 65-69 have higher odds in both satisfaction categories, with the strongest association in the satisfied category (RRR = 5.12, 95% CI [2.64, 6.24]). These results indicate that younger elderly women tend to report better social HRQoL than the oldest cohort.

Being married/cohabiting is associated with a higher likelihood of being neither satisfied nor dissatisfied with the social HRQoL (RRR = 1.63, 95% CI [1.10, 3.25]). This suggests that marital or cohabiting status may provide social and emotional support that enhances social HRQoL. In contrast, women who are never married or separated/divorced do not show significant associations with social HRQoL, which may indicate different social network structures or support systems compared to their married counterparts.

Religion emerges as a significant factor, with women affiliated with Christianity, Islam, and African Traditional Religions showing a higher likelihood of being neither satisfied nor dissatisfied compared to the reference group. For instance, Christian women are more likely to report neither satisfied nor dissatisfied with social HRQoL (RRR = 1.70, 95% CI [1.42, 3.06]). These findings suggest that religious involvement may provide social support or a sense of belonging, which positively impacts social HRQoL. Generally, this model provides a nuanced understanding of how factors like age, marital status, and religious affiliation shape social HRQoL among older Ghanaian women. The significant pseudo-R-squared (0.119) and chi-square test indicate that the model has moderate explanatory power and is statistically significant. This analysis underscores the importance of targeted interventions that consider these social determinants to improve HRQoL among older women in Ghana.

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Table 7.3: Determinants of Women's Social HRQoL

Determinant	Neither Satisfy vs. Dissatisfied		Satisfied vs. Dissatisfied	
	RRR	95% CI	RRR	95% CI
Age Group (ref. 80+)				
60-64	3.23***	[1.24, 6.15]	2.88	[1.50, 5.64]
65-69	2.42***	[1.29, 3.92]	5.12*	[2.64, 6.24]
70-74	1.19	[0.46, 3.06]	1.05	[0.59, 2.77]
75-79	1.30	[0.47, 3.59]	1.20	[0.92, 2.17]
Marital Status (ref. Widowed)				
Never Married	3.97	[0.51, 5.47]	0.80	[0.59, 2.62]
Married/ Cohabiting	1.63***	[1.10, 3.25]	2.72	[1.43, 2.06]
Separated/ Divorced	1.54	[0.49, 4.75]	0.66	[0.47, 1.53]
Ethnicity (ref. Other)				
Akan	0.26	[0.03, 2.43]	0.36	[0.04, 3.65]
Ewe	0.32	[0.02, 2.29]	0.30	[0.07, 1.24]
Ga-Adangbe	0.35	[0.03, 2.15]	0.39	[0.20, 1.85]
Mande-Busanga	0.59	[0.12, 3.44]	0.36	[0.19, 2.40]
Main occupation (ref. Not working)				
Formal sector	0.41	[0.08, 2.06]	0.53	[0.43, 1.2]
Informal sector	0.52	[0.20, 1.36]	0.46	[0.31, 1.31]
Educational Level (ref. Tertiary)				
No education	2.17	[0.18, 4.63]	1.35	[0.15, 4.14]
Primary	1.53	[0.18, 2.72]	1.40	[0.16, 3.32]
Secondary	2.77	[0.35, 3.24]	2.22	[0.21, 3.35]
Place of Residence (ref. Rural)				
Urban	0.68	[0.32, 1.44]	0.85	[0.49, 1.46]
Religious Affiliation (ref. Other)				
No religion	1.10***	[1.28, 2.42]	0.75	[0.53, 2.14]
Christianity	1.70***	[1.42, 3.06]	1.33	[1.08, 2.51]
Islam	1.05***	[2.01, 2.70]	1.46	[0.34, 3.44]
African Traditional Religion	1.20***	[2.17, 3.38]	0.82	[1.58, 3.64]

log likelihood = 746.89 Pseudo R2 = 0.119 Prob>chi2 = 0.000
p<0.05
RRR = Relative Risk Ratio SE = Standard Error

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7.2.4 Proximate Determinants of Women's Environmental HRQoL

Table 7.4: Determinants of Women's Environmental HRQoL

Determinant	Neither Satisfy vs. Dissatisfied		Satisfied vs. Dissatisfied	
	RRR	95% CI	RRR	95% CI
Age Group (ref. 80+)				
60-64	1.97	[0.87, 4.46]	3.12***	[1.25, 2.64]
65-69	1.20	[0.59, 2.47]	1.48	[0.65, 3.27]
70-74	1.36	[0.65, 2.88]	2.12	[0.91, 4.70]
75-79	0.90	[0.44, 1.82]	1.32	[0.58, 2.97]
Marital Status (ref. Widowed)				
Never Married	1.80	[0.40, 3.09]	0.15	[0.01, 1.73]
Married/ Cohabiting	2.17	[1.11, 4.23]	0.91	[0.43, 1.92]
Separated/ Divorced	1.44	[0.67, 3.08]	0.99	[0.42, 2.31]
Ethnicity (ref. Other)				
Akan	0.64	[0.21, 1.93]	0.87	[0.26, 2.96]
Ewe	0.40	[0.10, 1.52]	0.55	[0.12, 2.48]
Ga-Adangbe	0.50	[0.15, 1.69]	0.38	[0.09, 1.54]
Mande-Busanga	0.67	[0.23, 1.99]	0.87	[0.27, 2.87]
Main occupation (ref. Not working)				
Formal sector	0.19***	[0.07, 0.44]	0.27***	[0.09, 0.74]
Informal sector	0.65	[0.36, 1.18]	0.48***	[0.25, 0.93]
Educational Level (ref. Tertiary)				
No education	0.21	[0.02, 1.88]	1.35	[0.15, 4.14]
Primary	0.25	[0.28, 2.21]	1.40	[0.16, 3.32]
Secondary	0.84	[0.08, 1.24]	2.22	[0.21, 3.35]
Place of Residence (ref. Rural)				
Urban	0.75	[0.46, 1.22]	0.72	[0.42, 1.24]
Religious Affiliation (ref. Other)				
No religion	1.41***	[1.20, 2.32]	0.75***	[0.18, 1.14]
Christianity	2.50***	[1.42, 3.06]	1.30***	[1.08, 2.51]
Islam	1.05***	[2.01, 3.70]	1.16***	[0.34, 2.44]
African Traditional Religion	1.25***	[2.17, 3.38]	0.82***	[1.18, 2.34]

log likelihood = 1041.86 Pseudo R2 = 0.100 Prob>chi2 = 0.000
p<0.05
RRR = Relative Risk Ratio SE = Standard Error

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7.2.5 Proximate Determinants of Women's Overall HRQoL

Table 7.5: Determinants of Women's Overall HRQoL

Determinant	Moderate vs. Bad		Good vs. Bad	
	RRR	95% CI	RRR	95% CI
Age Group (ref. 80+)				
60-64	1.79	[0.95, 3.39]	1.40	[0.77, 2.53]
65-69	1.65	[0.90, 3.04]	1.21	[0.68, 2.13]
70-74	1.29	[0.72, 2.29]	0.76	[0.44, 1.30]
75-79	0.84	[0.46, 1.53]	0.83	[0.49, 1.41]
Marital Status (ref. Widowed)				
Never Married	2.20	[0.49, 3.38]	3.72	[0.82, 4.09]
Married/ Cohabiting	1.38	[0.85, 2.23]	1.37	[1.08, 1.79]
Separated/ Divorced	0.92	[0.53, 1.62]	1.00	[0.74, 1.44]
Ethnicity (ref. Other)				
Akan	1.92	[0.87, 2.56]	1.12	[0.55, 2.29]
Ewe	2.55	[0.89, 3.13]	0.96	[0.35, 1.65]
Ga-Adangbe	1.77	[0.71, 3.24]	0.97	[0.41, 2.541
Mande-Busanga	2.02	[0.91, 2.15]	1.74	[0.67, 2.02]
Main occupation				
Formal sector	1.01	[0.45, 2.24]	1.01	[0.49, 2.12]
Informal sector	2.48***	[1.64, 3.76]	1.68***	[1.15, 2.46]
Educational Level (ref. Tertiary)				
No education	0.10***	[0.01, 0.79]	1.53	[0.07, 2.41]
Primary	0.23	[0.03, 1.83]	2.24	[0.09, 3.95]
Secondary	0.48	[0.06, 1.22]	3.54	[0.12, 4.39]
Place of Residence (ref. Rural)				
Urban	1.24	[0.84, 1.83]	0.97	[0.68, 1.41]
Religious Affiliation (ref. Other)				
No religion	0.45***	[0.01, 1.09]	1.32***	[0.03, 1.92]
Christianity	0.65***	[0.02, 1.56]	1.38***	[1.03, 2.63]
Islam	0.87***	[0.02, 1.50]	1.52***	[0.83, 2.73]
African Traditional Religion	0.06***	[0.01, 1.05]	0.22***	[0.03, 1.79]

log likelihood = 1014.13 **Pseudo R2 = 0.135 Prob>chi2 = 0.000**
p<0.05
RRR = Relative Risk Ratio SE = Standard Error

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7.3 Proximate Determinants of Men's HRQoL

This section presents the results of the factors associated with the domains of HRQoL among older men.

7.3.1 Proximate Determinants of Men's Physical HRQoL

Table 7.6: Determinants of Men's Physical HRQoL

Determinant	Neither Satisfy vs. Dissatisfied		Satisfied vs. Dissatisfied	
	RRR	95% CI	RRR	95% CI
Age Group (ref. 80+)				
60-64	2.77***	[1.35, 5.66]	0.71	[0.31, 1.61]
65-69	2.81***	[1.36, 4.69]	0.85	[0.37, 1.94]
70-74	2.07	[0.99, 4.32]	1.03	[0.46, 2.35]
75-79	0.85	[0.47, 1.55]	0.58	[0.29, 1.15]
Marital Status (ref. Widowed)				
Never Married	0.92	[0.18, 4.59]	2.41	[0.41, 3.62]
Married/ Cohabiting	1.30	[0.74, 2.30]	2.20***	[1.08, 4.66]
Separated/ Divorced	1.43	[0.58, 3.54]	2.60	[0.89, 5.03]
Ethnicity (ref. Other)				
Akan	0.43	[0.30, 1.81]	0.59	[0.17, 2.03]
Ewe	0.56	[0.21, 1.97]	0.65	[0.13, 3.15]
Ga-Adangbe	0.54	[0.24, 1.67]	0.57	[0.14, 2.28]
Mande-Busanga	0.59	[0.77, 4.79]	0.77	[0.25, 2.39]
Main occupation (ref. Not working)				
Formal sector	2.29*	[1.08, 4.84]	1.29	[0.51, 3.30]
Informal sector	2.47*	[1.51, 4.05]	2.04	[1.15, 3.63]
Educational Level (ref. Tertiary)				
No education	1.45	[0.57, 3.68]	2.16	[0.64, 3.14]
Primary	1.78	[0.70, 4.52]	2.37	[0.71, 4.32]
Secondary	1.99	[0.84, 4.73]	2.24	[0.71, 4.33]
Place of Residence (ref. Rural)				
Urban	1.00	[0.63, 1.59]	0.69	[0.57, 1.40]
Religious Affiliation (ref. Other)				
No religion	1.40***	[1.08, 2.72]	3.65***	[1.58, 4.74]

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Christianity	1.70***	[1.40, 3.06]	1.29***	[2.08, 3.51]
Islam	1.42***	[1.06, 3.80]	1.12***	[0.62, 3.14]
African Traditional Religion	1.05***	[0.96, 2.38]	2.12***	[1.58, 3.54]

log likelihood = 1039.51 **Pseudo R2 = 0.146 Prob>chi2 = 0.000**
p<0.05
RRR = Relative Risk Ratio SE = Standard Error

This chapter has provided an in-depth analysis of how gender shapes the predictors of health-related quality of life (HRQoL) across physical, psychological, social, and environmental domains among older adults in Ghana. While examining significant male and female predictors, the study highlights critical gendered patterns that inform the need for targeted and gender sensitive interventions and policies.

In the domain of physical HRQoL, age and employment status emerged as significant predictors for both genders. Younger older adults reported better physical outcomes than their older counterparts, but the decline in physical HRQoL with increasing age was more pronounced among women. This finding aligns with global evidence showing that women face a higher prevalence of chronic illnesses and functional limitations in later life. Employment in the informal sector positively influenced physical HRQoL for both men and women, although men in formal employment derived additional benefits, including improved access to healthcare services and retirement-related support. These results suggest the need for targeted health interventions, such as physical activity and fitness programmes for older adults, as well as policies that promote equitable access to healthcare and social protection for informal sector workers, particularly women.

For psychological HRQoL, religious affiliation significantly enhanced psychological well-being for both men and women, with women deriving greater emotional support and resilience from

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religious participation. Informal sector employment also contributed positively to psychological well-being, with men reporting stronger benefits. This pattern may reflect prevailing social norms that associate male identity and self-worth with productive engagement. These findings underscore the importance of integrating religious and community-based mental health initiatives into national strategies aimed at supporting ageing populations. Policies that promote continued productive engagement across the life course, while being sensitive to gender specific needs, may further enhance psychological well-being in later life.

Social HRQoL was closely associated with marital or cohabiting status, with men reporting higher levels of social satisfaction within these relationships than women. This gender difference reflects the greater reliance of men on spousal relationships for social interaction and emotional support. In contrast, widowed women often relied on extended family and community networks, which appeared to mitigate the adverse effects of marital status on their social HRQoL. These findings suggest that social interventions should prioritise reducing social isolation among widowed men, while also strengthening community-based social networks for women, ensuring that both genders can maintain meaningful social connections in later life.

In the domain of environmental HRQoL, religious affiliation and place of residence emerged as significant predictors for both genders. Women appeared to benefit more strongly from the support provided by religious institutions, likely due to their higher levels of participation in religious activities. However, women residing in rural areas experienced greater environmental disadvantages compared to their urban counterparts and to men, highlighting persistent gender inequalities in access to infrastructure, services, and material resources. Addressing these disparities requires policies that prioritise rural development and equitable resource allocation,

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ensuring that older adults living in rural communities, particularly women, are adequately supported.

In conclusion, the findings demonstrate that while predictors such as age, employment status, marital status, and religious affiliation influence HRQoL across all domains, their effects are mediated by gender. Women face compounded challenges arising from intersecting vulnerabilities, including limited access to healthcare, economic insecurity, and socially prescribed caregiving roles. These factors accumulate over the life course and place women at greater risk of poorer quality of life outcomes in later life. In contrast, men tend to benefit more from structural and social supports, such as occupational advantages and spousal care, which may buffer some of the negative effects of ageing.

The observed gendered disparities in HRQoL point to the need for comprehensive and gender sensitive health policies and programmes. Such policies should address the distinct needs of older men and women, prioritise equitable access to healthcare and social support systems, and foster enabling environments that support dignity and wellbeing in later life. Strengthening these approaches provides an important pathway for improving population ageing outcomes in Ghana and for embedding gender equity within national health and social policy frameworks.

Chapter Eight provides a comprehensive summary of the key findings from the quantitative analyses presented in the preceding chapters. The chapter synthesises these results to draw overarching conclusions regarding the proximate determinants of health-related quality of life among older adults in Ghana. It also outlines policy-relevant recommendations directed at policymakers, healthcare professionals, and community stakeholders, with the aim of improving HRQoL outcomes through interventions that address age, education, main occupation, and broader

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socio-economic conditions. In addition, the chapter highlights areas for future research to extend the evidence base and contribute to ongoing scholarly and policy discussions on ageing and wellbeing in Ghana.

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CHAPTER EIGHT

SUMMARY, RECOMMENDATIONS, AND CONCLUSIONS

8.1 Introduction

Chapter eight synthesises the key findings, theoretical implications, recommendations, and conclusions of the study on the gender dimensions of population ageing and health-related quality of life (HRQoL) among older adults in Ghana. This chapter aims to contextualise the results within the broader literature, draw implications for theory and practice, and propose actionable recommendations for policymakers and future researchers. In examining the complex interactions between socio-demographic factors and HRQoL, the chapter offers insights into the critical role of age, gender, occupation, and socio-economic conditions in shaping health outcomes for older adults. It also highlights the need for targeted interventions and policies that address these factors, contributing to a more equitable and sustainable approach to healthy ageing in Ghana.

8.2 Summary of Empirical Findings

The study explored the prevalence of HRQoL among older adults in Ghana, analysing how various socio-demographic characteristics influence perceptions of health across physical, psychological, social, and environmental domains. The analysis provided a nuanced understanding of how age, gender, marital status, education, and occupation influence older adults' quality of life.

8.2.1 Demographic Characteristics and HRQoL

The study's demographic analysis revealed that most respondents were aged 60-64, predominantly female, married, and residing in rural areas. This demographic structure reflects the broader population ageing trends in Ghana, where the proportion of older adults steadily increases. The data showed that age significantly influences HRQoL, with younger seniors reporting higher

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satisfaction levels across physical, psychological, social, and environmental domains. For instance, 81.0% of respondents aged 60-64 reported satisfaction with physical health, compared to only 52.1% of those aged 80 and above. Similarly, satisfaction with social health was reported by 91.4% of those aged 60-64, decreasing to 76.6% among those over 80 years old. These findings suggest that the ageing process is accompanied by a decline in perceived quality of life, underscoring the need for age-sensitive health interventions. This trend aligns with the life course theory, which suggests that as individuals age, their health expectations and perceptions of well-being evolve, often becoming more moderate due to adaptive coping mechanisms and lived experiences. The emergence of this trend underlines the importance of geriatric health mediations that address both age-related physical decline and the social isolation older adults may encounter as they age.

8.2.2 Socioeconomic Factors and HRQoL

The analysis highlighted the critical role of socio-economic factors, such as education, employment, and marital status, in determining HRQoL among older adults. Education emerged as a key determinant, with individuals who had attained tertiary education reporting significantly higher levels of satisfaction across all HRQoL domains. For example, 75.6% of older adults with tertiary education expressed satisfaction with physical health, compared to 63.1% without formal education. This finding emphasises the importance of education in shaping health literacy and access to healthcare, which are crucial for maintaining well-being in older age. Additionally, the study found that employment status, particularly in the formal sector, was positively associated with HRQoL. Older adults employed in the formal sector reported 74.3% satisfaction with physical health, compared to 58.6% among those unemployed. This suggests that economic stability and access to social security benefits are critical for maintaining health in later life, particularly in

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contexts where informal employment is prevalent. However, the informal sector also plays a vital role in promoting psychological well-being by fostering social engagement and a sense of purpose. This emphasises the need for targeted policies that provide health insurance and pension schemes tailored to the realities of informal workers. Marital status also played a significant role in shaping HRQoL perceptions. The data showed that never-married older adults reported higher satisfaction levels with their overall quality of life than their widowed counterparts. For example, 83.1% of never-married respondents reported satisfaction with physical health, compared to 60.4% of widowed individuals. This highlights the potential impact of social support structures, companionship, and emotional well-being on the quality of life among older adults. These findings indicate the importance of considering the socio- economic context when designing policies to improve the well-being of older populations in Ghana. It is, therefore, imperative for policymakers to consider how marital support systems or community-based alternatives can alleviate the negative impacts of widowhood on HRQoL.

8.2.3 Gender Differences in HRQoL

Gender differences in HRQoL were significant, particularly concerning physical and psychological well-being. Men consistently reported higher satisfaction levels with physical health (71.4%) than women (65.6%), reflecting potential differences in healthcare access, social roles, and support networks. This disparity may also be attributed to gender-specific health challenges, with women more likely to experience chronic conditions that affect their physical health. Psychological well-being also varied between genders, with 84% of men expressing satisfaction compared to 76% of women. The lower satisfaction among women may be linked to societal pressures, caregiving responsibilities, and a lack of access to mental health resources. These findings suggest that health interventions must be gender-sensitive, addressing the unique

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challenges older men and women face to ensure equitable outcomes in health and quality of life. These incongruences suggest that caregiving responsibilities, limited economic opportunities, and sociocultural expectations may place a disproportionate burden on women, affecting their HRQoL more acutely.

8.2.4 Social and Cultural Influences on HRQoL

The study also explored the influence of cultural and social factors, such as religious affiliation and ethnicity, on HRQoL among older adults. The findings indicated that religious affiliation did not significantly impact overall HRQoL, with individuals from different religious backgrounds reporting similar satisfaction levels. This challenges traditional assumptions that religious practices directly enhance well-being through social support and community engagement. Instead, the findings suggest that while religious practices may contribute to a sense of belonging and emotional support, their impact on physical and psychological health is mediated by other factors, such as access to healthcare and socio-economic conditions. This perspective aligns with broader social capital theories, which emphasise the role of socio-economic status and healthcare access in shaping health outcomes. However, religious institutions often serve as platforms for social interaction, particularly for older women, indirectly supporting their social and psychological well-being.

8.3 Theoretical Implications of Findings

The study's findings contribute to several theoretical frameworks, offering a deeper understanding of the factors influencing HRQoL among older adults in Ghana:

1. Life Course Theory and Health Perceptions: The study's findings support the life course theory, which posits that health trajectories are influenced by experiences

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accumulated over time. The significant association between age and HRQoL indicates that older adults adjust their health expectations as they age, reflecting resilience and adaptation to physical decline. This theory is extended by the study's findings, which suggest that the socio- cultural context and access to age-appropriate healthcare services can shape these adaptive processes. Understanding these dynamics is crucial for designing age-sensitive health interventions that align with older adults' evolving needs.

2. Social Determinants of Health Framework: The role of employment in shaping HRQoL aligns with the social determinants of health framework, highlighting how socio-economic conditions impact health outcomes. The positive health perceptions among older adults in the informal sector challenge the assumption that informal work is universally detrimental to health, suggesting that social networks and job flexibility may mitigate some adverse effects. This finding adds nuance to the framework, emphasising the need to consider the diversity of employment experiences in public health strategies for older populations.
3. Cultural Capital and Social Capital Theories: The absence of significant differences in HRQoL across religious and ethnic groups suggests that cultural capital alone does not directly determine health outcomes. While traditional theories hold that cultural and religious affiliations provide essential social support and coping mechanisms, the findings suggest that their influence may be more complex and intertwined with socioeconomic factors. This highlights the need for a more integrated approach that considers the interplay between cultural, economic, and social factors in shaping health perceptions.
4. Intersectionality Theory: The study's findings emphasise the value of using an intersectionality approach to understand health inequities among older adults. The

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intersections of age, occupation, and socio-economic status significantly influenced HRQoL, while individual factors like gender and education showed limited direct effects. This underscores the importance of designing public health interventions that recognise the complexity of individual identities and experiences rather than focusing on single determinants of health.

8.4 Conclusion

The findings of this study underscore the intricate relationship between demographic, socio-economic, and cultural factors in shaping the health-related quality of life among older adults in Ghana. Age emerged as a significant determinant, with older adults, particularly those aged 60-74, tending to perceive their health more moderately. This shift in perception highlights a resilience often developed over time as individuals adapt to the physiological and social changes accompanying ageing. The positive impact of employment in the informal sector on HRQoL suggests that job flexibility and community networks can serve as protective factors, enhancing well-being even without formal employment benefits.

Conversely, the study found that formal education, gender, marital status, ethnicity, and place of residence did not independently determine HRQoL. This lack of direct influence suggests that while these factors are essential, broader socio-economic conditions and access to healthcare play a more critical role in shaping how older adults perceive their health. These insights point to the need for health policies that prioritise socio-economic support and access to age-appropriate healthcare services.

Ultimately, the study highlights the importance of adopting a holistic approach to health interventions for older adults. Policymakers and healthcare providers must address socio-

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economic factors and occupational conditions to enhance the HRQoL of older adults. Tailored interventions that focus on improving access to healthcare, supporting informal sector workers, and addressing the unique challenges of ageing populations are crucial for fostering a more inclusive and equitable society. As these gaps are addressed, Ghana can improve the well-being of its ageing population, contributing to the broader goal of sustainable development and social equity.

Consequently, women's HRQoL was disproportionately affected by intersecting vulnerabilities, such as caregiving responsibilities and health challenges. Men, by contrast, benefited from structural advantages like employment benefits and spousal support. These findings emphasise the need for gender-sensitive, inclusive policies that address these disparities and promote equitable ageing experiences.

The broader contribution of this study extends beyond its substantive conclusions and enriches ongoing scholarship on population ageing in Ghana. The work contributes empirically through a national-level analysis that brings gender specific patterns in health-related quality of life into clearer focus and reveals distinct pathways through which older women and men experience wellbeing in later life. Important methodological advances emerge from the application of multinomial logistic regression to multidimensional health outcomes and from the inclusion of variables such as chronic conditions, functional limitations, and work history, which offer a stronger explanatory account of ageing in the Ghanaian context. The theoretical perspectives used in the study deepen understanding of how ageing is shaped by the life course, social determinants of health, and gendered social arrangements, and these perspectives illuminate how structure and agency interact to influence wellbeing among older adults. The study also enriches the literature in population studies and African gerontology through a synthesis of recent evidence, clarification

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of earlier inconsistencies, and renewed attention to the African and Ghanaian ageing experience. This work strengthens the empirical and theoretical foundation for future research and offers a clearer platform for policy reflection on population ageing and wellbeing in Ghana.

8.5 Recommendations

8.5.1 Policy Recommendations

The findings of this study suggest several policy recommendations that are aligned with the Sustainable Development Goals (SDGs), particularly those focused on health, equality, and gender:

1. Improving Access to Healthcare for Older Adults (SDG 3): Given the declining HRQoL with age, comprehensive geriatric care programs that address the physical, mental, and social health needs of older adults are needed. Policymakers should prioritise age-specific health screenings, preventive care, and support for managing chronic conditions. This aligns with SDG 3, which aims to ensure healthy lives and promote well-being for all ages.
2. Addressing Gender Inequalities in Health (SDG 5): The study's findings on gender disparities in HRQoL highlight the need for gender-sensitive health interventions. These should focus on improving women's access to healthcare services, mental health support, and economic empowerment through social safety nets. Addressing these disparities is critical for achieving SDG 5, which focuses on gender equality and empowering women and girls.
3. Supporting Informal Sector Workers (SDG 8): Given the positive association between informal employment and HRQoL, there is an opportunity to support this sector through tailored health insurance schemes and access to healthcare. This would ensure

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that informal workers, who are a significant part of Ghana's workforce, have access to medical services, thus contributing to SDG 8, which promotes decent work and economic growth.

4. Promoting Inclusive Health Policies (SDG 10)**:** To reduce inequalities in HRQoL, policymakers should focus on designing culturally sensitive health programs that engage diverse communities and respect their values and beliefs. This approach can improve community trust in healthcare systems, contributing to SDG 10, which aims to reduce inequalities within and among countries.
5. Additionally, a conscious programme could expand the role of community healthcare centres and integrate the enormous effect of mass communication reminiscent of the recent COVID-19 pandemic, such as telemedicine solutions, to address healthcare disparities in rural areas. Policies could involve religious institutions as advocacy partners to mobilise community participation.

8.5.2 Recommendations for Future Studies

Future research should focus on longitudinal studies to better understand how HRQoL changes over time among older adults. Such studies would provide valuable insights into the dynamics of ageing, capturing the progression of health-related challenges and the effectiveness of interventions. Additionally, there is a need for intersectional research that explores the combined effects of gender, ethnicity, and socio-economic status on HRQoL. This approach can deepen our understanding of the diverse experiences of ageing across different subgroups, helping to tailor public health interventions more effectively. Comparative studies across various African contexts would also contribute to a broader understanding of the factors influencing HRQoL, facilitating the development of regional policy frameworks that address the unique needs of ageing

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populations in sub-Saharan Africa.

Furthermore, exploring the role of technological innovations, such as telemedicine and digital health platforms, could provide insights into how these tools can enhance access to healthcare for older adults, especially in rural areas. This research is critical in the post-pandemic context, where digital health solutions have become more prominent.

In alignment with the theories of ageing in place and resilience theory of ageing, future research should consider stratifying findings by ethnicity and rural-urban residence to provide a more nuanced and enriched understanding of HRQoL dynamics, capturing the intricate interplay of social and environmental factors that shape the lived experiences of older adults.

8.5.3 Limitations of the Study

This study has several limitations that must be considered when interpreting the findings. One fundamental limitation is using cross-sectional data from the WHO SAGE Wave 2 survey for Ghana. Cross-sectional data captures information at a single point in time, limiting the ability to track changes in HRQoL over time or establish causal relationships. Although this limitation constrains the study's capacity for longitudinal analysis, it provides a snapshot of the current state of older adults' health-related quality of life, which is crucial for policymakers in addressing immediate gaps in healthcare provision and social support systems. The insights gained are particularly relevant in an ageing population, where timely data can inform targeted interventions. Additionally, the study's focus on Ghana may limit the generalisability of its findings to other African countries with different socio-cultural and economic contexts. While Ghana's socio-demographic trends make it a critical case study, representing broader patterns in sub-Saharan Africa, the unique cultural and policy environments of other countries suggest that caution should

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be exercised in applying these findings universally. Nevertheless, the study contributes valuable insights that can guide localised policy development and inform regional discussions on ageing and HRQoL.

The reliance on self-reported data presents another limitation, as it may be subject to recall bias. Older adults may struggle to accurately remember or articulate details about their health and life experiences, potentially affecting the reliability of their responses. Despite this, self-reported measures remain a widely accepted method in HRQoL research, providing critical insights into individuals' subjective health experiences. The study mitigated potential biases through stratified sampling and carefully designed questionnaires, ensuring that the data are representative of the broader older adult population in Ghana.

A further limitation is the scope of the analysis regarding gender differences. While the study examines overall gender disparities in HRQoL, it does not delve into how factors like ethnicity, rural-urban residence, or specific cultural practices intersect with gender to shape health outcomes. The primary focus on gender provides valuable insights into a critical aspect of HRQoL. However, future research should build upon this foundation by exploring other intersections that could illuminate additional disparities in older adults' health and well-being.

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