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**DEMENTIA KNOWLEDGE AND ATTITUDES AMONG
NURSES IN IGBOLAND, NIGERIA: A MIXED-METHODS
STUDY OF CULTURAL BELIEFS, STIGMA, AND
FAMILY CAREGIVING**

The doctoral dissertation written
under the supervision of:

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Dąbrowa Górnicza 2026

STATEMENT OF THE SUPERVISOR OF THE DOCTORAL DISSERTATION

I declare that the doctoral dissertation entitled **Dementia Knowledge And Attitudes Among Nurses In Igboland, Nigeria: A Mixed-Methods Study Of Cultural Beliefs, Stigma, And Family Caregiving**, written by Chiazoka Clare Obasi, MA has been prepared under my supervision and hereby state that it fulfills the conditions for presentation in the PhD degree conferral procedure.

Date March 31, 2026

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STATEMENT

I declare that the submitted doctoral dissertation entitled: **Dementia Knowledge And Attitudes Among Nurses In Igboland, Nigeria: A Mixed-Methods Study Of Cultural Beliefs, Stigma, And Family Caregiving** was independently written by me and am fully aware of my legal responsibility in making the selfsame declaration.

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List of Abbreviations

AD	Alzheimer's Disease
ADI	Alzheimer's Disease International
ADRD	Alzheimer Disease and Related Dementias
AfDC	African Dementia Consortium
AJCJS	African Journal of Criminology and Justice Studies
BGM	Bundesministerium für Gesundheit
BPSD	Behavioral and Psychological Symptoms of Dementia
DAS	Dementia Assessment Scale
DFIs	Dementia-Friendly Initiatives
DKAS	Dementia Knowledge Assessment Scale
DKAT2	Dementia Knowledge Assessment Tool Version two
DSM	Diagnostic and Statistical Manual of Mental Disorders
FCT	Federal Capital Territory
FGN	Federal Government of Nigeria
FG	Focus Group
FMoH	Federal Ministry of Health
FMHADMSD	Federal Ministry of Humanitarian Affairs, Disaster Management & Social Development
FTD	Fronto-Temporal Dementia
HBM	Health Belief Model
HRH	Human Resources for Health
ICD	International Classification of Diseases

ICN	International Council of Nurses
ITU	International Telecommunication Union
LBD	Dementia with Lewy Bodies (Lewy Body Dementia)
LGA	Local Government Area
LMICs	Low- and Middle-Income Countries
MMR	Mixed Method Research
NBS	National Bureau of Statistics
NDB	Need-Driven Dementia-Compromised Behavior Model
NGOs	Non-Government Organisations
NHIS	National Health Insurance Scheme
NMCN	Nursing and Midwifery Council of Nigeria
NSHDP II	Second National Strategic Health Development Plan
OOPE	Out of Pocket Expenditure
P	Participant
PCC	Person-centred care
PHC	Primary Health Care
PRIMASYS	Primary Health Care Systems
RN	Registered Nurse
SSA	Sub-Saharan Africa
STI	Serial Trial Intervention model
TPB	Theory of Planned Behavior
UHC	Universal Health Coverage
VaD	Vascular Dementia

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INTRODUCTION

The Background and Context of the Study

Contemporary demographic developments have led to a sustained and unprecedented increase in the proportion and absolute number of older adults worldwide. Rising life expectancy across diverse populations and cultural contexts can be attributed to multiple interrelated factors, including improvements in nutrition, expanded access to healthcare services, advances in education, enhanced sanitation, and broader gains in economic and social well-being. In addition, declining fertility and mortality rates have substantially contributed to population ageing (Montes de Oca, et al., 2014; Dhemba & Dhemba, 2015; Ekoh, et al., 2020).

While increased longevity reflects significant public health and socio-economic progress, it also presents complex cultural and socio-economic challenges for families, communities, and state institutions. Population ageing is frequently associated with heightened demands on health and social care systems, as well as increased vulnerability to chronic conditions, functional limitations, and other factors that may adversely affect the health status and overall well-being of older adults (Tanyi, et al., 2018).

The global population of older adults is increasing at a faster rate than that of the younger age groups with Africa witnessing the most rapid growth in its older population (Federal Ministry of Humanitarian Affairs, Disaster Management, and Social Development [FMHADMSD], 2020). Like other populations in Sub-Saharan Africa [SSA]¹, the Nigerian elderly population is also growing rapidly despite its largely youthful population profile (Tanyi, et al., 2018; FMHADMSD, 2020). The number of individuals aged 60 years and above increased from 4.6 million in 1991 to 7 million in 2006, with projections indicating a further rise to approximately 28.9 million by 2050 (FMHADMSD, 2020).

Consequent upon this demographic development, there is a corresponding increase in the number of people living with dementia (Akyol, et. al., 2021; Ekoh, et al., 2020; Takeuchi, et al., 2020). Dementia is not a normal part of ageing, although older

¹ SSA comprises 49 countries and four sub-regions which are exceedingly diverse in their social, economic, physical and cultural profiles (Cambridge University Press Dictionary).

people are more susceptible to get the disease. Dementia is a syndrome of cognitive impairment that is mostly chronic and progressive in nature, caused by various brain maladies that can affect thinking, memories, behaviour and ability to perform daily life activities. It is delineated as one of the major causes of disability and dependency among older adults across the globe (Akyol, et al., 2021; World Health Organization [WHO], 2018).

Dementia can be terrifying not only for the people who have it, but also for their caregivers and families (WHO, 2019), because of the challenging nature of the symptoms. It is estimated that 50 million people live with dementia worldwide with a rough estimate of 10 million new cases every year and the tendency to rise up to 152 million by the year 2050 (WHO & International Telecommunication Union [ITU], 2021; WHO, 2018). Despite the rising global prevalence of dementia, limited knowledge and persistent misconceptions continue to shape societal and institutional responses to the condition in many countries (WHO, 2012; Ekoh, et al., 2020).

Although the elderly population is on the increase in SSA, precedence is still given to younger people over the older adults in the provision of public support and welfare programmes, often leaving the informal family caregiving the sole source of assistance for the elderly (Aviisah, et al., 2022; Agyemang Duah, et al., 2024; Dube, et al., 2024). However, there are shifts from extended towards nuclear family network systems, dismantling the traditional family support system due to economic, social and technological changes impacting the quality of care given to older adults, with increased pressure on individual caregivers (FMHADMSD, 2020; Dube, et al., 2024). The limited understanding about dementia and its symptoms further exacerbate the burden of caregiving in the family, often resulting in social isolation, economic challenges and delayed help-seeking (Ekoh, et al., 2020).

Adequate care provision for people with dementia demand a reasonable level of dementia awareness and understanding to be able to improve the quality of life of people with dementia. Against this background, dementia awareness and dementia care has been a priority concern in majority of high-income countries. According to the WHO (2012) a lot of high-income countries have constituted policies, plans and strategies to respond to the impact of dementia, identifying priority areas of action to be addressed.

Conversely, in the majority of low- and middle-income countries (LMICs) including Nigeria dementia is not seen as a medical disease rather it is often still linked to a normal process of ageing, madness, witchcraft or even to demonic possession (Brooke & Ojo, 2020). Thus, making people with dementia go through rejection, stigmatisation, isolation and at times physical abuse even from family members (Ekoh, et al., 2020; Adeloye, et al., 2019). The WHO calls all nations to solicit for ways of raising awareness and understanding of dementia to build a dementia friendly community (2012). Nurses in Nigeria including Igboland constitute the primary and major contact of individuals with health issues (Ubochi, et al., 2019) hence, they stand a better position to advocate for dementia awareness. However, little is known about the level of their dementia knowledge and their attitude towards dementia care.

This being the case, it will be necessary to assess whether nurses in Igboland of south-eastern Nigeria have sufficient knowledge of dementia to facilitate early diagnosis and adequate management of the disease and also to educate family members and informal caregivers of people with dementia and the general public. Therefore, this study aims to assess the level of awareness and understanding of dementia among nurses in Igboland of south-eastern Nigeria, to identify their attitude towards people with dementia and the factors motivating the attitudes displayed.

Despite the growing relevance of dementia in Nigeria, there is limited empirical evidence on how nurses' knowledge and attitudes are shaped by cultural beliefs and healthcare system constraints in Igboland.

Definition of Operative Terms

In this subsection, I will try to present the definition of the terms used in the title of this research study and outline how they should be understood with regards to the work presented here.

Nurse

Before the coming of the British missionaries, there were various tribal practices in place in Nigeria overseeing the care of the sick like “traditional birth attendants, witchdoctors and herbalists” (Auta, 2019). Nursing as a distinct profession and training began in Nigeria during the colonial era with the arrival of Christian missionaries in the nineteenth century. This developed from experimental efforts to take care of the sick and

the wounded in mission hospitals and clinics to support medical activities. These mission posts became the core of numerous training schools for professional nurses and midwives in Nigeria, at first as informal and unstructured training programmes that were overseen by unqualified medical and nursing personnel (Emelonye, et al., 2016; Abdullahi, et al., 2019). The first half of the twentieth century marked the establishment of the first formal “Preliminary Training Schools” for nurses at the regional level in Ibadan for the Western Region, Aba for the Eastern Region, and Zaria for the Northern Region (Emelonye, et al., 2016).

The International Council of Nurses [ICN] defines a nurse as an individual who has completed an accredited nursing education programme and is legally authorised to practice by the relevant national authority (ICN, 2021). In Nigeria, nursing education is obtained through either a three-year general nursing certificate programme or a five-year bachelor’s degree programme, delivered via university-based or hospital-based institutions (Balogun, 2021; Obichi, et al., 2021) and regulated by the Nursing and Midwifery Council of Nigeria [NMCN] (Onyemelukwe, 2016). The NMCN serves as the statutory body responsible for setting educational standards, regulating professional practice, and ensuring the quality and safety of nursing care in response to evolving societal health needs in Nigeria (NMCN, 2019).

Within the Nigerian healthcare system, nurses constitute the primary point of contact for patients and families and play a central role in health promotion, care coordination, and long-term illness management (Ubochi, et al., 2019). In the context of dementia care, nurses’ knowledge and attitudes are particularly consequential, as they might influence diagnostic pathways, caregiving guidance, and interactions with family caregivers, who bear the primary responsibility for care in Igboland. From a family science perspective, nurses function not only as clinical providers but also as key mediators between healthcare systems and family-based caregiving structures.

For the purpose of this study, **nurses** are operationally defined as individuals who hold the status of Registered Nurse in Nigeria having completed either a three-year basic general nursing programme or a five-year bachelor’s degree in nursing and who are currently engaged in direct patient care in hospitals or health centers in Igboland. This definition includes nurses with post-basic specialisations and postgraduate qualifications,

whose professional knowledge and attitudes may shape family experiences of dementia care.

Knowledge

Knowledge is a complex and multidimensional construct for which no single universally accepted definition exists. Broadly, it encompasses awareness, understanding, and familiarity with a subject acquired through education, experience, practice, and social interaction (Bolisani & Bratianu, 2018; Agarwal, 2017; Zarman, 2018). Knowledge comprises both explicit and implicit components. Explicit knowledge refers to formally acquired, articulated, and transferable information, such as theoretical understanding obtained through professional education and training. Implicit knowledge, by contrast, is experiential and tacit, emerging through repeated clinical encounters and interaction with patients and families (Bolisani & Bratianu, 2018). Both forms of knowledge shape not only professional judgment, but also behaviour and attitudes.

Knowledge of dementia encompasses both factual understanding and applied awareness of dementia as a clinical and social condition. In family-centered care contexts, such knowledge shapes professional judgment, communication with family caregivers, and responses to the care needs of persons living with dementia (Kerwin, 2022; Oyinlola, 2024). Nurses' knowledge is therefore understood to include biomedical, psychosocial, and care-related dimensions acquired through formal education, clinical practice, and interaction with affected individuals and their families.

In this study, nurses' knowledge of dementia is operationalised using a composite measure derived from the Dementia Knowledge Assessment Scale [DKAS] (Annear, et al., 2017) and the Dementia Knowledge Assessment Tool Version 2 [DKAT2] (Toye, et al., 2014). These instruments collectively assess key domains of dementia knowledge, including etiology and symptoms, disease progression and risk factors, communication and care needs. From a family science perspective, these domains are particularly relevant, as they inform nurses' ability to recognise dementia, provide accurate information, and support family-based caregiving arrangements prevalent in Igboland.

For the purpose of this study, **knowledge** is defined as the level of nurses' self-reported understanding and awareness of dementia, as measured by selected items from

the DKAS and DKAT2. This construct is examined in relation to nurses' attitudes toward people with dementia, as measured by the Dementia Attitudes Scale [DAS] (O'Connor & McFadden, 2010), to explore how knowledge informs attitudinal orientation and family-centered dementia care practices in Igboland.

Attitude

Attitude refers to an individual's learned evaluation of an object, person, or condition, encompassing cognitive, affective, and behavioural components that jointly shape perception and action (Briñol, et al., 2019; Haddock & Maio, 2012). In professional contexts like dementia care, attitudes influence how knowledge is interpreted, how decisions are made, and how behaviours are enacted (Knobloch-Westernwick, et al., 2020), particularly in caregiving and interpersonal interactions. Attitudes are not innate but are developed through experience, education, and socialisation. While relatively stable, they remain amenable to change through increased knowledge and meaningful exposure (Olufemi, 2012; Albarracin & Shavitt, 2018).

In this study, nurses' attitudes toward people with dementia are conceptualised in alignment with selected items from the DAS (O'Connor & McFadden, 2010), which captures two core dimensions: dementia knowledge and comfort or confidence in dementia care. These dimensions reflect nurses' perceptions of the abilities and personhood of individuals with dementia, as well as their emotional ease and willingness to engage in care-related interactions. From a family science perspective, these attitudinal dimensions are particularly salient, as they might influence nurses' support for family caregivers, their communication practices, and their responsiveness to the social and cultural meanings of dementia within Igboland.

For the purpose of this study, **attitude** is operationally defined as nurses' cognitive and emotional orientations, as well as their self-reported behavioural tendencies, toward people with dementia, as measured by the DAS. This construct is examined in relation to nurses' knowledge of dementia and its implications for family-centered dementia care in Igboland.

Dementia

Dementia is not a particular disease, but rather it is a collective term used to delineate a complex of symptoms related to a decline in memory or other cognitive abilities, which are severe enough to impair a person's capacity to carry out everyday tasks (Steele, 2010).

Dementia has various causes and presentations, and it is mostly progressive. It affects mainly older individuals, although young persons might also be affected and it is linked to a wide array of mental and behavioural disturbances that often resemble other psychiatric disorders. The functional impairments caused by dementia stem from cognitive deficits but can also result from behavioural issues. Individuals with dementia are more susceptible to the impacts of co-existing medical conditions and medications. Dementia affects not just the individual but also their family, necessitating a complex care approach that involves the patient, family members, caregivers, and health professionals (Rabins, et al., 2006). The following chapter provides a detailed discussion of dementia. Figure 1 below shows some cognitive functions affected by dementia.

Figure 1: Dementia and affected cognitive functions



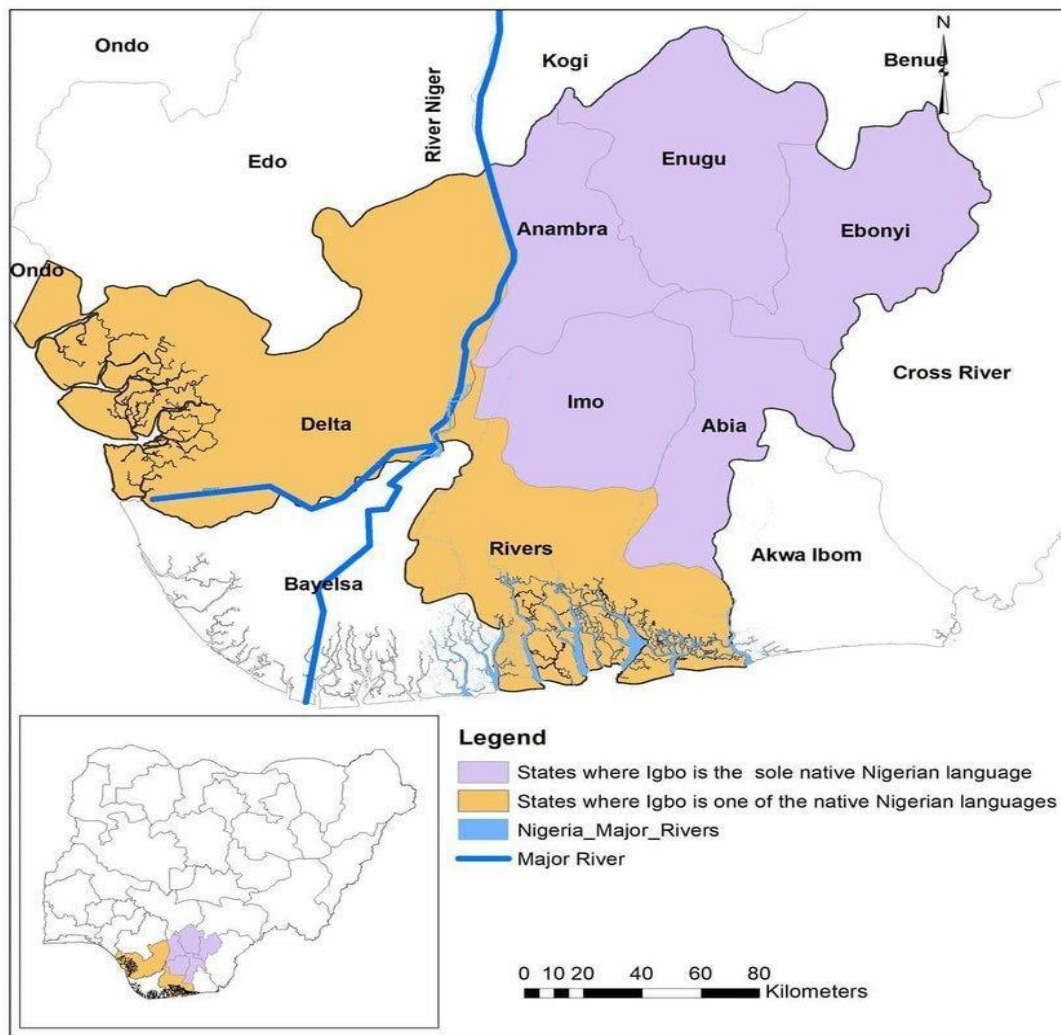
(Care Health Insurance, 2023)

Igboland

Igboland is the homeland of the Igbo speaking people among the Nigerian population. Igbo is one of the three major ethnic groups in Nigeria besides Hausa and Yoruba. Igbo is also one of the up to 400 native languages spoken in Nigeria (Oyali, 2019). The Igbos occupy the south-east zone of the country and Igboland comprises of five states: Abia, Anambra, Ebonyi, Enugu, and Imo States (Oyali, 2019; Umezinwa, 2016; Smith, 2011; Silas & Idachaba, 2020). However, the Igbo language is not only spoken in Igboland, but also in some other regions of the country as can be seen in figure 2 below. The Igbos inhabit a contiguous region that has borders to the north with the Igala, Idoma, and Ogoja communities, to the east with the Ibibios, to the south with the Ijaws, and to the west with the Edo people respectively (Silas & Idachaba, 2020).

The choice of the Igbo ethnic group for this study was partly informed by the researcher's positionality as an individual of Igbo origin, which provided linguistic proficiency and contextual understanding relevant to the research setting. This insider status facilitated participant access and informed interpretation, particularly during the qualitative phase of the sequential explanatory mixed-methods design.

However, it also introduced potential biases, including the risk of presuppositions influencing data interpretation and over-familiarity with culturally embedded meanings of dementia. To address these limitations, reflexive practices were applied throughout both phases of the study, with the quantitative phase relying on standardised instruments to minimise subjectivity, and the qualitative phase employing systematic coding and analytic transparency. Despite these measures, the findings remain context-specific and should be interpreted with caution when extending them beyond the Igbo cultural setting. I will explore Igboland more in chapter one.

Figure 2: Map of Igboland

(Oyali, 2019)

Scope and Significance of the Study

Dementia is a growing public health concern, and adequate understanding of the condition is central to early recognition, timely diagnosis, and appropriate help-seeking behaviours (Mfene & Pillay, 2023; Hu, et al., 2023). In Igboland, south-eastern Nigeria, rapid population ageing is expected to increase the number of individuals living with dementia and, consequently, the demand for dementia-related healthcare. Nurses, as frontline health professionals, will increasingly be required to provide care for individuals with dementia and to support their families. This underscores the importance of ensuring that nurses possess adequate knowledge of dementia and hold attitudes that promote dignity, person-centred care, and effective clinical decision-making.

Globally, approximately 10 million people develop dementia each year, with about 63% residing in low- and middle-income countries (LMICs), largely due to demographic transitions and increasing life expectancy (WHO, 2018). In these settings, the burden of dementia extends beyond affected individuals to families, caregivers, and socio-economic and health systems (Akinyemi, et al., 2022). Evidence suggests that caregivers with better knowledge and understanding of dementia are more likely to cope effectively with the emotional and practical demands of dementia caregiving (Hu, et al., 2023). Consequently, improving dementia knowledge among healthcare providers is critical to strengthening care capacity and mitigating caregiver burden, especially among family and informal caregivers.

In many LMICs, including Nigeria, symptoms of dementia are frequently misunderstood and interpreted through cultural or spiritual frameworks, such as witchcraft or spiritual affliction. Individuals with dementia are therefore particularly vulnerable to stigma, social exclusion, neglect, and abuse (Brooke & Ojo, 2020; WHO, 2021; Onyekwuluje, et al., 2023). These beliefs significantly influence health-seeking behaviour, often resulting in delayed presentation to formal healthcare services or reliance on traditional or spiritual healers (Brooke & Ojo, 2020; Onyekwuluje, et al., 2023). The situation is further compounded by limited governmental involvement in dementia care, which places primary responsibility on families with minimal institutional support (Mwendwa, et al., 2022).

While extensive international research has examined dementia knowledge and care practices, findings from high-income countries may not be directly transferable to the Nigerian context, particularly to Igboland, where cultural beliefs, family structures, and healthcare resources differ substantially. In Igbo communities, care for older adults is predominantly provided within the family, often in the absence of adequate formal healthcare support. This study therefore narrows its scope to nurses working with people living with dementia and their families in south-eastern Nigeria, with the aim of generating context-specific evidence.

Nigeria's healthcare system is largely characterised by a curative-oriented structure, with limited emphasis on preventive, rehabilitative, and palliative care (Effiong, et al., 2023). This systemic orientation has implications for chronic and long-term conditions such as dementia, which require sustained, multidisciplinary, and person-

centred approaches. Understanding nurses' knowledge of dementia and their attitudes towards people living with the condition is thus particularly important within this structural context.

Given Nigeria's ethnic, cultural, and religious diversity, this study is geographically delimited to Igboland in south-eastern Nigeria. Participants were recruited from hospitals and health centers across multiple cities and villages within the region. This focus allows for in-depth engagement with a specific socio-cultural context while maintaining feasibility. The choice of Igboland is further informed by the researcher's familiarity with the language, cultural norms, and lived experiences of older adults and nurses in Igbo communities, facilitating culturally sensitive data collection and interpretation, while maintaining reflexive stance.

The focus on nurses is justified by their central role in healthcare delivery in Igboland. From my experience of healthcare in Nigeria, nurses are often the first and most consistent point of contact for patients and families and are embedded within community-based institutions such as schools, churches, and community associations. As such, they are well positioned to contribute to health education, advocacy, and public awareness initiatives related to dementia. Assessing their level of knowledge and attitudes is therefore critical to understanding their capacity to influence dementia care practices within families and community perceptions.

Finally, this study is relevant to the field of family studies in the context of ongoing demographic changes, including population ageing and the growth of multigenerational households. This development can either be experienced as a resource or a challenge, as the elderly can either serve as caregivers or be care recipients themselves (Bernardes, 2002). Family members are the primary providers of care for dependent older adults, and dementia care can pose significant emotional, social, and practical challenges for families and informal caregivers. Therefore, evaluating nurses' preparedness to support both individuals living with dementia and their families might contribute to a broader understanding of family-centred care in ageing societies.

From the perspective of family studies, dementia represents not only a clinical condition but also a relational and social experience that profoundly reshapes family life. In many low- and middle-income settings, including Nigeria, families remain the primary

providers of long-term care for older adults with dementia. Consequently, nurses often function as intermediaries between formal healthcare systems and family caregivers, shaping how families understand the condition, interpret symptoms, and seek support. Examining nurses' knowledge and attitudes toward dementia is therefore also relevant to understanding how families navigate caregiving responsibilities, stigma, and help-seeking decisions in culturally embedded contexts.

Research Questions and Objectives

The following research questions will be in the center of the proposed research:

- What do nurses in Igboland of south-eastern Nigeria know about dementia?
- What attitudes do nurses in Igboland of south-eastern Nigeria hold towards people with dementia?
- What socio-demographic, cultural, and institutional factors influence nurses' dementia knowledge, attitudes, and dementia care practices in Igboland of south-eastern Nigeria?

Considering the research questions stated above, **the main objective of this study is to examine nurses' knowledge of dementia, their attitudes towards people with dementia, and the socio-demographic, cultural, and institutional factors influencing dementia care practices in Igboland of south-eastern Nigeria.** Therefore, the following sub-objectives will be explored in this research:

- To identify dementia knowledge gaps among nurses in Igboland.
- To examine nurses' attitudes towards people with dementia in Igboland.
- To analyse the socio-demographic factors associated with nurses' dementia knowledge and attitudes.
- To explore the cultural and institutional factors shaping nurses' dementia care practices in Igboland.
- To identify the role nurses can play in promoting dementia awareness among families and communities in Igboland.

Structure of the Thesis

This thesis is organised into six chapters, each building progressively toward a comprehensive understanding of dementia knowledge, attitudes, and care practices in Igboland, south-eastern Nigeria.

Chapter One provides the contextual and conceptual foundation of the study. It situates dementia care within the socio-cultural and family structures of Igboland and examines the broader Nigerian healthcare system and its implications for family caregiving. The chapter further defines dementia, tracing its historical conceptualisation and evolving definitions, and discusses its major forms and stages. It also explores prevailing knowledge gaps, care challenges, and the central role of the family in dementia care within the local context.

Chapter Two presents the theoretical and conceptual frameworks underpinning the study. It begins with the Social Stigma Theory, examining the historical roots, definitions, and social processes of stigmatisation, and analysing its impact on dementia. The chapter then discusses the Theory of Planned Behaviour (TPB), outlining its core concepts and its relevance to health-related behaviours, particularly help-seeking and dementia management. The Health Belief Model (HBM) is subsequently explored, focusing on its origins, key constructs, and application to dementia risk and prevention. The chapter concludes with a discussion of best practices in dementia care, including global policy frameworks, the promotion of dignity and autonomy, and the management of behavioural and psychological symptoms of dementia. A summary section synthesises the theoretical insights and links them to practical implications.

Chapter Three outlines the methodology and methods employed in the study. It explains the sequential explanatory mixed-method research design, detailing both the quantitative and qualitative phases. The chapter describes the data acquisition processes, including survey sampling, participant selection, and data collection procedures. It also elaborates on the data analysis techniques used for both phases and addresses ethical considerations guiding the research.

Chapter Four presents the findings of the study. It reports on participants' understanding of the prognosis and nature of dementia, as well as issues related to communication and interaction with people living with dementia. The chapter highlights the challenges and rewards of caregiving, and examines knowledge, beliefs, and

awareness among participants. It further presents findings on nurses' attitudes toward people with dementia and assesses their level of dementia-related knowledge.

Chapter Five discusses the findings in relation to the research questions and theoretical frameworks. It critically examines what nurses in Igboland know about dementia, their attitudes toward people living with dementia, and the socio-demographic, cultural, and institutional factors influencing their knowledge, attitudes, and dementia care practices. Particular attention is given to limited knowledge, communication challenges, caregiving experiences, cultural beliefs, stigma, and awareness. The chapter provides an integrated interpretation of the findings and synthesises them within the frameworks of stigma theory, the TPB, and the HBM.

Chapter Six concludes the thesis by summarising the key contributions of the study. It outlines the theoretical, empirical, and practical contributions, and discusses implications for nursing practice, community and public health. The chapter offers recommendations for nursing education, clinical practice, policy, and future research. It also acknowledges the limitations of the study and provides concluding reflections.

Overall, the thesis moves from contextual and theoretical foundations through methodological design and empirical findings to discussion, implications, and recommendations, thereby offering a comprehensive examination of dementia knowledge and attitudes among nurses in Igboland.

1 DEMENTIA CARE IN CONTEXT: FAMILY, CULTURE AND CARE SYSTEMS IN IGBOLAND, NIGERIA

Dementia is not only a clinical syndrome but also a socially interpreted condition whose meaning, recognition, and management are shaped by cultural knowledge systems and professional training. In Igboland, south-eastern Nigeria, understandings of cognitive decline are embedded within moral discourses of ageing, family obligation, and community life. Within this context, nurses occupy a critical interface between biomedical knowledge and culturally grounded interpretations of illness. This chapter, *“Dementia Care in Context: Family, Culture and Care Systems in Igboland, Nigeria,”* therefore situates the study of nurses’ knowledge of dementia and their attitudes toward people living with dementia within the broader socio-cultural and structural realities of care in Igboland.

From a family science perspective, dementia care cannot be reduced to clinical management alone; it is relational and negotiated within kinship systems, and largely influenced by societal beliefs about personhood, dependency, and reciprocity. Nurses’ knowledge and attitudes are shaped not only by formal education and professional socialisation, but might also be shaped by the cultural narratives that frame memory loss, mental illness, and ageing in Igbo communities. These narratives influence how symptoms are perceived, how families seek help, and how individuals living with dementia are treated within home, community and hospital settings. Thus, examining nurses’ knowledge and attitudes requires careful attention to the cultural ecology in which their professional practice is embedded.

This chapter provides an analytical overview of Igboland’s geographical, socio-cultural, and healthcare contexts as a necessary foundation for understanding the empirical focus of the dissertation. It critically examines the organisation of Nigeria’s healthcare system, the status of geriatric and mental health services, and the structural constraints that shape nursing practice and dementia care. By doing so, it frames nurses not merely as individual knowledge holders but as actors operating within layered systems of family expectation, institutional limitation, and cultural meaning-making. It also provides an in-depth exploration of the various dimensions of dementia, from its meaning and symptoms through underlying causes and progression to the strategies and practices essential for effective care.

Positioning the study within this broader context allows for a more nuanced interpretation of how knowledge gaps, misconceptions, stigma, or compassionate orientations toward people with dementia may emerge among nurses. Rather than attributing attitudes solely to personal disposition or training deficits, this approach highlights the interplay between professional education, cultural beliefs, and systemic realities.

1.1 Igboland of South-Eastern Nigeria: Socio-cultural and Family Structures

Nigeria, located in West Africa, is Africa's most populous country, with over 216 million inhabitants and considerable ethnic, linguistic, and regional diversity (NBS, 2023). The country is administratively organised into six geopolitical zones and operates a three-tier governmental structure comprising federal, state, and local government authorities (FGN, 2022). These structural arrangements are not merely administrative descriptors; they directly influence healthcare governance, funding allocation, workforce distribution, and regional disparities in service provision. Consequently, variations in infrastructure, policy implementation, and access to care across geopolitical zones shape the availability of geriatric and mental health services, including dementia care.

Figure 3: Map of Nigeria Showing the Six Geopolitical Zones



(Bakare, 2015).

The map illustrates the geographical scope of the study area and situates the five Igbo-speaking states within the broader Nigerian context.

The south-east geopolitical zone, with a population exceeding 22 million (NBS, 2020), is predominantly inhabited by the Igbo people, hence the designation “Igboland.” The term “Igbo” carries layered meanings: it refers to the people, their language, and the territory they occupy (Ezenwa, 2017). Thus, one may speak of Igbo people, Igboland, or the Igbo language, reflecting the intertwined nature of identity, geography, and culture.

Contemporary Igboland comprises five states: Abia, Anambra, Ebonyi, Enugu, and Imo. However, Igbo populations are widely dispersed across other regions of Nigeria and in the diaspora, reflecting long-standing patterns of mobility and enterprise. While attributes such as industriousness and communal solidarity are often ascribed to Igbo communities (Umezina, 2016), from an analytical standpoint it will be more instructive to examine how shared cultural norms particularly those surrounding kinship, reciprocity, and social obligation design expectations around ageing and care.

In traditional Igbo society, old age has historically been associated with honour, authority, and moral prestige. Elders were regarded as custodians of wisdom and customary heritage, and younger generations were socialised to respect, support, and care for them. The extended family system and strong communal networks functioned as primary mechanisms of social security, ensuring that older persons were embedded within supportive kinship structures (Echeta & Ezech, 2017).

However, these traditional arrangements have undergone significant transformation. Rapid urbanisation, economic pressures, migration, and changing family configurations have progressively weakened extended family structures (FMHADMSD, 2020). Rural-to-urban migration of younger adults has reduced the availability of informal caregivers, while socio-economic constraints have intensified the burden on remaining family members (Ene, et al., 2022). These structural shifts are particularly consequential for older persons living with chronic and degenerative conditions such as dementia, which require sustained, individualised and specialised care.

Within this evolving landscape, nurses increasingly serve as critical mediators between families and the formal healthcare system. As traditional care systems weaken and institutional care remains limited, nurses often assume expanded roles in assessment, education, advocacy, and psychosocial support. Their knowledge of dementia, its

symptoms, progression, and management as well as their attitudes toward individuals living with the condition significantly influence quality of care, stigma reduction, and family coping processes.

1.2 Healthcare System in Nigeria and Implications for Family Caregiving

An Igbo adage: “*ndu ka aku*” or “*ndu ka uba*” (life is greater than wealth) captures the cultural centrality of health as a social good. Beyond its moral resonance, this proverb reflects a structural reality: the organisation and effectiveness of a nation’s healthcare system profoundly shape its social and economic development (Anthony, 2018; Umezinwa, 2016). Hence, good health and healthy living counts among the essential needs in the life of every individual and every social community. In the context of this dissertation, the relevance of Nigeria’s healthcare system lies not only in its capacity to deliver services, but also in how it conditions professional practice, influences nurses’ knowledge acquisition, and shapes attitudes toward people living with dementia.

Nigeria has historically operated a pluralistic healthcare system in which traditional, faith-based, and biomedical practices coexist. Prior to colonial rule, healthcare was provided primarily by traditional healers, diviners, herbalists, midwives, and spiritualists, who combined herbal remedies with cosmological interpretations of illness. Nevertheless, these forms of healthcare delivery presented some limitations and risk factors, as they were carried out in unhygienic environments coupled with the use of potentially contaminated instruments. The effects were a consequential increase and outbreak of different kinds of transmittable diseases, which in turn led to a rise in mortality rate (Anthony, 2018).

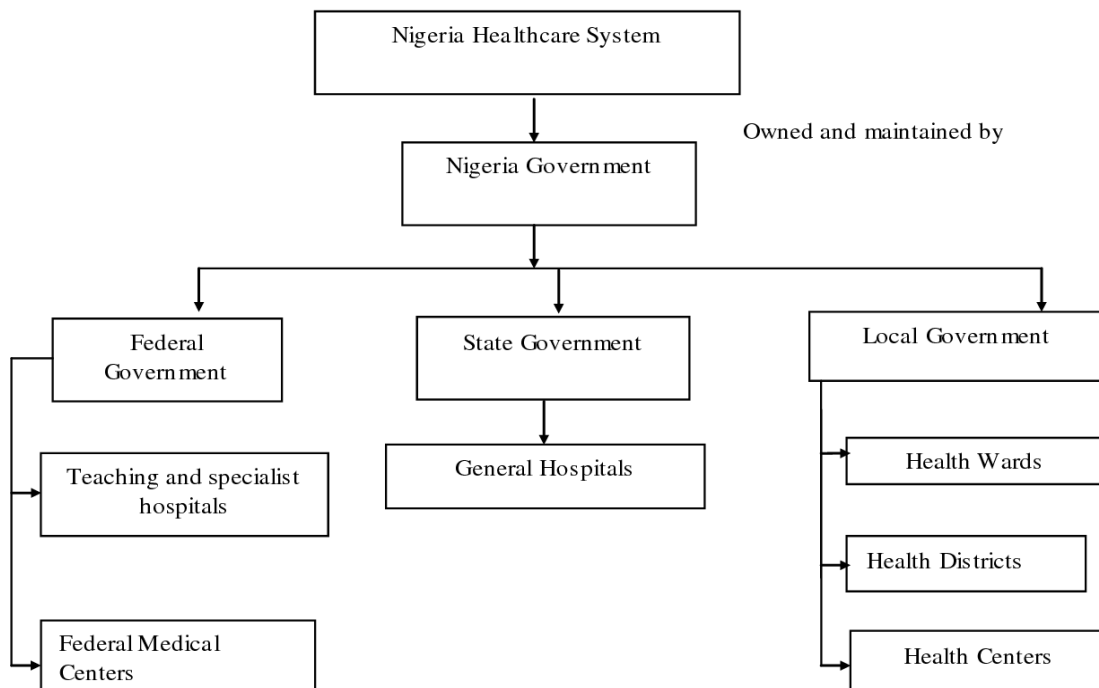
With colonialism in the nineteenth century came western orthodox medicine, which gradually assumed institutional dominance. However, rather than replacing traditional systems, biomedical and indigenous practices continue to function in parallel (Anthony, 2018). This pluralism is particularly relevant for dementia management, as cognitive decline may be interpreted through spiritual, moral, or psychosocial lenses. Nurses practicing within this environment must therefore navigate competing explanatory models of illness, which can influence both their clinical reasoning and their interpersonal engagement with patients and families.

Since Nigeria’s independence in 1960, there have been several healthcare policies and plans with the aim of providing quality, equity and affordable healthcare service to

every Nigerian citizen. However, none of these policies and plans have been able to achieve its aim due to many factors especially non-release of funds and lack of coordination (Primary Health Care System [PRIMASYS], 2017) for the implementation of the plans.

Nigeria's healthcare system is decentralised across three tiers of government: primary healthcare (PHC) under the local governments, secondary healthcare under the state governments, and tertiary healthcare under the federal government (FGN, 2022; PRIMASYS, 2017; Oji, et al., 2022). While this structure theoretically distributes responsibility and is considered to enhance access to healthcare, in practice it is characterised by weak coordination, unclear delineation of roles, and uneven resource allocation (Iroju, et al., 2013; FGN, 2022; Oyibocho, et al., 2014). Figure 4 depicts the summary of the healthcare system operative in Nigeria.

Figure 4: Health Care System in Nigeria



(Iroju, et al., 2013).

The PHC intended as the entry point into the healthcare system remains underfunded and overstretched, particularly in rural communities due to a speedily ageing population (FGN, 2022; Omoleke & Taleat, 2017; PRIMASYS, 2017). Inequities persist between urban and rural areas in terms of infrastructure, personnel distribution, and service quality as a result of lack of political commitment, poor leadership and

accountability as well as lack of clearly defined roles and responsibilities (FGN, 2022; PRIMASYS, 2017; Okoli, et al., 2016), leading to insufficiency and unmaintained healthcare delivery infrastructure, unequal distribution of human resources and poor-quality healthcare services.

These systemic weaknesses limit early detection, diagnosis, and management of chronic conditions such as dementia, which often require sustained and specialised attention. Nigeria's ranking of 187 out of 200 countries in its healthcare quality (Okoli, et al., 2016), 152 out of 189 countries in the Human Development Index Ranking (Oji, et al., 2022) as well as 187 out of 191 countries in health system efficiency with respect to health expenditure per capita (PRIMASYS, 2017) reflects this.

The introduction of the National Health Insurance Scheme (NHIS) in 2005 aimed to advance universal health coverage (UHC) by improving access to healthcare and providing financial protection for Nigerian citizens. Yet after several years, enrolment remains extremely limited relative to the total population (FGN, 2022; Adewole, et al., 2015; Kiri & Ojule, 2020; Federal Ministry of Health [FMoH], 2016), leaving the majority of Nigerians reliant on out-of-pocket expenditure (OOPE) as the primary mode of healthcare financing. This worsens the inequity in health outcomes and exposes the poor more to catastrophic health spending with the risk of pauperisation and high mortality rate (FGN, 2022; Adewole & Osungbade, 2016; PRIMASYS, 2017; FMoH, 2016).

For families managing long-term conditions such as dementia, OOPE represents a significant barrier to consistent and quality care. The financial strain associated with repeated consultations, medications, and possible hospitalisations can shape help-seeking behaviours, often resulting in delayed presentation, reliance on informal providers, or discontinuity of treatment. Nurses working in such contexts frequently encounter families under financial stress, which may influence both caregiving capacity and expectations placed on healthcare professionals.

Human resources for health (HRH) in Nigeria remain inadequate in number and unevenly distributed across regions and also between urban and rural areas. Looking at the wards in some of the Nigerian hospitals gives the impression that new diseases might be breaking out soon. Healthcare infrastructure and equipment are mostly inadequate and in obsolete condition (Ojo & Akinwumi, 2015). Challenges such as limited opportunities

for continuing professional education, poor working conditions, inter-professional tensions (FMoH, 2016; Ojo & Akinwumi, 2015) further strain the system. Moreover, misallocation of funds, inadequate and delayed wages have contributed much to the migration of healthcare professionals to other countries, leaving Nigeria in a “medical brain drain” condition (Eme, et al., 2014; Balogun, 2021).

For nurses in Igboland, these structural constraints may limit exposure to specialised geriatric and dementia-focused training. Knowledge gaps regarding dementia symptoms, progression, and management may therefore reflect not merely individual deficits but systemic shortcomings in professional preparation and continuing education. Similarly, high workload and infrastructural limitations may inadvertently shape attitudes toward older patients with complex needs, including those with cognitive impairment.

Despite a steadily growing ageing population, Nigeria lacks a fully functional and effectively implemented national policy on ageing. Social security mechanisms remain limited, and formal long-term care services are scarce (Tanyi, et al., 2018; Okoye, 2013; Oluwagbemiga & Tiwalade, 2017; Oji, et al., 2022). Even the pension scheme, which seems to be the only available service the government provides for the elderly is immensely inadequate and inconsequential and it is only for those who were engaged in public service (Okoye, 2013; Dimkpa, 2015). Policymakers have often operated on the assumption that families, particularly within the extended kinship systems will always assume responsibility for elder care (Okoye, 2013; Shofoyeke & Amosun, 2014), hence they have not shown much interest with regard to the care of the ageing population.

Yet, as noted earlier, traditional family structures in Igboland and across Nigeria are undergoing transformation due to urbanisation, migration, economic hardship, and shrinking household sizes. Consequently, the caregiving burden increasingly falls on fewer family members, often without adequate financial or institutional support (FMHADMSD, 2020; Ene, et al., 2022). For older persons living with dementia, this can result in delayed diagnosis, inadequate supervision, stigma, and social isolation, and lastly poor health outcome.

In this environment, nurses can assume a pivotal role not only as clinical caregivers but also as educators, advocates, and sources of psychosocial support for families. Their knowledge of dementia and their attitudes toward affected individuals may directly influence care quality, family guidance, and stigma reduction.

Understanding the structural and policy landscape of Nigeria's healthcare system is essential for interpreting findings related to nurses' knowledge and attitudes toward dementia and dementia care in Igboland. Knowledge deficits, misconceptions, or negative attitudes cannot be examined solely at the individual level; they must be situated within broader systemic realities like limited geriatric specialisation, weak policy implementation, financial barriers to care, and competing cultural health paradigms.

Thus, this subsection provides more than a descriptive overview of Nigeria's healthcare system. It establishes the institutional and structural context within which nurses are trained, socialised, and expected to deliver care. By foregrounding these contextual dynamics, the study critically engages with how systemic constraints and cultural frameworks interact to shape professional knowledge, clinical practice, and attitudes toward people living with dementia in Igboland.

1.3 Defining Dementia

Building on the socio-cultural and structural contexts outlined in the preceding sections, this sub-section examines dementia not only as a biomedical syndrome but also as a historically and socially constructed category. Such conceptual clarification is essential for a study concerned with nurses' knowledge of dementia and their attitudes toward people living with the condition. How dementia is defined, classified, and understood globally and locally directly shapes professional education, diagnostic practices, and care interactions.

1.3.1 Historical Conceptualisation and Evolving Definitions of Dementia

The term dementia derives from the Latin word "demens", meaning "out of one's mind." In Roman times, it was used broadly to denote madness or insanity. In its original usage, "dementia" referred to a state of severe cognitive impairment or mental disorder. Over time, the term evolved to encompass a broader range of cognitive impairments, including those associated with neurodegenerative diseases like Alzheimer's disease (Gatterer & Croy, 2020).

Prior to the nineteenth century, dementia functioned largely as a legal and moral label, associated with incapacity, incompetence, and social exclusion. Individuals so classified were often considered unable to manage property, enter contracts, or participate in civic life. These early formulations were deficit-oriented and heavily stigmatising,

framing affected persons primarily in terms of loss and incapacity, denying them the right of self-determination, autonomy and the right to live a qualitative and fulfilled life (Berrios, 2017).

During the nineteenth century, advances in neuropathology and clinical observation shifted dementia from a moral-legal category toward a medical one. It began to be differentiated into subtypes and understood as a syndrome arising from diverse pathological processes including arteriosclerosis, cerebral atrophy and trauma (Berrios, 2017). In the twentieth century, more specific diagnostic differentiations emerged, including Alzheimer's disease and pick disease. The development of standardised diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders (DSM) and the International Classification of Diseases (ICD) further consolidated dementia as a clinically defined syndrome with operational criteria (Kane & Thomas, 2017).

Contemporary definitions describe dementia as a chronic or progressive syndrome resulting from disease of the brain, characterised by disturbances in multiple cognitive domains including memory, thinking, orientation, comprehension, calculation, learning capacity, language, and judgment sufficient to interfere with independent functioning (WHO, 2012; Gatterer & Croy, 2020). Dementia ranks as the seventh leading cause of death globally and is a significant contributor to dependency and disability among older adults worldwide (Wang, et al., 2022).

In other words, dementia is a syndrome of a disease process which gradually and progressively disrupts normal brain functioning, altering thinking, behaviour and the ability to perform activities of daily living (WHO, 2017; WHO, 2019). Dementia is not associated with ethnic group, social class or living environment, as it can affect individuals across various societal demographics. People with dementia have complex needs and require support from health and social care professionals, and family members (Brooke, et al., 2019). Importantly, dementia is not a normal part of ageing, even though its prevalence increases with age (WHO, 2019). This clarification is particularly relevant in contexts where cognitive decline may be normalised as an inevitable aspect of growing old.

Dementia stands as the most common mental disorder among the elderly, with women being more susceptible than men due to their higher life expectancy. Its prevalence is about 3-4% in 60-year-olds, increasing greatly with age and reaching about

35% in 90-year-olds (Gatterer & Croy, 2020). Generally, a basic distinction is made between primary (organic brain, irreversible) dementia, caused by a degeneration of brain substances, and secondary (non-organic brain, probably reversible) dementia as a result of other primary diseases like metabolic disorder and hypovitaminosis (Bundesministerium für Gesundheit [BGM], 2022; Gatterer & Croy, 2020). In order to distinguish dementia from temporary cognitive and performance disturbances, the symptoms must have lasted at least six months (Förstl & Lang, 2011).

For nurses in Igboland, whose practice is embedded within cultural narratives that may interpret memory loss through spiritual, moral, or age-related lenses, the biomedical framing of dementia as a syndrome of brain disease may coexist with alternative explanatory models. Understanding this historical and definitional evolution provides a foundation for assessing the depth and orientation of professional knowledge.

1.3.2 Major Forms of Dementia

As has been stated above, dementia encompasses a spectrum of cognitive impairments that profoundly impact individuals and their loved ones. Within this spectrum, various forms of dementia manifest with distinct characteristics, causes, and progression patterns. For nurses, knowledge of these distinctions is not merely theoretical. Accurate recognition of symptom patterns influences referral pathways, communication with families, and expectations regarding prognosis and management.

Alzheimer's Disease (AD) is the most common form of dementia, accounting for approximately 60–80% of cases worldwide (WHO, 2017; BMG, 2022; WHO, 2019). It is a progressive neurodegenerative disorder associated with neuronal loss and synaptic dysfunction, especially in brain regions responsible for memory and learning. Clinically, the disease typically begins with gradual memory impairment and progresses to difficulties in language, orientation, reasoning, and daily functioning (Gatterer & Croy, 2020). Because the onset is usually slow and subtle, early symptoms are often mistaken for normal ageing. Consequently, limited awareness among healthcare professionals may delay diagnosis and intervention.

Vascular Dementia (VaD) is the second most common form of dementia, representing approximately 20–30% of cases (WHO, 2017; WHO, 2019). It results from reduced blood flow to the brain due to cerebrovascular conditions such as stroke or chronic vascular disease. Symptoms may develop suddenly after a stroke or appear

gradually following multiple small vascular occurrences. In addition to memory impairment, individuals often experience difficulties with attention, executive functioning, and decision-making. Because vascular dementia is closely linked to modifiable risk factors such as hypertension, diabetes, smoking, and obesity, nurses play an important role in prevention through health education and risk-factor management.

Dementia with Lewy Bodies (DLB) accounts for about 10% of dementia cases (WHO, 2019). It is characterised by abnormal protein deposits, known as Lewy bodies, in brain cells. The condition typically presents with fluctuating cognitive functioning, recurrent visual hallucinations, and motor symptoms resembling Parkinson's disease. Individuals may also experience sleep disturbances and increased sensitivity to certain medications, particularly antipsychotics (WHO, 2017; Gatterer & Croy, 2020).

Frontotemporal Dementia (FTD) involves degeneration of the frontal and temporal lobes of the brain, which regulate personality, behaviour, and language. Unlike Alzheimer's disease, early symptoms usually involve behavioural and personality changes rather than memory loss. FTD often occurs in individuals younger than 65 years and may have a genetic component (WHO, 2017; Gatterer & Croy, 2020).

Other medical conditions, including traumatic brain injury, chronic alcohol misuse, brain tumors, endocrine disorders, nutritional deficiencies, and infections such as HIV or syphilis, can also cause dementia-like symptoms (WHO, 2017; WHO, 2019). Although less common, some of these conditions are potentially reversible if detected early.

Understanding these major forms of dementia provides an essential foundation for nursing practice and is particularly relevant when assessing nurses' knowledge and attitudes toward dementia care.

1.3.3 Stages of Dementia

The symptoms of dementia can vary from minor loss of memory to more severe cognitive and motoric disorders that make independent living difficult or impossible. As dementia advances, it goes through distinct stages, each presenting unique challenges and symptoms. Understanding these stages is essential for nurses, as stage-specific needs influence care planning, communication strategies, and family guidance (WHO, 2019). Moreover, attitudes toward people living with dementia may be shaped by the stage most

frequently encountered in clinical practice. For nurses, stage-specific understanding is particularly relevant, as care needs, communication strategies, and family guidance vary substantially across the disease trajectory.

The **early or mild stage** is typically characterised by subtle cognitive changes, most notably difficulties with recent memory and learning new information. Individuals may experience mild disorientation in time or place, reduced ability to plan or organise tasks, and occasional problems with word finding or decision-making (Förstl, et al., 2011; WHO, 2019). Despite these challenges, many individuals remain largely independent and capable of managing most daily activities, although they may require support with more complex tasks such as financial management or administrative responsibilities (Förstl, et al., 2011). Because symptoms can resemble normal ageing, early-stage dementia is often overlooked, highlighting the importance of clinical awareness among healthcare professionals.

The **middle or moderate stage** is marked by more pronounced cognitive and functional decline. Memory impairment becomes more evident, and individuals increasingly struggle with activities of daily living such as dressing, eating, or managing household chores (Förstl, et al., 2011; WHO, 2019). Disorientation and confusion may increase, and behavioural and psychological symptoms—such as agitation, wandering, hallucinations, or mood changes—may emerge. At this stage, individuals usually require regular supervision and assistance, accenting the importance of a solid healthcare and social system (Förstl, et al., 2011). For families and caregivers, this phase often represents a time and physically demanding period of care, as behavioural disturbances and increasing dependency place considerable emotional and practical strain on support systems.

In the **late or advanced stage**, cognitive and physical deterioration becomes severe. Individuals may lose the ability to recognise familiar people, communicate effectively, or perform basic self-care activities. Language abilities become extremely limited, and complete dependence on caregivers for daily needs such as feeding, hygiene, and mobility becomes common (WHO, 2019; Förstl, et al., 2011). Some individuals may retain stereotypical motor behaviours like shouting or wandering, instances of aggressive reactions may occur, when they feel threatened by caregiving actions. Such restlessness or aggressive behaviours might also be an indication of pain, since individuals with dementia are no longer capable of expressing their needs and desires adequately. Physical

complications associated with immobility, including infections and pressure ulcers, also become more prevalent. Care during this stage is therefore largely supportive and focused on comfort and dignity (Förstl, et al., 2011; WHO, 2019).

Understanding these stages provides an important conceptual foundation for examining nurses' knowledge and attitudes toward dementia. Since clinical encounters often occur during the more advanced stages of the illness, nurses' perceptions may be disproportionately shaped by severe manifestations of dementia. This makes stage-specific knowledge particularly relevant when assessing how dementia is understood and managed within healthcare settings, including in the context of Igboland.

1.4 Dementia Knowledge and Care Challenges

Dementia knowledge is unevenly distributed across populations and professional groups, with significant implications for recognition, help-seeking, stigma, and quality of care (Annear, et al., 2015; Ekoh, et al., 2020). In low- and middle-income contexts, limited awareness and culturally embedded explanatory models may shape both public perceptions and professional responses to cognitive decline. But understanding dementia - one of the most pressing health issues of our time is crucial in addressing it. This section of my dissertation delves into the current state of dementia knowledge, exploring the difficulties faced by people with dementia and their families as well as healthcare providers and caregivers in their quest to manage and mitigate the impacts of dementia.

Knowledge about dementia varies across different communities and groups, including differences based on gender and among individuals providing formal and informal care. Such differences in dementia knowledge often result in stigma and stereotypical or discriminatory views about dementia (Annear, et al., 2015). This corresponds with the study of Ekoh, et al., (2020), in which they explored the differences in the understanding of dementia amongst different cultures and the impact of low knowledge of dementia. In this study they found that many cultures view dementia as part of normal ageing. Some cultures understand dementia from the biomedical perspective, others see it as a result of the sufferers' wrongdoings (Karma), and some other cultures take it to be the same as insanity, and still others view it as demonic possession or that the patient is involved in witchcraft. Such conceptions and misconceptions influence the way people with dementia are treated in the studied cultures and these have negative effects on their quality of life.

According to a study by Nwakasi, et al. (2019), people with dementia and their families face a lot of challenges because of lack of awareness and understanding. They are tagged with several names like mad, crazy, sorcerers, witches and persons with old age problems. This leads to stigmatisation, isolation, not taking the problem of people with dementia seriously, hence professional help is not sought. People with dementia are taken to prayer houses for deliverance, some are ostracised from the community because of the names tagged them, while some are rejected by family members for the same reasons. According to their findings, religious and cultural beliefs influence the perception of dementia, and this influences the quality of dementia caregiving.

Prince, et al. (2016) reported in their study that dementia is under-detected, under-diagnosed, under-disclosed, under-treated and under managed in the primary healthcare sector. Hence, there is a need to boost the recognition of dementia in primary healthcare through in-service education and training of healthcare workers. The aim is to alter attitudes and perceptions of specialists to people with dementia and to offer technical skills to facilitate dementia care as well as provide practice-based components to guide and mentor non-specialists to recognise and diagnose dementia.

Evidence suggests that in certain cultures, people fear those with dementia due to their poor knowledge and erroneous perceptions of the disease. There were cases of people with dementia being beaten, abused and expelled from their homes because their families believed they were bewitched. Poor knowledge of dementia can lead to social isolation of affected family members, for instance, studies found that some relatives refused to visit or dine with grandparents who had dementia, thinking they were witches (Ekoh, et al., 2020).

Moreover, knowledge of dementia is found to correlate with the level of health education and professional training, with medical staff having the highest level of knowledge followed by nurses. On the other hand, more educated nursing staff have better knowledge than care workers and family members. However, most health workers have significant poor knowledge in identifying risk factors and understanding the clinical progression of dementia and mistakenly see normal ageing symptoms as dementia (Annear, et al., 2015).

Numerous studies evaluate the understanding of dementia among both the general public and healthcare professionals globally. Many populations in Nigeria and other

countries exhibit limited knowledge of dementia. Studies across Nigeria and other SSA countries consistently report that dementia is frequently interpreted through spiritual or moral frameworks, including witchcraft, demonic possession, or divine punishment, contributing to stigma, delayed help-seeking, and social exclusion (Kerwin, et al., 2022; Onyekwuluje, et al., 2023; Ekoh, et al., 2020).

Although there is a scarcity of research on health workers' knowledge of dementia in SSA, available studies highlight the relationship between inadequate knowledge and lack of training during both pre- and post-medical education. Thus, leading some health workers with knowledge deficiency to feel less confident and more uncomfortable when dealing with individuals living with dementia or other cognitive impairments (Onyekwuluje, et al., 2023). For nurses specifically, limited dementia knowledge may affect not only recognition and referral decisions but also confidence in communication, perceived behavioural control, and attitudinal orientations toward dementia care—dimensions later examined in this dissertation through the TPB and HBM frameworks. This situation is further worsened by limited access to mental health services, resulting in high out-of-pocket expenses that only a few can afford (Adeloye, et al., 2019; Kerwin, et al., 2022), leading to hesitancy and delay in seeking medical help coupled with the experience of poor health outcomes.

Although the number of people with dementia is increasing more rapidly in LMICs and despite the recommendations of WHO (2012) that countries adopt a public health approach to address the needs of people with dementia, their caregivers and families, socio-economic disparities in Nigeria and other SSA countries restrict access to proper diagnostics, management, and screening tools for dementia (Kerwin, et al., 2022; Mwendwa, et al., 2022). Even when proper diagnosis of dementia can be made, many Nigerian patients and their families usually seek a favorable prognosis rather than an accurate one, driven by their general optimism and cultural inclination to avoid negative forecasts. This prevalent optimism may result in some medical professionals hesitating to predict negative health outcomes openly (Oji, et al., 2022).

Dementia care is facing additional challenges in Africa including Nigeria due to globalisation, rapid socio-economic changes and gradual but continuous decline in the built-in informal care system such as multigenerational and extended family structures, which have traditionally been the foundation of dementia care. Consequently, there is a

pressing need for the continent to develop robust alternative strategies within the formal healthcare sector, leveraging global advancements in the preventive, curative, rehabilitative and palliative care of dementia (Akinyemi, et al., 2022).

Although people with dementia and their caregivers possess the same human rights as any other individual, it is widely acknowledged that they often face denial of their basic rights both in the community and in care facilities. In SSA for example, there is a significant lack of ethical, social, and legal protection for people with dementia. People with dementia are frequently not part of decision-making processes, and their care preferences and desires are often disregarded and their perspective often overlooked or ignored (Guerchet, et al., 2017).

Taken together, these findings indicate that dementia knowledge in Nigeria and other SSA contexts is not merely a matter of information deficit but is embedded within cultural beliefs, structural constraints, and health system limitations. This underscores the need to examine how professional knowledge interacts with stigma, perceived behavioural control, and institutional realities—issues that form the analytical focus of the present study.

1.5 Dementia Care in the Family

As the global population ages, the prevalence of dementia is expected to rise, making it an increasingly critical public health issue. For families, the journey of caring for a loved one with dementia can be both rewarding and overwhelming, requiring significant emotional, physical, and financial resources. This section delves into the multifaceted role families play in dementia care, exploring the unique challenges they face, their coping strategies and the motivating factors that enhance their caregiving. Through understanding and addressing these aspects, families can be better supported in providing compassionate and effective care for their loved ones with dementia.

Apparently, relatives becoming caregivers of family members is getting more significance, making family caregivers the cornerstone of future care. Family caregivers assist with various activities, including household chores, transportation, practical help, companionship, and emotional support (Bernardes, 2002; Steinfeldt, et al., 2021; Engel, et al., 2022). Therefore, it is important to consider how these caregivers handle the new life circumstances, which involve both practical and emotional challenges, especially in

the context of dementia. Taking on the role of a family caregiver involves significant personal impacts, often resulting in intertwined changing roles, encountering a variety of new tasks and challenges as the dementia progresses.

The family caregiver enters into an unfamiliar territory that might require the reshaping of the caregiver's life trajectory (Steenfeldt, et al., 2021). Though supporting a relative with dementia can be rewarding, it can lead to poor physical and mental health resulting in high level of stress, depression and anxiety because of its demanding nature. Family caregivers often forgo leisure or health-promoting activities, neglecting their own health, which escalates the negative health effects (Engel, et al., 2022).

This is also the case in SSA countries where the majority of the people living with dementia live at home with mostly female adult relatives taking care of them. Hence, caring for people with dementia is the greatest challenge in SSA including Nigeria, where homecare is the standard practice due to cultural expectations related to caring for older adults (Mwendwa, et al., 2022; Ogunniyi, 2018; Nwakasi, et al., 2021). Currently, there is scarcity of formal long-term care facilities like nursing homes and even where such facilities are available, accessible, and affordable, using them is culturally unacceptable. Families that use the limited formal long-term care facilities available in Nigeria are generally disapproved of and criticised (Nwakasi, et al., 2021).

However, assuming full-time responsibility for caring for a person with dementia is a demanding and burdensome task, that can have health, psychological, emotional and social consequences for the caregiver (Steenfeldt, et al., 2021; Mwendwa, et al., 2022; Ogunniyi, 2018). Successively, the family dynamics change, with the caregiver becoming increasingly socially isolated, while also experiencing the grief of losing a loved one (Mwendwa, et al., 2022; Ogunniyi, 2018).

The full-time responsibility of caring for someone with dementia often drains the caregiver's energy, leaving them unable to attend to their own needs, which can negatively impact their health and well-being and that of the care recipient (Steenfeldt, et al., 2021; Mwendwa, et al., 2022; Engel, et al., 2022). As dementia advances, the caregivers' responsibilities increase, extending beyond instrumental activities of daily living (e.g., household, financial, and social tasks) to personal care and constant supervision. Caregiver burden and strain rises as the dependency and care needs of the individual with

dementia increases and becomes more challenging (Mwendwa, et al., 2022; Engel, et al., 2022).

Handling this situation alone can be overwhelming, but sharing the caregiving task with other family members and friends could help reduce the strain. Older caregivers, those with low socio-economic status, and individuals with limited support networks tend to experience worse caregiver strain (Steenfeldt, et al., 2021; Mwendwa, et al., 2022; Ogunniyi, 2018; Engel, et al., 2022). Therefore, there is a need for caregivers to build social contacts with other dementia caregivers to get more knowledge about dementia and its effects. There is also an increasing policy emphasis on supporting informal caregivers in their roles. Such society support in daily caregiving will help procure some respite for caregivers to enable them take care of themselves and also to help them fulfil their caregiving role effectively (Steenfeldt, et al., 2021; Engel, et al., 2022).

Multigenerational living arrangement, where many family members live together and collectively attend to the needs of the elderly represents the major measure to reduce caregiver strain in some SSA countries including Nigeria (Ogunniyi, 2018). However, this is no more the case as the extended family system, which previously provided support, has been weakened by factors such as unemployment, underemployment, economic activities, and rural-to-urban migration. Additionally, the emigration of the working class to western countries has further reduced this family support network. As a result, individuals with dementia receive inadequate care at home (Ogunniyi, 2018; Nwakasi, et al., 2021).

Furthermore, some families in SSA are faced with economic hardship and financial strain due to extra expenses in caring for people living with dementia, such as transportation to healthcare facilities, medication, and other necessary supplies, while managing various family demands. The economic burden is intensified by the duration and severity of the disease, along with the family's socio-economic status (Nwakasi, et al., 2021). The professional development and earning potential of most caregivers are adversely affected due to their full-time job as informal caregivers. Many other caregivers reduce their employment or other income-generating activities to focus on caregiving, resulting in insufficient funds to attend to basic needs and essential services. Some caregivers incur additional costs by hiring caregivers and making use of private healthcare services, which are more expensive than public options (Mwendwa, et al., 2022).

Despite the challenges and negative changes experienced by family caregivers, some also describe positive outcomes, noting that providing informal care brings them closer to the care recipient. Such positive aspects of caregiving are described as the benefits of caregiving itself (e.g., satisfaction, emotional rewards, personal growth) and the dynamics between the caregiver and the person with dementia (e.g., improved relationship, reciprocity, and fulfilling a sense of duty). These positive aspects are closely tied to caregivers' motivations, often driven by the desire to keep the person with dementia at home for as long as possible and avoid formal care. Other motivational factors are the feeling of obligation to become caregiver, social pressure and the need to meet societal expectations (Engel, et al., 2022; Nwakasi, et al., 2021).

Additionally, in Nigeria, although caring for a person with dementia can be challenging, caregivers seldom seek external or professional help probably due to financial constraint, the unacceptability of formal long-term care, and the stigma associated with dementia (Nwakasi, et al., 2021). Moreover, some people embraced the caregiver role to protect their relatives from the negative attitudes of outsiders and from community stigma given that some dementia symptoms are seen as embarrassing and damaging to a person's reputation and dignity. Such protective practice hinders caregivers to seek specialised support that could help with caregiving and managing the severe and life-threatening progression of dementia (Mwendwa, et al., 2022; Nwakasi, et al., 2021).

Some family members may distance themselves from relatives with dementia in their effort to protect their social relationships because of public pejorative views of families with dementia that can even result in refusal to marry into such families. Such attitude exacerbates the burden of dementia caregiving and diminishes the quality of care for the person with dementia. Effective caregiving requires access to a combination of family support, community-based informal support, and formal government support (Nwakasi, et al., 2021).

From a family science perspective, this analysis underscores that dementia is fundamentally a family phenomenon. The condition reorganises family roles, redistributes emotional labour, and redefines intergenerational relationships. Understanding nurses' knowledge of dementia and their attitudes toward people living with the condition therefore requires attention to the family context in which care is embedded.

2 THEORETICAL FRAMEWORK AND BEST PRACTICES IN DEMENTIA CARE

Dementia care is shaped not only by clinical knowledge but also by social norms, cultural interpretations, and perceived behavioural constraints. To examine the interplay between knowledge, attitudes, and dementia care practice in Igboland, this study draws on three complementary theoretical frameworks: Social Stigma Theory, the Theory of Planned Behaviour (TPB), and the Health Belief Model (HBM).

Together, these frameworks enable a multi-level analysis of how socially constructed meanings, individual beliefs, and perceived control mechanisms interact to influence professional behaviour toward people living with dementia.

2.1 The Social Stigma Theory

2.1.1 Historical Roots and Definitions of Stigma

The term stigma originated from the Greeks and was used to describe physical marks meant to reveal something negative and abnormal about a person's moral character. These marks, often cut or burned into the skin, signified that the bearer was a slave, criminal, or traitor—someone tainted and ritually impure, to be shunned, particularly in public (Goffman, 1963; Goffman, 2006). Stigma can be described as the connection between an attribute and a stereotype, with emphasis that an attribute is not inherently positive or negative. Its significance depends on the particular stereotype it is linked to (Kusow, 2004; Goffman, 2006).

Therefore, stigma is defined as a characteristic, conduct, or reputation that carries social discredit in a specific manner, tarnishing one's image and relegating individuals associated with it to the margins of society (Goffman, 1963). In other words, stigma, in its true sense, refers to a mark, condition, or status that is regarded with devaluation (Pescosolido & Martin, 2015).

According to Goffman (1963) the term stigma and its related concepts reflect a dual perspective: does the stigmatised person believe their difference is already known or immediately obvious to others, or do they assume it is neither known nor easily noticeable? In the first instance, the individual faces the challenges of being discredited and in the second, they deal with being discreditable. Although these are distinct situations, a stigmatised person often experiences both. Goffman identifies three broad

types of stigma namely: physical deformities or bodily "abominations", character flaws such as weak will, unnatural passions, or dishonesty, often linked to issues like mental illness, addiction, imprisonment, or radical behaviours and tribal stigmas associated with race, nationality, and religion, which can be passed down through generations and affect entire families (Goffman, 1963). Thus, making stigma a social and cultural process.

2.1.2 Stigmatisation as a Social and Cultural Process

Types of Stigma and their social stigmatisation operates as a relational and culturally embedded process in which difference is identified, labelled, stereotyped, and linked to social devaluation and discrimination (Pescosolido & Martin, 2015; Scambler, 2009; Subu, et al., 2021). Rather than residing in the individual alone, stigma emerges within social interactions and is sustained by broader structural and cultural systems that define what is considered normal or deviant.

Stigmatisation is a socially and culturally constructed process in which an individual is initially recognised as being different and subsequently marginalised. The process of stigmatisation involves identifying and labeling differences, formation of negative stereotypes and attributes resulting in prejudice and discriminating behaviour towards the stigmatised (Roozen, et al., 2020; Pescosolido & Martin, 2015; Scambler, 2009; Subu, et al., 2021). However, stigmatisation is inherently linked to key sociological issues, as it takes place exclusively through social interactions. While individuals may expect exclusion or rejection, these experiences become real only when they occur in social settings (Pescosolido & Martin, 2015; Aranda, et al., 2023).

Additionally, stigmas are continuously shaped and reshaped by specific cultural contexts, including time and place, reflecting the divisions within a society at any given moment (Pescosolido & Martin, 2015; Subu, et al., 2021). Stigmatisation denies those stigmatised, for example individuals with mental illness and cognitive impairment their full dignity and right of participation in society by impairing social support and access to treatment opportunities. This might be because of misconceptions, harmful stereotypes, and negative attitudes toward mental illness from the public and professionals that can manifest through both individual and institutional discrimination (Armiyau, 2015; Herrmann, et al., 2018; Scambler, 2009). This means that stigma is primarily a social phenomenon grounded in relationships and influenced by societal culture and structure.

Therefore, addressing and transforming it must also involve social relationships as well as altering the structures that shape those relationships (Pescosolido & Martin, 2015).

Stigma is a unique and harmful form of social categorisation, often involving generalising from a single experience. Instead of being treated as individuals, people are grouped categorically and devalued in the process. Categorising individuals rather than focusing on specific traits leads to a sense that stigmatised people are fundamentally different, increasing psychological and social distance. This perception results in stigma becoming the dominant attribute defining the person. Other qualities are overlooked unless they align with the stereotype. As a form of negative stereotyping, stigma diminishes positive traits and erodes the identity of those affected. This categorisation, described as "discordance with personal attributes," often leads to stigmatised individuals being perceived as lacking qualities such as intelligence, attractiveness, or social status (Coleman, 2006).

Thus, stigma can be seen as a global issue that impacts individuals' illness journeys, treatment experiences, access to opportunities, quality of life, and recovery outcomes (Subu, et al., 2021). Stigma not only exacerbates the experience of illness but also heightens the feeling that life is unpredictable, perilous, and unsafe. Stigmatising individuals is not merely a reaction to perceived sociological or cultural difference, it can also be a tactical response to perceived threats, actual dangers, and the fear of the unknown. For those who are stigmatised, it adds to their suffering, while for those who stigmatise, it appears to be an effective and instinctive reaction for self-preservation and psychological defense, as well as from an existential and moral standpoint of feeling threatened (Yang, et al., 2007).

2.1.3 Implications

Mental health stigma refers to the shame, social disapproval, or discrediting of individuals with mental health conditions. Several dimensions of this stigma have been identified, including self-stigma, public stigma, professional stigma, and institutional stigma. Self-stigma, or internalised stigma, involves negative attitudes an individual hold toward their own mental illness. It is linked to poor outcomes like avoiding treatment, feeling disempowered, lower self-confidence, and a diminished quality of life. Public stigma encompasses the negative attitudes held by society towards those with mental illness, often rooted in misconceptions, fear, anger, stereotype and prejudice (Corrigan &

Watson, 2002; Subu, et al., 2021; Şamar, et al, 2023; Putland & Brookes, 2024; Young, et al., 2019).

Professional stigma arises when healthcare providers hold stigmatising views about their patients, mostly as a result of fear or misconceptions regarding the causes and symptoms of mental illness. It can also occur when professionals themselves face stigma from the public or other healthcare workers due to their association with stigmatised individuals. This type of stigma is particularly concerning because it can influence the quality of care and treatment given to individuals with mental illness, impacting their overall wellbeing and recovery (Putland & Brookes, 2024; Şamar, et al, 2023).

Institutional stigma, on the other hand, involves an organisation's policies or culture that harbour negative attitudes and beliefs toward stigmatised individuals, such as those with mental health issues, including dementia (Pescosolido & Martin, 2015; Putland & Brookes, 2024). This stigma can be further entrenched by legal frameworks, public policies, and professional practices, becoming deeply rooted in society.

These distinct but interrelated forms of stigma are particularly relevant in healthcare contexts. Professional and institutional stigma may subtly shape clinical judgement, communication patterns, and care decisions, especially in conditions such as dementia where symptoms are socially visible and culturally interpreted. Understanding these layers of stigma is therefore essential for analysing nurses' attitudes and behavioural intentions toward people living with dementia in Igboland.

2.1.4 The Impact of Stigma on Dementia

Due to lack of awareness and understanding about dementia, individuals affected by this condition along with their families, friends, and healthcare providers encounter stigma, discrimination, or exclusion from society (Spittel, et al., 2021). Dementia stigma has significant consequences for both individuals with the condition and society at large. It can induce feelings of shame in patients and their families, discouraging them from seeking timely professional care or participating in research. Additionally, it adversely affects healthcare service design and delivery, influencing funding decisions and frontline care. Consequently, dementia stigma reduces the quality of life and future prospects for those affected, while also fostering negative and often inaccurate public perceptions of the syndrome (Putland & Brookes, 2024; Young, et al., 2019). Resulting in people with

cognitive disorders including dementia being frequently confined indoors, restrained with chains or subjected to physical abuse (Spittel, et al., 2021).

Moreover, visual (re)presentations of people with dementia can project stigma sometimes, in that images of people with dementia emphasise the symptoms of dementia over the individual. For example, people may be projected with a hand on their forehead and a pained expression, highlighting suffering, passivity and confusion rather than the person. Confusion and memory loss are often shown through blank or fearful expressions. Images often represent memory loss by showing incomplete tasks or dangerous behaviours, like leaving appliances on or doors open, associating dementia with danger, not through symptoms but by the economic burden. This abstraction risks dehumanising individuals by focusing on memory loss, danger, and suffering instead of the person as an individual (Putland & Brookes, 2024).

Addressing dementia stigma could offer several benefits, such as earlier diagnoses, better quality care, improved public attitudes towards those with dementia, and reduced societal misconceptions about the syndrome. A key way to understand and challenge dementia stigma is by examining and reshaping the societal discourses used to discuss the condition (Putland & Brookes, 2024). Furthermore, social interaction between people with dementia, their caregivers, healthcare practitioners and others can help reduce stigma. Educational sessions can offer dual benefits by both sharing knowledge and fostering contact between individuals with dementia and the wider community (Young, et al., 2019).

Raising awareness and educating healthcare providers and cognitive impaired health service users could greatly lessen the impact of stigma. Moreover, healthcare professionals can offer crucial assistance to families by understanding the dynamics of inclusion and exclusion. Equipping families with strategies for managing information flow can as well alleviate stigma levels (Gibbons & Birks, 2016).

2.2 The Theory of Planned Behaviour (TPB)

2.2.1 The core Concepts and Beliefs of TPB

The theory of planned behaviour builds on the theory of reasoned action, emphasising the role of an individual's intention in predicting behaviour. Intentions reflect the motivational drive to perform an action, indicating the effort and determination a

person is willing to invest. Generally, stronger intentions increase the likelihood of the behaviour occurring (Ajzen, 1991; Conner & Sparks, 2005). The theory explains that human behaviour is influenced by three types of beliefs: **behavioural beliefs** (expectations about outcomes and their value), **normative beliefs** (perceived social expectations and motivation to comply), and **control beliefs** (factors that may help or hinder behaviour and their perceived influence). These beliefs shape attitudes, social pressure (subjective norms), and perceived control, which together form the intention to act (Ajzen, 2006; Adams, et al., 2022; Jang & Ahn, 2023; Kodagoda Gamage, et al., 2024).

The TPB highlights the thoughtful and deliberate nature of human actions, suggesting that humans are rational beings who use available information to guide their actions, considering the potential consequences before deciding to or not to act. It underscores the central role of intentions and beliefs in shaping intentions and behaviour. Behavioural, normative, and control beliefs provide the information individuals use to make decisions about their actions (Ajzen & Manstead, 2007; Gunawan, et al., 2022). The TPB also provides valuable insights for designing interventions aimed at changing intentions and behaviours. It identifies key factors influencing behaviour, enabling the development of targeted strategies. These interventions can be assessed by examining their impact on beliefs, attitudes, subjective norms, perceived control, intentions, and ultimately, behaviour (Ajzen & Manstead, 2007).

In the context of dementia care, TPB provides a structured framework for examining how nurses' knowledge (behavioural beliefs), perceived social expectations (normative beliefs), and perceived clinical competence (control beliefs) may interact to shape intentions and actual care practices.

2.2.2 TPB in Health-Related Behaviours

The TPB has been extensively utilised to predict and modify health-related behaviours, including seeking assistance (Adams, et al., 2023). According to the theory, a nurse's positive attitude is closely linked to their good intentions (Gunawan, et al., 2022). The TPB suggests that health-related actions, like engaging in physical exercise, are influenced by intentions and perceived behavioural control, which predict the likelihood of performing the behaviour. Intentions are shaped by attitudes toward the behaviour, perceived social pressure and perceived control over the action.

These factors are linked to beliefs about the behaviour's outcomes, social expectations, and control factors. Normative beliefs represent the perceived expectations of significant individuals or groups, such as family, friends, colleagues, and healthcare providers. Combined with the individual's motivation to meet these expectations, normative beliefs shape the subjective norm regarding the behaviour. Control beliefs, on the other hand, involve perceptions of factors that may either enable or hinder the performance of the behaviour (Ajzen & Manstead, 2007).

In line with self-stigma, Ajzen's TPB provides a key framework for understanding the factors influencing help-seeking for mental illness and early dementia diagnosis (Damghanian & Alijanzadeh, 2018; Devoy & Simpson, 2016; Adams, et al., 2021). The Theory identifies attitudes shaped by knowledge and experience, subjective norms reflecting social pressure, and perceived behavioural control over the action as key predictors of intention to seek help (Devoy & Simpson, 2016; Adams, et al., 2021).

2.2.3 Understanding Help-Seeking Practice and Dementia Management Through TPB

According to the TPB, help-seeking intentions for early dementia diagnosis are influenced by knowledge and attitude about the condition, its symptoms, and available interventions, as well as support from family, friends, peers, and healthcare professionals. Greater awareness and social encouragement increase the likelihood of seeking help. However, barriers such as stigma, fear, lack of knowledge about where to seek help, and challenges in accessing services highlight the need for more education and improved access to dementia care (Devoy & Simpson, 2016).

The World Alzheimer's Report highlights diagnosis as a human right and stresses the importance of disclosure, despite dementia being highly feared by older adults. Early diagnosis offers benefits such as understanding the consequences of alterable lifestyle factors, enabling effective medical management, and reducing caregiver stress and anxiety. It also helps caregivers adapt, plan for the future, and develop coping skills through targeted support that aligns with patient-centered care principles (2011, cit. in Devoy & Simpson, 2016; Foy, et al., 2007). Furthermore, early dementia care should involve compassionate and clear communication of the diagnosis, prognosis, and care options to patients and caregivers. Moreover, from the ethical point of view, individuals

have the right to know their diagnosis, and many value this information for validating their concerns and making sense of their condition (Foy, et al., 2007).

However, the practice of disclosure among healthcare professionals differs widely. Some share the diagnosis, others do not, yet some others disclose the dementia diagnosis only to the caregivers, rather than persons with dementia. A key factor influencing behaviour is professionals' motivation or intention to disclose (Foy, et al., 2007). The Theory of Planned Behaviour can be used to explain this variation in intentions, with subjective norms like incorporating team work being a key factor. Other influencing factors are self-efficacy like the ability to use specific terminology, perceived behavioural control and attitudes relating to outcomes for the patients and professional like poor recall of events by people with dementia.

Furthermore, some healthcare professionals lack comprehensive knowledge, skills and the confidence to meet the needs of people with dementia (Martin, et al., 2020). Effective dementia disclosure involves a series of interconnected steps and contributions from a multi-disciplinary team. Therefore, interventions focusing on defining team roles and enhancing self-efficacy could be effective in shaping intentions and attitude to disclose dementia diagnosis (Foy, et al., 2007).

The complexity involved in caring for individuals with dementia could result in an overall decline in the confidence levels of nursing and healthcare personnel. Nonetheless, research indicates that their confidence in providing dementia care could be enhanced through training programmes focusing on dementia management, caregiving, and policies (Chen, et al., 2023). This corresponds with the findings of Annear (2020), that a solid understanding of dementia holds the promise of enhancing care practices and patient outcomes within institutional environments.

TPB as explained herein implies the need to alter the care attitude towards people with dementia and the health seeking behaviour of people with dementia through raising awareness and knowledge of the disease. Following in the line of TPB, cognitive behavioural therapy can be adopted to enhance the concentration and orientation of people with dementia on issues at hand and finding their way in the positions they find themselves. This can be done by using large calendars, using pictures on the doors to differentiate rooms or posting reminders as orientation aid (Iguodala-Cole, et al., 2022).

2.3 Health Belief Model (HBM)

2.3.1 Origins and Intent of the HBM

The Health Belief Model (HBM) is a psychological framework developed to explain and predict health-related behaviours by focusing on individual beliefs and attitudes. Initially conceptualised in the 1950s by social psychologists at the U.S. Public Health Service, the model sought to address the reasons behind the low participation rates in tuberculosis screening programmes. It posits that people's decisions to engage or not to engage in preventive health actions, such as adopting healthy habits or seeking medical interventions, are influenced by their perceptions of health threats and the benefits versus barriers of taking action (Janz & Becker, 1984; Champion & Skinner, 2008; Nasir & Suliman, 2022; Matin, et al., 2020).

Central to the HBM are key constructs that include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. These constructs collectively shape an individual's motivation and capacity to engage in health-promoting behaviours (Nasir & Suliman, 2022; Matin, et al., 2020; Janz & Becker, 1984; Champion & Skinner, 2008). By providing a structured lens through which to understand the complex interplay of personal beliefs, the HBM has been widely applied in public health initiatives, ranging from vaccination campaigns to chronic disease management. This section explores the foundational elements of the Health Belief Model and its practical applications in shaping health behaviour interventions.

For individuals to act, they must be psychologically prepared, and conditions must be favourable. Psychological readiness involves factors such as knowledge, past experiences, emotions, and beliefs. Hochbaum (1958) found that a person's decision to undergo a screening test is influenced by their belief in the likelihood of contracting or already having the disease and the perceived benefits of early diagnosis. This decision is shaped by three key factors: psychological readiness, situational influences, and environmental opportunities for action. The HBM emphasises the individual's perspective, highlighting three main factors: readiness to act based on perceived vulnerability and severity of a health condition, evaluation of the action's benefits versus its barriers or costs, and the presence of a cue to action, such as internal signals or external influences to trigger the behaviour (Maiman & Becker, 1974).

The HBM is rooted in psychological and behavioural theories suggesting that behaviour is influenced by two main factors: the value placed on achieving a goal and the belief that a specific action will accomplish it. In the context of health, these translate to the desire to avoid or recover from illness and the belief that a particular health action can effectively prevent or alleviate the condition (Janz & Becker, 1984). It suggests the likelihood of individuals engaging in health-related actions if they feel vulnerable to a serious condition, believe the action will be effective, and see its benefits as outweighing the burden and costs (Champion & Skinner, 2008; Orji, et al., 2012; Kim, et al., 2014; Abraham & Sheeran, 2015; Akyol, et al., 2022). This perceived threat can trigger behaviour changes, motivate health goals, and boost self-efficacy (Akyol, et al., 2022).

2.3.2 Understanding Health-Related Behaviour Through HBM

Changing long-term habits like diet, exercise, and smoking is far more challenging than adopting one-time actions like immunisations or screenings. Success requires confidence in one's ability to make lifestyle changes. According to the HBM, individuals need an incentive to act, perceive their current behaviour as risky, believe the change will bring meaningful benefits at a reasonable cost, and feel capable (self-efficacious) of making the change (Rosenstock, et al., 1988). The connection between health beliefs and behaviours was initially grounded in Lewin's concept of valence, which makes behaviours more or less appealing. This idea developed into an expectancy-value model, where individuals assess events based on their likelihood and perceived outcomes. The model, initially focused on preventive actions and was later expanded to explain health service use and adherence to medical advice (1951, cit. in Abraham & Sheeran, 2015).

The HBM is one of the most widely applied frameworks for understanding health-related behaviours and guiding health promotion efforts. It emphasises that understanding the beliefs and motivations driving behaviours can aid in designing interventions aimed at promoting positive health practices (Kim, et al., 2014). The perceptions and attitudes of an individual or society regarding health and illness influence their lifestyle choices and utilisation of healthcare services. The HBM emphasises that people's perceptions generate motivation, driving behavioural change (Matin, et al., 2020). The prevailing belief is that individuals require assistance and education to change their health behaviours. Therefore, it is necessary that healthcare professionals have knowledge of the

specific health-seeking behaviour of such group of people in order to facilitate a positive attitude toward health-seeking (Iyalomhe & Iyalomhe, 2012).

Beliefs shape the desirability of behaviours, leading to the expectancy-value model, where individuals evaluate the likelihood and value of outcomes to guide their actions. Beliefs are essential in linking social influences to behaviour. Although they are long-lasting traits, beliefs can be modified and may differ among individuals from similar backgrounds. Influencing behaviour-related beliefs through persuasive methods can lead to behaviour change, providing a basis for evidence-based health education (Abraham & Sheeran, 2015).

Applied to dementia care in Igboland, the HBM offers a lens for examining how nurses' perceptions of severity, perceived barriers (such as limited resources or stigma), and perceived self-efficacy may influence their engagement in proactive dementia care. The model thus complements TPB by focusing more explicitly on perceived health threat and cost–benefit evaluations underlying caregiving behaviour.

2.3.3 Dementia Risk Factors and Prevention within the HBM Framework

The rising global population has led to an increase in dementia cases, with about 10 million new diagnosis annually (WHO, 2018). Over the past decades, significant, but modifiable risk factors contributing to dementia have been identified. Such factors include obesity, excessive use of alcohol and tobacco, social, cognitive and physical inactivity, not well managed chronic diseases like hypertension and diabetes. Reducing exposure to these modifiable risk factors can encourage healthier lifestyle choices, potentially reducing dementia risk (Akyol, et al., 2022; Livingston, et al., 2020).

Although key risk factors have been identified and awareness has grown, many individuals are still hesitant to adopt the changes needed to mitigate their risk. This could be due to a lack of awareness about the potential for reducing modifiable dementia risk factors. Another major challenge in reducing dementia risk is the misconception that it is an inevitable part of ageing, making it seem less concerning than other diseases (Akyol, et al., 2022; Vrijisen, et al., 2021).

Having adequate knowledge is essential for developing a correct belief system. If individuals perceive diseases like dementia as uncontrollable, they are unlikely to adopt preventive health behaviours. On the other hand, people who are more informed about

dementia and ways to reduce its risks are more likely to adopt healthier behaviours and are readier to undergo screening. This indicates that perceived susceptibility can influence different behaviours in varying ways (Li, et al., 2022; Vrijisen, et al., 2021). Therefore, it is desirable that future dementia prevention education should emphasise its controllability and preventability. Convincing people that dementia can be managed may encourage susceptibility to positively impact healthy behaviours (Akyol, et al., 2022; Vrijisen, et al., 2021).

Healthcare professionals like nurses can play a vital role in raising awareness and educating the public especially descendants of those with dementia about dementia and promoting healthier lifestyles to reduce its prevalence. Understanding people's perceptions and beliefs is essential for encouraging behaviour changes to lower dementia risk (Vrijisen, et al., 2021; Akyol, et al., 2022). Enhancing understanding of dementia and risk reduction not only helps lower dementia risk, but also better equips individuals to manage the dementia-related needs of their parents and other care receivers, benefiting both the caregiver and the person with dementia (Vrijisen, et al., 2021).

2.4 Best Practices in Dementia Care

Providing high-quality care for individuals with dementia requires a thoughtful and informed approach that adapts to the unique needs of the individual with dementia. This section "Best Practices in Dementia Care" explores the most effective strategies and interventions currently in use to enhance the quality of life for those living with dementia. The section will delve into evidence-based practices, innovative care models, and practical tips for caregivers, aiming to equip both professional and family caregivers with the necessary tools to offer compassionate and effective support. By focusing on person-centered care, safety, and the promotion of dignity and independence, I aim to highlight the standards and methods that can make a significant difference in the daily lives of patients with dementia, bearing in mind that it is quite desirable that individuals with dementia should have the opportunity to enjoy a life of fulfilment, self-determination, and respect for their dignity.

2.4.1 Policy Frameworks and Global Action Plans on Dementia

To meet the peculiar needs of individuals with dementia, some high-income countries have introduced policies, plans and strategic frameworks to address the impact

of dementia. Several key issues like defining the problem, involving relevant stakeholders, committing resources, fostering intersectoral collaboration and developing a timeline for implementing the policy and plan have been defined. Priority action areas within these policies and plans have been identified as raising awareness, timely diagnosis, commitment to high-quality continuing care and services, caregiver support, workforce training, prevention, and research (WHO, 2012). This priority action plan makes it essential to dispel myths and stereotypes about dementia among both the general public and health and social care professionals. Providing accurate information about dementia and fostering supportive environments shift the focus to the individual rather than their disability and impairment, which is crucial for combating stigma (WHO, 2021).

To be able to take adequate care of people with dementia, the first priority will be an accurate diagnosis through extensive evaluation of the person. For although some dementia diseases currently have no cure, a lot could be done to improve the life of the individual with dementia and their caregivers. As mentioned earlier, there are various causes of dementia and individuals with dementia exhibit different behaviours and symptoms at different times, therefore understanding the cause and progression of the disease is very essential to appropriately address the daily challenges and to plan for the future.

This is essential because the challenges faced by individuals and families are influenced by different factors like the personality of those involved, their location and the particular type and stage of dementia (Mace & Rabins, 2006; Kim & Park, 2017; Tible, et al., 2017). Moreover, a treatable condition can be managed effectively, if identified early enough, but can lead to irreversible change if neglected. Furthermore, knowing what to expect can alleviate caregivers' fears and help them to better support the person with dementia (Mace & Rabins, 2006).

2.4.2 Upholding Dignity, Autonomy, and Self-Determination

In the context of dementia care, respecting patients' dignity and autonomy is essential, despite the perception that cognitive impairments limit their self-determination. Research by Lee, et al. (2020) emphasises that even in advanced stages of dementia, individuals can express emotions, highlighting the need to address their psychological needs. To meet this need, it is imperative to adopt a person-centered approach to caregiving that views the complete individual from various perspectives (Steele, 2010).

Person-centred care (PCC), also known as patient-centered care emphasises understanding the individual beyond their condition and placing them at the heart of their own care. This approach focuses on supporting, empowering, and involving them in their care through shared decision-making, open communication, and mutual respect. As such, it is regarded as a humanistic, respectful, and ethically sound model of care (Mitchell & Agnelli, 2015; Bökberg, et al., 2014; Martin, et al., 2020; Kim & Park, 2017; Manthorpe & Samsi, 2016; Wu, et al., 2020). It involves aligning healthcare with the individual's values and preferences, ensuring these guides all aspects of care to support their realistic health and life goals (Lee, et al., 2020; Martin, et al., 2020; Manthorpe & Samsi, 2016; Wu, et al., 2020).

The PCC approach addresses unmet needs, which can underlie behavioural or neuropsychiatric symptoms in people with dementia. It emphasises understanding these needs, prioritising well-being, fostering meaningful activities, and strengthening relationships between caregivers and individuals with dementia (Kim & Park, 2017; Manthorpe & Samsi, 2016; Wu, et al., 2020). Person-centered dementia care involves close interaction between caregivers and individuals receiving care, aiming to preserve and promote their current abilities, health, well-being, and dignity. Caregivers are encouraged to show respect and create a calm, positive, and supportive environment during these interactions (Wu, et al., 2020; Welling, 2004).

Effectively engaging with individuals living with dementia is crucial for delivering person-centred care. The first step in this process is providing comprehensive training to dementia caregivers, ensuring they fully understand the principles of PCC (Seetharaman, et al., 2022). This highlights the essence of a skilled workforce for effective person-centered dementia care. More educated and experienced caregivers are found to be more likely to adopt a person-centred approach (Wu, et al., 2020). Ongoing education plays a vital role in helping caregivers remain engaged in their work and respond appropriately to care recipients. Training that focuses on communication, including both verbal and nonverbal interaction, is particularly valuable for fostering meaningful and effective caregiver - care receiver interactions (Wu, et al., 2020; Seetharaman, et al., 2022). Furthermore, programmes that not only offer information about the disease but also provide practical support and opportunities for caregivers to share experiences on managing daily challenges are found to be effective (Tible, et al., 2017).

Maintaining stability and consistency in the caregiver-care receiver relationship is crucial in delivering PCC, because frequent changes in contact persons, activities and places can confuse people with dementia more. Therefore, there is need for consistency, as this will lead to a better understanding of the needs and preferences of the person and help build trust and relationship (Seetharaman, et al., 2022; Wu, et al., 2020). Moreover, familiar cues such as specific furniture, wall colors or signs should be used to enable people with varying cognitive abilities in recognising spaces, especially those residing in long term care facilities. However, it's important to limit the number of cues to prevent visual overload (Seetharaman, et al., 2022).

Music therapy is another intervention that has been applied in delivering PCC. Music therapy aims at helping individuals manage unpleasant emotions by providing musical stimulation, while also allowing them to express their current feelings through music. The research of Lee, et al. (2020) observed that music stimulates various brain regions, aiding cognitive rehabilitation. Tibbe, et al. (2017) also established that combining biography related music with sensory stimulation were beneficial in reducing agitation in people with dementia.

While international best practices emphasise person-centred care, early diagnosis, workforce training, and stigma reduction, their implementation depends heavily on the knowledge base, attitudes, and perceived behavioural control of frontline healthcare professionals. In contexts such as Igboland, where structural constraints and cultural interpretations of dementia intersect, the translation of best-practice principles into everyday nursing practice may be uneven. This highlights the importance of empirically examining nurses' knowledge and attitudes as foundational determinants of care quality.

2.4.3 Managing Behavioural and Psychological Symptoms of Dementia (BPSD)

Considering that challenging behaviours in people with dementia can be an expression of unmet and misunderstood needs, caregivers should seek to identify the underlying causes of these behaviours and attempt to address the needs in order to satisfy them (Bartholomeyczik & Halek, 2017; Welling, 2004). Structured models, such as the NDB (Need-Driven Dementia-Compromised Behaviour Model) or the STI (Serial Trial Intervention model) are well-suited for this purpose. The STI model involves a systematic sequence of staged assessments and interventions, combining three key components:

recognising a behavioural change, followed by specific set of assessments, and specific sequence of interventions (Fischer, et al., 2008).

The NDB helps to interpret BPSD (**Behavioural and Psychological Symptoms of Dementia**) as a maladaptive response to unmet needs. According to this model, behavioural analysis in nursing care can identify the patient's immediate needs and uncover their underlying causes. Certain factors contributing to BPSD, such as pain, hunger, or thirst, can often be addressed quickly (Tible, et al., 2017).

Another important aspect of person-centered dementia care is ensuring continuity and integrating appropriate activities, as well as opportunities for experiences and participation in daily life, to promote and maintain their autonomy, independence, and quality of life. In this regard, orientation to biography and memory can be very helpful. It is important to ensure that individuals with dementia are neither over- nor under-challenged, as this could be experienced as a stressor (Bartholomeyczik & Halek, 2017; Romero & Geschke, 2022; Welling, 2004, Wu, et al., 2020; Tible, et al., 2017). An important assumption in memory care is that remembering helps strengthen the self-identity of people with dementia, providing a sense of security, connection, and belonging, which might otherwise easily slip away (Bartholomeyczik & Halek, 2017; Lee, et al., 2020).

The focus should be on the remaining strengths of the individual, such as what the person with dementia can still do and what brings them joy, to motivate and encourage them. Taking time, along with clear rules and routines, are also important aspects that provide security and stability while helping to avoid fear and stress. Discussing past events and involvement in household activities can serve as valuable points of connection when interacting with people with dementia (BMG, 2022; Lee, et al., 2020; Welling, 2004).

Taken together, the socio-cultural context of Igboland, the structural realities of the Nigerian healthcare system, the historical and clinical conceptualisation of dementia, and the theoretical perspectives of Social Stigma Theory, TPB, and HBM provide a multi-layered analytical foundation for this study. Dementia care emerges not merely as a clinical task but as a socially embedded practice shaped by knowledge structures, cultural narratives, perceived control, and normative expectations. Against this backdrop, examining nurses' knowledge of dementia and their attitudes toward people living with

the condition becomes essential for understanding how global best-practice principles are interpreted, negotiated, and enacted within local care environments.

2.5 Summary and Implications

This chapter has explored three key theoretical frameworks that underpin the foundation for understanding dementia and dementia caregiving. It as well highlighted best practices aligned with these theories.

2.5.1 Summary of Theoretical Frameworks (Stigma, TPB, HBM)

The **Theory of Social Stigma** highlighted the profound impact of societal attitudes, prejudices and stereotypes on the experiences of people with dementia and their caregivers. These factors affect the lives of people with dementia negatively, shaping their identity, relationships, and access to help. Mitigating stigma through education and advocacy improves their quality of life and promotes inclusivity. Best practices combine these insights, advocating for empathetic communication, tailored interventions, and community support.

The **Theory of Planned Behaviour (TPB)** emphasised the role of attitudes, subjective norms, and perceived behavioural control in shaping caregivers' and nurses' intentions and actions, especially in dementia disclosure, diagnostic pathways and professional caregiving. By addressing these factors, interventions can foster proactive, compassionate care.

Finally, the **Health Belief Model (HBM)** further illustrated how individuals' perceptions of severity, risk, benefits, and barriers inform health seeking and preventive behaviours. The model also elucidated how the mentioned factors influence the engagement of individuals in dementia care practices and the implications for dementia risk reduction and early intervention. Encouraging positive perceptions and reducing barriers is essential for effective dementia management.

2.5.2 Importance of Reducing Stigma and Promoting Positive Health Behaviours

At this point, it might be necessary to reiterate that stereotyping or stigmatising is not inherently automatic, but people tend to notice differences when they focus on them, just as they notice similarities when they choose to. Historically, society has recognised

human potential when necessary, overlooking devalued traits. For example, during World War II, gender differences were disregarded as women took on traditionally male roles in the U.S., and racial integration in the armed forces occurred due to the need for more soldiers (Coleman, 2006). This shows that stereotypes about stigmatised individuals can change under certain conditions.

When stigmatised individuals have essential knowledge or expertise, others recognise shared traits or similarities. "Cooperative interdependence" through shared goals can transform perceptions and relationships (Coleman, 2006). Therefore, from the psychological point of view, recognising and prioritising the fundamental similarities rather than focusing on the differences between the stigmatised and the non-stigmatised can mark the beginning of stigma reduction (Coleman, 2006).

Moreover, the TPB theory identifies three key beliefs that guide an individual's behaviour: behavioural, normative, and control beliefs. This study examines the knowledge about dementia and attitudes towards people with dementia among nurses in Igboland of Nigeria. In the context of dementia care, behavioural beliefs and the knowledge about dementia, its symptoms and available interventions might shape attitudes by influencing how nurses perceive the benefits and consequences of adequate dementia assessment and care. Subjective norms like the pressure coming from family, friends, community and relationship with the individual with dementia might affect nurses' normative beliefs about dementia care.

And control beliefs like the availability of resources, skills and opportunities to undertake adequate dementia assessment and care might affect the perceived behavioural control, influencing how nurses assess the internal and external factors that facilitate or hinder their ability to conduct dementia assessment and care. This necessitates increased knowledge and awareness which can lead to more positive health beliefs and attitudes toward reducing dementia risk and increasing help seeking. This can be achieved in Igboland through awareness campaign carried out in health centers, schools, places of worship, villages and village squares with the aim of sensitising and educating individuals about dementia and to encourage them to address their personal risk factors.

Nurses being often the most available and major contact for people seeking health services, it is essential that they are knowledgeable about dementia, how to reduce the risk factors and how to manage the disease. This will enable and empower them to inform and advise the general public and informal dementia caregivers effectively on the topic. Moreover, this will result in the reduction of dementia associated stigma and better

prepare caregivers to adopt a person-centered care model, leading to reduced burden for caregivers and increased quality of care and quality of life for people with dementia.

It is also important to note and to remember that both the individuals with dementia and their families can still experience joy and happiness. Dementia progresses slowly, often leaving the person's ability to enjoy life and social interactions intact. During difficult times, it might help to remember that, regardless of memory loss or unusual behaviour, the person with dementia remains a unique and special human being that can still be loved deeply, even after significant changes and despite being troubled by their current condition (Mace & Rabins, 2006).

People with dementia are adults with their own self-determination and identity and should be viewed and treated as such. They require more time, orientation, involvement, and support rather than disempowerment or making them dependent and incapable. Care should focus more on their strengths and needs, connecting with their memories, abilities, and preferences. This approach can improve and enhance their dignity, autonomy, and quality of life.

2.5.3 Link Between Theoretical Insights and Best Practices

The integration of these theories has shown that dementia is not merely a biomedical condition but also a social and behavioural phenomenon shaped by cultural norms and individual health beliefs. These insights help explain why stigma persists, why some individuals may delay seeking care, and why professionals may feel uncertain in their caregiving roles. Complementing these theoretical perspectives, the review of best practices emphasised the importance of person-centered care, timely diagnosis, professional training, environmental adaptation, and psychosocial interventions such as music therapy and memory orientation. These practices align with global policy frameworks and emphasise dignity, autonomy, and quality of life for people with dementia and their families.

Taken together, the theories and practices reviewed here underscores the importance of reducing stigma, enhancing awareness, and promoting positive health behaviours in dementia care. For nursing practice, the chapter highlighted the need for holistic, evidence-based approaches that support both the person with dementia and their family.

Having established the theoretical frameworks and best practices that inform this study, the following chapter sets out the methodology and methods employed. It outlines the research design, philosophical underpinnings, data collection strategies, and analytical approaches used to explore dementia knowledge and attitude towards dementia care within the study context.

3 METHODOLOGY AND METHOD

This chapter outlines the methodological strategy adopted to investigate nurses' knowledge of dementia and their attitudes toward people living with dementia in Igboland, south-eastern Nigeria. Given the limited empirical research in this socio-cultural context and the complexity of factors potentially shaping dementia care — including knowledge, attitudes, and cultural interpretations — the study required a design capable of capturing both measurable patterns and contextually grounded meanings. Therefore, a sequential explanatory mixed-methods design was employed to examine not only the level of dementia knowledge and attitudes, but also the broader contextual influences shaping them.

Specifically, the study began with a quantitative phase assessing dementia knowledge and attitudes, followed by a qualitative phase designed to explain and contextualise the statistical findings.

The subsequent sections of this chapter detail the research design, population and sampling techniques, data collection instruments, procedures, and methods of data analysis, along with ethical considerations guiding the study. I will begin by presenting the process adopted for the literature review, followed by describing mixed-methods research and discussing the rationale for adopting a mixed-methods approach, with a focus on the sequential explanatory design. Then I will proceed with presenting the details of the research which will include the data collection and analysis methods for both phases. Finally, I will address the issue of ethical conduct, ensuring that both phases of the research adhere to rigorous academic standards. By presenting these elements systematically, the chapter establishes a transparent foundation for the results that will be reported in Chapter Four.

This study is guided by a pragmatic paradigm, which is widely recognised as a coherent philosophical foundation for mixed-methods research (Creswell, 2014; Teddlie & Tashakkori, 2009). Pragmatism prioritises the research problem over strict adherence to a single ontological or epistemological position and allows the researcher to draw flexibly on both quantitative and qualitative strategies as warranted by the research questions. In the context of this study, where dementia knowledge, attitudes, and socio-cultural interpretations intersect, a purely positivist or purely constructivist stance would

have been insufficient. Pragmatism enabled the examination of measurable patterns in knowledge and attitudes while simultaneously exploring the socially constructed meanings shaping nurses' perceptions and practices in Igboland.

Generative AI (ChatGPT, OpenAI) was used as a language-support tool during the drafting of this dissertation. Its use was limited to refining, phrasing and improving clarity of expression. All research design decisions, data collection, analysis, and interpretations were conducted independently by the author.

3.1 Desk work: Literature Search

A structured literature search was conducted using databases such as Scopus, ScienceDirect, and Google Scholar to identify relevant studies on dementia, nursing knowledge, and healthcare in Nigeria. Keywords such as *dementia*, *nurses*, *knowledge*, *healthcare*, and *Nigeria* were used with Boolean operators to enhance search precision. Additionally, theoretical frameworks including the *Health Belief Model*, *Social Stigma Theory*, and the *Theory of Planned Behaviour* were explored to inform the study's conceptual foundation. Moreover, reference lists and citation searches of the selected studies were explored to broaden the search. The study also included books and literatures recommended by my supervisor and a friend.

On **Scopus**, an initial search yielded 777 results, which were narrowed to 236 after applying filters for publication year (2017–2024), subject areas (health professionals, nursing, psychology, and social sciences), and language (English and German). After reviewing titles and abstracts, 35 articles were selected. A **ScienceDirect** search returned 12,692 results, which were filtered by similar criteria and limited to review articles and book chapters, resulting in 532 documents. Following thematic screening, 32 were retained for relevance. Using **Google Scholar**, the search produced 19,300 results, which were refined to 1,890 with filtering. From these, 37 key documents were selected based on relevance to the study focus. In total, the literature review yielded **104 relevant sources** that informed the study's framework and methodology. The initial electronic database searches were conducted between October 2023 and April 2024.

The reviewed literature revealed a complex landscape of dementia care in low- and middle-income countries, particularly Nigeria. Key themes included lack of and poor

awareness among healthcare providers, widespread cultural misconceptions (such as attributing dementia to spiritual causes), and systemic challenges like understaffing and lack of specialised training. Notably, the Igboland region was scarcely represented in existing research, highlighting a significant research gap. Across studies, inadequate knowledge of dementia among nurses was frequently linked to limited training, minimal patient exposure, and weak institutional support. The findings underscored the urgent need for continuous professional development and the integration of dementia-focused education into nursing curricula to improve attitudes and reduce caregiver stress.

To inform the study's framework, key behavioural and social theories were reviewed using the search engine Google Scholar. A search on **Social Stigma Theory** identified two relevant articles. The **Health Belief Model (HBM)** yielded 27 relevant articles, with two selected after title and abstract screening. For the **Theory of Planned Behaviour (TPB)**, an initial search produced 17,500 results, which were narrowed down to one directly relevant article, after filtering and removing duplicates. The search was extended by screening reference lists and cited articles as well as using the names of individuals associated with the mentioned theories like Goffman, Ajzen and Manstead, Janz and Becker.

While the process incorporated systematic principles such as the use of search filters, inclusion/exclusion criteria, title and abstract screening, it does not meet the full criteria of a formal systematic literature review under PRISMA guidelines.

3.2 Research Design: Sequential Explanatory Mixed Method

The research design adopted for this study was a sequential explanatory mixed-methods approach. This design was selected because it allows for the systematic integration of quantitative and qualitative data, thereby enabling a more comprehensive understanding of dementia care in Igboland than could be achieved by either approach alone. The sequential explanatory design involves two distinct phases: the collection and analysis of quantitative data in the first phase, followed by the collection and analysis of qualitative data in the second phase. In the following paragraphs I will elaborate mixed-methods and sequential explanatory approach stating the rationale for choosing this design.

3.2.1 Mixed-Method Research (MMR)

The origin of mixed-methods can be traced back to the late 1980`s or early 1990`s based on the work of researchers from various fields like education, sociology, management and health sciences. Since then mixed-methods design has undergone various stages of development, philosophical debates and methodological discussions as well as expansion into different disciplines (Creswell, 2014; Creswell & Creswell, 2018). It is widely acknowledged that qualitative and quantitative methods each have unique strengths and limitations. Therefore, the importance of mixed-methods builds on the argument that mixed-methods research designs can leverage the complementary strengths of qualitative and quantitative approaches to address their respective weaknesses (Kelle, 2006; Creswell, 2014).

Many different terms have been used by different researchers for this approach such as quantitative and qualitative method, multimethod, mixed methodology, blended research, integrative research, Triangulation and hybrid, but recent studies tend to use the term “mixed-method” (Creswell, 2014; Schreier & Odag, 2010). Moreover, different researchers offer different definitions for mixed-methods. However, they all acknowledge that it involves combining elements of qualitative and quantitative research (Schreier & Odag, 2010). Mixed-methods can be seen both as a methodology and as a method. As a methodology, it incorporates philosophical assumptions that shape the approach to data collection, analysis, and the integration of quantitative and qualitative methods throughout various stages of the research project. As a method, it emphasises the process of gathering, analysing, and combining both quantitative and qualitative data within a single study or across multiple studies (Creamer, 2018).

Therefore, mixed-methods research is described as a study approach that involves combining quantitative and qualitative data collection and analysis within a single study or research programme. This approach goes beyond merely gathering both types of data; it entails integrating, connecting, or blending them at some stage of the research process. The rationale for mixing methods is that neither quantitative nor qualitative approaches alone can fully capture the complexities of a situation. Together, they provide a more comprehensive analysis and effectively complement each other (Creswell, et al., 2004; Creswell, 2010; Creswell, 2014; Halcomb & Hickman, 2015; Almeida, 2018; Schoonenboom & Johnson, 2017; Teddlie & Tashakkori, 2009; Schreier & Odag, 2010; Ivankova & Creswell, 2009; Kelle, 2014).

According to Morse, mixed-method design combines a primary method (core component) with supplementary methods that enhance the core component but lack the scope or completeness for publication in a single study. These supplementary methods may be limited by small sample sizes, insufficient depth, or narrow focus, making them dependent on the core component for context and interpretation (2010). According to this definition, Morse argues that qualitative-qualitative design studies can also be considered as mixed-methods when variations in data types, level of analysis or participant perspectives necessitate distinct handling of the methods. And also, that when one component of the study is foundational and the other supplementary, it constitutes a qualitative mixed-method design (Morse, 2010).

In contrast, other mixed-method researchers postulate that mixed-methods research goes beyond gathering multiple types of qualitative data (e.g., interviews and observations) or quantitative data (e.g., surveys and experiments). Mixed-methods research integrates both qualitative and quantitative data, combining their strengths to provide deeper insights into research problems than either method alone. On the contrary, gathering multiple forms of either qualitative or quantitative data is called multimethod research, not mixed-methods (Creswell, 2015; Halcomb & Hickman, 2015; Schreier & Odag, 2010).

In this research, I desire to draw from the strengths of both quantitative and qualitative approaches to minimise the limitations of both designs. Therefore, for the purpose of this study, I adopt the definition that **mixed-methods research is an approach that combines quantitative and qualitative data, integrating them during the research process to provide a more comprehensive understanding** of nurse's knowledge and perception of dementia and attitude towards people with dementia in Igboland. This approach acknowledges that neither method alone can fully address the complexities of a situation, but together, they offer complementary insights (Creswell, et al., 2004; Creswell, 2010; Schoonenboom & Johnson, 2017; Schreier & Odag, 2010; Ivankova & Creswell, 2009).

Creswell (2014; 2015) described three basic types of mixed method designs that constitute the key of all mixed methods studies. A **convergent design** where the researcher collects and analyses both quantitative and qualitative data simultaneously, then combines the findings from both analyses to compare the results, potentially

validating one set with the other. A **sequential explanatory design** that involves initially applying quantitative methods, followed by qualitative methods to provide deeper insight and understanding into the quantitative findings. Finally, a **sequential exploratory design** that starts with qualitative methods to explore a problem, particularly when research questions are unclear or the population is understudied. The insights gained guide the creation of a quantitative phase, which may include developing measurement tools and ends with collecting and analysing quantitative data using these tools. In addition, Creswell (2015) also depicted three advanced designs that can be found in mixed method studies namely, intervention designs, social justice or transformative designs and multistage evaluation designs.

Despite the clear and substantial benefits of mixed-methods research, certain challenges to its implementation in scientific studies have been identified. The use of mixed-methods designs involves extensive and multiple stage data collection coupled with intensive time for data analysis and interpretation (Creswell & Creswell, 2018; Kelle, 2006; Almeida, 2018; Creswell, et al., 2004). Furthermore, the use of mixed-method requires that the researcher have knowledge of and experience of both quantitative and qualitative research methods (Creswell, 2014; Schreier & Odag, 2010).

This study applied a sequential explanatory mixed-method design to identify the attitude of nurses in Igboland towards people with dementia, their knowledge of dementia and to explore the factors that influence the attitudes. Initially, a quantitative study and analysis was conducted to gather data that will help identify the level of nurses' dementia knowledge and their attitude towards people with dementia in Igboland. Subsequently, a qualitative follow-up study was employed to explore the factors influencing dementia knowledge and attitude towards people with dementia. This design was chosen to ensure that the quantitative findings are first established, providing a foundation that guides and shapes the subsequent qualitative inquiry.

Sequential explanatory mixed-method is a two-phase approach where the researcher begins with quantitative research, analyses the data, and then follows up with qualitative research to provide a more detailed explanation of the results. It is termed "explanatory" because the qualitative phase is used to clarify and expand upon the initial quantitative findings, and "sequential" because the qualitative phase follows the quantitative phase (Creswell, 2014; Creswell, 2015; Creswell, et al., 2004; Almeida,

2018; Schreier & Odag, 2010; Ivankova & Creswell, 2009). In other words, a quantitative study is first conducted to identify problem areas and research questions that require further explanation through qualitative data and methods (Creswell, 2014; Creswell, 2015; Almeida, 2018; Kelle, 2006; Ivankova & Creswell, 2009). Figure 5 depicts the process of the sequential explanatory design as observed in this study.

In mixed methods research design, **integration** is a critical step and refers to the process of combining, merging or connecting quantitative and qualitative data during the research. It involves aligning the collection, analysis, and interpretation of both types of data to address the research objectives comprehensively. Integration ensures that the strengths of both quantitative and qualitative approaches are utilised effectively, and it occurs at specific points in the research process, such as during data analysis, interpretation, or reporting (Creswell, 2015; Creswell, et al, 2004).

In this study, integration occurred at three key stages, following established mixed-methods integration strategies such as connecting, building, and weaving (Creswell & Plano Clark, 2018). First, at the design level, the qualitative phase was explicitly built upon the results of the quantitative survey (connecting and building integration). Specific patterns identified in the statistical analysis—such as moderate knowledge levels, neutral attitudes, and weak correlations between knowledge and attitudes—directly informed the development of the qualitative interview guide. Second, integration occurred during analysis, where qualitative themes were used to explain, contextualise, and interpret quantitative findings. Third, integration was achieved at the interpretation and reporting stage, where findings from both strands were woven together to construct a coherent explanatory account of nurses' knowledge and attitudes within the socio-cultural context of Igboland.

Quantitative and qualitative methods cannot replace one another; instead, they shed light on different aspects of the research questions and phenomena. In research, quantitative methods can describe the behaviours of the research participants, while qualitative methods provide insights into the underlying reasons for these behaviours. In the case under study here, qualitative and quantitative methods address distinct questions: statistical analysis reveal nurses' perceptions of dementia and what actions nurses put up in dealing with people with dementia, while qualitative data analysis helps answer why they put up such actions (Kelle, 2006; Creswell, 2015).

The strength of this design lies in the way the two phases build on one another, resulting in distinct and easily recognisable stages in the research process. However, it is challenging to execute because implementing two distinct phases in sequence requires considerable time (Creswell, 2015; Halcomb & Hickman, 2015; Creswell, 2014; Almeida, 2018; Ivankova & Creswell, 2009). Additionally, determining which quantitative results need further clarification is another challenge (Creswell, 2015; Halcomb & Hickman, 2015; Creswell, 2014; Almeida, 2018).

3.2.1.1 Quantitative Phase

Quantitative research is described as explaining phenomena by collecting numerical data, like test scores or survey responses that are objectively analysed using mathematically based methods (Muijs, 2004; Ivankova & Creswell, 2009; Stockemer, 2019). Quantitative research employs deductive reasoning and various quantitative analysis methods, ranging from simple variable descriptions to complex statistical modeling. It typically involves research designs focused on describing, explaining, and predicting phenomena (Khalid, et al., 2012).

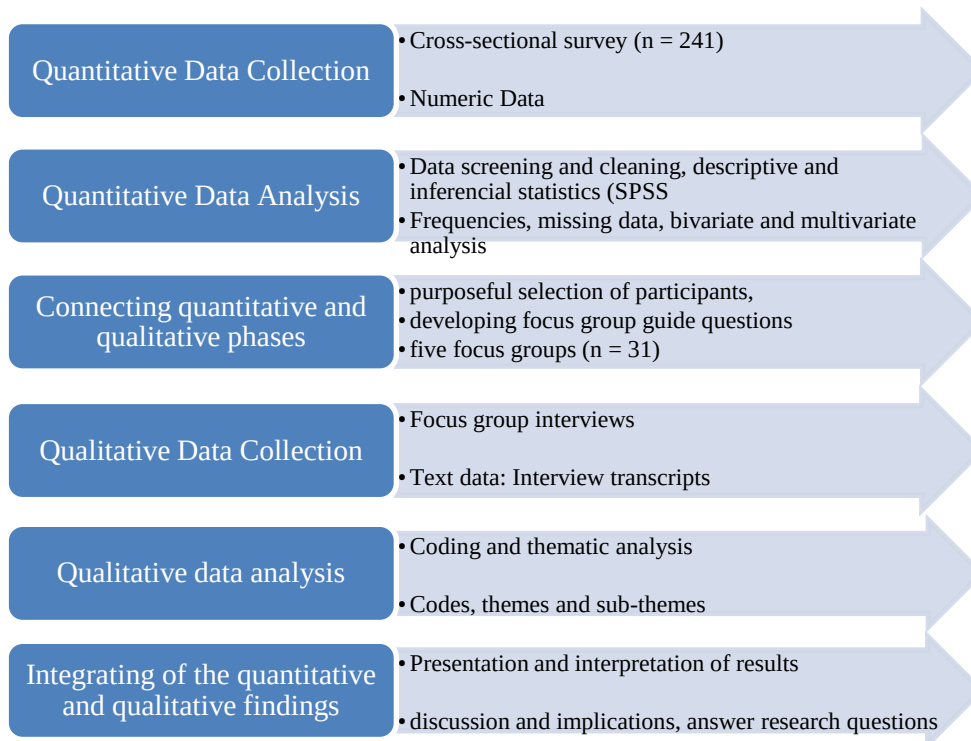
Quantitative research involves sampling data from hundreds, thousands, or even hundreds of thousands of respondents. Through the use of statistical methods, it helps identify relationships between variables, in that the researcher aims to explore the relationship between an independent (predictor) variable and a dependent (criterion) variable within a population (Khalid, et al., 2012; Stockemer, 2019; Razafsha, et al., 2012). Moreover, quantitative research aims to evaluate and measure the behaviours of individuals within a specific group or population (Almeida, 2018; Lune & Berg, 2017). Quantitative research is also used to test a hypothesis and generalise results from a sample to a larger population (Ivankova & Creswell, 2009).

The quantitative research process is typically linear, progressing through sequential stages of formulating questions, collecting data, analysing it statistically, and reporting the findings (Croker, 2009). The data collection process in quantitative research is systematically organised, followed by statistical analysis of the data (Almeida, 2018). Meaning that, quantitative research depends on a high level of standardisation in data collection for accurate statistical comparisons. For instance, questionnaires typically have a predetermined order of questions and fixed response options, with consistent conditions for all participants. It also values the observer's independence from the research subject

(Flick, et al., 2004). Hence, quantitative research seeks to determine the frequency of an event by asking questions such as "how often" or "how many" (Razafsha, et al., 2012; Lune & Berg, 2017).

The quantitative research offers opportunities for objectivity, reliability, precision and generalisability because of the use of large sample, numerical data and statistical analysis. Hypothesis can be tested and the use of structured methodologies and instruments ensure consistency across studies (Creswell, 2015; Ivankova & Creswell, 2009; Kelle, 2014; Flick, et al., 2004; Croker, 2009; Khalid, et al., 2012; Stockemer, 2019). These strengths make quantitative research highly valuable in disciplines like natural sciences, social sciences, and market research, to mention but a few. However, quantitative research is often criticised of lacking the ability to thoroughly explore personal narratives, individual meanings, and in-depth perspectives of participants (Creswell, 2015; Wipulanusat, et al., 2020). Furthermore, quantitative research may be criticised for its inability to explain the reasons behind the success or failure of an intervention, or why there are differences in outcomes between groups (Creamer, 2018).

Figure 5: Process of this Sequential Explanatory Design



(authors' own illustration)

3.2.1.2 Qualitative Phase

The qualitative method is a collective term for systematic approaches that aim to describe, explore and interpret individuals' experiences, behaviours, interactions, and social environments. Qualitative methods of inquiry and data collection include in-depth interviews, focus groups, and participant observation among others (Berry, et al., 2006; Razafsha, et al., 2012; Almeida, 2018; Breuer, 2010). Qualitative research is a dynamic methodology rooted in disciplines like anthropology, sociology, and philosophy, and is now widely applied across social sciences. It encompasses various approaches, such as narrative inquiry, case studies, ethnography, phenomenology, and grounded theory (Croker, 2009; Flick, et al., 2004; Ivankova & Creswell, 2009).

Qualitative research is basically inductive, focusing on exploring meanings and insights within specific contexts (Mohajan, 2018; Croker, 2009; Khalid, et al., 2012). In other words, qualitative research aims to provide detailed insight into human behaviour, emotions, attitudes and experiences. Therefore, it seeks to understand the meanings individuals or groups assign to social or human issues as well as the opinions and expectations of individuals within a population. This methodology uses an explorative and interpretive framework and a carefully chosen sample of participants who can provide valuable insights into the research question (Creswell, 2013; Almeida, 2018; Mohajan, 2018; Croker, 2009; Stockemer, 2019; Khalid, et al., 2012; Lune & Berg, 2017; Ivankova & Creswell, 2009).

It adopts purposive sampling and open-ended, semi-structured interviews to collect and analyse non-numerical data to explain how and why social phenomena or programmes function as they do within particular contexts. Furthermore, this open and exploratory approach helps to discover new insights and uncover the unfamiliar within everyday life (Mohajan, 2018; Razafsha, et al., 2012; Flick, et al., 2004). This openness captures cultural snapshots of small life-worlds and also forms the basis for grounded theoretical development (Flick, et al., 2004). Moreover, researchers are encouraged to approach a topic with theoretical openness, that is without preset assumptions or predefined hypotheses. They must actively reflect their underlying assumptions throughout the research process to allow for multiple interpretations of participants' experiences (Breuer, 2010; Ivankova & Creswell, 2009).

Qualitative researchers view meaning as socially constructed, focusing on how participants experience and interact with phenomena in their natural environments. Their interest lies in the everyday lives of participants, including their homes, workplaces and classrooms. Rather than removing people from their natural environments, qualitative researchers immerse themselves in these settings to understand participants' realities (Croker, 2009; Flick, et al., 2004; Breuer, 2010; Lune & Berg, 2017; Ivankova & Creswell, 2009). In qualitative research, the data collected are descriptive, including interview notes, observation records, diary records and documents. It focuses on real-world, natural settings and uses an inductive approach to analyse data (Mohajan, 2018; Flick, et al., 2004; Breuer, 2010; Ivankova & Creswell, 2009). The goal of this approach is not to prove or disprove a theory but to explore and provide a detailed description of the phenomenon being studied (Ivankova & Creswell, 2009; Khalid, et al., 2012).

Qualitative research is characterised by a simultaneous, iterative, and non-linear approach. Researchers collect, analyse, and interpret data concurrently, frequently moving between these stages until no new insights emerge—a stage known as data saturation (Croker, 2009). Moreover, qualitative research involves exploring specific questions such as what is happening in a setting, how participants perceive their world, and what meanings they attribute to their experiences. This approach produces a large amount of textual data, which can be difficult to manage (Croker, 2009; Flick, et al., 2004; Breuer, 2010; Lune & Berg, 2017; Berry, et al., 2006).

In qualitative research, the researcher acts as the primary instrument by directly collecting and interpreting data, such as through observation or interviews. This approach allows for adaptability, exploration of unexpected insights, and immediate reflection on findings (Croker, 2009; Flick, et al., 2004). However, researcher biases can emerge in several ways, potentially influencing the design, data collection, analysis, and interpretation of findings (Wipulanusat, et al., 2020). These biases are often rooted in the researcher's personal beliefs, assumptions, expectations, or experiences. To mitigate these biases, qualitative researchers must engage in reflexivity, which involves reflecting on their own role in the research process and actively questioning how their biases may shape the study (Breuer, 2010; Ivankova & Creswell, 2009).

Qualitative research explores social contexts and the individuals within them to understand their experiences and perceptions. It identifies patterns in specific cases and

captures the unique aspects of the group being studied. It provides insights into how people make sense of their lives through direct interaction or personal traces like letters and photos (Lune & Berg, 2017; Kelle, 2014). However, qualitative research relies on small, non-representative samples and therefore, it is not designed to generalise findings across large populations (Lune & Berg, 2017; Creamer, 2018; Wipulanusat, et al., 2020; Creswell, 2015). Table 1 shows a summary of the major differences between quantitative, qualitative and mixed-methods studies.

Table 1: Quantitative, Qualitative and Mixed-Methods

Design	Quantitative	Qualitative	Mixed-Methods
Definition	understanding phenomena through the collection and analysis of numerical data (Muijs, 2004)	approach that explores research problems through the perspectives of, and the meanings individuals or groups attribute to phenomena (Creswell, 2013; Breuer, 2010).	a procedure that combines quantitative and qualitative data to better understand a research problem (Creswell, 2013).
Function and characteristic	objective research methods, test theories and hypothesis, provide information in breadth from a large number of units (Muijs, 2004; Razafsha, et al., 2012) generalisable, replicable (Razafsha, et al., 2012)	explore a problem or concept in depth, develop theories and hypothesis (Muijs, 2004; Creswell, 2013) conducted within the setting and context of participants, bottom-up approach, flexible, open ended questions (Creswell, 2013; Berry, et al., 2006; Breuer, 2010) small number of participants (Razafsha, et al., 2012)	look at both breadth and depth (Muijs, 2004) develop and test theories and hypothesis, explore meaning and intensions (Kelle, 2014)
Paradigm	Realism, Positivism (Muijs, 2004), positivism, post-positivism (Creswell, 2014)	Subjectivist, relativism (Muijs, 2004) constructivist, interpretivist, feminist, postmodernist (Creswell, 2013) holistic, pluralism of reality (Berry, et al., 2006)	Pragmatism (Kelle, 2014; Teddlie & Tashakkori, 2009)
Strengths	Objective, reliable, generalisable, precise (Creswell, 2015; Ivankova & Creswell 2009; Kelle, 2014).	provides a complex, detailed understanding of the problem, flexible (Creswell, 2013; Mohajan, 2018).	Broaden, expand, better understand or explain research problems and results (Creswell, 2014)
Limitations	Can't explore individual narrative & meaning, in-depth perspective (Creswell, 2015; Wipulanusat, et al., 2020; Kelle, 2014)	Presence of researcher can influence collected data negatively, voluminous data make analysis time consuming, statistically	Intensive time for data collection and analysis (Creswell & Creswell, 2018; Kelle, 2006; Almeida, 2018; Creswell, et al., 2004).

		not representative (Creswell, 2013; Mohajan, 2018).	Researcher is required to have knowledge of and experience with both quantitative and qualitative research methods (Creswell, 2014; Schreier & Odag, 2010).
Researcher	Detached from the research (Muijs, 2004) objective observer (Razafsha, et al., 2012)	Key instrument, reflexive of own role in the process (Creswell, 2013) Active participant (Razafsha, et al., 2012)	

3.3 Data Acquisition Methods and Techniques

As I have established above, this study utilises mixed-methods approach to answer the research questions. In mixed-methods research, the integration of quantitative and qualitative data provides a comprehensive understanding of the research problem. This study employs **survey** and **focus group interviews** as primary data acquisition methods, leveraging their complementary strengths to ensure a robust and holistic analysis. Surveys facilitate the systematic collection of quantitative data, enabling the identification of trends and patterns across a broad sample population. Meanwhile, focus group interviews offer qualitative insights, capturing nuanced perspectives, attitudes, and experiences that enrich the contextual understanding of the findings.

Data collection occurs in two phases: structured quantitative sampling first, followed by purposeful qualitative sampling. The main challenge in this strategy lies in determining which quantitative findings to explore further and selecting participants for qualitative insights. The qualitative phase is designed to directly build on the quantitative results (Creswell, 2014).

3.3.1 Survey: Sampling, Participants and Data Collection

The quantitative strand used survey to collect data. Survey research entails systematically gathering information from individuals using standardised methods. Typically, researchers select a random or representative sample from the target population. The aim is to capture data that accurately represents the studied concept, relevant variables, and the broader population (Stockemer, 2019). A survey design offers a numerical or quantitative overview of trends, attitudes, or opinions within a population by examining a sample. Based on the sample's findings, the researcher generalises or

makes inferences about the broader population (Creswell, 2014). Survey research dates back thousands of years, driven by the need for bureaucracies to gather citizen data for taxation and infrastructure planning. An early example is the biblical census during Jesus' birth (Stockemer, 2019).

Survey research designs are flexible and can use different methods, such as telephone, face-to-face interviews, postal, or online questionnaires. They are ideal for descriptive studies or exploring relationships between variables in real-life situations (Muijs, 2004; Stockemer, 2019). Two main types of surveys are typically distinguished namely, cross-sectional surveys and longitudinal surveys. A cross-sectional survey is designed to collect data from individuals at a specific moment in time. The use of a cross-sectional study enables researchers to make inferences about the relationships between independent and dependent variables. On the other hand, longitudinal surveys administer the same questions multiple times over a long period, allowing researchers to track changes in attitudes or behaviours (Stockemer, 2019; Stein, 2014).

Furthermore, in a survey, random or probability and non-random or non-probability selections are generally distinguished, with the choice of method depending on the research question. Random sampling allows for generalising sample results to the population, though it may not always be feasible or necessary. In random sampling, each element in the population has an equal or specified chance of being selected (Stein, 2014; Singh, 2007). When random selection is not feasible due to an undefined population or inaccessible individuals, non-random methods can be employed (Stein, 2014). In non-probability sampling, random selection is not employed, so the probability of each element of the population being selected is not determined (Singh, 2007).

Non-probability sampling methods can be broadly categorised into arbitrary or accidental and deliberate or purposive sampling (Singh, 2007; Stein, 2014). Arbitrary selections lack a defined population or selection plan, relying solely on the selector's discretion. Deliberate selections, however, involve a defined population and a structured plan. Unlike random selection, they are based on pre-determined, purposeful decisions, such as choosing cases deemed representative of the population (Stein, 2014; Stockemer, 2019). The majority of non-probability samples are purposive, as researchers typically address sampling with a clear, predefined strategy (Singh, 2007; Lune & Berg, 2017).

Despite limitations, such as limited generalisability, purposive sampling is often effectively utilised by researchers (Lune & Berg, 2017).

Survey research is a widely used method in social sciences due to its flexibility and efficiency. It allows researchers to explore diverse questions, describe situations, and analyse relationships between variables in real-world contexts, making findings easier to generalise (Muijs, 2004; Stockemer, 2019). Surveys are cost-effective and enable the collection of large amounts of data while ensuring respondent anonymity, which encourages honest responses. Standardised questions also facilitate comparisons between groups. However, surveys lack environmental control, making them less effective for studying causality compared to experiments (Muijs, 2004).

This study adopted a cross-sectional research design and a purposive sampling with complementary snowballing to collect data from nurses working in the five states in Igboland. I employed purposive sampling for this study because I needed information from nurses as the predetermined target group. This was because nurses in Igboland hold similar qualification and expertise in their field of work (Stockemer, 2019; Lune & Berg, 2017). Moreover, the research aims make it needful to access this targeted sample of nurses and also need to ensure that nurses working in different hospitals in the five states that make up Igboland are included in the study (Singh, 2007; Lune & Berg, 2017). Furthermore, precise figures for registered nurses in Igboland of south-eastern Nigeria are not readily available due to limited region-specific data. However, the NMCN recorded over 250,000 Registered Nurses and Midwives across Nigeria (NMCN, 2019).

Snowball sampling was applied so that nurses in certain areas of Igboland who were hard to reach could be included in the study (Stockemer, 2019; Singh, 2007). Using this method, individuals who completed the questionnaire were asked to send the survey link to their colleagues and friends who were nurses working in Igboland. This process helped to access potential participants, who would otherwise not have been reached. By so doing, the sample was gradually expanded (Stockemer, 2019; Lune & Berg, 2017; Singh, 2007).

Data were collected by means of a questionnaire containing 51 items. The questionnaire was compiled using items from three different dementia assessment instruments;

- the “Dementia Knowledge Assessment Scale” [DKAS] by Annear, et al. (2017),
- the “Dementia Knowledge Assessment Tool Version Two” [DKAT2] by Teye, et al. (2014) and
- the “Dementia Attitude Scale” [DAS] designed by O’Connor and McFadden (2010).

These assessment tools have been tested and proven to be reliable and valid by their various authors and no prior permission is required to use them. The questionnaire (see appendix 1) also contains demographic questions including age, gender, working experience, religion, owner and state of work to provide context for the online survey responses and to accurately characterise the respondent group.

To assess the level of dementia knowledge among nurses in Igboland, I adopted a total of 27-items compiled from the DKAS and DKAT2 following a contextual adaptation process that included face validity assessment. The same process also led to adopting 14 items from the 20-item DAS for this research study. A contextual adaptation process was conducted to ensure cultural and professional relevance of the selected instruments within the Igboland setting. Face validity refers to the extent to which assessment items appear appropriate and relevant to respondents in measuring the intended construct (Hardesty & Bearden, 2004).

Three senior nurses (each with more than 12 years of clinical experience) participated in a structured review of the DKAS, DKAT2, and DAS items. They evaluated item clarity, contextual appropriateness, and linguistic suitability for local practice. Minor wording adjustments were made to enhance contextual alignment while preserving the original constructs.

This process did not aim to alter the theoretical structure of the instruments but to ensure cultural comprehensibility and practical relevance within the study context. Subsequently, a pilot pretest with ten nurses was conducted to assess clarity, flow, and overall usability of the questionnaire prior to full data collection.

Following the face validity process, it was noted that most of the items of the two instruments were identical in their content. However, for better understanding, items 1, 5, 9 and 15 of the DKAS were replaced with items 9, 1, 16 and 15 from the DKAT2 specifically. Moreover items 10 and 17 of the DKAT2 were added to the questionnaire, making it a total of 27-items. Nevertheless, item 16: “closing the blinds” was changed with closing the windows to suit the context of Igboland. Fourteen out of the 20 items of DAS were adopted to measure the attitude of nurses in Igboland towards people with dementia. Items 5, 7, 8, 10, 11 and 20 were not included in the questionnaire, because they were considered to deal more with awareness and understanding of dementia, rather than attitude. A pretest of the resultant questionnaire was run with ten nurses from Igboland.

The DKAS is a 25-item assessment scale divided into four subscales: (1) Causes and Characteristics with seven items, (2) Communication and Behaviour containing six items, (3) Care Considerations comprising of six items, and (4) Risks and Health Promotion with six items. It is a dependable and valid tool for measuring dementia knowledge among health professionals, trainees, and the general public (Annear, et al., 2017). The DKAT2 comprise 21 items designed to assess knowledge related to dementia and its care among healthcare workers, family caregivers and aged care staff with focus on late stage dementia (Toye, et al., 2014). The two scales reported high internal consistency scores of Cronbach’s alpha coefficient of ($\alpha = .85$ and $.79$) for DKAS and DKAT2 respectively (Annear, et al., 2017; Toye, et al., 2014). The DAS is a 20-item assessment instrument developed to measure attitudes towards dementia. The instrument is noted to possess strong psychometric properties, with Cronbach’s α of $.83$ (O’Connor & McFadden, 2010).

An online survey was administered between June and September 2024 using the website “Survey Monkey”. An introductory paragraph was used to inform the participants about the study and to assure them guarantee of confidentiality. Participants were advised that by completing and sending in the online survey, they were providing consent for the use of collected and anonymised data in analysis and reporting (see Appendix 1 for a copy of the questionnaire). The link to the survey questionnaire was distributed through contact persons, hospitals and lastly, the south-east zonal coordinator for the Nursing and Midwifery Council of Nigeria to prospective participants. Using the online survey method offered the advantage of storing the responses directly in the database, saving time on

data entry. However, the research met the challenges of technophobia and limited reach to the target population (Muijs, 2004). Furthermore, some potential participants reported having problems with opening the link to the questionnaire.

Attempts were made to overcome this challenge by applying additional pencil-and-paper questionnaire. The advantage of this method is that it is familiar and allows respondents to complete the questionnaire at their convenience, and provide time for thoughtful answers. However, they often have low response rates and require time-intensive follow-up and data entry (Muijs, 2004). By combining online survey with pencil-and -paper questionnaire, I was able to minimise the disadvantages of both methods and at the same time maximising the advantages of each of them.

The survey questionnaire incorporated both a dichotomous scale and a 7-point Likert scale to gather data effectively. The dichotomous scale was used for questions requiring straightforward true/false responses, enabling clear and categorical insights. Meanwhile, the 7-point Likert scale allowed participants to express varying degrees of agreement or disagreement with specific statements, providing a more detailed understanding of their attitudes and perceptions. This approach ensured a balance between simplicity and depth in the data collection process. Socio-demographic data including age, gender, working experience, religion, prior contact with person with dementia, employer and area of specialisation were also collected, so that the level of dementia knowledge among groups can be compared.

3.3.2 Qualitative Interview and Focus Group Interview

The qualitative research interview, often referred to as a "conversation with a purpose" or a "professional conversation," is regarded as the gold standard in qualitative research. It serves as a method for deeply exploring individuals' experiences and perspectives (Richards, 2009). Primarily, interview types are differentiated or categorised according to the level of their structure and rigidity (Barrett & Twycross, 2018; Lune & Berg, 2017). Hence, interviews generally fall into three categories: structured, unstructured, and semi-structured (Richards, 2009; Gill, et al., 2008; DiCicco-Bloom & Crabtree, 2006; Lune & Berg, 2017).

The structured interview is a highly controlled method of data collection, designed to obtain specific information with minimal variation. It follows a predetermined set of

questions to ensure consistency, often using a coding scheme for recording responses. While this approach enhances accuracy and comparability, it may be less effective for in-depth exploration (Richards, 2009; Gill, et al., 2008; Barrett & Twycross, 2018). Typically, structured interviews tend to yield quantitative data (DiCicco-Bloom & Crabtree, 2006). Moreover, structured interviews are more like verbal questionnaires, giving researchers greater control (Barrett & Twycross, 2018).

An open or unstructured interview is guided by a single broad question that allow the conversation to evolve based on the participant's response. This approach is ideal for narrative inquiry and in-depth exploration or when little is known about a topic, requiring fresh insights (Barrett & Twycross, 2018; Richards, 2009; Gill, et al., 2008). While the interviewer may guide the conversation, the direction is mostly shaped by the respondent (Richards, 2009). Therefore, DiCicco-Bloom & Crabtree argues that no interview is fully unstructured, rather they function like guided conversations (2006). These interviews are typically time-consuming and can be challenging for both interviewers and participants in the absence of guiding questions. Moreover, the researcher is challenged to maintain focus without directing participants toward specific topics (Gill, et al., 2008; Barrett & Twycross, 2018).

Semi-structured interviews balance elements of both structured and unstructured formats (Richards, 2009). Semi-structured interviews are mostly scheduled in advance and constitute the primary method of data collection in qualitative research. Researchers typically have predetermined topics and key questions, allowing for some level of comparison. However, flexibility is very essential, enabling interviewers to explore certain areas in depth and allow respondents lead the conversation (DiCicco-Bloom & Crabtree, 2006; Richards, 2009; Gill, et al., 2008; Jamshed, 2014; Barrett & Twycross, 2018). Individual interviews allow for deep exploration of personal and social issues, while group interviews provide diverse perspectives but limit individual depth due to their public nature (DiCicco-Bloom & Crabtree, 2006).

Semi-structured interviews are widely used by healthcare professionals for in-depth research (Jamshed, 2014; Gill, et al., 2008). They are mostly conducted with individuals, but can also be used in group settings (Jamshed, 2014; DiCicco-Bloom & Crabtree, 2006). Focused interview is a special form of semi-standardised interview that is typically group-based but not restricted to it. They blend structured topics with flexible

discussion, allowing more openness than structured ones. Their goal is to expand the conversation and encourage participants to share unexpected viewpoints (Hopf, 2004).

The qualitative phase of this research study adopted focus group discussions with groups of nurses in four out of the five states of Igboland. One state could not be accessed, due to lack of responsiveness. The main aim was to explore the opinion and perspective of nurses in Igboland about factors that influence nurse's knowledge of dementia and their attitude towards people with dementia in Igboland. A semi-structured interview guide based on the quantitative findings (see Appendix 2) with open-ended questions was created to explore and elaborate on the quantitative findings and to gather deeper insights relevant for the research question. The group discussions were conducted on-site and also per video conference and lasted between 30 and 75 minutes. All group discussions were audio and digitally recorded. The discussion process was flexible and questions reworded based on participants' responses.

For the purpose of recruiting focus group members, a purposive sampling method was primarily adopted. More specifically, nurses were invited to participate via phone calls and face-to-face conversations. Additionally, some of the participants were recruited through snowballing, in that they were contacted with the help of those who had been recruited. The inclusion criteria were nurses with at least three years general nursing training, working in Igboland. A total of thirty-one (31) nurses were successfully recruited, thirty female and one male. The groups were made up of two groups with four members, one group of five members, one group of twelve members and one group of six members respectively. All the participants were provided with written information about the study and the interview guide prior to the group discussion. They all gave informed consent to participate in the study verbally and written.

A focus group is an interview method designed for a small group of individuals assembled by researchers to engage in guided discussions on specific research topics. In social sciences, focus groups enable researchers to explore people's opinions, beliefs and experiences in a more conversational and natural setting (Onwuegbuzie, et al., 2009; Feixa, et al., 2020; Lune & Berg, 2017; Gill, et al., 2008; Barrett & Twycross, 2018). Focus group data represent the shared and negotiated views of the group. They are designed to gather insights from group interactions rather than individual responses, treating the group as the unit of analysis. The small group sessions are typically led by a

facilitator or moderator (Lune & Berg, 2017; DiCicco-Bloom & Crabtree, 2006; Barrett & Twycross, 2018).

Discussion groups are composed based on shared demographic characteristics like profession, education and age, but they do not represent pre-existing groups (Bohnsack, 2004). It is advised to keep the focus groups small, as large groups may be difficult to manage. Smaller groups encourage diverse responses, prevent dominant voices from monopolising the discussion, aid transcription accuracy, and reduce groupthink, where participants conform to prevailing ideas due to group pressure (Lune & Berg, 2017). Therefore, it is the role of the moderator to guide the group discussion, ensuring it stays focused without steering it. The moderator ensures that all participants have a chance to speak, encouraging diverse viewpoints, and managing dominant voices. They should also promote fair discussion of differing opinions and support quieter participants (Gill, et al., 2008; Przyborski & Riegler, 2010; Barrett & Twycross, 2018).

According to Gill, et al., focus group is recommended in research contexts that seek to refine, expand, validate, or challenge findings obtained through other research methods (2008). Focus groups can offer a more comfortable setting than one-on-one interviews, as participants are not required to engage in all part of the discussion and may feel more confident expressing shared opinions (Onwuegbuzie, et al., 2009; Barrett & Twycross, 2018). Focus groups allows the researcher to gain access to multiple participants and a huge amount of interaction on a given topic in a short period of time (Smithson, 2008; Onwuegbuzie, et al., 2009). Moreover, the group interaction allows participants to build on or challenge each other's comments, turning brief individual remarks into significant points that reflect their shared experiences (Onwuegbuzie, et al., 2009; Lune & Berg, 2017; Barrett & Twycross, 2018).

However, it might be complex to moderate focus groups, making it essential that the moderator be skilled (Smithson, 2008; Barrett & Twycross, 2018). Focus groups generate a large volume of data that must be transcribed and analysed, as the group sessions typically last 1–2 hours (Barrett & Twycross, 2018). Furthermore, the group discussion is not suitable for studying personal actions, life stories, or decision-making (Przyborski & Riegler, 2010).

During the group discussions, I acted solely as a moderator and deliberately refrained from participating as a member of the discussion group, which helped maintain

the natural flow of conversation and allowed participants to focus on each other. By introducing the topics in a vague manner, I was able to foster open exploration, carefully rephrasing questions to encourage deeper discussion. This method, showing controlled detachment, helped to capture detailed insights into participants' opinions and beliefs (Bohnsack, 2004; Przyborski & Riegler, 2010). The data gathered from the focus groups were transcribed verbatim including some non-verbal utterances like sighs and laughs, which enabled me to capture all questions and responses from the participants (Lune & Berg, 2017).

3.4 Data Analysis Methods and Techniques

In this sequential explanatory mixed-methods study, data analysis was conducted in two distinct yet interconnected phases to ensure a comprehensive understanding of the research problem. The first phase involved quantitative data analysis, where statistical techniques are used to identify patterns, relationships, and trends within the dataset. These findings then guide the second phase, which consists of qualitative data analysis aimed at exploring and explaining the quantitative results in greater depth. The qualitative phase employed thematic analysis to uncover underlying meanings and contextual insights. By integrating both analytical approaches, this study ensures a robust interpretation of the data, enhancing the validity and depth of the research findings.

3.4.1 Quantitative Data Analysis

In the quantitative phase of this research study, statistical techniques were used to describe patterns of distribution and relationship within variables in the dataset. Statistical methods are categorised into descriptive statistics and inferential statistics, which are further divided into parametric or non-parametric tests. Descriptive statistics measure, summarise and explain data, while inferential statistics use sample data to draw conclusions and make predictions about a larger population (Singh, 2007; Walliman, 2006).

The quantitative analyses for this research was conducted using SPSS Statistics version 29.0 (IBM Corp., 2023). The analysis involved both descriptive and correlation techniques to examine the dataset derived from the survey questionnaire. Descriptive statistics was used to summarise the demographic characteristics of the respondents, including age, gender, area of specialty, years of working experience, prior

contact with dementia, religion, owner of and state where working place is located. Quantitative analysis involves numerical data and mathematical methods to examine its attributes (Walliman, 2006). Therefore, to begin the analysis process, pieces of information in text form were converted into numbers and stored in the form of data sets. For example, the gender of respondents was coded 1 for female and 2 for male participants and for questions with yes or no answer options, yes was coded 1 and no coded 2.

The level of dementia knowledge among nurses in Igboland was measured using a combination of items from the DKAS and DKAT2. The dementia knowledge questions consist of 27 items with true or false answer options in which every correct response got 1 (one) score and each incorrect response scored 0 (zero). Thus, the total possible score in the dementia knowledge assessment section varies from 0-27, with a higher score reflecting a greater level of knowledge. For these dichotomous variables measured with a true and false scale frequency and percentage distributions were analysed to provide an overview of the data trends. Internal consistency was tested for applying the Cronbach's alpha analysis. The Cronbach's alpha for the dementia knowledge section of the questionnaire was .611.

According to Nunally (1978), a Cronbach's alpha of .70 or higher is generally considered as acceptable for established scales. DeVellis (2017) and DeVellis & Thorpe (2022) suggests an undesirable comfort range of Cronbach's alpha between .60 and .65. However, in the early stages of research or when dealing with complex constructs, values slightly below this threshold may still be acceptable. For example, Schmitt (1996) stipulates that there is no universally fixed threshold for what constitutes an acceptable Cronbach's alpha. That in some cases, even relatively low alpha values can still be valuable. Taber (2018) also argues that it is difficult to assess the reliability of an instrument like knowledge test and that instruments designed to assess a wide range of diverse knowledge areas are not expected to yield high Cronbach's alpha values.

Furthermore, using a fixed reliability cutoff for complex and changing constructs like knowledge can be misleading. It may conflict with theoretical views, limit research, encourage publication bias, and lead to tests that are either too long or too narrow, failing to capture the full scope of the construct (Edelsbrunner, et al., 2025). Given this context,

the obtained Cronbach's alpha of .611 for the dementia knowledge section of the questionnaire is considered acceptable for the purposes of this study.

The attitude of nurses towards people with dementia was assessed implying 14 items of the DAS rated on a 7-point Likert scale, with response options ranging from 1 = "strongly disagree" to 7 = "strongly agree. However, four items that were negatively worded, like "be afraid of (...)", "feel uncomfortable (...)", "avoid agitated person (...)" and "cannot imagine taking care of person with dementia" were reverse coded, with 7 representing "strongly disagree" and 1 standing for "strongly agree" (Pallant, 2007) before analysis. The total possible scores on this scale ranged from 14 to 98, with higher scores indicating a more positive attitude towards person with dementia. For the items in this scale, central tendency (mean and median) and variability (standard deviation and interquartile range) were assessed to gauge overall response patterns (Pallant, 2007).

The internal consistency of the questionnaire section assessing the attitude of nurses towards people with dementia was conducted using the Cronbach's alpha. A Cronbach's alpha of .664 was initially obtained and after reverse coding negatively worded items, a Cronbach's alpha of .717 emerged. For the purposes of this study, the obtained alpha value of .717 is regarded as acceptable.

The items of the scales were computed to get the total scores, mean, minimum, maximum and percentile of the scores. For interpretative purposes, total scores were descriptively categorised into three levels (low, moderate, high) for the knowledge items and (negative, neutral, positive) for the attitude items of the scale based on their empirical distribution within the sample. These categories were used solely to facilitate interpretation and presentation of results, rather than to establish clinical or normative cut-off thresholds.

Bivariate correlation analysis was employed to determine the relationships between dementia knowledge, attitude towards people with dementia and other variables of interest, like age, gender, working experience, prior contact with a person with dementia, specialty area and religion of the participants. This preliminary bivariate correlation analysis helped to identify potential predictors of dementia knowledge. These variables were then included in a multivariate linear analysis employing multiple linear regression to assess how much they explained the variation in total dementia knowledge and the total nurses' attitude scores. Prior to regression analysis, assumptions of linearity,

homoscedasticity, independence of errors, and normality of residuals were examined and found to be sufficiently met to justify the use of linear regression models.

Prior to conducting the analysis, the dataset underwent rigorous data cleaning procedures, like checking for outliers, missing values and normality assessment. To evaluate the impact of potential outliers, the 5% trimmed mean was compared with the total sample mean. The 5% trimmed mean (17,98 and 63,07) were found to be very close to the actual mean (18 and 63,21) for dementia knowledge and nurses attitude sections respectively, suggesting that extreme high and low outlier values had minimal impact on the overall total scores. Table 2 illustrates the detailed information about the total scores of the dementia knowledge and attitude sections of the questionnaire. Missing values were deleted pairwise throughout the process of data analysis.

Several categories of age and years of working experience contained very small cell counts, therefore, these two variables were grouped into broader categories (binned) prior to conducting the correlation analysis to improve statistical stability and ensure more reliable estimates. Furthermore, for regression analysis categorical explanatory variables with more than two categories were transformed into dummy variables, with one category omitted as the reference group to avoid multicollinearity. To minimise loss of observations due to missing data, the missing-indicator (dummy-missing) method was employed. Missing values in categorical variables were coded as zero in the corresponding dummy variables, and separate binary indicators were included to capture missingness.

Normality of total scores was assessed using Kolmogorov–Smirnov and Shapiro–Wilk tests, as well as inspection of skewness, kurtosis, and trimmed means. Although normality tests indicated that data is not normally distributed ($p < .05$), which is common in large samples, the skewness and kurtosis values indicated only minor deviations from normality.

Given these mixed indicators and the ordinal nature of some variables, non-parametric tests (Mann–Whitney U, Kruskal–Wallis H, and Spearman’s rho) were applied where appropriate to ensure robustness of results.

Table 2: Descriptive of the Total Scores of Attitude and Knowledge

			Statistic	Std. Error
Total score of nurses' attitudes towards people with dementia	Mean		63,21	,781
	95% Confidence Interval for Mean	Lower Bound	61,66	
		Upper Bound	64,75	
	5% Trimmed Mean		63,07	
	Median		63,00	
	Variance		119,061	
	Std. Deviation		10,911	
	Minimum		39	
	Maximum		90	
	Range		51	
	Interquartile Range		16	
	Skewness		,180	,174
	Kurtosis		-,578	,346
			Statistic	Std. Error
Dementia knowledge among nurses in Igboland	Mean		18,00	,189
	95% Confidence Interval for Mean	Lower Bound	17,62	
		Upper Bound	18,37	
	5% Trimmed Mean		17,98	
	Median		18,00	
	Variance		7,627	
	Std. Deviation		2,762	
	Minimum		12	
	Maximum		27	
	Range		15	
	Interquartile Range		4	
	Skewness		,126	,167
	Kurtosis		,359	,332

3.4.2 Qualitative Data Analysis

In line with the sequential explanatory mixed-methods design, qualitative data from the focus group discussions were analysed to deepen the understanding of findings from the initial quantitative survey on nurses' knowledge of and attitudes toward people with dementia in Igboland. The qualitative phase aimed to explore the contextual and cultural factors influencing nurses' responses. **The data derived from the focus group discussions were analysed using thematic analysis, following the six-phase approach outlined by Braun and Clarke (2006).** This method was chosen because of its flexibility and rigor in identifying, analysing, and reporting patterns (themes) within qualitative data.

In qualitative research, themes are overarching concepts consisting of codes that share a common reference point and bring recurring ideas together (Creswell, 2013; Vaismoradi, et al., 2016). To provide a deeper understanding of the data, each theme may include sub-themes, which help reveal patterns within participants' responses (Vaismoradi, et al., 2016). A theme captures something significant within the data and highlights a consistent pattern or meaning across the dataset that helps to best answer the research question (Braun & Clarke, 2006; Maguire & Delahunt, 2017).

Braun and Clarke (2006) differentiate between two types of thematic analysis: a deductive, top-down or theoretical approach, which is guided by the research question and the researcher's perspective, and a bottom-up or inductive approach, in which themes emerge more directly from the data. In this study, I followed a more top-down approach primarily shaped by my research questions and my purpose to explain the results of the preceding quantitative phase of this research. However, there was no attempt to fit the coding process into a pre-existing coding frame, rather I used open coding to identify all relevant patterns to be able to answer the research questions. This approach allowed theoretical guidance without imposing rigid deductive constraints on the data.

All focus group sessions were audio-recorded and transcribed verbatim. The transcript of one focus group discussion is attached in Appendix 4 as an example. To ensure accuracy and maintain the integrity of participants' contributions, each transcript was cross-checked against the audio recordings. The development of codes and themes proceeded iteratively following a step-by-step process informed by the guidelines of Vaismoradi, et al. (2016) and Braun & Clark (2006; 2012). Data management and coding

were performed manually and the analysis process was repeated for each of the five focus group transcripts before bringing them together. The six steps were applied as follows:

Familiarisation: In this first step, I engaged in meticulous and repeated reading of the transcripts, accompanied by taking notes of initial ideas and reflections. This aimed to ensure familiarity with the data and to gain an initial understanding of the content of the data. This helped me to concentrate on the most relevant concepts emerging from the data and to capture the patterns and meanings in participants' views and experiences.

Generating Initial Codes: In step two, I then proceeded to code the data systematically. Here I generated initial codes comprising of interesting and relevant features across the dataset, such as words or phrases that were significant and related to the research questions and objectives. Working through the transcripts, I coded every segment or extract of text that seemed to be important to or explicitly address my research questions. Both semantic codes (explicit statements, e.g., "dementia can be managed, but not reversed") and latent codes (underlying meanings, e.g., "it feels rewarding to care for them, despite the stress") were developed.

Searching for Themes: In step three, I examined the generated codes for similarities and grouped them into broader categories. This process involved collating all relevant codes within the data to generate preliminary themes. For example, codes like "communication is very difficult" and "correcting people with dementia frustrates them" were grouped under the theme communication and interaction with people with dementia.

Reviewing Themes: After generating the themes, I reviewed the themes critically in step four, asking questions like; do the themes make sense in relation to the coded data, data extracts and the entire dataset? Do I have enough data to support them or are the data too diverse? To do this, I refined the themes by checking against the coded extracts and the entire dataset. This process enabled me to ensure that the themes were coherent and internally distinct from each other, while also reflecting the participants' accounts in relation to my research questions and objectives.

Defining and naming Themes: This step five involved a clear definition and naming of each theme to capture the essence of what it represented and the story it is telling. I revisited the collated data extracts and checked whether they really supported the themes. This step was necessary to ensure the analysis produce a cohesive and

logically consistent narrative. I also checked each of the themes in relation to other themes and in relation to my research questions, to guard against too much overlap between themes. I identified four major themes with corresponding sub-themes that gave structure to enormous and sophisticated themes.

Producing the Report: Lastly, in step six, the themes were described in detail and supported by illustrative quotes from the participants to enhance the credibility and transparency of the findings. The themes were presented and discussed in relation to my research questions and objectives. Finally, I merged the quantitative and qualitative studies in an attempt to use the themes to explain the results of the preceding quantitative analysis.

3.5 Ethical Considerations

Given the fact that research involves gathering data from and about individuals, the importance of justifying ethical considerations in research study is imperative. Throughout the research process, researchers must protect and safeguard participants' privacy and dignity, build trust, uphold integrity, and avoid any form of misconduct (Creswell, 2014; Yip, et al., 2016; Dooly, et al., 2017; Mirza, et al., 2023). Research ethics regulations are based on the following key principles: (1) **Beneficence, which emphasises** maximising research benefits while minimising harm, (2) **Respect for persons** which ensures informed and voluntary participation while recognising individual's autonomy in research, and (3) **Justice** which requires the fair distribution of research benefits and burdens (Fisher & Anushko, 2008; Yip, et al., 2016). Other key ethical concerns in research include personal disclosure, research credibility, researcher's roles, and privacy in data collection (Creswell, 2014).

This study was conducted in strict adherence to ethical principles and guidelines as approved by the Scientific Committee of the University and as directed by my Supervisor. Prior to embarking on this doctoral research project, a proposal was written and presented to the members of the scientific committee of the university for approval. The proposal contained detailed information about the study's purpose, methodology, and data collection and processing procedures. Thus, the study received clearance and approval from the appropriate university authorities, ensuring that all research activities align with institutional and academic standards. As the study did not involve medical intervention, vulnerable populations, or sensitive clinical data, formal review by a

medical ethics committee was not required under the institutional regulations governing this research.

The participants received the contact details of the researcher, to make sure that contact is possible in the case of any concerns (Dooly, et al., 2017; Creswell, 2014). Proper referencing and citation were employed throughout the dissertation following the APA 7 style to acknowledge the intellectual contributions of scholars and researchers whose works were consulted. This ensured academic integrity and prevention of plagiarism (Creswell, 2014; Walliman, 2006).

Participants were fully informed about the study's objectives, procedures, potential risks, and benefits through an information sheet. For the quantitative part of the study in which data was collected through survey using self-administered questionnaire, an introductory section was utilised to provide prospective participants with relevant study details including its purpose, risks, benefits, confidentiality measures, withdrawal rights, and contact information (Fisher & Anushko, 2008; Creswell, 2014; Lune & Berg, 2017; Dooly, et al., 2017; Mirza, et al., 2023). In this survey, signed consent forms were replaced with implied consent, where completing and submitting the questionnaire signifies agreement to participate (Lune & Berg, 2017).

For the qualitative part of the study, participants were provided with a detailed information sheet explaining the purpose, objectives, procedures, risks, and benefits of the study prior to the focus group discussions. **Written informed consent** (see Appendix 2) **was obtained before participation**, and participants were assured of their right to withdraw at any point without fear of negative consequences (Walliman, 2006; Creswell, 2014; Lune & Berg, 2017; Fisher & Anushko, 2008; Dooly, et al., 2017; Mirza, et al., 2023).

To protect participants' identities, no personally identifiable information was collected. Any data that could potentially reveal the identity of the participants was strictly avoided. For example, absolute anonymity was maintained throughout the process of the survey, because the questionnaire was self-administered and did not contain any identifying mark (Creswell, 2014; Lune & Berg, 2017; Dooly, et al., 2017; Mirza, et al., 2023). However, complete anonymity wasn't possible in the focus group discussions, since the researcher had in-person group discussions with the participants, even though they were not known to each other before the discussion sessions. However,

confidentiality was observed by replacing real names with pseudonyms while transcribing and reporting data (Walliman, 2006; Creswell, 2014; Lune & Berg, 2017; Dooly, et al., 2017; Mirza, et al., 2023).

All research data were stored securely using password- and fingerprint protected electronic files throughout the research process and beyond. Data was accessible only to the researcher, ensuring compliance with data protection regulations (Creswell, 2014; Mirza, et al., 2023; Walliman, 2006). The collected data was and will be used exclusively for research purposes as outlined in the information sheet provided to the participants (Creswell, 2014; Dooly, et al., 2017; Mirza, et al., 2023). By doing this, honesty and respect for the participants and the research community were maintained and deceit avoided (Creswell, 2014; Mirza, et al., 2023; Walliman, 2006).

In presenting and interpreting the research results, I upheld ethical integrity by ensuring accuracy, transparency, and objectivity. The data was not underrepresented, misrepresented, exaggerated, or manipulated to fit a desired outcome (Creswell, 2014; Dooly, et al., 2017; Walliman, 2006). I employed quantitative and qualitative research methods including survey and focus group discussions to validate findings. Additionally, I acknowledged the limitations, avoided biases, and presented conclusions that faithfully reflect the data (Dooly, et al., 2017; Walliman, 2006). Maintaining ethical integrity fosters credibility, promotes responsible research practices, and upholds the trust of both participants and the wider academic community.

Given the socio-cultural context of Igboland, cultural sensitivity was maintained throughout the study. Questions, interactions, and interpretations were conducted in a way that respects local customs, norms, beliefs, and practices (Creswell, 2014) regarding dementia and caregiving. Efforts were made to use language that is non-stigmatising and culturally appropriate (Walliman, 2006).

Throughout the process of the research, I engaged in continuous reflexivity, recognising my own biases and ensuring that they do not influence the study's findings (Creswell, 2014; Mirza, et al., 2023; Walliman, 2006). By adhering to these ethical principles, this study protects the rights and well-being of participants, while ensuring academic and research integrity.

4 NURSES' DEMENTIA KNOWLEDGE AND ATTITUDES IN IGBOLAND

Dementia is a progressive neurological disorder that significantly impacts cognitive function, behaviour, and daily activities. Nurses as advisers and mentors of caregivers play a pivotal role in providing quality care to individuals with dementia. Their level of knowledge about the condition and their attitudes towards affected individuals can influence the quality of care provided. Understanding these factors is essential in addressing gaps in dementia care, particularly in culturally distinct regions such as Igboland, where perceptions of dementia may be shaped by socio-cultural beliefs and healthcare practices.

This study aimed to assess the level of nurses' knowledge about dementia, examine their attitudes towards people with dementia, and explore the correlation between dementia knowledge and factors such as age, gender, prior contact with person with dementia, years of work experience, and specialty area. Consistent with the methodological framework outlined in chapter three, I will present the findings in two phases: first, the quantitative findings which provide an overview of patterns and relationships on dementia knowledge and attitude. Then, the qualitative findings, which build upon and explain these results by offering deeper insights into nurses' experiences and perceptions.

Finally, I will conclude the chapter with a synthesis of the two strands, highlighting the ways in which the qualitative data illuminate and contextualise the statistical patterns observed in the quantitative analysis. This integrated presentation ensures coherence across both phases of the study and lays the groundwork for the discussion in Chapter five, where I will interpret the findings in relation to existing literature and theoretical frameworks.

4.1 Findings from the Quantitative Analysis of Dementia Knowledge

4.1.1 Demographic Characteristics of Respondents

A total number of 241 nurses participated in the survey. Due to item non-response, the number of valid responses varies across variables and analyses. Of these, 193 provided information about gender comprising of 179 females and 14 males. Forty-eight participants did not provide information about their gender. Some of the respondents

skipped some questions in the survey, therefore the numbers and percentages presented in this section refer to the valid number for the variables and not the total number of participants. Based on the valid number of respondents ($n = 193$), the majority of the respondents 92.7% ($n = 179$) were female and 47.3% ($n = 95$) were under 35 years of age. Those within the age range of 35 – 44 were represented with 31.8% ($n = 64$) and those above 45 years made 20.9% ($n = 42$) of the respondents. Most 60.4% of the respondents ($n = 116$) had up to 10 years of work experience. Nurses with work experience of 11 years and above were represented with 39.6% ($n = 76$).

More than half, 52.3% of the respondents ($n = 126$) are practicing as general nurses and 38.6% ($n = 93$) have known or worked with someone with dementia for a period of 6 months to more than 15 years. All the five states in Igboland were represented, though not equally: 7.4% ($n = 14$) Abia, 25.0% ($n = 47$) Anambra, 5.9% ($n = 11$) Ebonyi, 22.3% ($n = 42$) Enugu and 34.6% ($n = 65$) Imo respectively. Almost all the respondents 96.4% were Christians ($n = 186$), and only a few 3.6% ($n = 7$) practiced the traditional religion. Most of the respondents 46.8% ($n = 87$) worked in government owned hospitals. Table 3 represents a summary of the socio-demographic characteristics of the participants. As not all respondents answered every demographic question, the valid percent for each variable is reported separately and may be higher than that of the total sample size ($N = 241$).

Table 3: Socio-demographic Characteristics of Participants

Variable	Frequency (Valid n)	Percent (Valid percent)	M (SD)
Age of Participants	N = 201	83.4% (100%)	1,74 (.784)
18 - 34 years	N = 95	39.4% (47.3%)	
35 - 44 years	N = 64	26.6% (31.8%)	
45 & above	N = 42	17.4% (20.9%)	
Gender	N = 193	80.1% (100%)	
Female	N = 179	74.3% (92.7%)	
Male	N = 14	5.8% (7.3%)	
Work Experience in years	N = 192	79.7% (100%)	1,40 (.490)
1 - 10 years	N = 116	48.8% (60.4%)	
11 & above	N = 76	31.5% (39.6%)	

Specialty Area	N = 241	100% (100%)	
Midwifery, MCH, Pediatrics, Obstetrics	N = 42	17.4% (17.4%)	
Ophthalmology, orthopedic, Dentistry	N = 22	9.1% (9.1%)	
Psychiatry, Dementia, Mental health	N = 9	3.7% (3.7%)	
Anesthesia, Cardiac thoracic, A&E, Medical surgical, ICU, Critical care, M&E	N = 20	8.3% (8.3%)	
Microbiology, Theater nursing, Biochemistry	N = 3	1.2% (1.2%)	
Public health, clinical nursing, nursing education & science, community health, PHC, B.Sc. N.	N = 19	7.9% (7.9%)	
General nursing	N = 126	52.3% (52.3%)	
Previous Experience with People with Dementia	N = 200	83.0% (100%)	
Yes	N = 93	38.6% (46.5%)	
No	N = 107	44.4% (53.5%)	
Religion	N = 193	80.1% (100%)	
Christianity	N = 186	77.2% (96.4%)	
Traditional religion	N = 7	2.9% (3.6%)	
Owner of Hospital	N = 186	77.2% (100%)	2,04 (1,189)
Federal Government	N = 87	36.1% (46.8%)	
State Government	N = 44	18.3% (23.7%)	
Mission	N = 15	6.2% (8.1%)	
Private	N = 40	16.6% (21.5%)	

4.1.2 Dementia Knowledge Among Nurses in Igboland

Building upon the demographic overview presented earlier, the following section outlines the quantitative findings related to nurses' dementia knowledge, including overall scores, sub-section performance, and item-level response patterns. The numbers and percentages presented in this section are based on the valid number of respondents, since not all respondents answered all questions. The mean score on the Dementia Knowledge Assessment section of the questionnaire was 18,00. Out of 27 obtainable scores 79.19% of the questions were answered correctly, with a range of 15. At the sub-section level of the dementia knowledge questions, the "Communication and Behaviour"

sub-section obtained the lowest correct response rate with 51.81% correctly answered questions. In contrast, the sub-section “Care Considerations” had the highest 86.08% scores of correctly answered questions at the sub-section level.

The statement “The sudden onset of cognitive problems is characteristic of common forms of dementia “(false), had the lowest correct response rate, with only 37 (16.1%) respondents answering it correctly. Other statements at the item level with low correct response rate included the following: “It is important to correct a person with dementia when they are confused” (false) answered correctly by 72 (30.9%) participants, “Dementia is a normal part of ageing” (false) correctly answered by 73 (31.1%) respondents, “It is impossible to communicate with a person who has advanced dementia” (false) with a correct response rate of 37.9% (n = 88) and “People can recover from the most common forms of dementia” (false) correctly answered by 91 (38.9%) respondents.

On the other hand, the statements "Dementia occurs because of changes in the brain" (true), “When a person has late stage dementia, families can help others to understand that person’s needs “(true) and “People experiencing dementia have difficulty learning new skills” (true) received the highest correct response rates, with 97.0% (n = 229), 94.4% (n = 220) and 93.2% (n = 218) of respondents answering precisely. Table 4 provides detailed information on the sum and percentage of correct responses to the Dementia Knowledge Assessment items based on the valid number of responses.

Table 4: Sum and Percentage of Correct Answers in the Dementia Knowledge Assessment Items

Dementia Knowledge Items	Valid N	Minimum	Maximum	Sum	Valid Percent
Dementia is likely to limit life expectancy [True]	238	0	1	208	87.4%
Blood vessels disease (vascular dementia) is the most common form of dementia [False]	234	0	1	117	50.0%
People can recover from the most common forms of dementia [False]	234	0	1	91	38.9%
Dementia is a normal part of the ageing process [False]	235	0	1	73	31.1%
Dementia occurs because of changes in the brain [True]	236	0	1	229	97.0%
Planning the end of life care is generally not necessary following a diagnosis of dementia [False]	232	0	1	155	66.8%
Alzheimer’s disease is the most common form of dementia [True]	233	0	1	198	85.0%

It is impossible to communicate with a person who has advanced dementia [False]	232	0	1	88	37.9%
Changing the environment (e.g., putting on a CD, opening or closing windows) will make no difference to a person who has dementia [False]	233	0	1	114	48.9%
It is important to correct a person with dementia when they are confused [False]	233	0	1	72	30.9%
People experiencing advanced dementia often communicate through body language [True]	234	0	1	147	62.8%
Uncharacteristic behaviors in a person experiencing dementia is generally a response to unmet needs [True]	232	0	1	144	62.1%
Medications are the most effective way of treating behavioural symptoms of dementia [False]	233	0	1	117	50.2%
People experiencing dementia do not generally have problems making decisions [False]	234	0	1	198	84.6%
Movement is generally affected in the later stages of dementia [True]	234	0	1	180	76.9%
Difficulty eating and drinking generally occurs in the later stages of dementia [True]	232	0	1	194	83.6%
People with advanced dementia may have difficulty speaking [True]	233	0	1	197	84.5%
People experiencing dementia have difficulty learning new skills [True]	234	0	1	218	93.2%
Daily care for a person with advanced dementia is effective when it focuses on providing comfort [True]	231	0	1	197	85.3%
Having high blood pressure increases a person's risk of developing dementia [True]	233	0	1	152	65.2%
Maintaining a healthy lifestyle does not reduce the risk of developing the most common forms of dementia [False]	231	0	1	146	63.2%
Symptoms of depression can be mistaken for symptoms of dementia [True]	233	0	1	177	76.0%
The sudden onset of cognitive problems is characteristic of common forms of dementia [False]	230	0	1	37	16.1%
Exercise is generally beneficial for people experiencing dementia [True]	232	0	1	186	80.2%
Early diagnosis of dementia does not generally improve quality of	232	0	1	179	77.2%

life for people experiencing the condition [False]					
When a person has late stage dementia, families can help others to understand that person's needs [True]	233	0	1	220	94.4%
When a person who has dementia is distressed, it may help to talk to them about their feelings [True]	232	0	1	162	69.8%
Valid N (listwise)	213				

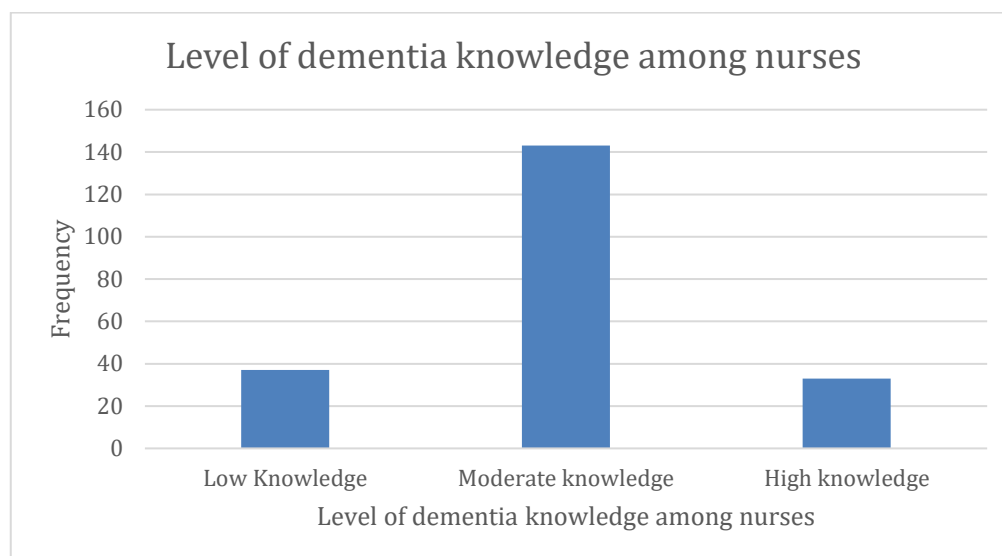
4.1.3 Level of Dementia Knowledge Among Nurses in Igboland

A total of 241 nurses participated in the study. Of these, 11.6% (n = 28) had missing responses. Out of the valid responses (n = 213), the majority of nurses demonstrated **moderate knowledge** of dementia 67.1% (n = 143), followed by those with **low knowledge** 17.4% (n = 37) and **high knowledge** 15.5% (n = 33). At the sub-section level, the majority of the respondents **73.7% (n = 168)** demonstrated **high knowledge** about dementia Care Considerations followed by knowledge about Risks and Health Promoting Factors. On the contrary, more than half 50.2% (n = 113) of the respondents demonstrated low knowledge about Communication with People with Dementia. Table 5 presents the distribution of dementia knowledge levels among nurses in Igboland based on the valid number of responses. Figure 6 depicts the frequency of dementia knowledge level among nurses in Igboland.

Table 5: Level of Dementia Knowledge Among Nurses

Knowledge Level	Frequency (n)	Valid Percent
Low Knowledge	37	17.4%
Moderate Knowledge	143	67.1%
High Knowledge	33	15.5%
Total (Valid)	213	100.0%
Missing Data	28	
Total Sample	241	
Risks and Health-Promoting Factors		
Low Knowledge	39	17.3%
Moderate Knowledge	107	47.3%
High Knowledge	80	35.4%

Total (Valid)	226	100.0%
Missing Data	15	
Total Sample	241	
Care Considerations		
Low Knowledge	10	4.4%
Moderate Knowledge	50	21.9%
High Knowledge	168	73.7%
Total (Valid)	228	100.0%
Missing Data	13	
Total Sample	241	
Causes and Characteristics		
Low Knowledge	41	18.1%
Moderate Knowledge	136	59.9%
High Knowledge	50	22.0%
Total (Valid)	227	100.0%
Missing Data	14	
Total Sample	241	
Communication		
Low Knowledge	113	50.2%
Moderate Knowledge	94	41.8%
High Knowledge	18	8.0%
Total (Valid)	225	100%.0
Missing Data	16	
Total Sample	241	

Figure 6: Level of Dementia Knowledge

4.1.4 Relationship Between Dementia Knowledge and Participants' Socio-demographic Characteristics

The relationships between the total score of dementia knowledge among nurses in Igboland and the total score of their attitude towards individuals with dementia as well as the socio-demographic variables were analysed using Spearman's correlations (ρ). The analysis of the differences between dementia knowledge and potential predictor variable groups like age, gender, religion, working experience and prior exposure to dementia were conducted using Mann Whitney U Test and Kruskal-Wallis Test. These non-parametric tests were used because the preliminary analysis performed on the dependent variable indicated that data was not normally distributed. A significant deviation from normality ($p = 0,02$) was observed on the dementia knowledge scale when tested for normality applying the Kolmogorov-Smirnov and Shapiro-Wilk tests. The choice of using non-parametric tests was made based on the Kolmogorov-Smirnov test considering the large sample size. Correlation analysis was conducted applying pairwise deletion to deal with missing values.

Using the Spearman's rank correlations (ρ) to evaluate the correlation between nurses' dementia knowledge and their attitudes toward people with dementia reflected a statistically significant, positive, ($p(183) = ,213, p = ,004$) relationship. This indicates that higher levels of dementia knowledge among nurses are associated with more positive

attitudes toward individuals living with dementia. Although the relationship was statistically significant, the strength of the correlation was weak.

The findings also revealed a weak but statistically significant negative correlation between gender and dementia knowledge ($\rho(179) = -.190, p = .011$). Furthermore, there was a statistically significant positive correlation between years of working experience and dementia knowledge ($\rho(177) = .245, p < .001$). Age also demonstrated a weak yet significant positive correlation with dementia knowledge ($\rho(184) = .180, p = .014$). In contrast, no significant relationships were found between dementia knowledge and either prior contact with individuals with dementia ($\rho(182) = -.064, p = .393$) or religious affiliation ($\rho(177) = -.070, p = .355$).

4.1.5 Comparison of Dementia Knowledge Between Groups

Mann-Whitney U Tests were used to assess whether dementia knowledge differed between pairs of independent variables containing only two groups like gender, prior contact with individuals with dementia, religion and working experience (binned). The results indicated that nurses who had known or worked with someone with dementia ($n = 86$, Mean Rank = 95,01) did not significantly differ in their dementia knowledge scores compared to those who had not ($n = 96$, Mean Rank = 88,35). Hence, there was no statistically significant difference in dementia knowledge between the two groups $U = 3826,00, Z = -0,86, p = .391$. Similarly, there was no significant difference in dementia knowledge between nurses who identified as Christian ($n = 170$, Mean Rank = 89,72) and those who identified as practitioners of Traditional Religion ($n = 7$, Mean Rank = 71,50). The results showed no statistically significant difference in dementia knowledge between the two groups, $U = 472,50, Z = -0,93, p = .353$.

However, the results showed that female nurses ($n = 165$, Mean Rank = 92,84) demonstrated significantly greater dementia knowledge than their male counterparts ($n = 14$, Mean Rank = 56,57). The results indicated a statistically significant difference in dementia knowledge between the two groups, $U = 687,00, Z = -2,532, p = .011$. Furthermore, dementia knowledge was seen to be significantly higher among nurses with **more than 10 years of working experience (Mean Rank = 103.76)** compared to those with **1 – 10 years of working experience (Mean Rank = 79,35)**, $U = 2712,00, Z = -$

3,120, $p = ,002$. These results indicate that nurses with greater experience tend to have significantly more knowledge about dementia.

A series of Kruskal-Wallis H tests were employed to explore the variation in dementia knowledge among nurses in Igboland based on age (binned), and specialty area. The analysis revealed a statistically significant difference in dementia knowledge among nurses of different age groups, $H(2) = 8,75, p = ,013$. Nurses aged 45 years and above demonstrated the highest knowledge levels (Mean Rank = **113,35**), followed by those aged 35 – 44 years (Mean Rank = **92,52**), with the lowest knowledge (Mean Rank = **83,25**) observed among nurses aged 18 – 34 years.

Similarly, the test also showed a significant variation in knowledge across different nursing specialties, $H(6) = 15,45, p = ,017$. The highest mean rank (Mean Rank = 178,00) was recorded among nurses with their specialty area in Microbiology, Theater Nursing, and Biochemistry. In contrast, lower knowledge levels (Mean Rank = 91,32) were observed in specialty areas such as Anaesthesia, Cardiac Thoracic, Accident & Emergency, Medical-Surgical, ICU, Critical Care, and Monitoring & Evaluation. This indicates variation in dementia knowledge across specialty areas.

However, the test revealed no statistically significant differences in dementia knowledge scores across the hospital ownership groups, $\chi^2(3) = 4,12, p = ,249$. The Mean rank scores of the different hospital ownership groups were as follows: Federal government hospitals (M rank = 93,08), state government hospitals (M rank = 87,21), mission hospitals (M rank = 81,79) and private hospitals (M rank = 73,42). The summaries of the correlation results are outlined in Tables 6 and 7 below.

Table 6: Correlation Matrix for Potential Predictors of Dementia Knowledge

Variables	Correlation Coefficient Spearman's rho (ρ)	Sig. (2-tailed) p-value
Attitude toward people with dementia	,213**	,004
Gender	-,190*	,011
Years of working experience (binned)	,245**	<,001
Age (binned)	,180*	,014
Known/worked with someone with dementia	-,064	,393
Religion	-,070	,355

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 7: Differences in Dementia Knowledge Between Groups

Mann-Whitney U Test					
Comparison Variable	Groups	Rank Mean	U	Z	p (2-tailed)
Known/worked with someone with ADRD	Yes (n = 86)	95,01	3826,00	-,857	,391
	No (n = 96)	88,35			
Religion	Christianity (n = 170)	89,72	472,50	-,929	,353
	Traditional (n = 7)	71,50			
Gender	Female (n = 165)	92,84	687,00	-2,532	,011
	Male (n = 14)	56,57			
Working experience in years (binned)	1-10 (n = 107)	79,35	2712,00	-3,120	,002
	11 and above (n = 70)	103,76			
Kruskal-Wallis Test			Kruskal-Wallis H		
Age of participants (binned)	18-34 (n = 88)	83,25	H(2) = 8,751		,013
	35-44 (n = 57)	92,52			
	45 & above (n = 39)	113,35			
Specialty Area	Midwifery, MCH, Paediatrics, Obsterics (n = 40)	103,21	H(6) = 15,445		,017
	Ophthalmology, orthopedic, Dentistry (n = 21)	115,29			
	Psychiatry, Dementia, Mental health (n = 7)	102,14			
	Anaesthesia, Cardiac thoracic, A&E, Medical surgical, ICU, Critical care, M&E (n = 17)	91,32			
	Microbiology, Theater nursing,				

Owner of hospital	Biochemistry (n = 3)	178,00			
	Public health, clinical nursing, nursing education & science, community health, PHC, Bsc N. (n = 17)	150,50			
	General nursing (n = 108)	100,75			
	Federal government (n = 79)	93,08	H(3) = 4,122		,249
	State government (n = 42)	87,21			
	Mission (n = 14)	81,79			
	Private (n = 37)	73,42			

4.2 Findings from the Quantitative Analysis of Nurses' Attitude Towards People with Dementia

This section presents the findings from the quantitative analysis of nurses' attitudes towards people living with dementia in Igboland. Using responses obtained from the DAS, the analysis provides both a descriptive overview of attitude patterns and an examination of how these attitudes vary across selected socio-demographic characteristics. Together, the findings offer insight into the prevailing attitudes among nurses and the factors that may influence them within the study context.

4.2.1 Pattern of Nurses' Attitude Toward People with Dementia in Igboland

Details of the Dementia Attitude Scale (DAS) are provided in Appendix 1. As not all participants completed the attitude section, the valid sample size for this analysis is reported accordingly. The results below summarise the overall and item-level attitudes of nurses toward people with dementia. A total of 195 out of 241 nurses completed the "Dementia Attitude Scale" (DAS) questions. The attitude section of the survey questionnaire contained 14 items with a possible score range between 14 and 98. The scores attained by respondents ranged from 39 to 90 ($M = 63,21$, $SD = 10,911$).

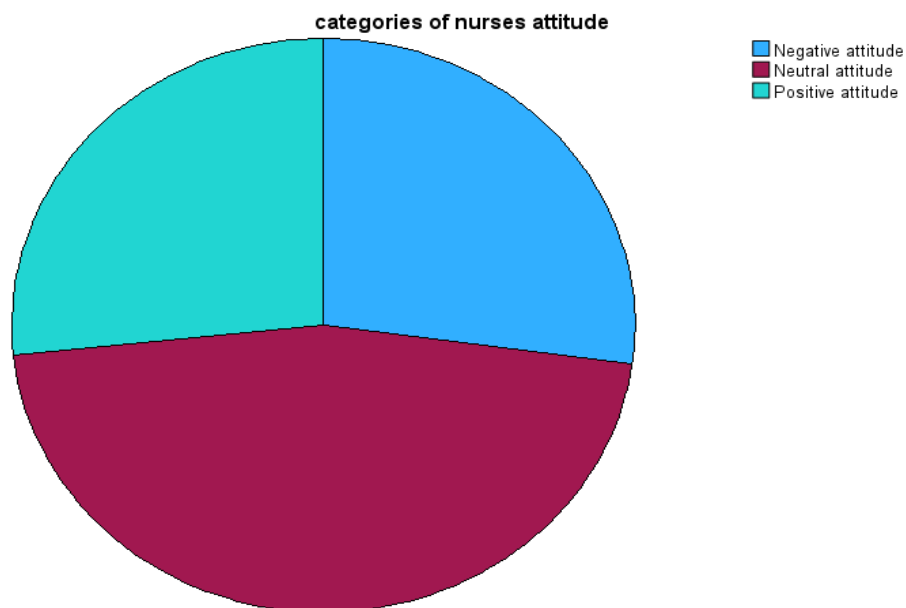
At the item level, the statement “we can do a lot to improve the lives of people with ADRD” had the highest score of positive response with 52.2% (n = 106) strongly agree and 32.0% (n = 65) agree responses (M = 6,12, SD = 1,341). On the contrary, 2.0% (n = 4) strongly disagreed that they would avoid an agitated person with dementia. Similarly, only 3.0% (n = 6), 3.3% (n = 8) and 3.3% (n = 8) also strongly agreed to the statements “I feel relaxed around people with ADRD”, “I feel confident around people with ADRD” and “People with ADRD can be creative” respectively. The central tendency of nurses’ attitudes towards people with dementia is outlined in Table 8.

Generally, the majority of the respondents 46.2% (n = 90) exhibited neutral attitudes towards people with dementia. 27.2% (n = 53) reported negative attitude, 26.7% (n = 53) stated positive attitudes and 46 responses (19.1%) were missing. The categories of the attitude of nurses towards people with dementia in Igboland is presented in figure 7.

Table 8: Nurses’ Attitude Towards People with Dementia

Variable	N: Valid	N: Missing	Mean	Median	Std. Dev.
It is rewarding to work with people who have ADRD	204	37	4,34	5,00	1,940
People with ADRD can be creative	203	38	3,48	3,00	1,948
I feel confident around people with ADRD	204	37	4,01	4,00	1,804
It is possible to enjoy interacting with people with ADRD	202	39	4,70	6,00	1,851
I feel relaxed around people with ADRD	203	38	4,01	4,00	1,762
People with ADRD can enjoy life	204	37	4,55	5,00	1,844
People with ADRD can feel when others are kind to them	203	38	5,10	6,00	1,841
I feel frustrated because I do not know how to help people with ADRD	202	39	3,80	4,00	1,907
I admire the coping skills of people with ADRD	201	40	5,27	6,00	1,599

We can do a lot to improve the lives of people with ADRD	203	38	6,12	7,00	1,341
I am afraid of people with ADRD reversed	206	35	4,85	6,00	1,854
I feel uncomfortable around people with ADRD reversed	202	39	4,32	5,00	1,927
I would avoid an agitated person with ADRD reversed	201	40	3,45	3,00	1,854
I cannot imagine taking care of person with ADRD reversed	202	39	4,89	6,00	1,798
Total score of nurses' attitudes towards people with dementia	195	46	63,21	63,00	10,911

Figure 7: Categories of Attitudes

4.2.2 Relationship Between Attitude and Socio-demographic Characteristics

To investigate if and how socio-demographic factors relate with nurses' attitude towards people living with dementia, non-parametric analysis (Kruskal-Wallis H and Mann–Whitney U Tests) were conducted. These non-parametric tests were used due to

violation of normality ($p = .002$) applying Kolmogorov-Smirnov Test. The summary of the association between nurses' attitude towards individuals living with dementia and their socio-demographic characteristics is presented in Table 9 below. The test across three age groups (binned): 18 – 34 years, 35 – 44 years, and 45 years and above using Kruskal-Wallis H Test revealed no statistically significant differences in the attitude of nurses towards people with dementia, $H(2) = 1.00$, $p = .606$. The adjusted Post hoc pairwise comparisons using the Bonferroni correction showed that none of the group comparisons were statistically significant: 18 – 34 years vs. 35 – 44 years: $p = 1.000$, 18 – 34 years vs. 45 and above: $p = 1.000$, 35 – 44 years vs. 45 and above: $p = .970$.

The assessment of whether nurses' attitudes toward people with dementia differed across seven specialty areas also showed no statistically significant difference in attitude scores, $H(6) = 3.45$, $p = .751$. This suggests that nurses' attitudes toward individuals with dementia did not significantly vary based on their specialty areas. Likewise, the Post hoc pairwise comparisons using the Bonferroni correction indicated that none of the pairwise comparisons reached statistical significance after adjustment for multiple testing (all adjusted p -values = 1,000). The details of the adjusted pairwise comparison is shown in Table 10. However, these results should be interpreted with caution due to the small number of participants in some specialty groups, which may limit statistical power.

On the contrary, the Kruskal-Wallis H test to determine whether there were statistically significant differences in nurses' attitudes toward people with dementia based on hospital ownership (Federal, State, Mission, and Private) indicated a statistically significant difference among the four ownership groups, $\chi^2(3) = 9.18$, $p = .027$. This result suggests that nurses working in mission and state hospitals reported more positive attitudes toward people with dementia than those in federal or private hospitals.

Based on gender, the Mann-Whitney U Test revealed a statistically significant difference in attitudes towards people with dementia between male and female nurses, ($U = 808.00$, $Z = -2.02$, $p = .043$). Female nurses ($N = 171$, Mean Rank = 95,27) had significantly higher mean ranks in attitude scores than male nurses ($N = 14$, Mean Rank = 65,21). This suggests that female nurses generally exhibited more favorable attitudes toward individuals with dementia compared to their male counterparts. Nevertheless, this result is to be interpreted with caution, because of small number of male participants in the study.

However, no statistically significant difference was identified in attitudes toward people with dementia based on years of working experience (binned), ($U = 3567,50$, $Z = -1,23$, $p = ,221$). Nurses with up to 10 years of working experience ($N = 111$, Mean Rank = 88,14) and those with working experience of 11 or more years ($N = 72$, Mean Rank = 97,95) showed relatively similar attitudes. This suggests that working experience does not significantly influence nurses' attitudes toward individuals with dementia.

In the same line, there was no manifest of a statistically significant difference in attitude scores between nurses who practice Christianity ($N = 177$, Mean Rank = 92,59) and those who practice Traditional Religion ($N = 7$, $M = 90,29$), $U = 604,00$, $Z = -0,11$, $p = ,911$. Furthermore, the analysis indicated no statistically significant difference in attitude scores between nurses who had known or worked with someone with dementia ($N = 88$, Mean Rank = 99,01) and those who had not ($N = 101$, Mean Rank = 91,51), $U = 4091,50$, $Z = -0,94$, $p = ,347$.

Table 9: Correlation Between Attitude and Socio-demographic Factors

Mann-Whitney U Test					
Comparison Variable	Groups	Rank Mean	U	Z	p (2-tailed)
Known/worked with someone with ADRD	Yes (n = 88)	99,01	4091.00	-,940	,347
	No (n = 101)	91,51			
Religion	Christianity (n = 177)	92,59	604,00	-,112	,911
	Traditional (n = 7)	90,29			
Gender	Female (n = 171)	95,27	808,00	-2,021	,043
	Male (n = 14)	65,21			
Working experience in years (binned)	1-10 (n = 111)	88,14	3567,50	-1,225	,221
	11 and above (n = 72)	97,95			
Kruskal-Wallis Test			Kruskal-Wallis H		
Age of participants (binned)	18-34 (n = 90)	96,19	H(2) = 1,003		,606
	35-44 (n = 60)	90,44			
	45 & above	101,53			

	(n = 40)				
Specialty Area	Midwifery, MCH, Paediatrics, Obstetrics (n = 40)	97,10	H(6) = 3,446		,751
	Ophthalmology, Orthopedics, Dentistry (n = 22)				
	Psychiatry, Dementia, Mental health (n = 9)	105,64			
	Anaesthesia, Cardiac thoracic, A&E, Medical surgical, ICU, Critical care, M&E (n = 19)	88,89			
	Microbiology, Theater nursing, Biochemistry (n = 2)	100,50			
	Public health, clinical nursing, nursing education & science, community health, PHC, Bsc N. (n = 18)				
	General nursing (n = 85)	44,25			
	Federal (n = 83)				
	State (n = 43)				
	Mission (n = 14)				
	Private (n = 38)	85,97			
		100,56	H(3) = 9,177		
Owner of hospital					,027
		87,25			
		102,57			
		109,18			
		72,37			

Table 10: Pairwise Comparisons of specialty Areas

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig. ^a
Microbiology, Theatre nursing, Biochemistry-Public health, clinical nursing, nursing education & science, community health, PHC, Bsc N.	-41,722	42,042	-,992	,321	1,000
Microbiology, Theatre nursing, Biochemistry-Psychiatry, Dementia, Mental health	45,639	44,094	1,035	,301	1,000

Microbiology, Theatre nursing, Biochemistry-Midwifery, MCH, Paediatrics, Obstetrics	52,850	40,870	1,293	,196	1,000
Microbiology, Theatre nursing, Biochemistry-Anaesthesia, Cardiac thoracic, A&E, Medical surgical, ICU, Critical care, M&E,	56,250	41,931	1,341	,180	1,000
Microbiology, Theatre nursing, Biochemistry-General nursing	-56,309	40,351	-1,395	,163	1,000
Microbiology, Theatre nursing, Biochemistry-Ophthalmology, Orthopedics, Dentistry	61,386	41,658	1,474	,141	1,000
Public health, clinical nursing, nursing education & science, community health, PHC, Bsc N.- Psychiatry, Dementia, Mental health	3,917	23,027	,170	,865	1,000
Public health, clinical nursing, nursing education & science, community health, PHC, Bsc N.- Midwifery, MCH, Paediatrics, Obstetrics	11,128	16,009	,695	,487	1,000
Public health, clinical nursing, nursing education & science, community health, PHC, Bsc N.- Anaesthesia, Cardiac thoracic, A&E, Medical surgical, ICU, Critical care, M&E,	14,528	18,553	,783	,434	1,000
Public health, clinical nursing, nursing education & science, community health, PHC, Bsc N.- General nursing	-14,587	14,635	-,997	,319	1,000
Public health, clinical nursing, nursing education & science, community health, PHC, Bsc N.- Ophthalmology, Orthopedics, Dentistry	19,664	17,927	1,097	,273	1,000
Psychiatry, Dementia, Mental health-Midwifery, MCH, Paediatrics, Obstetrics	7,211	20,810	,347	,729	1,000
Psychiatry, Dementia, Mental health-Anaesthesia, Cardiac thoracic, A&E, Medical surgical, ICU, Critical care, M&E,	-10,611	22,825	-,465	,642	1,000
Psychiatry, Dementia, Mental health-General nursing	-10,670	19,772	-,540	,589	1,000
Psychiatry, Dementia, Mental health-Ophthalmology, Orthopedics, Dentistry	15,747	22,319	,706	,480	1,000
Midwifery, MCH, Paediatrics, Obstetrics-Anaesthesia, Cardiac thoracic, A&E, Medical surgical, ICU, Critical care, M&E,	-3,400	15,716	-,216	,829	1,000
Midwifery, MCH, Paediatrics, Obstetrics-General nursing	-3,459	10,815	-,320	,749	1,000
Midwifery, MCH, Paediatrics, Obstetrics-Ophthalmology, Orthopedics, Dentistry	-8,536	14,972	-,570	,569	1,000

Anaesthesia, Cardiac thoracic, A&E, Medical surgical, ICU, Critical care, M&E, -General nursing	-,059	14,314	-,004	,997	1,000
Anaesthesia, Cardiac thoracic, A&E, Medical surgical, ICU, Critical care, M&E- Ophthalmology, Orthopedics, Dentistry	5,136	17,665	,291	,771	1,000
General nursing-Ophthalmology, Orthopedics, Dentistry	5,078	13,492	,376	,707	1,000

Asymptotic significances (2-sided tests) are displayed. The significance level is ,050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

4.3 Multivariate Analysis of Nurses' Dementia Knowledge and Attitude

A multiple linear regression analysis was performed to examine the relationship between selected demographic characteristics and dementia knowledge among nurses in Igboland. The independent variables included age groups, years of working experience, gender, and a dummy variable capturing missing information on working experience and age groups. Categorical variables with more than two categories were entered using dummy coding, with nurses aged 18 - 24 years and those with 0 - 10 years of work experience serving as the reference groups. These variables were chosen for the multiple regression, because they showed a significant bivariate correlation with the total dementia knowledge score.

The model produced a multiple correlation coefficient of $R = 0,302$, indicating a weak positive relationship between the predictors and dementia knowledge. The R^2 value of 0,091 suggests that approximately 9.1% of the variance in dementia knowledge is explained by the variables included in the model. After adjusting for the number of predictors, the adjusted R^2 was 0,072, indicating limited explanatory power. The standard error of the estimate was 2,753, reflecting the average deviation of observed dementia knowledge scores from the model-predicted values. The regression model was not statistically significant ($F(10, 168) = 1,685$, $p = 0,088$), indicating that the predictors included in the model did not significantly explain variance in dementia knowledge among nurses in Igboland (refer to Table 11 a).

None of the age group dummy variables were statistically significant predictors of dementia knowledge among nurses in Igboland. In comparison to the reference group (18 – 24 years) nurses aged 25 – 34 years (Age group 2) scored approximately 0,29 points

($p = 0,661$) those aged 35 – 44 years (Age group 3) scored 0,41 points ($p = 0,591$) and those aged 55 – 64 (Age group 5) years scored 0,27 points ($p = 0,858$) lower. Nurses aged 45 – 54 (Age group 4) years scored 0,41 points ($p = 0,692$) and nurses aged 65 years and above (Age group 6) scored 2,05 points ($p = 0,503$) higher than the reference group. The “Missing Age” dummy variable was excluded from analysis because it had no variability. All confidence intervals included zero, indicating no statistically significant differences in dementia knowledge across age groups.

Likewise, years of working experience did not significantly predict dementia knowledge in this sample. Nurses with 11 – 20 years of experience (Work experience 2) scored approximately 0,82 points ($p = 0,223$), those with 21 – 30 years of experience (Work experience 3) scored 1,07 points ($p = 0,375$) and those with experience over 31 years (Work experience 4) scored 2,13 points ($p = 0,277$) higher than those in the reference group (0–10) years of working experience. Although the coefficients were positive and increased with experience, none reached statistical significance. The missing-experience indicator ($B = 1,684$, $p = 0,300$) was not statistically significant, suggesting that missing data on working experience are unlikely to be systematically related to dementia knowledge and do not appear to bias the regression estimates.

Gender had a negative coefficient ($B = -1,519$) and was statistically not a significant ($p = 0,060$) predictor of dementia knowledge among nurses in Igboland. However, the finding suggests a possible gender difference in dementia knowledge that may merit further investigation. Table 12a display the individual contributions of the predictor variables.

Collinearity diagnostics indicated linear relationship and homoscedasticity. Tolerance values ranged from 0,307 to 0,981 clearly within the acceptable limit and the Variance Inflation Factors (VIFs) ranged from 1,019 to 3,256, which are well below the commonly accepted threshold of 10, indicating that multicollinearity is not a concern in this model.

Table 11: Model Summary for Predictors of Nurses' Dementia Knowledge (a) and Attitude (b)

a.

R	R ²	Adjusted R ²	Std. Error
,302	,091	,037	2,753
b.			
R	R ²	Adjusted R ²	Std. Error
,336	,113	,072	10,514

Table 12: Multiple Linear Regression: Nurses' Dementia Knowledge (a) and Attitude (b)

a.

Predictor	B	SE B	β	t	p
(Constant)	19,402	,990	—	19,600	< ,001
Age group 2	-,285	,684	,480	-,440	,661
Age group 3	-,414	,769	-,069	-,539	,591
Age group 4	,405	1,019	,048	,397	,692
Age group 5	-,266	1,485	-,024	-,179	,858
Age group 6	2,046	3,050	,055	,671	,503
Work experience 2	,818	,669	,132	1,223	,223
Work experience 3	1,071	1,203	,106	,890	,375
Work experience 4	2,133	1,956	,113	1,090	,277
Missing Work Experience	1,684	1,618	,077	1,040	,300
Gender	-1,519	,801	-,146	-1,897	,060

b.

Predictor	B	SE B	β	t	p
(Constant)	64,973	4,191	—	15,503	< ,001
Gender	-4,503	3,018	-,109	-1,492	,137

Predictor	B	SE B	β	t	p
State	4,270	2,008	,166	2,127	,035
Mission	6,166	3,104	,150	1,987	,048
Individual	-1,481	2,133	-,055	-,698	,486
Missing ownership	7,880	3,934	,147	2,003	,047
Moderate Knowledge	,929	2,223	,041	,418	,676
High Knowledge	6,397	2,873	,207	2,227	,027
Missing Knowledge	3,965	3,917	,977	,943	,347

Likewise, a second multiple linear regression analysis was conducted to examine whether gender, level of dementia knowledge and hospital ownership could predict nurses' attitudes toward individuals with dementia. Level of dementia knowledge and hospital ownership were entered as dummy variables, with low dementia knowledge and federal government owned hospitals serving as the reference categories. Dummy variables were also included to account for missing data on dementia knowledge and hospital ownership.

The regression model generated a multiple correlation coefficient of $R = 0,336$, indicating a modest positive relationship between the predictors and nurses' attitudes towards people with dementia. The R^2 value of 0,113 shows that approximately 11.3% of the variance in nurses' attitude scores is explained by the independent variables. After adjusting for the number of predictors, the adjusted R^2 was 0,072, suggesting a moderate but meaningful explanatory power. The standard error of the estimate was 10,514, reflecting the average deviation of observed attitude scores from predicted values (see Table 11b above).

The overall model was statistically significant, $F(8, 176) = 2,793$, $p = ,006$. This suggests that, taken together, level of dementia knowledge, hospital ownership, gender, and missing-data indicators significantly predict nurses' attitudes towards people with dementia.

Dementia knowledge illustrated a meaningful association with nurses' attitudes toward people with dementia. Nurses with moderate dementia knowledge scored approximately 0,93 points higher on attitude score than those with low knowledge

(reference group); however, this difference was not statistically significant ($p = 0,676$). On the other hand, nurses with high dementia knowledge scored approximately 6,40 points higher than those with low knowledge, and this effect was statistically significant ($p = 0,027$). The missing-knowledge indicator was not statistically significant ($B = 3,695$, $p = 0,347$), suggesting that missing information on dementia knowledge is unlikely to have biased the estimated relationship between dementia knowledge and nurses' attitudes towards people with dementia.

Hospital ownership was significantly associated with nurses' attitudes towards people with dementia in Igboland. Nurses working in state government owned hospitals scored 4,27 points ($p = 0,035$), and those working in mission hospitals scored roughly 6,17 points ($p = 0,048$) higher than those in federal hospitals with statistically significant effects. Nurses working in privately owned hospitals scored 1,48 points lower than those in federal hospitals, although this effect was not statistically significant ($p = 0,486$). The missing-ownership indicator was statistically significant ($B = 7,880$, $p = 0,047$). This suggests that nurses with missing information on hospital ownership differed systematically in their attitudes towards people with dementia, justifying the inclusion of the missing-dummy variable in the model.

Even though gender had a negative coefficient ($B = -4,503$), indicating lower attitude scores for male nurses in relation to their female counterparts; however, this effect was not statistically significant ($p = 0,137$). The contributions of individual predictors is outlined in table 12 b above.

Collinearity diagnostics indicate that Variance Inflation Factors (VIFs) ranged from 1,066 to 1,922, well below the threshold of 10, and Tolerance value ranged from 0,520 to 0,930, well within the acceptable limit, suggesting no multicollinearity concerns among the predictors.

4.4 Findings from the Qualitative Analysis

To complement the quantitative findings, focus group interviews were conducted to gain deeper insight and understanding into nurses' knowledge of dementia and their attitudes towards individuals living with the condition in Igboland. This qualitative component allowed for the exploration of personal experiences, views, cultural beliefs, and contextual factors that may influence both understanding and behaviour in dementia

care. Through open-ended discussions, participants shared their knowledge, experiences, perceptions and challenges, offering a nuanced perspective that extends beyond numerical data.

The thematic analysis of these focus group discussions revealed a range of beliefs and patterns of how dementia is understood, the factors shaping attitudes toward people with dementia, and the role of personal experience, religious and traditional beliefs in shaping these views. The following section presents the major themes that emerged from the , highlighting the complex interplay between knowledge, attitude, and cultural context in dementia care among nurses in Igboland. The emergent themes and sub-themes are presented in Table 13.

Table 13: Major Themes and Sub-themes

Themes	Sub-themes
Prognosis & Nature of Dementia	The reversibility of dementia Dementia and ageing Onset of cognitive decline in dementia
Communication and Interaction with People with Dementia	Possibilities and challenges of communication Correcting people with dementia
Dementia Caregiving: Challenges and Rewards	Caring for people with dementia Burden and challenges Fear and discomfort Rewards and positive dimensions in dementia care
Knowledge, Beliefs, and Awareness	Misconceptions and superstitions Stigma and societal attitudes Need for awareness and education

The thematic analysis of the focus group discussions generated four overarching themes:

- **Prognosis and Nature of Dementia**
- **Communication and Interaction**
- **Dementia Caregiving: Challenges and Rewards**
- **Knowledge, Beliefs and Awareness.**

Each theme is further enriched by sub-themes that provide nuance and illustrate the diversity of perspectives expressed.

4.4.1 Prognosis and Nature of Dementia

The theme prognosis and nature of dementia reflects participants' diverse understanding of dementia, its origin, development, characteristics and relationship with age. The understanding and views of participating nurses about dementia prognosis

ranged from optimism about recovery to recognition of its degenerative and irreversible nature. The theme also describes different perceptions about the onset of cognitive problems in dementia as well as the (in)evitability of dementia in old age.

4.4.1.1 The Reversibility of Dementia

Some participants believed that dementia could be reversed if the underlying cause such as infections, trauma, medication side effects, or brain tumors was treated promptly. For instance, one of the participants recounted: *“It depends on the underlying cause that some people might recover or might not recover from dementia. some dementia could be as a result of (...) Alzheimer. And the one that's from that origin, I don't think that is reversible. But if it's some, if it's as a sort of infection, it can be recovered”* (P04, FG 1)².

Some participants also believed that people could recover from dementia under correct and consistent medication. Like P04, FG 2 *“So, I think (...) once you are placed on medication, you can, you can fully recover from it (...) if you continue taking your medication”*. And some others confuse the normal and clear moments of persons with dementia as recovering from the disease. This can be seen in the statement of P02, FG 2: *“some people do. They recover from that state (...), because I have aaaa neighbour that has dementia, well they, even though at times, she may, will forget most of the things, but sometimes she will come back to normal”*.

Conversely, others highlighted the chronic and progressive nature of dementia. Thus, they emphasised that common forms of dementia like Alzheimer's disease are irreversible and only amenable to symptomatic management. The quality of life of people with dementia could be improved through lifestyle interventions and supportive measures. For example, one participant noted: *“I don't think the common forms of dementia, (...), I don't think they are reversible. I just think, (...) it can be managed and it can be prevented, (...) can be minimised and you can prevent it from getting worse through certain treatments and just certain management plans, but it cannot be reversed”* (P02, FG 5). Another added: *“(...) it is a progressive disease which can only be controlled*

² P0 stands for participant, FG stands for focus group, and the numbers represents each of the participants as well as each focus group

but cannot be cured. Some strategies like lifestyle, medications, support and care also help to improve the quality of life in such a case” (P04, FG 4).

Furthermore, the prognosis of dementia was widely described as dependent on the stage at which dementia is diagnosed and its underlying type. Early detection was believed to improve the possibility of management and better quality of life, whereas late-stage dementia was generally seen as irreversible and debilitating. Thus, P05, FG 2 said: *“if the patient is presented early to the hospital, for early management and post management to the patient, (...), the patient can recover from dementia when managed early”*. Likewise, P06, FG 2 added: *“(…) this dementia, being the eem the preventive „ihena“, programme. It depends on the stage (...), but once they have discovered earlier and followed eeh speedily, they do recover”*.

4.4.1.2 Dementia and Ageing

A recurrent debate concerned the relationship between dementia and ageing. Some participants considered dementia to be an inevitable consequence of old age, equating it with the natural slowing down of the brain and its functions. For example, P04, FG 1 stated: *“It is because as you are ageing, part of the brain cells is ageing. Like, (...), that’s dementia, there’s no way; your brain cannot be as sharp as it is when you are young. So, because of that degeneration or because of that, the brain cells ageing, it can’t function fully. Like, so it’s part of the ageing process”*.

Others strongly contested this view, stressing that dementia is not a normal part of ageing, as many older people remain cognitively intact. However, they maintained that the elderly population are significantly more vulnerable to suffer from dementia. Thus, P04, FG 3 said: *“not all the elderly people at 65 and above suffer such illness. Even though age is a significant risk factor for dementia”*. Another participant said the following concerning dementia and the ageing process: *“I don’t think it’s inevitable, because you still see some aged people who are still sane, remember, it’s not as if everybody that’s aged will get dementia, some will develop, while some will not develop. So, it’s not inevitable” (P04, FG5).*

4.4.1.3 Onset of Cognitive Decline in Dementia

While many participants emphasised that cognitive decline in dementia usually develops gradually, with memory lapses progressing to disorientation and loss of independence: *“Start from memory loss, (...) is a gradual process. Forgetting some things (...). Some little little things. Then you start forgetting some important things like you don't know your name again, orientation, time, and everything”* (P04 & P05, FG 1) and also *“dementia doesn't come with sudden onset of cognitive problems. This is because the illness is gradual in onset and not sudden”* (P05, FG 3).

Few others narrated what they described as cases of sudden onset of cognitive problems in dementia. These cases were often attributed to secondary causes such as hypertension, stroke, trauma, or emotional stress, which participants sometimes conflated with dementia itself. For instance: P04, FG 1: *“our medications here some medications can lead to creating changes in the brain, thereby causing dementia. In some cases, thats they are sudden, like trauma (...)”*. In the same line of thought, P02, FG 5 said: *“In some individuals, it can be sudden, it can happen, because for some persons, it could be a, it could be TBI, traumatic brain injury that instigates, maybe they are predisposed, they've been predisposed, all this while nothing happened, but then they had a traumatic brain injury, and then the onset just started and kick-started all at once”*.

4.4.2 Communication and Interaction

This theme reflects the different perceptions about communication and interaction with people living with dementia. Communication with people living with dementia was described as both challenging and potentially meaningful, depending on the strategies employed. However, a small fraction of the participants are of the view that communication is not possible with people with dementia, especially in the advanced stage.

4.4.2.1 Possibilities and Challenges of Communication

Across the discussions, participants stressed that communication depends heavily on the emotional climate and topic of the interaction, for example: P03, FG2 said: *“It depends on the persons favorite person to talk to or favorite themes to explain things with it, so they can still communicate”*. Patience, empathy, and a calm, friendly approach were viewed as essential for fostering comfort and trust. They said comfort and trust are vital

in interacting with people with dementia, because without trust they might feel unsafe and act aggressively in an attempt to defend themselves: *“Caregivers of patients with dementia needs special training as well as patience and empathy to aid communication”* (P05, FG 3). And as well: *“It all requires patience, with patience, and you use short simple sentence, yes so that you don’t end up confusing them more”* (P07, FG 2).

In contrast, harshness, lack of understanding, or repeated correction were seen as triggers of negative emotions and breakdown in interaction. In the discussion about the possibility of communication with people with dementia, P03, FG 5 said: *“I think that people with dementia have people they, they feel comfortable with. So, it’s easier to communicate with the people they feel comfortable with. (...), you have to show that you are welcoming to people that have dementia, so they will feel safe around you (...), if you don’t have patience with people that have dementia, you find it extreme like way more difficult than it already is to communicate with them”*.

Moreover, participants highlighted the importance of adopting appropriate strategies and instrumental aids for communication. Techniques such as the use of non-verbal cues, familiar objects (e.g., pictures, names), reminders, and engagement by trusted individuals were reported as helpful: *“it is not impossible to communicate with people with advanced dementia, (...) with the aid of using nonverbal communication, validation, simple language and emotional connection, will enable communication to be possible with people with dementia”* (P04, FG 3). See also P06, FG 5: *“You have to be patient with them, and then keep on relating them to place, person, and time”*. The use of simple and short sentences should be preferred to complex and long sentences for better communication.

Nevertheless, communication with people living with dementia was acknowledged as difficult and challenging. Forgetfulness, mood swing and irritability make conversation difficult. Participants stressed some factors that might make communication and interaction with people with dementia difficult, like aggression and anxiety: *“But at that last stage, they forget, they can be aggressive, or they might be withdrawn by a kind of depression (...) or they ee a kind of anxiety* (P04, FG 1).

The barriers in communication can exacerbate due to difficulty to understand or carry out instructions. It could also be difficult for the persons with dementia to articulate

their needs and wishes due to verbal limitation: *“there will be no effective communication (...), and because the patient cannot understand you well or to retain whatever you have said to the patient, you know the patient will not always carry out what you want him or her to carry out”* (P06, FG1). Another participant expressed: *“people with dementia, they don't really listen. And they don't like to, some of them don't like to talk, and when you tell them something, they try to do the opposite thing”* (P03, FG 5).

4.4.2.2 Correcting People with Dementia

A major point of divergence concerned whether caregivers should attempt to correct people with dementia when they are confused. Some participants insisted that correction was necessary, particularly for safety reasons or to stimulate memory recall and to give orientation. For example, P02, FG 3 stated: *“It is very much important to correct them. Yes. You know, you shouldn't allow them to eeem, what would I say, (...) mm, yes, it is very important to correct their mistakes and make them be aware of what the actual facts are”*. And also, P05, FG 4 added: *“Because at that stage, that person doesn't know what he or she is doing. So, the person needs to be, to be, maybe pictures to make him remember the, the, the past or remember that, okay, this is your son, this is your daughter, and so the person needs to be corrected when he or she is going astray”*.

However, others cautioned that constant correction often provokes agitation, frustration, and aggression. It should always be remembered, that people with dementia are adults. Constant correction could make them feel offended for being incapacitated and taken to be a child or a fool, hence the urge to defend and protect themselves: *“At times, they get offended if you repeatedly start correcting them”* (P04, FG 4), and *“Correcting those with dementia could lead to them getting frustrated and angry”* (P05, FG 3). Instead, they emphasised the importance of validation, listening, showing understanding, and tactfully redirecting conversations which was described as reducing stress, building trust, and safeguarding dignity. For instance, P04, FG 3 stated: *“I can actually say that it is more effective to use some strategies like showing empathy and validation over correction because it reduces stress and anxiety (...). It preserves their dignity and fosters connection. But in another hand, correcting people with dementia is fine when it is for safety concerns or reduces caregivers significant distress”*.

4.4.3 Dementia Caregiving: Challenges and Rewards

Dementia caregiving was described in clear terms as a demanding, multi-dimensional experience that could simultaneously be a burden and a source of deep fulfilment.

4.4.3.1 Caring for People with Dementia

Participants stressed the necessity of person-centered and holistic care when it comes to dementia caregiving. They stated that there is need for caregivers to first of all identify and understand the individual problems of the person with dementia and find out his or her care need for effective and adequate caregiving: *“you give them individualised nursing, you love, you try to, you try to sort out the patient's problem. And that problem is peculiar to that particular patient. It might not be, if you have about ten different patients with dementia, ten of them might not have the same, it's not the same way you care for them”* (P06, FG 1).

Moreover, participants highlighted the importance of integrating persons with dementia in the activities of daily living, as this will always reassure them that they are still useful. There is need to find out their resources and utilise them as well as the need to keep them company. This will help in sustaining and maintaining their dignity and also increasing their quality of life. However, one has to make sure that they are not under or overstrained: *“Associate them, engage them, so that they will realise that they are part of us (...), you don't leave them all alone by themselves. But, you still do that in a way that they won't feel bored or stressed out. You have to like strike a balance”* (P09, FG 2).

Another aspect that was stressed as important in dementia caregiving is social engagement. Giving people with dementia the opportunity to participate in social activities was said to aid enhance their dignity and quality of life as well as their cognitive ability (P03, FG 5) *“So, engaging them in things like singing (...), make them to also dance too or sing songs that the, the patients have once known before or help them like give them a paintbrush, colors and paper so they will draw something, anything. Like it can help to eem reduce that cognitive decline (...)”*.

It was also observed that empathy, patience and tolerance are vital in caring for people with dementia. These are factors that can help people with dementia to build trust with the caregiver. They feel more relaxed and tend to be more cooperative in accommodating and friendly environments. Without trust people with dementia might see

the caregiver as an enemy that has come to harm them. For example, **P04, FG 4**: *“to have a good rapport with them, you need to have empathy, show them love. If you do, at least they feel relaxed and know that you're not against them, (...). And when you're not able to show them, show them the empathy or love, they see you as an outsider that's come to attack them, so they become aggressive”*. And also, **P02, FG 4**: *“so you need to create a friendly environment to reach with them, so they don't see you as somebody coming to attack them. So, the love must be there and you must have patience”*.

Some other participants, for example P04, FG 3 mentioned that dementia care require some sort of flexibility on the part of the caregivers. Caregivers have to be ever ready to adjust and readjust to the changing attitudes and care needs of people with dementia: *“(…) caring for them requires a lot of strategies in order to flow well with them, such as patience and empathy, flexibility: one needs to adapt with their changing needs”*.

Furthermore, participants emphasised the importance of safety consciousness in taking care of people with dementia. Persons with dementia are very forgetful of things including their environment. They can easily move away, without knowing where they are and where they are going. Most times, some are seen wandering around the cities or villages, so caregivers need to be always on the watch to safeguard people with dementia from apparent danger to their life: *“you must be around, watching them. They may be in an environment, maybe they will forget that this is our home. You see them going up and down, going up and down. So, you must be watchful, (...) so that they cannot travel somewhere. some will wiii be going to the bush and stay and you will be looking for the person” (P07: FG 2)*.

This forgetfulness can also result in people with dementia hurting themselves or eating poisonous things, hence the importance of close observation and monitoring: *“I think also you have to be closely observant (...), they are not people you care for when you sit away. You always have to kind of check up on them, know what they are doing around their environment, (...) just to be careful. Because they might pick up something and eat that is offensive” (P08, FG 2)*.

Dementia care implies giving a wholistic care that requires involving the family members and informal caregivers to enable continuity after discharge from the hospital, else the patient will relapse. This includes training and instructing informal caregivers and family members about dementia and its characteristics. For instance, **P06, FG 1 said**:

“Not only that you manage the patient with dementia, you manage the household at the same time (...), you might manage that patient now that the patient is in the hospital or in your care, as soon as the person gets home and does something, the family members will no longer understand that this person is no longer reasoning normal, or is no longer getting things like before”.

Lastly, female nurses were described as more tolerant as their male counterparts in caring for persons with dementia. They were described as emotionally attuned and affective caregivers, with these qualities framed as socially, biologically, and culturally embedded. For example, P01, FG 5 emphasised that women’s emotional engagement extends beyond professional roles, stating, *“we don’t take away our personalities from our work. Our personalities just add up to the work we are doing,”* and linked this to caregiving patterns in families where *“it’s the daughters that will call and checkup (...) trying to make sure that everything is alright”.*

4.4.3.2 Burden and Challenges

Participants consistently highlighted the significant burdens and challenges associated with caring for persons with dementia. Caregivers face multiple layers of difficulty, including emotional distress (guilt, sadness, frustration, and helplessness), physical exhaustion (due to round-the-clock care and assistance with daily activities), and social strain (isolation, misunderstanding, and stigmatisation from relatives and society). Financial difficulties were also strongly emphasised, with participants noting the high cost of care, limited access to resources, and the reliance on out-of-pocket expenditures for medications, adult diapers, and hospital bills.

Nurses described the emotional toll of witnessing their loved ones’ cognitive and functional decline. The painful reality of seeing once strong and capable individuals become dependent and forgetful of who they themselves and who their relatives are was emphasised: *“Because you’re seeing, this is a human being, and you’re seeing this person degenerate in health, in normal life function (...). Sometimes you don’t even know what is what. They can’t even differentiate A and B and it’s very, very hurting for me”* (P01, FG 5). *“You’re watching somebody that you’ve known being this strong personality (...) and all of a sudden, they can’t perform simple tasks (...). They can’t remember people’s faces. It is hard. It’s not something anybody wants to accept”* (P02, FG 5). This emotional

strain often led to stress, frustration, guilt, and even depression, particularly when caregivers felt they could not meet the demands of the caregiver role.

Participants also reported difficulties managing behavioural changes, like agitation, refusal of care, neglect of hygiene, lack of trust and communication barriers. These challenges often made caregiving overwhelming and time-consuming: *“One challenge ... with someone with dementia is that most times they will not even trust you enough to accept care (...) So you have to be patient to keep reminding them (...). It takes lots of communication, patience, patience”* (P06, FG 5). *“They can mess themselves up. It's just like taking care of children all over again (...) they will not agree to take their bath or eat (...) it can affect the carer's activities of daily living”* (P03, FG 5). *“It is challenging to communicate (...). Difficult and challenging managing and coping with changing behaviour and communication problems”* (P04, FG 3).

Moreover, providing constant supervision, assisting with daily activities, and dealing with sleep disorders were described as physically and psychically draining: *“They, in fact, they don't really, at times they don't know how to take care of themselves and you end up being (...). The caregiver ends up being tired and stressed out”* (P02, FG 3). *“Physical demands like providing assistance with their daily activities (...) sleep disturbance: insomnia or disrupted sleep patterns might occur”* (P04, FG 3).

Furthermore, the heavy financial burden of dementia care coupled with lack of government support was a recurring theme. Participants reported struggles with paying huge hospital bills, purchasing adult diapers, and medication, compounded by inflation and lack of specialised services: *“We spent so much of the money we had ... at a point there was no much money again to spend (...) that was a very big challenge for us”* (Speaker 1, P05). *“When the resources (...) are not accessible (...) most people that would need that help are probably persons in the village (...) they would rather just stay where they are and do with what they can”* (P02, FG 5). *“Inflation, high cost of hospital bills, poor economy (...) causes of these challenges”* (P05, FG 3).

Lack of specialised geriatric and dementia care services, both personnel and institution wise was also repeatedly mentioned. Dementia is often dismissed as a normal part of ageing rather than a condition requiring targeted care: *“Geriatric management in*

this region is not really something (...) we don't really specialise in the care of the aged (...) it's rare to see geriatric clinics” (P02, FG 3).

Stigma towards persons with dementia and their families emerged as a key societal challenge. Individuals with dementia were often perceived as “useless,” both in and to society. On the other hand, relatives were perceived to be confronted with pity, gossip, and social discomfort from those around them. For example, one participant noted: *“People perceive you as no longer as valuable to the society (...) at this point that you have dementia (...) you’re no longer seen as useful” (P01, FG 5).* Another added *“The families are also being stigmatised (...) pity party and all those small small side talks can make family members very uncomfortable” (P01, FG 5).*

The voices of people living with dementia were represented through caregivers’ observations of their experiences of fear, loss, helplessness and abandonment. Some of them go through victimisation, bullying and accused of being responsible for not getting better, despite heavy cost on treatment: *“For the person that has the disease, I cannot believe that it is easy for you to watch yourself not be able to do certain things (...) it sounds scary even to me that doesn’t have it” (P02, FG 5).* *“The patients themselves, they tend to feel abandoned. Because some of their loved ones (...) dump them in the hospital (...) Some don't even pay them visit as they ought to” (P03, FG 4).* *“They (...) spend that kind of money and be thinking that the person can, uum go back to their usual state. So, when they now see that it’s not working, they can get very angry and angry at the patient and they might start harassing the patient” (P03, FG 5).*

4.4.3.3 Fear and Discomfort

Dementia care was also associated with pervasive fear and discomfort. Some caregivers expressed concerns about perceived unpredictability of behaviour, safety concerns, and even physical harm from the person with dementia. Cultural and spiritual beliefs compounded these fears, as dementia was sometimes viewed as a contagious condition, a curse, or a spiritual affliction that could be transferred to the people who come close to people with dementia.

Limited knowledge and understanding of dementia gave rise to anxiety. Participants expressed that caregivers and some family members might feel unable to

anticipate patients' dispositions or triggers, which compounded reluctance in dealing with them. As one participant noted, *"when you don't know something, you are automatically scared (...) you cannot predict (...) aggression (...) they are very unpredictable."* (P02, FG 5).

Seeing themselves in unfamiliar environments and being surrounded by strange faces and things was said to evoke fear and agitation on the part of people with dementia. This leads them to heighten vigilance, provoking self-protective responses, which could in turn escalate tensions: *"All of a sudden you find yourself in a place where there are strange faces (...) the first thing that will come to your mind is to protect yourself (...) become agitated. Because (...) they don't have the knowledge (...), they end up just seeing the person as someone that is agitated"* (P02, FG 3).

The belief that persons with dementia are often or might easily become aggressive led people to avoid them and guard against them: *"a lot of people don't feel safe (...) some of them can be aggressive (...) they are already beating them or slapping them"* (P03, FG 5), and caregivers acknowledged real risk of injury when memory loss and agitation sets in: *"the nurses, or maybe the caretaker (...) he or she risks of being injured, because once the loss of memory start, the demented client can hit them and injure the (...)"* (P02, FG 5). Also, past negative encounters with persons with dementia was seen as a provocative of fear and discomfort.

Furthermore, cultural and spiritual framings aggravated discomfort. Dementia was often interpreted through spiritual or supernatural lenses (e.g., "ogbanje"), producing fears of contagion or transfer of "bad energy" and deepening social distance: *"people believe that bad energy can be transferred ... that's why people with dementia ... are stigmatised"* (P03, FG5) and *" in the African context, you know, most of illnesses are being attributed to evil possessions and things like that (...), So we still believe that (...) evil spirit can easily possess you, if you are alone with the person (...)"* (P05, FG 4).

4.4.3.4 Rewards and Positive Outcomes

Despite the above-mentioned hardships, many participants described caregiving as rewarding. Across the focus groups, participants highlighted the various rewards and positive outcomes associated with caring for people with dementia. These rewards were described not only in terms of emotional fulfillment but also in seeing patients retain

dignity, joy, and productivity despite their condition. Generally, this sub-theme emphasises how dementia caregiving, though challenging, brings a sense of purpose, personal growth, and joy both in witnessing patient improvements and in the relationships and bonds that develop through care.

For many participants, the ability to make a tangible difference in the lives of people with dementia was seen as intrinsically rewarding. As one participant expressed, *“But the fact that I can care for you, I can help you get better, I can clean you up is a reward for me”* (P01, FG 5). Similarly, others emphasised the satisfaction derived from alleviating distress and supporting patients to manage their daily activities: *“it is rewarding when you see that you have relieved them of, even if it's a little bit of the burden that was on their shoulder”* (P02, FG 5).

Participants also spoke about the joy of seeing patients respond positively, such as smiling, eating well, or participating in meaningful activities. One participant noted, *“seeing them smile, or seeing them looking clean and eating and like doing other stuff, it can be very very rewarding”* (P03, FG 5). Another added that *“the reward has to be seeing the fact that you are helping someone do something that seems almost like very, very irreversible... you can still help this person to feel loved (...) you’ll see a smile on the person’s face or helping the person just do something he really like”* (P04, FG 5).

The theme of reciprocity also emerged, with nurses framing their efforts as investments in the future as well as reciprocating the care received as a child: *“Reward will come back to us in the way we will be managed when we get to that stage (...) someday, when we find ourselves in such a position, we will still have people to now treat us right, the same way we’ve treated the people in front of us”* (P03, FG 4).

In addition to emotional rewards, participants highlighted the development of personal growth, resilience, and deeper relationships that comes with caring for someone with dementia. As one participant explained, *“It can be rewarded through different ways like emotional reward... strong bond, sense of purpose, feeling fulfilled and meaningful (...) physical reward involved one building resilience and personal growth experience”* (P04, FG 3).

Several participants also emphasised the positive outcomes for people with dementia themselves. They pointed to the role of productivity and meaningful engagement in improving quality of life and dignity. When managed well, they can use

their talents and resources to entertain those around them. For example, *“if they are guided right, if they are taught, if they reminded, they can actually be creative in and useful in society (...) they can actually create something that is really beautiful”* (P01, FG 5). Others shared similar experiences: *“People suffering from dementia can indeed be creative via Art therapy, music therapy and storytelling (...) they can as well enjoy life in fullness via engaging in meaningful activities that gives them joy and purpose”* (P04, FG 3).

This sense of retained capacity and creativity was frequently illustrated with examples from local and cultural practices, such as storytelling, singing, painting, dancing, basket-making, and broom-making (P02, FG 3; P08, FG 2; P04, FG 1). Participating nurses described these activities as meaningful both for individuals with dementia and for their communities.

Finally, participants described how caring roles fostered patience, fulfillment, and a sense of achievement when the condition of the patients improved: *“it takes your patience, maybe you are a nurse, you don't know that you have this level of patience... and when you take care of them, and they are discharged (...) you feel fulfilled”* (P03, FG 1).

4.4.4 Knowledge, Beliefs, and Awareness

The final theme captured how dementia is understood in the Igbo context, shaped by a mixture of misconceptions, stigma, and a clear need for education and awareness programmes.

4.4.4.1 Misconceptions and Superstitions

Dementia was often linked to supernatural or spiritual explanations, including evil spirits, ancestral curses, witchcraft, or punishment for past deeds. Such interpretations often diverted families from medical care toward spiritual interventions, prayer houses, and herbalists, often times leading to loss of time for adequate management and worsening the condition.

A recurring challenge identified across groups was the persistence of misconceptions and superstitious beliefs surrounding dementia. Participants highlighted that in many communities, dementia is often misunderstood and attributed to spiritual or

cultural causes rather than recognised as a medical condition. For example, it was described as being linked to curses, ancestral sins, or punishment from the gods: *“they tend to feel (...) this person is suffering from some kind of ritual thing (...) linked to the gods or curse in the lineage”* (P04, FG 5). Similarly, others reported that dementia is frequently seen as the result of *“evil spirits or there’s a curse running in that family”* (P09, FG 2). But also, that dementia is caused by people who do not wish the other person well: *“(...) the person that did that stroke, caused that stroke is about to bring eeh madness, do you understand”* (P02, FG 1).

Religious and traditional practices were noted as reinforcing these misconceptions. Participants observed that rather than seeking medical care, families are often encouraged to rely on spiritual interventions: *“religion (...) will always tell you to bring the person to the church and then they will start praying... instead of telling the person to go to the hospital”* (P05, FG 4). In other cases, families turn to traditionalists and herbalists, viewing dementia as a *“spiritual issue (...) demons (...) or generational curse”* (P03, FG 1).

Participants also reported beliefs that dementia could be contagious, with some claiming that *“once you care for them or once you come in contact with them, you will also have the condition”* (P04, FG 2). Stigmatising labels such as “mad”, “insane” or “psychotic” were described as common in Igbo communities, sometimes accompanied by calls for ritual “cleansing”: *“some in Igboland self, once someone has dementia, the person is a mad person, he’s a psycho, he’s a psychotic patient and, and he need eeh cleansing. You see without cleansing a lot of things go wrong”* (P02, FG 1).

Finally, negative perceptions about the worth of people with dementia reinforced these superstitions, as one participant noted, *“they see it as waste of time (...) just somehow vegetable, they don’t have something to offer in the society”* (P03, FG 1). Together, these accounts demonstrate how cultural misinterpretations, fear, and stigma shape responses to dementia, creating barriers to care and perpetuating marginalisation of those affected.

4.4.4.2 Stigma and Societal Attitudes

Dementia was frequently equated with madness, leading to widespread stigma and marginalisation. Families were sometimes reluctant to acknowledge a relative's condition, instead they lock them indoors to avoid community mockery and gossip. This stigma not only isolated the affected individual but also discouraged families from seeking timely medical help.

Participants reported that stigma surrounding dementia is pervasive, shaping how individuals and families respond to the condition. People with dementia were often perceived as “mad” or “insane,” leading to social exclusion, mistreatment and sometimes abuse. As one caregiver explained, *“in Igboland (...) people with dementia (...) they see them as insane people (...) roaming around the street”* (P02, FG 1). Such labeling frequently resulted in families hiding or confining relatives, *“some people would lock them up (...) so they will not come out or embarrass them”* (P03, FG 5).

Stigma was not only directed at individuals but also extended to families, who were seen as tainted by association. In some cases, past misdeeds were cited as the cause of dementia, reinforcing judgmental community attitudes: *“if the person did one or two things the community did not fancy, if he eventually develops dementia, they will say (...) that thing that he did (...) that's why”* (P02, FG 4). This societal perception created fear of gossip, ridicule, and shame, prompting families to conceal the condition rather than seek medical care: *“they keep it to themselves (...) hide them because of what the society would say”* (P02, FG 1).

Overall, participants emphasised that misunderstanding and negative societal attitudes perpetuate stigma, hinder timely help-seeking, and increase the isolation of both people with dementia and their caregivers. As one participant put it: *“if it is something maybe they would have taken the person maybe to (...) where they have professional care, they will now decide to lock them up in the house”* (P02, FG 1).

4.4.4.3 Need for Awareness and Education

Participants underscored the importance of awareness creation and public education to dispel myths, reduce stigma and promote appropriate help-seeking behaviour. Suggested strategies included community outreach, sensitisation campaigns in schools,

villages and churches, use of social and mass media, posters and rallies, and integration of dementia education into nursing curricula and continuing professional training. Grassroots sensitisation was seen as especially crucial in rural communities where misconceptions are most deeply entrenched.

A recurring view was that lack of knowledge fuels neglect, stigma and exclusion, as *“if people know that... these people can also be helped... they will not discard them just like that”* (P01, FG 5). Awareness creation was seen as requiring deliberate and diverse strategies, including school-based education, public rallies, flyers, posters, social media campaigns, and even animated learning materials to engage wider audiences (P01, P03 & P04, FG 5): *“I feel like if, if nurses can begin to like (...) take those things very seriously, (...) hold um conferences, hold rallies, school visitations, posters, flyers, talking about um dementia. It will create more awareness and also social media (...) to promote the knowledge of dementia is also going to help”*.

Education should extend to rural areas, using local languages and culturally sensitive approaches to correct beliefs that dementia is spiritual or contagious and teach the public to understand that dementia is a disease that requires medical attention: *“If we will go to all these people's villages (...), they are yet to come to terms with medicine or medical diagnosis. (...) Dementia is explained to them in the language they will understand”* (P03, FG 4). Religious leaders were also identified as useful allies in education and awareness campaign, since *“they tend to listen more to the pastors... if it comes out from their mouth... they will heed”* (P05, FG 4).

Participants stressed the importance of training healthcare workers, especially nurses, in dementia care, suggesting its inclusion in curricula and refresher programmes, for example one participant stated: *“Nurses can be trained in effective management of patients with dementia as this can help patients live better lives”* (P05, FG 3). Another added: *“adding that in our curriculum during the refresher courses we take before the licensing, the renewal of licensing”* (P02, FG 3). They also proposed that having specialised dementia care units in hospitals could be an avenue to create awareness: *“there can also be special care units in hospitals for dementia patients, because in most of the hospitals in south-east, and that's basically Igboland, I've not really seen a specialised care for dementia patients”* (P01, FG 5).

Moreover, participants emphasised that government involvement, by way of subsidising care would be of great support and motivation for the family and caregivers. For instance, one participant expressed *“if there’s a way, maybe either the community or the government, (...) subsidising the treatment, you know, maybe it will be easier for families to take care of their old and aged people who are down with dementia”* (P03, FG 2).

At the community level, - families and neighbors -, participants stressed the need to inform them about some practical strategies, such as identifying roaming and straying individuals and assisting them to return home safe. One participant expressed: *“Let them know (...), like if they see eeh, somebody wandering, the person is not mad, (...) please help to take them back to their families. Educate the families, especially those ones that have this wandering tendency (...), you can write address or (...) your number, put in their pockets or pin it somewhere so that when someone sees them wandering about, they can call your number to, to identify them”* (P02, FG 1).

Beyond treatment, awareness was linked to prevention and early detection, with participants calling for public education on risk factors such as stress, hypertension, and stroke (P04 & P06, FG 1): *“creating awareness about this same dementia, because there are so many things that can be “cause danger” apart from the ageing process, you talk about the people with all this vascular issues, people that would have suffered from stroke before, either having a bp”*. Overall, caregivers highlighted that systematic sensitisation through healthcare systems, communities, schools, churches, and media is essential for shifting societal attitudes and ensuring that people with dementia receive timely, respectful, and effective care.

4.5 Merging of Quantitative and Qualitative Findings

The main purpose of this study is to assess the level of nurses’ knowledge of dementia, to identify their attitude towards people with dementia and to explore the factors influencing the attitude. The sequential explanatory mixed-methods design enabled the integration of quantitative and qualitative strands to provide a comprehensive understanding of nurses’ dementia knowledge and their attitudes towards people with dementia in Igboland. While the quantitative phase highlighted the overall patterns of

attitudes and knowledge, the qualitative phase enriched these findings by contextualising them within nurses' lived experiences, beliefs, and caregiving realities.

4.5.1 Attitudes of Nurses Towards People with Dementia

Quantitative results from the Dementia Attitude Scale (DAS) showed that nurses' overall attitudes were predominantly neutral (46.2%), with smaller proportions reporting negative (27.2%) or positive (26.7%) orientations. While most nurses strongly agreed that much can be done to improve the lives of people with dementia, fewer expressed confidence, comfort, or a sense of ease in interacting with them. The qualitative findings help explain this ambivalence: participants described communication with people with dementia as both challenging and meaningful, depending on the strategies used. For instance, while some advocated for correcting confused patients, others highlighted that validation and empathy reduced agitation and preserved dignity. Emotional strain, fear of aggression, and cultural stigma further shaped nurses' hesitation in expressing overtly positive attitudes.

4.5.2 Nurses' Knowledge of Dementia

Quantitative analysis indicated that the majority of nurses demonstrated moderate knowledge of dementia (67.1%), with only 15.5% achieving high knowledge. Strengths were observed in care considerations (86.1% correct responses), whereas communication and behaviour showed the lowest knowledge levels (51.8%). Item-level gaps, such as misconceptions about dementia as a normal part of ageing or potentially reversible, were consistent with themes emerging in the qualitative data. In the focus groups, some participants equated dementia with old age or described it as potentially reversible under certain conditions, while others accurately emphasised its degenerative and irreversible nature. These contrasting views reflect the variability in knowledge found in the survey.

4.5.3 Communication and Interaction Experiences

Survey data showed limited confidence and comfort among nurses when engaging or dealing with people with dementia. This was supported qualitatively by participants' accounts, which emphasised the difficulty of communication in advanced dementia and the frustration that arises when interactions rely heavily on correction. Conversely, those who adopted validation, patience, and empathy described more rewarding interactions,

aligning with the minority of respondents who expressed being comfortable and confident around people with dementia in the quantitative phase.

4.5.4 Caregiving Experiences: Burden and Rewards

While not directly measured in the survey, the qualitative phase revealed the multi-dimensional strain of caregiving -emotional, physical, social, and financial-, offering important context for why some nurses expressed neutral or negative attitudes. Yet, caregivers also reported deeply meaningful and fulfilling moments, describing how dementia care cultivated resilience, empathy, and purpose. These dual experiences help explain the neutrality in quantitative findings: many nurses balance positive recognition of the person with dementia against the burden of caregiving challenges.

4.5.5 Cultural Beliefs, Stigma, and Awareness

The integration of findings highlights the influence of cultural context on both knowledge and attitudes. Misconceptions, including beliefs that dementia is a curse, punishment, or spiritual affliction, were widely reported in qualitative data and correspond with low knowledge scores in survey items related to the nature and prognosis of dementia. Similarly, the stigma of associating dementia with madness provides a plausible explanation for the hesitation among nurses to report strongly positive attitudes. Both strands converge in underscoring the urgent need for targeted dementia education, public awareness campaigns, and stigma reduction strategies.

4.5.6 Overall Integration

Taken together, the findings suggest that while nurses in Igboland demonstrate a foundational level of knowledge and a generally neutral stance towards people with dementia, significant gaps remain in confidence, communication skills, and cultural perceptions. Quantitative results reveal the extent of these gaps, while qualitative insights illuminate the underlying beliefs, fears, and caregiving experiences that shape them. The integrated evidence underscores the importance of strengthening dementia education in nursing curricula, providing practical training in communication strategies, and addressing stigma through culturally sensitive awareness campaigns to foster more positive and informed attitudes. See Table 14 for more details.

Table 14: Integrated Quantitative and Qualitative Findings of Knowledge and Attitude

Domain	Quantitative Findings	Qualitative Findings	Integrated Interpretation
Attitudes toward People with Dementia	Mean DAS score = 63,21 (SD = 10,91), range 39–90. Most nurses were neutral (46.2%). Strongest agreement: “We can do a lot to improve the lives of people with ADRD” (84.2%). Lowest agreement: avoidance, relaxation, and confidence around people with ADRD (1.7% ~ 3.3%).	Nurses described communication as both challenging and rewarding. Some advocated correcting errors, while others emphasised validation and empathy. Fear of aggression, cultural stigma, and lack of training influenced hesitancy in expressing confidence or comfort.	Neutral attitudes may reflect the tension between recognising the value of care and the difficulties of interaction. Positive recognition of potential improvement coexists with low self-efficacy and cultural stigma.
Knowledge of Dementia	Overall mean = 18/27 (79.2% correct). Majority had moderate knowledge (67.1%), with 15.5% high and 17.4% low. Strongest domain: care considerations (73.7% correct). Weakest: communication and behaviour (8.0%). Misconceptions common (e.g., dementia as normal ageing).	Participants debated whether dementia is reversible or inevitable with ageing. Some viewed sudden onset as dementia, others recognised gradual progression. Misconceptions linked to religious and cultural beliefs and lack of training.	Quantitative gaps (normal ageing, reversibility) were mirrored in qualitative misconceptions. Strengths in care considerations align with practical caregiving experiences.
Communication and Interaction	Very low confidence and comfort reported (3% – 3.3%) strongly agreed they feel confident/relaxed around people with ADRD).	Communication seen as difficult but not impossible. Use of non-verbal cues, validation, and patience improved interactions. Constant correction provoked agitation.	Quantitative lack of confidence is explained by qualitative reports of challenges and uncertainty about strategies. Nurses with validation approaches reported more rewarding experiences.
Caregiving Experiences	Not directly measured in survey.	Caregiving described as burdensome (emotional, physical, financial, and social strain) but also rewarding (gratitude, recognition, sense of purpose). Fear and stigma shaped perceptions.	Explains neutrality in quantitative results: nurses balance the weight of caregiving challenges with meaningful, fulfilling aspects.
Cultural Beliefs, Stigma, and Awareness	Low correct responses on items tied to myths (e.g., “dementia is a	Dementia often attributed to curses, spirits, or punishment. Stigma equated	Cultural misconceptions explain low knowledge scores and hesitant attitudes.

	normal part of ageing” 31.1% correct).	dementia with madness, leading to social isolation and concealment. Strong call for, education, awareness campaigns and training.	Both strands highlight urgent need for culturally sensitive education and public sensitisation.
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5 DISCUSSION

This study set out to examine not only what nurses in Igboland know about dementia, but how this knowledge translates—or fails to translate—into attitudes, confidence, and caregiving practice. The findings reveal a structured tension: while many nurses demonstrate a foundational level of dementia knowledge and recognise the value of care, they simultaneously report low confidence, discomfort, and uncertainty in interacting with people living with dementia.

This tension suggests that dementia care in Igboland cannot be explained by a simple knowledge deficit. Rather, it appears to be shaped by the interplay of cultural stigma, perceived emotional and institutional barriers, and limited perceived behavioural control within clinical settings. Interpreting the findings through the lenses of Social Stigma Theory, the Health Belief Model (HBM), and the Theory of Planned Behaviour (TPB) allows for a deeper understanding of how socio-cultural beliefs, professional training, and structural constraints converge to shape nurses' responses to dementia.

The following sections critically examine these patterns, moving beyond description toward an analysis of the mechanisms that connect knowledge, belief systems, self-efficacy, and caregiving behaviour in the Igbo context.

5.1 Overview of Key Findings

The study addressed three main research questions concerning nurses' dementia knowledge, attitudes, and the factors influencing dementia care practices in Igboland.

Regarding the first research question, the findings indicate that nurses demonstrated a moderate level of dementia knowledge, with notable gaps particularly in communication and behavioural management.

With respect to the second research question, nurses' attitudes towards people with dementia were predominantly neutral, with relatively fewer positive attitudes observed.

In relation to the third research question, the findings show that nurses' knowledge, attitudes, and care practices are shaped by a complex interaction of socio-demographic, cultural, and institutional factors, including cultural beliefs, stigma, professional experience, and systemic healthcare constraints.

The central finding of this study is not merely that nurses in Igboland demonstrate “moderate” dementia knowledge and largely neutral attitudes, but that there is a marked knowledge–practice gap: nurses can recognise dementia as a condition and endorse the value of care, yet report very low confidence and comfort in day-to-day interaction and communication. This pattern suggests that dementia care in Igboland is shaped less by a simple lack of information and more by a relational competence and self-efficacy deficit, reinforced by cultural interpretations of dementia and limited institutional support.

Interpreted through TPB and HBM, neutral attitudes emerge as structured ambivalence: professional intentions toward compassionate care coexist with perceived barriers (fear, emotional strain, anticipated aggression) and reduced perceived behavioural control in under-resourced clinical contexts.

Finally, the findings indicate a reciprocal stigma loop in which community-level stigma informs nurses’ perceptions and practices, which then feeds back into family concealment, delayed help-seeking, and further stigma reproduction—highlighting a mechanism through which dementia remains socially “managed” rather than clinically supported in Igboland.

5.2 What do Nurses in Igboland Know About Dementia?

At first glance, an overall mean score indicating moderate dementia knowledge may suggest that nurses in Igboland possess an adequate foundational understanding of the condition. However, a closer examination reveals a markedly uneven knowledge structure. While respondents demonstrated relative strength in biomedical aspects and general care considerations, persistent weaknesses were evident in domains related to communication, behavioural management, disease trajectory, and differentiation from normal ageing or reversible conditions.

Importantly, the weakest quantitative items directly corresponded with qualitative expressions of ambivalence and misconception—such as beliefs that dementia may be a normal part of ageing, reversible, or best managed through correction of confused patients. This convergence across methods indicates that knowledge gaps are not incidental but structurally concentrated around psychosocial and relational aspects of care domains particularly susceptible to cultural framing and stigma.

This pattern suggests a distinction between *declarative biomedical knowledge* (knowing what dementia is) and *procedural or relational knowledge* (knowing how to engage, communicate, and interpret behavioural symptoms). The latter appears significantly less consolidated. This distinction may also reflect a measurement issue, as structured knowledge tools predominantly capture declarative understanding, while communication competence and relational practice develop through supervised, experiential learning. Thus, the central issue emerging from this study is not a simple information deficit, but a potential *knowledge–practice translation gap*, where factual awareness does not consistently translate into confident, person-centred care.

Qualitative findings further revealed the coexistence of biomedical explanations with cultural explanatory models, including spiritual causation, witchcraft, or ancestral punishment (Nwakasi, et al., 2019; Brooke & Ojo, 2020; Ekoh, et al., 2020; Nwakasi, et al., 2021). Rather than indicating total ignorance, this coexistence suggests an epistemic duality in which biomedical and spiritual explanatory models operate simultaneously rather than sequentially. In such contexts, professional knowledge may be formally acquired and verbally endorsed, yet interpretative authority in moments of uncertainty may shift toward culturally dominant narratives. This layered epistemology does not necessarily eliminate biomedical reasoning but can recalibrate its decisional authority in practice, particularly in domains such as behavioural symptoms, causation, and prognosis. In the Nigerian context, where mental health conditions are frequently attributed to supernatural causes (Okpalauwaekwe, et al., 2017; Oyinlola, 2024), such dual frameworks may reduce diagnostic clarity and influence clinical judgement.

Similar knowledge gaps among healthcare professionals have been reported internationally (Zhao, et al., 2022; Manee, et al., 2023), as well as among nursing students and the general public, indicating that dementia knowledge deficits transcend professional categories. However, in Igboland, these gaps are amplified by limited diagnostic infrastructure and the marginal position of dementia within health discourse. Educational and cultural factors jointly constrain knowledge acquisition (Ekoh, et al., 2020; Sunaryo, et al., 2020), suggesting that unstructured exposure alone is insufficient for conceptual integration.

Indeed, this study found that prior personal or professional exposure to people with dementia did not significantly predict knowledge levels, nor did religious affiliation.

This finding challenges assumptions that proximity naturally generates expertise. Instead, it underscores the importance of structured, evidence-based dementia education embedded within professional training. While weak correlations suggested that age and years of work experience may contribute to incremental knowledge accumulation—consistent with previous research (Spittel, et al., 2019; Annear, 2020)—professional maturity alone does not guarantee conceptual depth or diagnostic precision.

From a clinical perspective, accurate dementia diagnosis and effective management depend on the ability to differentiate dementia from normal ageing and acute, potentially reversible conditions such as delirium or infection (Brooke & Ojo, 2020; Evripidou, et al., 2018; Oyinlola, 2024). In frontline settings such as Igboland, where nurses frequently act as primary healthcare gatekeepers, limited clarity in disease trajectory, cognition, and communication may contribute to challenges in timely recognition and appropriate clinical differentiation.

From the Health Belief Model (HBM) perspective, these variations in knowledge reflect differences in perceived severity, susceptibility, and perceived benefits of clinical engagement. When dementia is interpreted through spiritual or moral lenses, perceived benefits of biomedical intervention may be diminished, reducing proactive care behaviours. Conversely, when dementia is conceptualised as a neurological condition, perceived self-efficacy and engagement in care may increase. However, knowledge alone does not eliminate perceived barriers—such as emotional strain, fear of aggression, or institutional limitations—which may continue to inhibit confident practice.

Therefore, strengthening dementia knowledge in Igboland requires more than curriculum inclusion; it necessitates integrative, culturally sensitive training that explicitly addresses prevailing belief systems while consolidating biomedical understanding and enhancing relational competence.

5.3 What Attitudes do Nurses in Igboland of South-Eastern Nigeria Hold Towards People with Dementia?

Nurses' attitudes toward people living with dementia were predominantly neutral, with approximately one quarter demonstrating clearly positive or negative tendencies. While such neutrality might superficially suggest indifference or emotional distance, a

closer examination indicates a more complex phenomenon. The weak yet positive correlation between knowledge and attitudes suggests that improved factual understanding alone does not necessarily translate into more favourable dispositions, particularly in contexts where dementia remains culturally stigmatised, spiritually interpreted, and institutionally under-supported.

Qualitative findings illuminate this dynamic by revealing that nurses operate within cultural environments where dementia is at times conceptualised as madness, spiritual attack, witchcraft, or even contagion. The coexistence of such interpretations with biomedical training generates a complex psychological and professional terrain. Nurses may intellectually endorse medical explanations and the importance of compassionate care, yet simultaneously internalise community-level narratives that frame dementia as socially troubling or morally charged. This tension contributes to what may be described as *structured ambivalence*.

Neutrality in this context should therefore not be interpreted as absence of concern, but as the outcome of competing cognitive, emotional, and contextual forces. Most nurses agreed that much can be done to improve the lives of people with dementia, reflecting a cognitive commitment to care. However, only a minority reported feeling relaxed, confident, or comfortable in practical interactions. This discrepancy signals a gap between professional intention and perceived capability.

The qualitative accounts provide insight into this confidence deficit. Nurses described repeated, effortful conversations with individuals who were perceived as agitated, forgetful, or confused, often requiring constant correction. These encounters were frequently experienced as emotionally draining and frustrating. Such relational strain directly undermines perceived self-efficacy and contributes to discomfort in care provision. Consistent with the item-level results, only a minority of nurses reported feeling relaxed or confident when interacting with people with dementia, indicating a substantial deficit in perceived behavioural control.

Consistent with findings from other Sub-Saharan African contexts (Brooke & Ojo, 2020; Ekoh, et al., 2020; Oyinlola, 2024), limited knowledge in communication and behavioural management appears to exacerbate uncertainty in practice. However, beyond knowledge deficits, these attitudes are shaped by broader contextual constraints. Drawing

on the Theory of Planned Behaviour, neutral attitudes may reflect a disjunction between positive professional values and reduced perceived behavioural control within resource-limited clinical settings. When nurses lack confidence in their ability to manage behavioural symptoms effectively, intentions toward compassionate care may not translate into consistent action.

Simultaneously, the Theory of Social Stigma helps explain how prevailing community norms—where dementia is framed as madness, witchcraft, or spiritual affliction—shape subjective norms and social expectations. These norms may foster subtle distancing, fear, or avoidance, even among trained professionals. Thus, nurses' attitudes emerge not solely from individual cognition, but from their positioning within intersecting systems of cultural meaning, professional obligation, and institutional limitation.

Taken together, the predominance of neutral attitudes reflects not indifference, but structural ambivalence: a state in which empathy and professional commitment coexist with emotional strain, cultural stigma, and limited self-efficacy. This ambivalence provides a critical link between knowledge gaps (discussed in Section 5.2) and the contextual factors influencing practice, setting the stage for a deeper examination of the mechanisms shaping dementia care in Igboland.

5.4 What Socio-demographic, Cultural, and Institutional Factors Influence Nurses' Dementia Knowledge, Attitudes, and Dementia Care Practices in Igboland?

The factors influencing nurses' attitudes toward people living with dementia do not operate in isolation. Rather, they interact across cognitive, emotional, and socio-cultural domains to produce what has been described in this study as structured ambivalence. The data suggest a dynamic mechanism in which knowledge gaps, relational strain, caregiving burden, and prevailing stigma mutually reinforce one another, shaping not only how dementia is understood but how care is enacted in practice. The following sub-sections examine these interrelated domains.

In addition to cultural and institutional influences, the quantitative findings indicate that socio-demographic factors showed limited and inconsistent associations with nurses' dementia knowledge and attitudes. While certain variables such as professional experience and prior contact with people living with dementia demonstrated

some influence, these relationships were generally weak. This suggests that knowledge and attitudes are shaped less by individual characteristics alone and more by broader cultural beliefs, stigma, and systemic healthcare conditions within the Igbo context.

5.4.1 Limited Knowledge and Challenges in Communication and Interaction

Building on the knowledge–practice gap identified in Section 5.2, communication difficulties emerge as a central mechanism through which limited or uneven knowledge translates into attitudinal ambivalence. Consistent with studies from SSA (Onyekwuluje, et al., 2023; Mwendwa, et al., 2022; Ekoh, et al., 2020; Ogundipe, et al., 2022; Oyinlola, 2024), this study observed that gaps in understanding dementia—particularly regarding behavioural symptoms, disease progression, and communication strategies—directly shaped nurses’ experiences of uncertainty and discomfort in care.

Importantly, these challenges were not confined to abstract knowledge deficits but were most visible in everyday relational encounters. Nurses described repeated, effortful attempts to communicate with individuals perceived as forgetful, agitated, or unable to articulate their needs. When such encounters were interpreted primarily through a lens of correction rather than validation, they often resulted in frustration and emotional fatigue. This pattern reflects findings in global literature highlighting communication breakdown as a major stressor for both professional and informal caregivers (Guerchet, et al., 2017; Evripidou, et al., 2018).

From the perspective of the Health Belief Model, these repeated relational difficulties may function as perceived barriers to effective care. Emotional strain, fear of escalating agitation, and uncertainty about appropriate strategies can diminish perceived benefits of engagement and reduce motivation to persist in person-centred interaction. Similarly, within the framework of the Theory of Planned Behaviour, inadequate communication training and limited experiential mastery undermine perceived behavioural control—an essential determinant of confident caregiving behaviour.

The linguistic and conceptual context of Igboland further complicates this dynamic. As noted in previous studies (Ogundipe, et al., 2022; Nwakasi, et al., 2021), the absence of a widely recognised term for dementia in many local languages makes articulation and recognition of the condition more difficult. This is not merely a semantic

limitation but an epistemic one: when a condition lacks stable linguistic categorisation, its symptoms may be interpreted through alternative explanatory frameworks, including spiritual or moral narratives. Such interpretative instability can heighten uncertainty in clinical encounters and weaken diagnostic confidence.

At the same time, the data reveal that nurses who employed validation techniques, patience, and non-verbal communication strategies reported more positive and meaningful interactions. Consistent with Zhao, et al. (2022) and Evripidou, et al. (2018), practical communication training appears to strengthen both empathy and confidence. This contrast suggests that relational competence is not fixed but trainable, and that communication mastery may serve as a protective factor against frustration and distancing.

Taken together, limited communication competence does not simply reduce care quality; it contributes to a cycle of frustration, reduced self-efficacy, and emotional withdrawal. In this way, knowledge gaps and communication challenges function as a cognitive–relational driver of the structured ambivalence described in Section 5.3.

5.4.2 Burden and Rewards of Caregiving

Although caregiving burden was not directly measured in the quantitative phase, qualitative findings revealed it as a central experiential factor shaping nurses’ attitudes toward people living with dementia. Participants described dementia care as physically exhausting, emotionally draining, financially demanding, and socially isolating—particularly in contexts where family members misunderstood or stigmatised the condition. These accounts are consistent with evidence from similar SSA settings (Oyinlola, 2024; Mwendwa, et al., 2022; Nwakasi, et al., 2021), where dementia caregiving is characterised by sustained emotional vigilance, limited respite, and significant financial strain.

From an analytical perspective, such experiences function as powerful perceived barriers within the Health Belief Model framework. Emotional fatigue, fear of behavioural escalation, and prolonged supervision demands may diminish perceived benefits of engagement and increase avoidance tendencies. When caregiving is associated primarily with exhaustion and frustration, nurses’ perceived self-efficacy and resilience

may erode, reinforcing the reduced behavioural control identified in Section 5.3. In resource-limited health systems, including many regions of Nigeria, structural constraints—such as inadequate staffing, lack of specialised training, and absence of formal long-term care support—amplify these burdens, transforming individual strain into systemic pressure.

At the same time, caregiving was not described solely in negative terms. Many nurses emphasised the rewarding dimensions of dementia care, including strengthened relationships, personal growth, resilience, and a sense of moral fulfilment. Caring for older adults—especially family members—was framed within cultural narratives of reciprocity, filial obligation, and the hope of future care in old age (Mwendwa, et al., 2022; Nwakasi, et al., 2021). These moral frameworks sustain commitment even under strain and reflect deeply embedded normative expectations within Igbo communities.

This duality of burden and reward helps explain why predominantly neutral attitudes emerged rather than uniformly negative ones. Emotional strain and systemic limitations create frustration and fatigue, yet moral obligation and relational meaning counterbalance withdrawal. In this sense, caregiving in Igboland can be understood as a balancing experience (Guerchet, et al., 2017; Mwendwa, et al., 2022), where resilience and exhaustion coexist.

Within the Theory of Planned Behaviour, this tension may be interpreted as an interaction between positive professional attitudes and constraining contextual factors that limit consistent behavioural enactment. Nurses may endorse compassionate, person-centred care as a moral and professional ideal, yet experience diminished perceived behavioural control due to workload pressures, limited training, and inadequate institutional support. Thus, caregiving experiences do not simply influence attitudes; they actively mediate between intention and practice.

In the absence of robust structural support systems, this balance remains fragile. When burden outweighs reward, distancing and emotional withdrawal may increase. When relational meaning and moral commitment are reinforced—particularly through training and peer support—positive engagement becomes more sustainable. Consequently, caregiving experiences constitute a critical emotional driver within the broader mechanism producing structured ambivalence in dementia care.

5.4.3 Influence of Cultural Beliefs, Stigma, and Awareness

The integration of quantitative and qualitative findings identifies cultural beliefs and stigma as foundational forces shaping both knowledge and attitudes toward dementia in Igboland. Misconceptions framing dementia as ancestral curse, divine punishment, madness, or spiritual affliction were frequently reported and were reflected in lower quantitative scores on items concerning disease nature and prognosis. These findings align with previous research across SSA (Nwakasi, et al., 2021; Iguodala-Cole, et al., 2022; Akinyemi, et al., 2022; Oyinlola, 2024; Brooke & Ojo, 2020; Ekoh, et al., 2020; Mokwenye, 2025), which consistently demonstrates the persistence of supernatural and moral explanatory models in dementia interpretation.

However, stigma in this context operates not merely as misinformation, but as a normative system that shapes expectations, emotional responses, and help-seeking behaviour. Within the framework of the Theory of Planned Behaviour, such culturally embedded beliefs function as powerful subjective norms. When dementia is socially framed as shameful, contagious, or morally charged, both families and healthcare professionals may experience implicit pressure toward concealment, distancing, or avoidance. These norms can subtly influence professional practice, even when biomedical knowledge is present.

Qualitative accounts in this study suggest that stigma contributes directly to concealment of symptoms, delayed help-seeking, and late presentation to healthcare services. In turn, delayed diagnosis often results in more advanced behavioural symptoms at the time of clinical contact, intensifying caregiving strain and reinforcing perceptions of dementia as chaotic or unmanageable. This dynamic illustrates a potential feedback mechanism: stigma fosters concealment and late intervention, which exacerbate caregiving difficulties, thereby reinforcing negative community narratives about dementia.

In Igboland, where communal and spiritual worldviews remain deeply influential, addressing dementia stigma requires more than clinical education. Participants emphasised the importance of public awareness campaigns, curriculum reform, and the creation of social support networks. Consistent with findings from Labinjo, et al. (2020) and Brooke & Ojo (2020), religious and traditional leaders often serve as trusted

authorities in Nigerian communities. Engaging these actors as partners in dementia awareness initiatives may therefore enhance legitimacy and cultural resonance of biomedical messaging.

Importantly, the presence of strong communal ties in Igbo society represents both a risk and an opportunity. While close-knit networks may facilitate rapid spread of stigma, they also provide a foundation for collective education and peer-based support structures. Support groups and community forums, as suggested by participants and supported by Mwendwa, et al. (2022), may function as counter-stigmatic spaces where knowledge, empathy, and shared coping strategies are normalised.

Taken together, cultural beliefs and stigma do not merely influence individual attitudes; they constitute the normative environment within which knowledge is interpreted, caregiving is enacted, and professional confidence is either strengthened or undermined. In this way, stigma operates as a structural driver within the broader mechanism linking knowledge gaps, caregiving strain, and attitudinal ambivalence.

5.5 Toward an Integrated Conceptual Model of Dementia Care Ambivalence in Igboland

The findings of this study suggest that no single theoretical framework is sufficient to explain nurses' knowledge of and attitudes toward people living with dementia in Igboland. Rather, an integrated interpretation drawing on Social Stigma Theory, the Health Belief Model (HBM), and the Theory of Planned Behaviour (TPB) provides a more comprehensive understanding of the mechanisms shaping dementia care.

From the perspective of Social Stigma Theory, dementia is embedded within socially constructed labels that frame it as madness, curse, or spiritual affliction. These labels generate fear, distancing, and concealment at the community level. Stigma thus establishes the normative environment within which both families and nurses interpret symptoms and decide how to respond.

The Health Belief Model illuminates how nurses' perceived barriers—emotional strain, fear of behavioural escalation, limited institutional support, and uncertainty in communication—constrain proactive engagement in dementia care. Even where

biomedical knowledge is present, high perceived barriers may diminish perceived benefits and weaken sustained caregiving effort.

The Theory of Planned Behaviour further explains how attitudes, subjective norms, and perceived behavioural control interact. While many nurses express positive intentions toward compassionate dementia care, limited confidence, inadequate training, and resource constraints reduce perceived behavioural control. Simultaneously, culturally embedded stigma functions as a powerful subjective norm, subtly shaping expectations and behavioural tendencies.

When considered together, these theoretical perspectives point toward an integrated mechanism characterised by three interlocking dynamics:

1. *A knowledge–practice translation gap*, in which declarative biomedical knowledge does not consistently translate into relational competence and confident practice.
2. *Structured ambivalence*, where empathy and professional commitment coexist with emotional strain, stigma, and limited self-efficacy.
3. *A reciprocal stigma loop*, whereby community-level stigma contributes to concealment and delayed care-seeking, intensifying caregiving strain and reinforcing negative narratives about dementia.

Table 15 summarises the application of each theoretical lens and its implications for understanding the findings.

Table 15: Integrated Theoretical Mechanisms Explaining Dementia Care Ambivalence in Igboland

Theoretical Lens	Mechanism Identified in This Study	Implication
Theory of Social Stigma	Dementia is socially labeled as madness or ancestral curse, leading to avoidance and fear among nurses.	Anti-stigma education and cultural sensitisation are essential to improve empathy and confidence.
Health Belief Model (HBM)	Perceived barriers (fear of behavioural escalation, emotional strain, and being hurt) reduce motivation to provide care; knowledge increases perceived benefits.	Education and training should reshape beliefs about dementia and emphasise modifiable aspects of care.

Theory of Planned Behaviour (TPB)	Attitudes, norms, and perceived control interact, lack of confidence and institutional support hinder positive behaviour.	Enhancing self-efficacy, community and institutional support can foster compassionate, person-centred dementia care.
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The integrated model presented above demonstrates that dementia care ambivalence in Igboland emerges from the intersection of epistemic, emotional, and normative forces. Addressing only one domain—for example, knowledge acquisition—without engaging stigma or structural barriers is unlikely to produce sustained change. A multi-level approach that simultaneously strengthens relational competence, reduces stigma, and enhances institutional support is therefore essential.

The findings suggest that while many nurses in Igboland demonstrate foundational dementia knowledge and professional goodwill, significant gaps remain in relational competence, diagnostic clarity, and confidence in managing behavioural symptoms. Cultural beliefs and institutional constraints further shape how this knowledge is enacted in practice. Consequently, dementia care may be delivered inconsistently, with families potentially navigating uncertainty, limited guidance, and delayed support. Addressing these challenges requires coordinated interventions that engage educational, cultural, and structural dimensions simultaneously in order to strengthen informed, compassionate, and person-centred dementia care practices.

However, while the proposed model provides a useful framework for understanding dementia care ambivalence in Igboland, it should be interpreted with caution, as the findings are context-specific and may not be fully generalisable to other cultural or healthcare settings.

Together, these frameworks highlight that dementia care practices are shaped not only by individual knowledge, but also by socially constructed beliefs, perceived behavioural control, and culturally embedded norms.

5.6 Implications and Concluding Reflections

The integrated conceptual model developed in this chapter suggests that dementia care ambivalence in Igboland is not the product of a single deficit, but of interacting cognitive, emotional, and normative forces. Addressing these dynamics requires multi-level strategies that extend beyond knowledge transmission alone.

First, educational interventions must move beyond factual instruction to include structured training in communication, behavioural management, and relational competence. Strengthening nurses' perceived behavioural control through experiential learning, simulation, and mentorship may be particularly important in bridging the knowledge–practice translation gap identified in this study.

Second, institutional support structures require reinforcement. Without adequate staffing, continuing professional development, and organisational recognition of dementia care as a specialised domain, even well-trained nurses may struggle to sustain confident and person-centred practice. Policies that integrate dementia-specific competencies into nursing curricula and ongoing training frameworks would help institutionalise improvements.

Third, stigma reduction efforts must operate at the community level. Public awareness campaigns, collaboration with religious and traditional leaders, and the development of culturally grounded support networks may help reshape subjective norms surrounding dementia. Because stigma functions as a structural driver within the identified model, addressing it is essential for long-term change.

In conclusion, improving dementia care in Igboland requires coordinated educational, institutional, and socio-cultural efforts. Recognising the interplay between knowledge, self-efficacy, caregiving experience, and stigma can support the development of interventions that enhance both professional competence and community understanding, ultimately improving the quality and dignity of care for people living with dementia.

6 CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter integrates quantitative and qualitative results, situates them within theoretical frameworks including the **Social Stigma Theory**, the **Health Belief Model (HBM)** and, the **Theory of Planned Behaviour (TPB)**, and articulates the study's theoretical and practical contributions to existing literature. It highlights the implications for nursing practice, healthcare institutions, and communities, discusses the strengths and limitations of the study, and offers recommendations for practice, education, policy, and future research.

6.2 Key Contributions of the Study

This study addressed three key research questions concerning nurses' dementia knowledge, attitudes, and the factors influencing dementia care practices in Igboland. The findings demonstrate that nurses possess moderate knowledge of dementia with specific gaps in communication and behavioural management, hold predominantly neutral attitudes towards people with dementia, and are influenced by a complex interplay of socio-demographic, cultural, and institutional factors. These findings contribute to a more nuanced understanding of dementia care within a culturally embedded Nigerian context, highlighting the central role of cultural beliefs and stigma in shaping professional knowledge, attitudes, and care practices in low- and middle-income settings.

This study advanced the perception and understanding of dementia care in Igboland in both theoretical and practical domains. By assessing nurses' knowledge and attitudes to dementia care through a sequential explanatory mixed-methods lens, it revealed how cultural and spiritual beliefs, professional training, and institutional context coalesce to shape dementia care practices among nurses in Igboland. The major theoretical and practical contributions of this study to existing literature will be discussed in this sub-chapter.

6.2.1 Theoretical Contributions

Three theoretical frameworks: The Theory of Social Stigma, the Health Belief Model, and the Theory of Planned Behaviour helped to explain nurses' perceptions and behaviours in dementia care in Igboland and how it influences family caregivers.

The study found that the stigma surrounding dementia in Igboland operates on multiple levels. The persistent linking of dementia to spiritual affliction, witchcraft or madness in the Igbo context reflected the expression of public stigma. These beliefs infiltrate professional care environments, where nurses internalise cultural narratives resulting in professional stigma, that in turn may cause nurses to adopt care patterns that families interpret as avoidance, fear or disinterest. This neutral or negative attitude of nurses contribute to family stigma, where relatives resort to hiding loved ones with dementia in their effort to prevent them from public and professional stigma or to avoid the experience of shame, leading to hesitancy in seeking help. Hence, causing people with dementia to experience increased personal stigma. This extended the Stigma Theory by highlighting a **reciprocal stigma loop** where stigma in the community influences the perception and attitude of nurses, whose behaviours then reinforce stigma within families. This extends Social Stigma Theory by demonstrating how professional and cultural logics converge within clinical settings and generate a reciprocal stigma loop in dementia care.

Nurses' varying perceptions of dementia causation as biological or spiritual, its prognosis as reversible or irreversible, and their viewing it as contagious or not illustrated how beliefs about susceptibility, severity, causation and benefits of action shape responses to dementia care. The view of dementia as contagious, spiritually caused, emotionally and physically burdensome leads to increased fear, reduced confidence and exhaustion.

On the other hand, perceiving dementia as biologically caused, emotionally bonding and rewarding strengthens self-efficacy and improves willingness to engage in compassionate dementia care. This suggest that how nurses view dementia influences not only their behaviour towards dementia care, but also the type of care system they advise families to embrace (spiritual, traditional or medical). This extends the Health Belief Model by illustrating how culturally embedded explanatory frameworks recalibrate perceptions of susceptibility, severity, and perceived benefits, thereby shaping both professional behaviour and caregiving guidance.

The study highlighted that nurses' attitudes, perceived subjective norms, and perceived behavioural control interact to shape their intentions regarding dementia caregiving. It demonstrated that knowledge and attitudinal ambivalence, cultural and spiritual beliefs, and difficulty in communication and behavioural management contribute

to neutral or hesitant engagement in person-centred dementia care, indicating that significant improvement requires both individual proficiency and supportive institutional and societal conditions. This extends the Theory of Planned Behaviour by demonstrating how perceived behavioural control and subjective norms are shaped not only by institutional constraints but also by culturally hybrid belief systems in which biomedical and spiritual explanations coexist.

In summary, this study advanced theoretical discourse by integrating culturally grounded insights into existing psychosocial models, highlighting how stigma, belief structures, and perceived control shape dementia care among nurses in Igboland.

6.2.2 Empirical and Practical Contributions

To the best of my knowledge, this study provided one of the pilot mixed-methods evidence exploring dementia knowledge and attitudes among nurses in Igboland, revealing a complex synergy of clinical understanding, workplace environments, and cultural ideologies. It showed that communication is the weakest aspect of dementia competence, a pattern that concurs with global literature but is heightened locally by culturally rooted beliefs that shape how symptoms are interpreted and discussed. The variations in nurses' attitudes across different facility types might suggest that institutional culture and the norms, expectations, and resources embedded within different care settings play a critical role in shaping dementia-related practices.

One of the aims of the study was to examine if nurses in Igboland are knowledgeable enough to care for people with dementia and guide family caregivers. The study found that nurses are major role players in shaping how families understand, manage and handle dementia. When nurses possess stronger dementia knowledge, communicate with confidence and compassion, families experience emotional, social and practical support in which fear, shame, guilt and isolation are reduced, willingness to involve community networks increased and competence for communication, security measures and daily care improved.

Conversely, when nurses lack confidence or hold stigmatised beliefs, families may perceive dementia as shameful or hopeless, hence, they intensify isolation and feel discouraged to seek help early. Therefore, strengthening nurses' understanding has far-reaching impacts that can benefit families and local communities.

Furthermore, misconceptions about dementia causation, prognosis and clinical course influence family response to dementia. These misconceptions lead to hesitation in seeking medical help, resorting to spiritual consultations, concealment of the disease resulting in isolation and sometimes in neglect and abuse. Nurses who are influenced by the same misconceptions may unintentionally reinforce these beliefs and behaviour patterns through inconsistent misinformation or limited guidance, thereby increasing caregiver burden. Moreover, the attitudinal differences among nurses across hospital types underscore the important role of organisational culture in shaping care quality, providing a practical roadmap for boosting dementia competence through institutional leadership, staff support and policy reform.

In conclusion, this study offered original empirical insights into the state of dementia knowledge and attitudes among nurses in Igboland, Nigeria. Practically, it demonstrated that nurses' knowledge and attitudes deeply impact family understanding, emotional resilience, care-seeking patterns, and daily caregiving experiences. These insights emphasise the importance of empowering nurses as both clinical caregivers and community educators as they make up the major and primary stakeholder in the healthcare system.

From a family studies perspective, the findings highlight the central role that healthcare professionals play in shaping family responses to dementia. In contexts where families remain the primary caregivers, nurses' knowledge, attitudes, and communication practices influence not only clinical encounters but also how families interpret cognitive decline, cope with caregiving demands, and decide when and where to seek support. Strengthening dementia education among nurses may therefore have broader implications for family wellbeing, caregiving resilience, and community-level responses to ageing and dementia.

6.3 Implications of the Study

This sub-chapter depicts the substantial implications of the study, emphasising how the findings inform professional practice, training needs, and broader cultural and institutional approaches to dementia care. It connects the study's insights to actionable strategies for improving caregiver attitudes, strengthening support systems, and guiding future policy and research.

6.3.1 Implications for Nursing Practice

Strengthening the understanding of dementia especially in the areas of communication and behavioural management can transform nurses from fearful and hesitant caregivers into competent caregivers and family support anchors. Clinically, the study demonstrates the need for dementia care to be recognised as a specialised aspect of nursing practice, that requires empathy, patience and affective communication strategies. Therefore, it is necessary to equip nurses with practical tools that empowers them to manage challenging behaviours and reduce caregiver stress. This can be achieved by prioritising person-centred care, empathetic and patient communication, and creating friendly and safe environments.

Furthermore, it highlights the need for supportive work environments that can help nurses develop more positive and confident attitudes. Because when nurses are confident, use validation instead of correction, and reaffirm families' efforts, they help reduce emotional distress, caregiver guilt, and feelings of failure. Advanced nursing competence also helps to dispel cultural narratives that frame dementia as spiritual punishment, help families to understand dementia as a medical condition and guide them toward targeted help-seeking.

6.3.2 Implications for Nursing Education

The study demonstrates a distinct need to **incorporate dementia-specific content into nursing curricula** at vocational, undergraduate and postgraduate levels. Highlighting the necessity for training and educational modules to be organised to address the biological, psychological, and social dimensions of dementia with more emphasis on communication skills, distinction between dementia, delirium and other reversible conditions, behavioural management, and person-centered care. Simulation-based training, case studies, and reflective practice can boost learning outcomes and build confidence among nurses. This is because, better educated and informed nurses will be in better positions to disseminate dementia knowledge in the communities and families.

6.3.3 Implications for Policy and Health System Development

The findings of this study call for **policy interventions** to establish long term care support, build and improve dementia care infrastructure and awareness in Nigeria. The Federal Ministry of Health, in collaboration with professional bodies like the **Nursing**

and Midwifery Council of Nigeria, should prioritise **national dementia education initiatives** and **public awareness campaigns**. Policies that promote early diagnosis, caregiver support, dementia friendly environments and community-based care can reduce stigma and improve quality of life for people living with dementia and their families.

However, it may not be enough to design policies, Nigeria need policies that can be effectively implemented, monitored and evaluated. Such policies are important, because the traditional family care system is the major source of long-term care in the country. Hence there is need for policies that can support, train and empower family caregivers to ensure their responsibilities as dementia caregivers are done effectively. And by doing so, the dignity and quality of life of people with dementia would be maintained and boosted.

6.3.4 Implications for Community and Public Health

The widespread influence of societal, cultural and spiritual misconceptions about dementia even among professionally trained nurses, implies that culturally sensitive community-wide education should be obligatory. Healthcare workers can serve as pivotal agents of change in rural and urban communities, helping to dispel myths about curses, contagion, or witchcraft.

The study also stressed the importance of collaboration with religious and community leaders as well as traditional healers who could be helpful advocates in correcting misconceptions and fostering culturally congruent health education. This is because the majority of Nigerians believe greatly in religion and tradition and as such, they respect so much the words of their religious and traditional leaders. Therefore, if these leaders are knowledgeable enough, they can help inform and refer families of people with dementia to seek medical help promptly. Moreover, integrating dementia awareness into school, church and community health programmes could significantly increase knowledge, reduce stigma and increase acceptance of people living with the condition and their families.

6.3.5 Summary

Altogether, the implications highlight the urgent need for strengthening communication training, transforming organisational cultures, and implementing

community-wide education to overcome stigma and enhance dementia care. Nurses with advanced dementia specific training and better-informed religious leaders and traditional healers can buffer families from emotional and physical burden, counter stigma and strengthen home based dementia care and public understanding of dementia.

6.4 Recommendations

Based on the study's findings and implications, the following recommendations are proposed for nursing education, clinical practice, policy formulation, and future research.

6.4.1 Recommendations for Nursing Education

To better equip nurses for effective and adequate dementia management, dementia education should be formally incorporated into the curricula of nursing schools and continuing professional education programmes. Modules should emphasise dementia etiology, communication, behavioural management, and person-centered care. Regular dementia workshops, seminar and refresher courses should be organised for practicing nurses.

Training programmes should include case-based simulations, interactive sections, psychosocial management and clinical placements in geriatric or psychiatric units to build confidence, empathy, and practical competence. Educational content should also address local cultural beliefs and stigmatising perceptions of dementia, fostering understanding of how cultural frameworks influence care behaviour.

6.4.2 Recommendations for Clinical Practice

Healthcare institutions should strengthen support systems for nurses providing care for people with dementia, including counselling, peer support and reflective practice opportunities to help them manage emotional challenges associated with dementia care. They should also promote interdisciplinary collaboration between nurses, psychologists, psychiatrists and social workers for proper dementia diagnosis and management. Ensuring adequate staffing, resources and time for care will lead to effective dementia care. Furthermore, dementia care should be recognised as a specialised area of practice deserving incentive and recognition in the institutions. Clinics should also do well to offer

in-service dementia training to nurses and erect dementia work groups to provide collegial guidance, model empathetic care and offer structured counselling to families.

6.4.3 Recommendations for Policy

On the national level, the Federal Ministry of Health should develop and implement a national dementia care policy that establishes standards for diagnosis, service provision and professional training. They should create dementia-friendly healthcare environments and allocate funds for dementia education, geriatric services and community support centers to facilitate early diagnosis and comprehensive care. Funds should also be allocated for family support concepts, including respite care and caregiver education to alleviate caregiving burden for families.

Culturally tailored dementia education and awareness campaigns, targeting the general public, caregivers and faith-based organisations to dispel myths and reduce stigma should be developed. This could be better achieved in partnership with Non-Government Organisations [NGOs], schools, traditional and faith leaders as well as the use of mass media and academic institutions for research.

6.4.4 Recommendations for Future Research

Future research should examine how interventions targeting relational competence, institutional support, and stigma reduction interact over time. Longitudinal and intervention-based studies could help refine the integrated conceptual model proposed in this dissertation (discussed in Section 5.5). Further qualitative research should explore dementia perceptions among other healthcare providers (e.g., physicians, social workers, traditional healers) and also family and community perceptions of dementia with the aim of designing culturally congruent dementia care strategies.

Comparative studies across Nigerian regions or among different professional groups (doctors, therapists, caregivers, community social and health workers) could offer a more comprehensive understanding of dementia awareness and attitudes and help identify region or group specific challenges and training needs. Future research should also investigate the direct effects of nurse – family interaction on caregiver experiences.

These recommendations underscore the need for systemic change, curricula reform, culturally competent dementia training, stigma reduction, dementia friendly and supportive care structures and research expanding the understanding of different perceptions, cultural influences and effects of education on dementia knowledge and care.

6.5 Limitations of the Study

Despite the rich understanding generated through the mixed-methods design—where quantitative findings were deepened and explained by qualitative insights—several limitations should be considered when interpreting the findings of this study. While the relatively large sample size for the quantitative strand enhanced the robustness of statistical analyses, the findings should be interpreted within the socio-cultural context of Igboland. Although certain mechanisms identified in this study may have relevance for other stigma-embedded or resource-limited settings, direct generalisation beyond the Igbo context should be approached with caution.

The use of validated instruments (DKAT2, DKAS, and DAS) strengthened the methodological rigor of the study and enhanced comparability with international research. However, structured knowledge and attitude scales predominantly capture declarative understanding and self-reported attitudinal dispositions. They may not fully reflect procedural competence, relational skill, or real-time behavioural responses in clinical practice. Consequently, the observed knowledge–practice translation gap identified in this study may partly reflect the inherent limitations of survey-based measurement tools. In addition, as the questionnaires were self-administered, responses may have been influenced by social desirability bias, with participants potentially overestimating their knowledge or expressing more socially acceptable attitudes.

The cross-sectional design limits the ability to draw causal conclusions regarding the relationships observed between knowledge, attitudes, and socio-demographic variables. Although theoretical frameworks were used to interpret potential mechanisms, the directionality of associations cannot be empirically confirmed within a single time point. Longitudinal or intervention-based designs would be necessary to examine how knowledge acquisition, stigma reduction, and enhanced behavioural control interact over time.

The use of purposive sampling may have introduced selection bias, as participants who chose to engage in the study could have had greater interest in or prior exposure to

dementia-related issues. Similarly, the qualitative phase relied on self-selected participants, which may have resulted in the inclusion of individuals who were more motivated or informed about the study topic.

Contextual and infrastructural challenges, including inconsistent electricity supply and limited internet connectivity, may also have influenced participation patterns and response completion. Although alternative data collection methods, such as complementary paper-based questionnaires, were employed to mitigate these constraints, some degree of sampling distortion cannot be entirely excluded.

Despite these limitations, the study's mixed-methods design, use of validated instruments, diverse sampling strategy, and robust analytic procedures enhanced its credibility and yielded substantial insights into dementia knowledge and attitudes in Igboland.

6.6 Conclusions

The overall findings of this study suggest that limited and uneven dementia knowledge—particularly in communication and behavioural management—together with stigma-laden beliefs and constrained institutional support may reduce nurses' confidence and consistency in person-centred dementia care in Igboland. These dynamics may contribute to challenges in behavioural symptom management, reduced confidence in delivering person-centred care, and potential inconsistencies in care practices.

By bridging the gap between science and culture, this research provides practical pathways toward ***compassionate, evidence-based, and culturally grounded dementia care*** in Igboland and similar contexts. It contributes to the growing body of literature on dementia awareness in SSA and provides one of the first mixed-methods perspectives on the topic within the Igbo cultural context. It demonstrates that improving dementia care requires more than knowledge acquisition. It demands ***empathy, confidence, cultural sensitivity, and systemic support***.

Empowering nurses through education, mentorship, institutional support, and policy reform is likely to strengthen dementia care practices and may contribute to reducing stigma surrounding people living with dementia and their families in Igbo communities and similar contexts.

This study demonstrates that improving dementia care in Igboland requires not only increasing knowledge among nurses but also addressing deeply rooted cultural beliefs and systemic healthcare limitations.

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Appendices

Appendix 1: Example of Survey Questionnaire

Online Survey Questionnaire

Dear Sir/Madam,

My name is Sr. Maria Chiazoka Obasi, a student at WSB University in Dąbrowa Górnicza, Poland. As part of my doctoral research, I am conducting an online survey and would like to invite you to participate. Please take a moment to read the following information, which outlines the purpose of the survey and its significance.

Theme: Assessing the level of nurses' knowledge and understanding of dementia, as well as their attitudes towards individuals with dementia in Igboland.

You have been selected to participate in this survey because you are a registered nurse working in a hospital in Igboland. You may have encountered dementia during your training or provided care to individuals with dementia. Your responses should be based on your personal and professional experiences, as well as your nursing education.

Participation in this survey is entirely voluntary, and all responses will be handled anonymously and confidentially. The questionnaire should take approximately 25 minutes to complete. Your completion and submission of the questionnaire will be considered as consent to participate. You are free to withdraw from the survey at any time without providing a reason, and this decision will not have any negative repercussions.

The data collected will be coded, categorized, and analyzed solely for research purposes. The deadline for submitting the completed questionnaire is September 30th. 2024.

Contact Information: If you have any questions or concerns regarding the survey, please do not hesitate to contact me:

Sr. M. Chiazoka Obasi DDL

Tel.:

E-Mail:

Thank you very much for taking the time to participate in this survey.

Here are some expressions about dementia. Please read the expressions thoughtfully and tick the column to indicate if the expression is true or false. Please do tick only one column (true or false) for each expression.

Expression	True	False
1. Dementia is likely to limit life expectancy		✓
2. Blood vessels disease (vascular dementia) is the most common form of dementia		✓
3. People can recover from the most common forms of dementia	✓	
4. Dementia is a normal part of the ageing process	✓	
5. Dementia occurs because of changes in the brain	✓	
6. Planning the end of life care is generally not necessary following a diagnosis of dementia		✓
7. Alzheimer's disease is the most common form of dementia		✓
8. It is impossible to communicate with a person who has advanced dementia	✓	
9. Changing the environment (e.g., putting on a CD, opening or closing windows) will make no difference to a person who has dementia	✓	
10. It is important to correct a person with dementia when they are confused	✓	
11. People experiencing advanced dementia often communicate through body language	✓	
12. Uncharacteristic behaviours in a person experiencing dementia is generally a response to unmet needs		✓
13. Medications are the most effective way of treating behavioural symptoms of dementia		✓
14. People experiencing dementia do not generally have problems making decisions		✓
15. Movement is generally affected in the later stages of dementia	✓	
16. Difficulty eating and drinking generally occurs in the later stages of dementia	✓	
17. People with advanced dementia may have difficulty speaking	✓	
18. People experiencing dementia have difficulty learning new skills	✓	
19. Daily care for a person with advanced dementia is effective when it focuses on providing comfort	✓	
20. Having high blood pressure increases a person's risk of developing dementia		✓
21. Maintaining a healthy lifestyle does not reduce the risk of developing the most common forms of dementia	✓	
22. Symptoms of depression can be mistaken for symptoms of dementia	✓	
23. The sudden onset of cognitive problems is characteristic of common forms of dementia	✓	
24. Exercise is generally beneficial for people experiencing dementia		✓
25. Early diagnosis of dementia does not generally improve quality of life for people experiencing the condition		✓
26. When a person has late stage dementia, families can help others to understand that person's needs	✓	
27. When a person who has dementia is distressed, it may help to talk to them about their feelings	✓	

Here are some expressions about attitude toward people with dementia. Please rate each expression according to how much you agree or disagree with it. Tick column 1 to 7

according to how you feel in each case. Feel free to indicate your feeling, there is no right or wrong answers. The acronym "ARDR" in each expression stand for "Alzheimer's Disease and Related Dementias".

Expression	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
1. It is rewarding to work with people who have ARDR	1	2	3	4 ✓	5	6	7
2. I am afraid of people with ARDR	1	2	3	4	5	6 ✓	7
3. People with ARDR can be creative	1	2 ✓	3	4	5	6	7
4. I feel confident around people with ARDR	1	2	3	4	5	6 ✓	7
5. I am uncomfortable being around people with ARDR	1	2	3	4 ✓	5	6	7
6. I would avoid an agitated person with ARDR	1	2 ✓	3	4	5	6	7
7. It is possible to enjoy interacting with people with ARDR	1	2	3	4	5	6 ✓	7
8. I feel relaxed around people with ARDR	1	2	3	4	5	6	7 ✓
9. People with ARDR can enjoy life	1 ✓	2	3	4	5	6	7
10. People with ARDR can feel when others are kind to them	1	2	3	4	5	6 ✓	7
11. I feel frustrated because I do not know how to help people with ARDR	1	2	3	4	5	6 ✓	7
12. I cannot imagine taking care of someone with ARDR	1 ✓	2	3	4	5	6	7

13. I admire the coping skills of people with ADRD	1	2	3	4	5	6	7 ✓
14. We can do a lot to improve the lives of people with ADRD	1	2	3	4	5	6 ✓	7

Demographic information

Please tell us a little about yourself

1. Gender ☒ Female ☐ Male ☐ Others
2. Age: 18-24 ☐ 25-34 ☐ 35-44 ☒ 45-54 ☐ 55-64 ☐ >64 ☐
3. Working experience in years: 16 years
4. Area of specialization, if any: general nursing
5. Owner of the hospital: ☐ Federal Government ☒ State Government ☐ Private ☐ Church
6. In which state is the hospital located? Enugu
7. Have you ever known or worked with someone who has ADRD? ☒ Yes ☐ No

If yes please explain:

8. How long have you known or did you know the person? 5 days
9. What is/ was your relationship? Nurse
10. What is your religion? ☐ Moslem ☐ Christian ☒ Traditional religion ☐ Others

You are done! Thank you immensely for your help!

Appendix 2: Focus Group Discussion Guide

I am interested in learning your views and perceptions about the level of dementia knowledge among nurses, attitude towards people with dementia and how people with dementia are cared for in Igboland. I will therefore be presenting some broad statements and questions from a previously conducted survey, but encourage you to provide any information you feel would be important to understand the topic from the Igbo socio-cultural context.

- Some of the respondents in the previous survey think that people can recover from the most common forms of dementia. What is your opinion?
- Majority of the respondents in the survey believe that dementia is an inevitable part of the ageing process. What do you think? Do you know or have you heard of others who share this view?
- Most of the respondents in the survey stated that it is impossible to communicate with people with advanced dementia. Can you share your views and opinions about this?
- Many also think that it is important to correct people with dementia when they are confused? What is your view and experience on this issue?
- What is your opinion about the sudden onset of cognitive problems being a common characteristic of dementia?

The following statements and questions are related to providing care for a person with dementia and attitude towards people with dementia.

- What is your opinion about working with or caring for someone with dementia? What do you think are some of the challenges and some of the rewards that can be experienced while caring for someone with dementia in Igboland?

- Some of the respondents in the survey indicated that they are afraid of and feel uncomfortable around people with dementia. Can you share your opinion and or experience? What do you think might be the cause of this attitude?
- What is your view about people with dementia being creative? Please share what you think about people with dementia enjoying life.
- Kindly explain your views about interacting with people with dementia.
- Some of the survey participants stated that they cannot imagine caring for someone with dementia. What, in your opinion could be the reason?
- What do you think are the major difficulties and challenges people with dementia and their family experience in Igboland? What do you think are the factors leading to the difficulties and challenges?
- In your opinion, is there anything nurses can do to enhance dementia knowledge and dementia care in Igboland?
- Is there any other thing that you feel is important for me to know regarding dementia knowledge, caregiving and attitude towards people with dementia in Igboland?

Thank you greatly for your time, your voluntary participation and for your valuable contributions.

Appendix 3: Consent Form for Focus Group Participants Study

Study Title: Dementia Knowledge and Attitudes among Nurses in Igboland, Nigeria: A Mixed-Methods Study of Cultural Beliefs, Stigma, and Family Caregiving.

Researcher: Sr. M. Chiazoka C. Obasi

Institution/Affiliation: WSB University Dąbrowa Górnicza, Poland

Contact Information:

Introduction

You are invited to participate in a research study exploring the factors associated with nurses' attitudes toward people with dementia in Igboland. This study aims to understand the level of knowledge nurses have about dementia and identify factors that influence attitudes and care practices for people living with the condition.

What Your Participation Involves

If you agree to participate, you will take part in a focus group discussion lasting approximately 90 minutes. The discussion is a follow-up of responses collected in a self-administered questionnaire survey. It will cover your experiences and opinion about the level of nurses' knowledge of dementia, and their attitudes towards people with dementia. It will be audio recorded for accuracy, but your identity will remain confidential.

Confidentiality and Anonymity

- Your responses will be treated confidentially.
- No personally identifiable information will be included in the final report.
- Data will be securely stored and used solely for academic purposes.

Potential Risks and Benefits

- There are no known risks associated with participating in this study.
- The findings may contribute to creating awareness, improving nursing education and care for people with dementia in Igboland.
- As a token of appreciation for your time, you will receive 5,000 NGN after completing the group discussion.

Voluntary Participation

- Your participation is entirely voluntary.
- You may withdraw at any time without penalty and without losing the token.
- You can also choose not to answer specific questions.

Consent Statement

I have read and understood the information provided above. I voluntarily agree to participate in this study.

Participant's Name: _____

Signature: _____ Date: _____

Researcher's Name: _____

Signature: _____ Date: _____

Appendix 4: Example of Focus Group Discussion Transcript

FG 1_10.05.2025

(0:02 - 0:27): Interviewer

Good afternoon everyone. First of all, I wish to say thank you very much for honoring my invitation for this discussion. As you have read through, I am writing my doctoral work on the topic, nurses Knowledge of Dementia and Attitude towards People with Dementia in Nigeria.

(0:31 - 1:07)

So, I carried out this. This is the second phase of my research work. This first phase was a survey with questionnaire, where I asked nurses about, many statements were made about dementia.

(1:07 - 1:28)

So, they ticked yes or no, or rather true or false, and then the attitude of people towards dementia. So, this is just a continuation to be able to explain the results of the survey. So, now, I am Sister Chiazoka Obasi, first of all.

(1:29 - 1:38)

I am a Daughter of Divine Love eem Congregation. We are based in Enugu. I, I live in Germany, but my school is in Poland.

(1:42 - 1:59)

Eem So, my topic, I'm studying about the nurses in Igboland. That's why I contacted our sister here. So, to start with, feel free to air your views.

(1:59 - 2:17)

There are no correct or wrong answers. It's just to know your opinion about some issues that came up in the survey. So, first of all, some of the respondents in the survey think that people can recover from most common forms of dementia.

(2:18 - 2:42)

What is your view about this? That people can recover from dementia.

P03:

To me, recovery from dementia will, first of all, look at the cause of that dementia. The cause of that dementia will always eeem give us an insight.

(2:42 - 2:54)

Whether the person will always recover. Most times, most of them don't recover fully. But we give a supportive intervention, a kind of to them.

(2:55 - 3:03)

We keep supporting them. That is where we now get the family involved. You yourself, the care, the health care giver, you are involved.

(3:04 - 3:15)

And so many other things we bring to make sure that the person is not just, is not ruled out from the society, but can be managed. That is my opinion.

(3:18 - 3:33): P04

In my own view, I concore my colleague's statement. It depends on the cause, yes. It depends on the underlying cause that some people might recover or might not recover from dementia.

(3:34 - 3:48)

You know, some dementia could be as a result of a Alzheimer. And the one that's from that origin, I don't think that is reversible. But if it's some, if it's as a sort of infection.

(3:51 - 4:03)

Or so many other things, that's apart from, yes, underlying diseases. Yes, that can affect the brain cells and other things. It can be recovered.

(4:03 - 4:11)

But that of Alzheimer. It's not reversible. So it depends on the underlying cause of the disease.

(4:13 - 4:41): Interviewer

You wanted to say something Eb....?

P02: Yes: its almost the same thing my colleague said.

Interviewer:

Okay ... Do you believe that eem dementia is an inevitable ageing process? As some of the respondents reported in the survey. What is your opinion about dementia being a part, a normal part of the ageing process?

(4:41 - 4:56): P04

Yes. It is, It is. It is because as you are ageing, part of the brain cells is ageing. Like, ... Your memory cannot be that sharp, that's. Dementia, there's no way; your brain cannot be as sharp as it is when you are young.

(4:56 - 5:10)

So because of that degeneration or because of that, the brain cells ageing, it can't function fully. Like, so it's part of the ageing process.

(5:10 - 5:24): P05

Yes. It's not that all, that all aged people will pass through dementia. Do you understand yes, yes, It's not that every aged person will have dementia. But it is, Dementia is part of the ageing process.

(5:24 - 5:37)

Because most of the time it affects the aged. Unlike, you know, the younger ones.

(5:38 - 5:47): P04

Another opinion is that actually is ageing process ehh, ageing process eeheh related related. But it's not in all. Because dementia can be a sort of lifestyle modification while in youth age. Maybe excessive intake of alcohol. Or other living reckless life

(5:48 - 6:01)

Too much of stress. This can cause somebody not cognating very well. But normal, normal is eem related to ageing process, but not in all.

(6:05 - 7:05): Interviewer

Okay. And what is your opinion about the onset, the sudden onset of eeeem cognitive problems being a common characteristic of dementia?

P03:

Pardon?

Interviewer:

The sudden onset of cognitive problems as a a com.. a normal characteristic as ... of dementia. What isss what do you think about that?

P06:

In most eee, if we talk of eee cognitive eeeh, when there is a kind of decline cognitively in a human being, what I say its still one of the characteristics is because whenever anything happens to the brain, anything that has to do with the brain will always start, when you you, when you are not expecting it, it's mainly sudden.

(7:08 - 7:40)

Anytime something happens to the brain, like if you are seeing if somebody is ageing, but you won't notice noticing dementia at that time, any day that thing will always start ageing, just like a kind of a sudden something. Before, the person will now start losing the memory, or no longer reeme- especially if they don't remember recent things. You see them remembering old, old things, but they can't pick up new new things. So most times its just sudden

(7:41 - 7:51)

So in this case, it's just sudden. They just lose that eee kind of recognition. Maybe that time. That's why I say it's a characteristic. It's one of those

(7:53 - 8:29): P06

It's supposed to be a characteristic because this dementia affects the thinking, their, the, the normal life function the of those people affected with dementia, and then their thinking, even the way they handle the their normal del... (...) somebody .. , they can

even forget things easily. You can discuss with somebody one eee whateee, someone having dementia now, then later you will ask the person, the person will not even remember, the person might not even recognise people anymore as a result of the this dementia.

(8:30 - 8:49)

That's why I say it's a cognitive, ehhh the the this thing is cognitive characterised.

Interviewer:

What is the opinion of the others?

P04:

In some cases, it's not sudden. Some some brain damages comes gradual gradual.

(8:51 - 9:03)

But before you know it, they are just like especially as it's coming with age, you wiii, ss, one day you will be like, ah, ah I don't know where I kept this thing. You think it's normal. You don't know it has started setting in.

(9:03 - 9:13)

Then the next day you will be like, ah, that money I don't know this. Just like that, before we can realise that this is actually this person's burden. It has gone (...).

(9:13 - 9:24)

So most times it's cognitive and it's not sudden.

P05 & 6

It can be a yes or a no answer. Mmh hh it can be a yes or a no answer.

(9:25 - 9:32) P06:

Because sometimes it's a gradual process. Start from memory loss. Memory loss is a gradual process.

(9:33 - 9:39)

Forgetting some things. Some key things. Some little little things.

(9:39 - 9:58): P02

Then you start forgetting some important things like you don't know your name again, orientation, time, and everything.

P04:

In my own opinion, in many cases, it's not sudden. Based on what my colleague has said, it's a gradual process. Unless you may sss ...

(10:00 - 10:19)

Because some of the intake of this some of ahh with our medications here some medications can lead to creating changes in the brain, thereby causing dementia. In some cases, that's they are sudden, like trauma. Trauma can happen. (many people talking at the same time). Trauma can (...) cause injury RTA

(10:20 - 10:27)

Trauma, yeah. I would say age, the problem, height, and asthma. But it's normal, normal.

(10:28 - 10:42)

It is a gradual process. Majority of dementia is a gradual process. Which, when you look at it, ageing process and a lot of stress can be pin-pointed at.

(10:47 - 11:06): Interviewer

Thank you. Eehmm also, most of the respondents stated that it is impossible to communicate with somebody having dementia in the last stage. What is your view or your experience about that?

(11:07 - 11:15) P03

Yes, it is true. Because dementia and the last stage are like, just finish saying something. Just like you said, just finish saying something. Tell her to repeat it.

(11:16 - 11:28)

He or she won't be able to repeat it. So, communication iis, but, if it hasn't just, according to your question, at the last stage, but before the last stage, you can, yes.

(11:29 - 11:47)

With soo soo, some cognitive, or maybe, so.. some ehhh what do they call it, social, occupational therapyy activities and all that, they will be able to, maybe like you said, you can do this. And you train them. You don't actually say something for a long time.

(11:47 - 12:00)

Just tell them to repeat short short aahh sentences and messages. But at that last stage, there is no both short and long sentences. They can't recognise they can't remember again.

(12:01 - 12:24): P04

Why I will agree with them is because at the last stage, a looot of signs and symptoms they present, you see so many of them being aggressive. So many of them. Because at the first time, it might be just forgetting something.

(12:25 - 12:39)

But at that last stage, they forget, they can be aggressive, or they might be withdrawn by a kind of depression. So many of them. Or they ee a kind of anxiety.

(12:39 - 13:00)

Anytime you just see people around them, they will start displaying those things. And when those things are present, you will no longer understand or coordinate, try to know; get; you can't communicate well with them. Because they are charac..., everything about them will change, their mood, everything will change

(13:00 - 13:27)

So because of that last stage, they find it difficult to have an effective communication with them, that's what I think.

P05

In my own opinion, I can say I'm not strongly agree but it is difficult to communicate with people with dementia.

(13:29 - 13:41)

It depends on the individual. Because some many personalities don't have that spirit to tolerate. It takes someone that has that tolerancy in him or her.

(13:43 - 13:59)

to accommodate people with dementia during communication. Because it's all about patience. So it is possible to communicate with them, because we know that it is common to everyone.

(13:59 - 14:49)

Nobody knows what he or she might encounter during the ageing process. So I strongly agree that it is possible.

Interviewer:

What is your opinion about working with or caring for someone who has eemm dementia?

What do you think might be some challenges and benefits if there are any?

P02: pardon?

Interviewer:

Taking care of someone with dementia, what could be, what might be the challenges or benefits that could go with it?

P06:

One of the challenges I think that comes with caring for a patient with dementia is that there will be no effective communication.

(14:50 - 15:13)

One of the challenges. But because the patient in question finds it difficult to understand, and because the patient cannot understand you well or to retain whatever you have said to the patient, you know the patient will not always carry out what you want him or her to carry out. That's the challenges.

(15:14 - 15:30)

And another thing again about people with dementia is that they tend to forget everything. They take life like.. that's why you see so many of them, they have mood swing.

(15:31 - 15:40)

People with dementia, you will just notice that maybe this time they are relaxed. The next minute anxiety sets in.

(15:41 - 16:14)

So when you are taking care of them, you will always ... fee.., if you don't understand why its, you give them individualized nursing, you love, you try to, you try to sort out the patient's problem. And that problem is peculiar to that particular patient. It might not be, if you have about 10 different patients with dementia, 10 of them might not have the same, it's not the same way you care for them.

(16:14 - 16:32)

You try as much as possible to give them individualised nursing, try to know the areas of their care. So when now, trying, even trying to know the area of their care will still pose a lot of problems. Because one can need patience.

(16:34 - 16:48)

There is a lot of skills that need to come in for you to get exactly what you will use to care for that patient. If you want that patient to be okay. Because a lot of things you will do with that patient, the safety is there.

(16:48 - 17:19)

Not only that you manage the patient with dementia, you manage the household at the same time. Because if you don't manage the household at the same time, you are not giving a holistic nursing to that patient. Because you might manage that patient now that the patient is in the hospital or in your care, as soon as the person gets home and does something, the family members will no longer understand that this person is no longer reasoning normal, or is no longer getting things like before.

(17:20 - 17:51)

They will start scolding, you know, trying to put off that patient again. So because of that, there is a lot of, you put in your time, you put in your skills, even what you think you know, whether it's intellectually, all those things will come in (...) then. And another benefit about it is that, it's like when you are nursing a patient, somebody that came in so bad, that people thought cannot be managed.

(17:52 - 18:17)

And maybe, when that person stays, two weeks, one month, and now you see a new leaf coming up, that patient trying to live up to, at least. The pers..., the person can now communicate, the person can now relax, no longer be aggressive and so many other things, you see; even yourself that has taken care of that patient, you will be happy. I think that's the benefit.

(18:17 - 18:48)

And the family will be happy too. And again, that person will be useful in the society, will no longer be a loser.

P02:

Yaaeh, that's that's one of the benefits, because to the family, they felt this person, because in Igbo land, so to say, people with dementia, they are see, they see them as insane people, because they can just up one day, or are all about, they don't know where, because he may not remember where he is, and now be roaming around the street.

(18:49 - 19:13)

So it puts the family at eem eem unease, so the family there, because they they it is one of their this thing. They just, you feel feel like, you say, let me go to this place. You think you are talking with somebody, the next thing, you wait for the person, ah, this place is supposed to come back by now, you know, you don't, you go there and you don't see them, that's when you start looking, you don't see them. You now see that

(19:13 - 19:32)

So to the family, it puts them at a lot of stress. But when they now come to the hospital, with maybe engage them with activities and all that, you see that they are able to, maybe. Because those activities help them find, to still find out what they can still do.

(19:33 - 20:38)

So when all these things, you now see that.

P03:

It takes your patience too, as a nurse, because it takes your patience, maybe you are a nurse, you don't know that you have this level of patience to take care of these, and when you take care of them, and they are discharged you feel like, you feel fulfilled, just like every other nurse feels fulfilled that the patient is going home, family inclusive just like (inaudible)

Interviewer:

Any other input in this case, in this subject?

Silence followed ...

What is your view about people with dementia being creative? Have you experienced someone with dementia as being creative, in whichever way at all?

P04:

Yes, they can be creative when you engage them in activities, such as some of the activities that they have encountered during their childhood period.

(20:38 - 21:08)

So when you engage them in activities, they will start to exhibit those attributes of activities they have passed through during their childhood period. So sometimes it's creative that by making people to have that eeh fun, understanding of so creative about that fun, so about that fun, as in through, as in bringing out something that is new, new it might be, of a funny aspect, or the other aspects. So they can be creative.

(21:11 - 21:32): P06

And in my own opinion, they can be creative when you plan activities with them, such as dancing, cooking, or when you plan those activities with them, most of them are painting. Some of them like paintings when you plan it with them. So when you plan it very well with them, most of them can be creative.

(21:34 - 22:26): P02

Yes, they can, because you know, like managing them is activities, so when you bring these activities, like dancing, just like this aah painting, even gardening, you can see somebody that can, you can see that the person is now becoming creative, because you have exposed the person that this is how we should do this, till farms and all that, the person is becoming creative, and those activities help them to find out what they can still do. And once they find out that thing they can still do, it's their main creativity.

P04:

Yes, I think they can be creative too, because so many times, you may ... when you are trying to rehabilitate them a kind of, you get them involved in some activities.

(22:28 - 22:39)

Like, if it's the one that is caused by ageing, ageing. You notice that so many of them like singing.

(22:41 - 23:01)

You try to get what they love, when you are trying to, you're trying to know what they like, what they don't like, how to come to blend with them. You notice that so many of them sing. Then, those song, so many of them will tell you, will be something they remembered, old, old things.

(23:01 - 23:10)

Either a story they turn it into singing. They can use it as an entertainment. You just see people, in the evening they will just gather.

(23:11 - 23:21)

I've, that's my mother-in-law. In the evening, she will, everybody will just gather. Songs that she will be giving, she wants to tell you about a particular woman that did something.

(23:22 - 23:27)

She will just say, this woman did something. And she will now turn it into song. And she will now be singing.

(23:27 - 23:34)

And everybody enjoys it. You just see elderly people just coming around in the evening. So that she will just entertain them.

(23:34 - 23:48)

So and anytime people come around her, she, she will not feel, especially in the evening, she will notice that those people are just coming for her. To just hear her. You see her talking, you know, singing and all.

(23:48 - 23:55)

So it keeps her moving. It makes her happy. So she will not just feel like she is being abandoned or age has more or cut off a lot of things from her. So that's, I feel, they can be creative, they can.

(23:56 - 24:06): Interviewer

And then some people said that they are afraid of staying with someone with dementia.

(24:06 - 24:34)

Or they are uncomfortable with staying with someone with dementia. What do you think, in your opinion, might be the cause of this action? Being afraid of or uncomfortable being around someone with dementia?

P02:

Yeah, the discomfort may come from just like, you come in today and take care of this patient. And the next day you come in and, he say who are you? saying you can see that there is a little discomfort there. You you

(24:35 - 24:51)

At first, if you are not really, maybe you are not a nurse, or you are not somebody that has a patient, you will be like mmshh, infact I I can't continue taking care of this patient. What's the meaning of this? So how, so you mean you forgot all the things I have ... So that is, I think, this is one of the causes.

(24:53 - 25:15): P04

Another one, because of the cognitive changes in them. Some people is afraid of staying around them. Because they might, they might, lay false accusation on someone that comes close to them, due to that thought-blocking, that hallucination, and issue they normally have, they might come to greet them.

(25:15 - 25:30)

They might say, ah, see oo he or she has come to eehh come to steal from my purse, or from this, that kind of a thing. So some people, with this kind of eeh embarrassment, some people would like to stay away from them.

(25:32 - 25:55): P03

One thing I know is that everybody is not the same. There are people that can't tolerance, even somebody without dementia, not to talk of somebody that has dementia. So that if you don't know how to tolerate something, you can't stay with such a person.

(25:55 - 26:15)

They will always want to shy away from staying with that person. And again, there are people, people might feel sometimes laziness, can make one not to want to stay with somebody who has dementia. Because somebody with dementia will get that notion that I want to wee.

(26:17 - 26:29)

The person gets up from there. Not getting to the closet, to go and wee. And maybe within the thought, the thought just came in that I'm there already, the person will just wee.

(26:31 - 26:45)

Then the person staying with that person, if that person is lazy, will not like to stay with that person. Because number one, it will get you on your feet, trying to tidy up the mess.

(26:46 - 27:10)

And there are people, again, that look at these people with dementia as somehow part of a psychotic issue. They will now say, I don't want when somebody comes to my house, hey, my mother or mother-in-law will just come out and she will just start talking, you know saying things that are not in line with what is happening. They feel shy about it.

(27:10 - 27:23)

So if you if you cannot tolerate. You can't handle somebody with dementia. There is a lot of more irregularities in every part of the system.

(27:23 - 27:36)

So you will always want to you know shift those things. I think ... that's what I felt.

(27:37 - 27:44): P05

And you also have to be security conscious handling people that have this dementia. Especially when they're in a secluded area, and most times that's how they do it. That's in our local setting. So if you are going there, you really need to be conscious.

(27:45 - 28:09)

Before this per..., maybe the person can ... , before the person will injure you with something, it could be a stick, a knife, or whatever. So whoever is having a dementia patient has to be patient, tolerant, and then has to be security conscious too.

(28:09 - 28:20): P02

Yes, because most times most of them exhibit paranoia. So there's a way you are coming close to them because they really don't recognise you. They may not recognise you, so they feel you came to harm them. So in such cases, they might harm you. That's why so many people don't want to (...)

(28:20 - 28:32): P04

Even when you are talking to them, that's why you don't talk a long When you want to teach them, you don't just give them a long, take them a long time.

(28:33 - 28:54)

Because they can't comprehend all that. So there's sometimes you'll be talking and talking and talking with the patient that has dementia, and the person gets agitated / aggressive and besides, yes the person looks like that and you want to like that, it seems you are now, the person will no longer be hearing what you are talking about because he's no longer understanding it.

(28:54 - 29:03)

And you think maybe you are getting annoyed or you want to pick at him or her and would like to bounce back.

(29:04 - 29:25): P05

And harm that person. So so many people are afraid to to taking care of them. And another thing, because of that spirit of misinterpretation in them, they might be thinking that they are misinterpreting you. So some people don't like to stay around with such a person, especially those that don't have that tolerancy in them.

(29:31 - 29:50): Interviewer

The analysis of the survey also indicated that female nurses eem tend to be eem more, to have more favourable attitude towards people with dementia than their male counterparts. What could be the cause of that in your opinion?

(29:51 – 30:31): P04:

The reason is obvious, see that's why we are talking about patience. Most men don't have it, but because generally there most females are mothers and the way in children, you will need to that patient infact you will nnn, you you have to score more than 100% to be able to tolerate (...) and that is the same patient you will need to apply. So that is because naturally, it's not like that that some male are not caring but percentage of the female that are more patient and caring and "may" is higher than the male. That's just the jist

All laugh and nod in agreement

(30:32 – 30:43): P06:

Yes, it's true, Female nurses are more patient and tolerant than male nurses

(30:44 – 31:32) P03:

Ehhh one of the things, like my colleague just said is because that motherly attitude that are in female whether married or not married, you just see that there is a kind of way you, even in the family where you are, you try to coordinate things. You try to you know tolerate some things so that the family will move on is more in the female than the male.

So because of that I think there's a lot of patience that is required to take care of this eeheh patient with dementia so I think the female does it more better than the male.

(31:33- 31:48): Interviewer

In your opinion does the socio-economic situation in the country or in our region play any part in influencing how people behave towards people with dementia?

(31:49 – 31:55): P02

Aah. That's the; the; the; the main one

(31:56 – 34:00): P04

Yes, people; like, like my sister will always say, the way the interpret things. you will now see in a family where you'll say okay you are, your; your mother or your mother in-law is staying with you and is now having this eeem dementia and whenever you go to the market you buy clothes, you give food, but whenever any of the eeh children visits to that house, you see that mother complaining, I've not eaten since last week, I don't even ... it's this cloth that I'm wearing that is remaining, do you understand? You see the, either the wife of the son or something like that will always say or since you are, I don't even have money and even managing because true true the person is managing to get those things in place. And you say aah still, am still suffering and you're not even recognizing it, you might reduce ooo the way he will be treating or she will be treating that patient. Because there is no money and again it's affecting the way we will relate to them, because people with dementia in as much as we say it's ageing process, it's this it's that there are still some drugs and so many things we can use to help them. But when you now look at the present situation of the country you can't get at all of them, so it will still make you to lack in some areas of their care. There are so many people with dementia, that there a lot of things we can use to keep them going, but because there's lack of fund you can't get at all of them, so taking care of them, the the economy of the country is actually affecting taking care of those people with dementia.

(34:00 – 34:51): P02:

And again, the way the society sees them, like there are some, especially those ones in the remote area, the rural areas, they see the, they come to your house aah, they say ah, this one that you're, I heard that your mother in-law is now mad, that's how they see it,

so it makes them like normally, if it is something maybe they would have taken the person maybe to where they will have eeh psyy, something like a psycho-therapy where they have professional care, they will now decide to lock them up in the house. Because he kno.. he or she knows that if she brings them out eeh society will (...) talk about it, mock him or her or something, so they keep it to themselves, they hoard those ..., maybe seeking for opinion or treatment on how to improve, they will now “cons”, they will try to hide them because of what the society would say.

(34:52 – 35:44): P03

When you talk about the social aspect, which is the communication area, people find it eem, (silence) difficult to communicate with them, they see it as waste of time, especially those people that are not their relatives, that are not their, that are not related to them, they see it as waste of time just somehow vegetable, they don't have something to offer in the society. Then when talk about the economic aspects, due to high rate of things and how our country is going now inflation, everything is on increment on a daily basis, some people might not afford to buy thing that are needed to take care of them, things like pampers and drugs as well as my colleague have stated before, many things that is needed to take care of them, so all these things can affect if which is the socio-economic aspect. And other things that are attributed to them.

(35:47 – 35:57): Interviewer:

Is there anything in your opinion nurses could do to enhance eem dementia knowledge in the society?

(35:58 – 37:08): P02

We will go into that teaching or what do you it eeh creating awareness, to tell them that look ooh it's not, this person is not getting mad, this is part of ageing process. She is forgetting things, he or she is forgetting things because this is what has happened. Let them know, create awareness and whenever they come, like if they see eeh, somebody wandering, the person is not mad, it may be, so if have any idea maybe where this person is, please help to take them back to their families, just create awareness, let them understand this is all about, most often, they have not heard. Maybe all where they were growing up or something feel like once a person have reached this stage it is madness, allow them to wander, so know they don't bring them close, call their family. Then you

can tell the, educate the families, especially those ones that have this wandering tendency please always either put, you can write address or something like your number, put in their pockets or pin it somewhere so that when someone sees them wandering about, they can call your number to, to identify them.

(37:09 – 37:20): P04

Yes, there are many things, there are many things a nurse need to do to enhance... can you repeat that question again please?

(37:21 – 37:22): Interviewer

To enhance knowledge and about care

(37:23 – 38:42): P04

There are so many things a nurse can do to enhance knowledge of dementia as my colleague have said. Since education matters a lot, going to the urban and rural area to let them know what the dementia is all about, the causes, the signs, and the preventions. And the treatment also. So these can help the public to know how they manage it. like in the area of eem, handling dementia and prevention. You know this our economic condition in our country now is causing a whole lot of problem; stress, thinking, everyday thinking, thinking about what could eat. All these things, so people in the society needed to be educated on the prevention of dementia by handling their stress, so that's stress management and knowing the signs, early detection and bringing them to hospitals for, for, for immediate attention and other things. So there are a whole lot of things a nurse suppose to do and many of them.

(38:43 – 39:17): P06

Another one is that trying to create, creating awareness about this same dementia, because there are so many things that can be "cause danger" apart from the ageing process, you talk about the people with all this vascular issues, people that would have suffered from stroke before, either having a bp (....) most of them, you notice that gradually they will be having dementia

(39:18 – 40:57): P04

And if you convince or trying to trying to teach the family members, one; they won't know that there could be a rela.. a relationship between what happened to their one, like sp.. that patient that has stroke before with dementia. There, there will be a kind of misinterpretation of what is happening to that patient, you see so many of them going herbal areas because they now thought that this stroke, this person has survived from stroke and the person that did that stroke, caused that stroke is about to bring eeh madness, do you understand. So, if you don't sensitise the family that this kind of a thing that happened to this person can cause this, they might go extra miles looking for the cause or trying to bring a remedy to that, causing more damage. Because they will go there, there's no how you will go to a herbalist house without that person giving one concoction or the other and which will go to the, ruin the system the more, so you will try to tell them there are ways out of this. We are "a certain", it could be things that caused this, so because of this, from time to time tell them the importance of coming for check-up, so many people will, after coming to treat, when you give them a kind of a re-visit appointment, they don't make it, they don't keep to that at all. So you try to, you know, try to sensitise them about it.

(40:58 – 40:59): P05

And I think it will help in getting care help.

(41:06 – 41:29): Interviewer

Okay, I understand that there are a lot of conditions attached to the the sickness de.. dementia and that there are eem, several several things nurses could do to help educate the general public. Is there any other thing you think eem, I need to know about the situation in Igboland that I've not asked?

(41:20 – 41:31): P03

Is it concerning the dementia?

Interviewer: Yes.

(41:35 – 43:17): P03

Yes, because in Igboland, even people that are lettered, you still see them tag dementia as a spiritual issue. In as much as they are terming it as spiritual issue, there's nothing

God cannot do, yes. But so many of them, they still go to, they patronize these herbalists more than going to the hospital. Because most of them does not even subject to prayers, yeah, they will now go to herbalist and dementia here, somehow, they tag it as a spiritual issue. It has to do with demons, it has to do with eeehh, either if he is a man, they can now attribute it to tradition. Maybe he did not carry the father's eeh ofo or what they eee, and that is what is causing, that's why everyone of them in the family is having dementia. Without knowing that there so ma..., even stress itself, because they're suffering, they're doing a lot of things, stress is not managed. (Speaker 5): It can cause these things. (Speaker 3): But here you see them, they will not attribute it to stress. They will say eeh, it's a kind of family pattern. Demonic, that the spirit is after them, (Speaker 2) generational curse, (Speaker 3): kind of generational curse, so I think that's the way most people here in Igboland look at it. especially those in the rural areas. Even people in the urban areas are still doing the same thing now.

(43:18 – 43:52): P02

Especially the ones that are patronizing eh, I don't know what am eh, magicians they call pastors. Because they want to get money they want eh, they want their ministry to move, once you bring in someone they say haha, we're going to perform this ritual, but because they feel som, some in Igboland self, once someone has dementia, the person is a mad person, he's a psycho, he's a psychotic patient and, and he need eeh cleansing. You see without cleansing a lot of things go wrong.

(43:53 – 44:05): Interviewer

Thank you very much for your time, for your valuable contributions, am very grateful. Thank you very much.

Summary of the dissertation in Polish

Globalny wzrost oczekiwanej długości życia doprowadził do szybkiego starzenia się populacji, czemu towarzyszy rosnąca częstość występowania demencji. O ile w wielu krajach wysokorozwiniętych demencja stanowi istotny problem zdrowia publicznego, o tyle w licznych krajach o niskim i średnim dochodzie, w tym w Nigerii, pozostaje ona nadal słabo rozpoznana i niewystarczająco uwzględniana w systemach opieki zdrowotnej. W Igbolandzie, położonym w południowo-wschodniej Nigerii, demencja bywa często błędnie interpretowana i kulturowo postrzegana jako naturalna konsekwencja starzenia się bądź zjawisko o charakterze duchowym lub nadprzyrodzonym. Tego rodzaju przekonania sprzyjają stygmatyzacji, opóźnieniom w diagnozie, niewystarczającej opiece oraz zwiększonemu obciążeniu rodzin i opiekunów.

Pielęgniarki odgrywają istotną rolę na styku opieki klinicznej, wsparcia rodzin oraz edukacji zdrowotnej społeczeństwa. Mimo to niewiele badań empirycznych poświęcono dotychczas analizie ich wiedzy na temat demencji oraz postaw wobec osób nią dotkniętych w Igbolandzie. W związku z tym niniejsze badanie koncentruje się na ocenie poziomu wiedzy pielęgniarek o demencji, ich postaw, a także społeczno-demograficznych, kulturowych i instytucjonalnych uwarunkowań praktyk opiekuńczych.

W badaniu zastosowano eksploracyjny, sekwencyjny schemat badań mieszanych (mixed methods). W pierwszym etapie przeprowadzono badanie ilościowe o charakterze przekrojowym na celowo dobranej próbie 241 pielęgniarek zatrudnionych w różnych szpitalach w pięciu stanach Igbolandu. Wykorzystano kwestionariusz obejmujący wystandaryzowane narzędzia do pomiaru wiedzy i postaw wobec demencji (DKAT2, DKAS i DAS) oraz zmienne społeczno-demograficzne. Dobór próby miał na celu uwzględnienie pielęgniarek posiadających bezpośrednie doświadczenie kliniczne, co stanowi jednak ograniczenie możliwość ekstrapolacji wyników. Dane ilościowe analizowano przy użyciu statystyki opisowej oraz nieparametrycznych testów wnioskowania statystycznego. W drugim etapie przeprowadzono badania jakościowe w formie zogniskowanych wywiadów grupowych z udziałem 31 pielęgniarek, aby pogłębić analizę czynników wpływających na wiedzę, postawy oraz praktyki opiekuńcze. Dane jakościowe poddano analizie tematycznej zgodnie z sześciostopniowym modelem zaproponowanym przez Braun i Clarke.

Wyniki badań ilościowych wskazują, że większość pielęgniarek dysponuje umiarkowanym poziomem wiedzy na temat demencji. Stosunkowo wysoki poziom wiedzy odnotowano w obszarze opieki nad pacjentem, natomiast istotne braki ujawniły się w zakresie komunikacji oraz radzenia sobie z zachowaniami pacjentów. Do najczęstszych błędnych przekonań należało postrzeganie demencji jako naturalnego elementu procesu starzenia się, przekonanie o tym, że funkcje poznawcze pogarszają się nagle oraz przekonanie, że komunikacja z osobami w zaawansowanym stadium choroby jest niemożliwa. Postawy wobec osób z demencją były w większości neutralne, przy stosunkowo niewielkim udziale postaw pozytywnych. Stwierdzono dodatnią, aczkolwiek słabą zależność między poziomem wiedzy a bardziej przychylnymi postawami. Z tego wynika, że sama wiedza może nie wystarczać do kształtowania postaw, zwłaszcza w kontekście silnych uwarunkowań kulturowych i stygmatyzacji.

Wyniki badań jakościowych pozwoliły na pogłębienie tych ustaleń, wskazując na cztery powiązane obszary tematyczne: (1) przebieg i natura demencji, (2) komunikacja i interakcja, (3) opieka – wyzwania i korzyści oraz (4) wiedza, przekonania i świadomość. Rozumienie demencji przez pielęgniarki kształtowane było przez połączenie wiedzy biomedycznej z przekonaniami kulturowymi i religijnymi, co wpływało na interpretację objawów i sposoby postępowania. Komunikacja była postrzegana jako trudna, lecz możliwa dzięki empatii, akceptacji doświadczeń pacjenta oraz dostrojeniu emocjonalnemu. Opieka nad osobami z demencją była opisywana jako obciążająca emocjonalnie, fizycznie, społecznie i finansowo, ale jednocześnie przynosząca poczucie sensu i satysfakcji. Na poziomie rodzinnym i społecznym odnotowano szeroki zakres stygmatyzacji i błędnych przekonań, co często prowadzi do ukrywania problemu, opóźnionego poszukiwania pomocy oraz zwiększonego obciążenia opiekunów.

Wkład teoretyczny pracy polega na zastosowaniu teorii stygmatyzacji społecznej, modelu przekonań zdrowotnych (Health Belief Model) oraz teorii planowanego zachowania w kontekście kulturowym Nigerii. Badanie wskazuje na istnienie swoistego mechanizmu wzajemnie wzmacniającej się stygmatyzacji, w którym postawy społeczne wpływają na percepcję i zachowania pielęgniarek, a te z kolei utrwalają stygmatyzację w rodzinach, oddziałując ostatecznie na osoby z demencją. Ponadto ukazuje, w jaki sposób kulturowo ugruntowane systemy przekonań współdziałają z wiedzą profesjonalną, postrzeganą kontrolą zachowania oraz normami subiektywnymi, kształtując praktyki opieki nad osobami z demencją w Igbolandzie.

W wymiarze praktycznym badanie pokazuje, że wiedza i postawy pielęgniarek wobec demencji wpływają na sposób jej postrzegania oraz zachowania związane z poszukiwaniem pomocy przez rodziny i społeczności. Wyniki podkreślają potrzebę rozwoju specjalistycznej edukacji pielęgniarek w zakresie demencji, doskonalenia kompetencji komunikacyjnych, tworzenia wspierających środowisk instytucjonalnych, prowadzenia kulturowo wrażliwych działań edukacyjnych oraz skuteczniejszej implementacji polityki zdrowotnej. Działania te są nieodzowne dla poprawy jakości opieki, ograniczenia stygmatyzacji oraz podniesienia jakości życia osób żyjących z demencją i ich rodzin w Igbolandzie, w południowo-wschodniej Nigerii.

Summary of the dissertation in English

The global increase in life expectancy has resulted in a rapidly ageing population, accompanied by a corresponding rise in dementia prevalence. While dementia has become a major public health concern in many high-income countries, it remains poorly understood and insufficiently addressed in several low- and middle-income countries (LMICs), including Nigeria. In Igboland of south-eastern Nigeria, dementia is frequently misunderstood and culturally interpreted either as a normal consequence of ageing or as a spiritual or supernatural phenomenon. These interpretations contribute to stigma, delayed diagnosis, inadequate care, and increased burden for families and caregivers.

Nurses occupy a pivotal position at the intersection of clinical care, family guidance, and community health education. However, little empirical research has examined nurses' dementia knowledge and attitudes toward people living with dementia in Igboland. This study therefore examined nurses' dementia knowledge, attitudes, and the socio-demographic, cultural, and institutional factors shaping their dementia care practices.

The study adopted an explanatory sequential mixed-methods design. A cross-sectional quantitative survey was conducted among a purposive sample of 241 nurses working in different hospitals across the five states of Igboland, using a questionnaire composed of validated dementia knowledge and attitude instruments (DKAT2, DKAS and DAS), alongside socio-demographic variables. The purposive sampling approach was adopted to ensure inclusion of nurses with direct clinical exposure to patients, although this limits the generalisability of the findings. Quantitative data were analysed using descriptive statistics and non-parametric inferential tests. Following the quantitative phase, qualitative data were collected through focus group discussions involving 31 nurses to explore in greater depth the factors influencing nurses' dementia knowledge, attitudes, and caregiving practices. Qualitative data were analysed thematically following Braun and Clarke's six-phase approach.

Quantitative findings revealed that most nurses demonstrated moderate overall knowledge of dementia. Knowledge related to care considerations was relatively high, whereas significant gaps were identified in communication and behavioural management. Common misconceptions included beliefs that dementia is a normal part of ageing, that sudden cognitive decline typifies dementia, and that communication with people with

advanced dementia is impossible. Attitudes toward people with dementia were predominantly neutral, with fewer nurses expressing positive attitudes. Dementia knowledge was positively associated with more favourable attitudes, although the correlation was weak. This suggests that knowledge alone may not be sufficient to influence attitudes, particularly in contexts where cultural beliefs and stigma strongly shape perceptions of dementia.

Qualitative findings elaborated on these patterns and revealed four interrelated themes: (1) prognosis and nature of dementia, (2) communication and interaction, (3) caregiving: challenges and rewards, and (4) knowledge, beliefs, and awareness. Nurses' understandings of dementia were shaped by a blend of biomedical knowledge and cultural or spiritual beliefs, influencing how symptoms were interpreted and managed. Communication was viewed as challenging but achievable through empathy, validation, and emotional attunement. Caregiving was described as emotionally, physically, socially, and financially demanding, yet also potentially meaningful and rewarding. Widespread stigma and misconceptions were reported at family and community levels, often leading to concealment, delayed help-seeking, and increased caregiver burden.

The study contributes theoretically by applying the Social Stigma Theory, Health Belief Model, and Theory of Planned Behaviour within a culturally grounded Nigerian context. It identifies a reciprocal stigma loop in which community stigma influences nurses' perceptions and behaviour, which in turn reinforce stigma within families, ultimately affecting people with dementia. It further illustrates how culturally embedded belief systems interact with professional knowledge, perceived behavioural control, and subjective norms to shape dementia care practices in Igboland.

Practically, it highlights how nurses' knowledge and attitudes about dementia impact perception and help-seeking behaviour of families and communities. The findings underscore the need for dementia-specific nursing education, improved communication training, supportive institutional environments, culturally sensitive public awareness initiatives, and effective policy implementation to strengthen dementia care, reduce stigma, and enhance the quality of life of people with dementia and their families in Igboland, south-eastern Nigeria.