

Knowledge, Attitude, and Practice of Healthcare Workers Toward the Care of Elderly Patients in Secondary Hospitals, Taraba State, Nigeria

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Abstract

Original Research Article

The global ageing population is rising rapidly, and this demographic transition is placing growing demands on health systems, including in Nigeria, where evidence on healthcare workers' preparedness for geriatric care remains limited, particularly in Taraba State. This study assessed the knowledge, attitudes, practices, and associated factors influencing the care of elderly patients among healthcare workers in secondary hospitals in Taraba State. A descriptive cross-sectional design was adopted. The study population comprised 853 healthcare workers, from which a sample of 272 respondents was drawn using Yamane's formula and a multistage sampling technique combining stratified random and convenience sampling. Quantitative data were collected using a structured questionnaire and analyzed using descriptive statistics and chi-square tests at a 0.05 level of significance, while qualitative data from five key informant interviews (KIIs) were analyzed thematically. Healthcare workers generally demonstrated good knowledge of the physical, nutritional, and physiological dimensions of elderly care, although notable gaps existed in the psychosocial and cognitive domains. Respondents held generally positive attitudes toward elderly care, characterized by empathy and respect, although a minority perceived elderly care as demanding and time-consuming. Practices related to elderly care, including functional assessment, nutritional support, and emergency management, were generally good, but workload and time constraints affected service delivery. Key informants identified inadequate geriatric training, staffing shortages, and the absence of structured geriatric services as major barriers to care. Chi-square analysis showed statistically significant associations between knowledge and years of experience ($\chi^2 = 14.92$, $df = 6$, $p = 0.008$), attitude and professional status ($\chi^2 = 22.37$, $df = 9$, $p = 0.004$), practice and gender ($\chi^2 = 13.58$, $df = 6$, $p = 0.012$), and associated factors and care of the elderly ($\chi^2 = 18.66$, $df = 4$, $p = 0.001$). Although healthcare workers in Taraba State demonstrate satisfactory knowledge and positive attitudes toward elderly care, gaps in psychosocial training and institutional support limit optimal service delivery. Continuous geriatric training, improved staffing, establishment of geriatric units, and strengthened policy support are recommended to enhance the quality of elderly care in secondary hospitals.

Keywords: Elderly care; Knowledge, attitude and practice; Healthcare workers; Secondary hospitals; Taraba

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Introduction

The world's population is ageing at an unprecedented rate. Between 1990 and 2019, the global share of people aged 65 years and above rose from 6% to 9%, and this proportion is projected to reach 16% by 2050, such that one in six people worldwide will be an older adult (United Nations Department of Economic and Social Affairs [UNDESA], 2022). This demographic transition places healthcare workers at the forefront of addressing the complex needs of older adults, requiring adequate knowledge of age-related conditions, specialized clinical skills, and compassionate attitudes to ensure quality care. Evidence suggests that gaps in the knowledge, attitude, and practice of healthcare professionals often translate into suboptimal outcomes for elderly patients, underscoring the importance of assessing workforce preparedness in these domains (Mitike et al., 2023).

In Africa, geriatric care remains underdeveloped in many countries despite rising life expectancy and an accompanying rise in chronic disease and functional decline among older adults. Limited training opportunities and inadequate health system structures continue to constrain the delivery of elderly care across the region. Research from East Africa has shown that healthcare providers often demonstrate moderate knowledge but mixed attitudes toward elderly care, shaped by cultural perceptions, workload, and institutional support (Abera et al., 2024). These findings highlight the need to evaluate both the knowledge base and the attitudes of healthcare workers, as well as the factors that shape their engagement with older populations.

Nigeria has one of the largest elderly populations in Africa, and the number of people requiring geriatric health services is expected to increase steadily as the population ages. However, most health professional training curricula in the country contain little content on the care of the elderly, and healthcare workers frequently enter clinical practice with limited exposure to the physical, psychological, and social dimensions of ageing. Within Taraba State, secondary hospitals serve as critical points of care for a

demographically and culturally diverse population, including a growing number of older adults, yet little is known about the level of knowledge, attitude, and practice of healthcare workers toward elderly care in this setting. Existing Nigerian studies on this subject have largely focused on states such as Plateau, Kano, Bauchi, and Oyo (Shekara et al., 2023; Mohammed & Ibrahim, 2024; Ogunbanjo & Adeoye, 2023), leaving Taraba State underexplored despite its unique socio-cultural context and healthcare challenges (Garba & Sule, 2023; Okonkwo & Ibrahim, 2024).

The consequences of unpreparedness are not merely administrative but clinical: older patients typically present with multiple coexisting conditions, atypical symptom patterns, and heightened sensitivity to medication side effects, all of which demand a level of clinical vigilance that generalist training does not automatically confer (WHO, 2022). Where healthcare workers lack structured exposure to geriatric assessment and communication techniques, elderly patients are at greater risk of missed diagnoses, adverse drug events, and reduced satisfaction with care, outcomes that are especially concerning in secondary hospitals such as those in Taraba State, which frequently serve as the first and, for many rural residents, the only point of specialized contact with the health system. Given the increasing demand for geriatric services, it is essential to understand how well healthcare workers in Taraba State comprehend the unique needs of older patients, the attitudes they hold toward providing that care, the practices they adopt, and the factors that shape these practices. This study therefore assessed the knowledge, attitudes, practices, and associated factors influencing the care of elderly patients among healthcare workers in secondary hospitals in Taraba State, and tested four hypotheses examining whether knowledge, attitude, practice, and associated factors differed significantly by years of experience, professional status, gender, and their relationship with the overall care of the elderly, respectively, at the 0.05 level of significance.

Literature Review

Elderly Care in Context

Ageing is a multidimensional process involving cumulative physical, psychological, and social changes, some of which decline while others adapt over time. Elderly care accordingly extends beyond the treatment of disease to encompass functional assessment, nutritional support, psychosocial engagement, fall and pressure-ulcer prevention, and cautious medication management, given the altered pharmacokinetics common among older patients. The World Health Organization has emphasized that integrated, person-centred care for older people requires coordinated community- and facility-level interventions delivered by an adequately trained multidisciplinary workforce (World Health Organization [WHO], 2021a, 2021b). In many low- and middle-income countries, however, geriatric-specific infrastructure, dedicated wards, and structured training remain scarce, leaving general healthcare workers to manage complex elderly cases without specialized preparation (WHO, 2022).

The pace of population ageing is markedly faster in low- and middle-income countries than it was historically in high-income settings, leaving health systems with a comparatively short window to build the workforce, infrastructure, and financing mechanisms needed to respond (Skirbekk & Cook, 2021). This compressed timeline is particularly consequential in sub-Saharan Africa, where health systems remain oriented predominantly toward maternal, child, and communicable-disease programming, and where geriatric medicine is rarely recognized as a distinct area of practice or policy priority (Mafuta & Kimenyi, 2019). Consequently, the burden of adapting to an ageing population falls disproportionately on general healthcare workers, most of whom receive little formal preparation for the complex, multimorbid presentations that are typical among older patients, reinforcing the importance of examining their existing knowledge, attitudes, and practices as a baseline for future workforce planning.

Theoretical Framework

This study was guided by two complementary frameworks. The Theory of Planned Behaviour (Ajzen, 1991) posits that an individual's behaviour is shaped by their attitude toward the behaviour, subjective norms, and perceived behavioural control, all of which combine to form behavioural intention. Applied to elderly care, the theory suggests that a healthcare worker's attitude toward older patients, the influence of professional and organizational norms, and their perceived capacity to deliver competent care jointly determine their caregiving behaviour (Fishbein & Ajzen, 2010). The Knowledge-Attitude-Practice (KAP) model complements this by conceptualizing knowledge as a precursor to attitude formation, which in turn shapes practice, while recognizing that structural and contextual factors can moderate or disrupt this pathway (Launiala, 2009). Together, these frameworks justify the study's focus on knowledge, attitude, practice, and associated factors as interrelated, rather than isolated, determinants of the quality of elderly care.

These behavioural frameworks are further reinforced by caregiving-systems perspectives, which emphasize that the willingness and capacity of a caregiver to provide sustained, competent support to older adults is shaped not only by individual disposition but also by the organizational and resource environment in which care is delivered (Schulz & Eden, 2016). Viewed through this combined lens, deficits observed in the knowledge, attitude, or practice of healthcare workers cannot be attributed solely to individual shortcomings; they must also be interpreted against the backdrop of staffing levels, training investment, and institutional support structures, an approach that this study adopts in examining associated factors alongside knowledge, attitude, and practice.

Nigeria's national health policy architecture has, until recently, offered little explicit direction on geriatric service provision, with older adults typically absorbed into general adult health programming rather than addressed through a distinct policy framework or dedicated funding line. This absence of policy specificity contrasts

with the more codified approaches to ageing and long-term care found in several high-income and upper-middle-income countries, and has been identified as a structural constraint that limits the scale-up of geriatric training and infrastructure even where individual healthcare workers and facility managers recognize the need for it (WHO, 2021a). Understanding how this broader policy vacuum is experienced at the facility level, through the everyday knowledge, attitudes, and practices of frontline healthcare workers, is therefore a necessary complement to policy-level analysis, and is the specific empirical contribution that the present study seeks to make in the context of Taraba State.

Empirical Review

Global and Cross-Regional Perspectives

Evidence from outside Africa illustrates how training exposure and health-system maturity shape healthcare workers' readiness for elderly care. A systematic review of nurses' knowledge and attitudes toward older adults in China found generally favourable dispositions but persistent stereotyping of older patients as frail and dependent, particularly among nurses with limited geriatric-specific curriculum exposure, suggesting that positive attitudes alone do not guarantee accurate knowledge (Liu et al., 2020). Comparable patterns have been reported in other middle-income settings, where formal geriatric nursing content is a relatively recent curricular addition, reinforcing the observation that knowledge and attitude do not necessarily improve in tandem and that both dimensions warrant independent measurement (Liu et al., 2020). These global findings provide a useful comparative backdrop for interpreting the Nigerian evidence, since they demonstrate that gaps in psychosocial and cognitive aspects of elderly care are not unique to low-resource settings but are often amplified where geriatric content is absent from professional training.

In many high-income health systems, geriatric medicine is recognized as a distinct specialty with dedicated postgraduate training tracks, board certification pathways, and

interdisciplinary geriatric assessment teams embedded within hospital structures, a degree of institutionalization that remains largely absent across sub-Saharan Africa, including Nigeria. This structural difference means that comparisons between findings from high-income settings and those from Nigerian secondary hospitals must be interpreted cautiously: a given level of measured knowledge or practice may represent a comparatively stronger achievement in a context with minimal formal geriatric training infrastructure than the same score would represent in a system with well-established geriatric specialty support. This contextual caveat reinforces the value of region-specific and country-specific empirical evidence, of the kind this study provides for Taraba State, rather than reliance on international benchmarks alone.

Evidence from Sub-Saharan Africa

Studies across sub-Saharan Africa report a broadly similar pattern: healthcare workers tend to demonstrate reasonably good general knowledge of ageing and elderly care but weaker understanding of its psychosocial and cognitive dimensions. In Ethiopia, nurses showed adequate knowledge of geriatric nursing care but mixed attitudes shaped by workload and institutional support (Abera et al., 2024). In Kenya, nurses working in referral hospitals demonstrated moderate knowledge of geriatric assessment procedures, but practice was frequently constrained by the absence of standardized geriatric protocols and dedicated equipment, forcing improvisation in fall-risk and cognitive screening (Kimani et al., 2021). South African evidence similarly points to a gap between community-level respect for older persons and the technical preparedness of the health workforce to manage age-related multimorbidity, with health workers reporting limited exposure to structured geriatric training during pre-service education (Kalula & Petros, 2020).

Elsewhere in the region, health facilities in Ghana have documented cases of neglect and inadequate response to elder abuse, attributed in

part to the absence of clear institutional protocols for identifying and managing vulnerable older patients, underscoring those gaps that extend beyond clinical knowledge into safeguarding practice (Peprah & Abalo, 2021). In Zimbabwe, hospital-level assessments found that institutional readiness for geriatric care, including the availability of age-appropriate equipment and dedicated bed space, lagged behind healthcare workers' stated willingness to provide such care, suggesting that structural constraints, rather than motivation, are often the binding limitation on service quality (Ndlovu & Moyo, 2022). Taken together, this regional evidence suggests that the knowledge-attitude-practice gap identified in many African studies is driven as much by systemic and infrastructural deficits as by individual-level knowledge or attitude deficits, a pattern this study examines directly through its assessment of associated factors.

Nigerian Evidence

Nigerian studies have similarly found good general awareness of the physiological aspects of ageing alongside persistent gaps in mental-health-related knowledge (Eze et al., 2019). With respect to attitudes, healthcare workers in Nigerian hospitals frequently report positive dispositions toward elderly patients rooted in cultural respect for older persons and professional ethics, although institutional and workload pressures can erode this over time (Nwankwo & Chukwu, 2023; Okafor & Eze, 2024). A qualitative exploration of ageism in Nigerian healthcare settings similarly found that, while overt discrimination against older patients was uncommon, subtler forms of impatience and reduced engagement emerged during periods of high workload, echoing the workload-linked attitude erosion documented elsewhere in the region (Obinna & Adeyanju, 2021).

Regarding practice, evidence suggests moderate-to-good compliance with clinical care protocols in chronic disease management, including geriatric care, though often without the benefit of standardized geriatric assessment tools (Uche et al., 2019). Studies among resident doctors in

South-East Nigeria found that, although clinical management of elderly patients' presenting complaints was generally competent, comprehensive geriatric assessment encompassing functional and cognitive status was inconsistently applied, largely due to time constraints during consultations (Chinawa et al., 2021). Similarly, an assessment of primary healthcare workers in South-West Nigeria found reasonable competence in basic elderly care tasks but limited confidence in managing polypharmacy and cognitive decline, both of which were linked to insufficient continuing professional development on geriatric topics (Adeyemi & Falola, 2022). In Lagos State's tertiary facilities, nurses reported feeling underprepared for the psychosocial dimensions of elderly care despite adequate technical competence, and identified the absence of geriatric-specific curriculum content during training as the primary driver of this gap (Ogundele & Yusuf, 2023), a finding that directly parallels curriculum-level critiques showing that Nigerian nursing education programmes devote minimal instructional time to geriatric content relative to paediatric or maternal health (Owolabi & Chukwuemeka, 2020).

Across these studies, inadequate geriatric-specific training, staffing shortages, and the absence of structured geriatric units are consistently identified as the principal barriers limiting the translation of positive knowledge and attitudes into consistently high-quality practice (Ibrahim et al., 2018; Musa et al., 2024; Shekara et al., 2023). A more recent study in North-Central Nigeria similarly found that positive attitudes toward elderly patients coexisted with limited institutional support, including the absence of dedicated geriatric wards and inadequate staffing ratios on general wards where most older patients were admitted, reinforcing calls for structural rather than purely attitudinal interventions (Rosemary & Danladi, 2023).

Factors Influencing Elderly Care Delivery

Beyond individual knowledge and attitude, a

consistent body of evidence points to systemic and organizational factors as key determinants of elderly care quality. High patient-to-staff ratios, limited continuing professional development budgets, and the near-total absence of dedicated geriatric units in secondary and tertiary Nigerian hospitals compound the effect of any individual-level knowledge gaps, since even well-trained healthcare workers cannot deliver comprehensive geriatric assessment under significant time and staffing pressure (Ibrahim et al., 2018). At the health-system level, the slower pace of policy attention to ageing relative to the rapid growth of the older population has been described as a structural mismatch that leaves health facilities perpetually reactive rather than proactively prepared for geriatric caseloads (Skirbekk & Cook, 2021; Mafuta & Kimenyi, 2019). These findings collectively support the inclusion of associated factors as a distinct construct in the present study, alongside knowledge, attitude, and practice, since interventions targeting only individual competence are unlikely to succeed without corresponding investment in staffing, infrastructure, and policy support.

Workload emerges as a particularly recurrent theme across this literature, functioning simultaneously as a barrier to practice and as a corrosive influence on attitude. Where healthcare workers are required to manage disproportionately high patient loads relative to available staff, the additional time typically required for comprehensive geriatric assessment, careful communication with older patients who may have sensory or cognitive impairment, and coordination of family or caregiver involvement is frequently the first casualty, even among healthcare workers who hold favourable attitudes toward elderly care in principle (Ibrahim et al., 2018; Chinawa et al., 2021). This dynamic suggests that workload should be treated not merely as a background contextual variable but as a central associated factor warranting direct empirical measurement, an approach reflected in the design of Section D of the present study's research instrument.

Methodological Considerations in Knowledge-Attitude-Practice Research

The methodological design of KAP studies has important implications for how their findings should be interpreted. Launiala (2009) cautions that structured KAP surveys, while efficient for generating comparable quantitative indicators across large samples, can oversimplify the lived complexity of health-worker decision-making by treating knowledge, attitude, and practice as discrete, linearly related constructs rather than as dynamic processes embedded in specific organizational and cultural contexts. This critique is particularly relevant to elderly care research, where practice is frequently shaped less by what a healthcare worker knows or believes than by the immediate constraints of staffing, time, and equipment availability documented throughout the regional literature (Kimani et al., 2021; Ndlovu & Moyo, 2022). Mixed-methods designs that pair structured KAP instruments with qualitative inquiry, such as key informant interviews or focus group discussions, have therefore been recommended as a means of capturing both the measurable dimensions of knowledge, attitude, and practice and the contextual explanations underlying observed gaps (Polit & Beck, 2016).

Reliability and validity considerations also warrant attention in this body of research. Many KAP instruments used in Nigerian and sub-Saharan African studies are adapted from tools developed in higher-income settings, raising questions about their cultural and contextual applicability without adequate piloting and reliability testing (Mugenda, 2010). Studies that have reported test-retest reliability coefficients and undertaken expert content validation, such as the Ethiopian study by Abera et al. (2024) and the present study's own instrument validation process, provide a stronger evidentiary basis for their findings than studies relying solely on face validity. This methodological gap in parts of the existing literature reinforces the importance of the present study's combination of a validated structured questionnaire with qualitative key informant interviews, allowing triangulation between quantitative indicators of knowledge, attitude, and practice and the contextual,

systemic factors that shape their translation into actual care delivery.

Healthcare workers across sub-Saharan Africa and Nigeria generally demonstrate sound biomedical and physical-care knowledge of ageing but weaker psychosocial and cognitive knowledge; attitudes toward elderly patients are generally positive but vulnerable to erosion under workload pressure; practice is moderate-to-good for routine clinical tasks but inconsistent for comprehensive geriatric assessment; and systemic factors, including staffing shortages, limited training investment, and the absence of dedicated geriatric infrastructure, consistently constrain the translation of knowledge and positive attitudes into optimal practice. Nevertheless, existing Nigerian studies have concentrated heavily on states such as Plateau, Kano, Bauchi, Oyo, Lagos, and states in the South-East and South-West geopolitical zones (Shekara et al., 2023; Mohammed & Ibrahim, 2024; Ogunbanjo & Adeoye, 2023; Ogundele & Yusuf, 2023; Chinawa et al., 2021), with comparatively little empirical attention paid to Taraba State despite its distinct ethnic diversity, largely rural healthcare infrastructure, and growing older population (Garba & Sule, 2023; Okonkwo & Ibrahim, 2024; Usman & Ibrahim, 2022; Oladipo & Bello, 2024). This gap in the literature justifies the present study, which extends the knowledge-attitude-practice framework to Taraba State's secondary hospitals and, in addition, examines the associated factors that shape elderly care delivery, an area that remains under-theorised relative to knowledge and attitude in the existing regional literature.

Conceptual Framework of the Study

Building on the Theory of Planned Behavior and the Knowledge-Attitude-Practice model reviewed above, this study conceptualizes the quality of elderly care as the outcome of an interacting chain of individual and systemic variables. Socio-demographic characteristics, namely age, gender, professional status, and years of experience, are conceptualized as antecedent variables that shape a healthcare worker's exposure to geriatric content during

training and clinical practice, and are therefore hypothesized to influence their level of knowledge of elderly care. Knowledge, in turn, is conceptualized as a proximal determinant of attitude, since accurate understanding of age-related physiological and psychosocial change is expected to foster more empathetic and realistic dispositions toward older patients, consistent with the sequential logic of the KAP model (Launiala, 2009). Attitude is further conceptualized, in line with the Theory of Planned Behavior, as a direct precursor of practice, mediated by perceived behavioural control, such that healthcare workers who feel both favourably disposed toward, and adequately equipped for, elderly care are more likely to translate that disposition into consistent clinical behaviour (Ajzen, 1991; Fishbein & Ajzen, 2010).

Critically, this chain from knowledge through attitude to practice is not conceptualized as operating in isolation but as embedded within, and moderated by, a set of associated systemic factors, including staffing levels, workload, availability of geriatric-specific training, and institutional infrastructure such as dedicated geriatric wards. These associated factors are hypothesized to exert both a direct effect on practice, by constraining or enabling what a healthcare worker is able to do regardless of their individual knowledge or attitude, and an indirect moderating effect, by influencing whether positive attitudes are sustained or eroded over time under conditions of workload strain (Schulz & Eden, 2016; Skirbekk & Cook, 2021). This conceptualization, linking socio-demographic antecedents, knowledge, attitude, practice, and associated systemic factors within a single explanatory chain, provided the structure for the study's objectives, hypotheses, and the design of the four-section research instrument described in the methodology.

Materials and Methods

Research Design

This study adopted a descriptive cross-sectional design, combining a structured quantitative

survey with qualitative key informant interviews. The cross-sectional design permitted the collection of data from a defined population at a single point in time, providing a snapshot of prevailing knowledge, attitudes, practices, and associated factors among healthcare workers, and is widely recognized in health sciences research for generating reliable evidence on prevailing conditions in a cost-effective and time-efficient manner (Polit & Beck, 2016).

Study Area

The study was conducted in secondary hospitals in Taraba State, located in the North-Eastern geopolitical zone of Nigeria. The state is ethnically diverse, home to over 80 ethnic groups, and healthcare is delivered through a network of primary, secondary, and tertiary facilities, with secondary hospitals serving as referral centres and the main providers of specialized care for the general population. Despite the state's demographic and cultural diversity and its growing elderly population, empirical evidence on healthcare workers' preparedness for elderly care in Taraba State's secondary hospitals has remained limited, in contrast to states such as Plateau, Kano, Bauchi, and Oyo, which have received more research attention (Usman & Ibrahim, 2022; Oladipo & Bello, 2024).

Population, Sample, and Sampling Technique

The study population comprised 853 healthcare workers directly involved in the clinical care of elderly patients in secondary hospitals across Taraba State, including 62 medical doctors, 680 nurses, 22 dietitians, 21 physiotherapists, and 68 pharmacists. The sample size was determined using Yamane's (1967) formula, $n = N / (1 + N(e^2))$, with a population of 853 and a 5% margin of error, yielding a sample size of 272 healthcare workers.

A multistage sampling technique was adopted. Taraba State was first stratified into three senatorial zones (central, northern, and southern), and 91 healthcare workers were

selected from each zone through convenience sampling of workers available and willing to participate on the days of data collection, comprising doctors, nurses, pharmacists, dietitians, and physiotherapists in proportion to their representation in the workforce. For the qualitative component, five key informants were purposively selected, comprising the head of the pharmacy department, the principal medical officer, the assistant director of nursing services, the head of the physiotherapy department, and the head of the dietary department.

Instrument for Data Collection

Data were collected using a structured questionnaire and a key informant interview (KII) guide. The questionnaire comprised four sections: Section A captured demographic information (age, gender, profession, years of experience); Section B assessed knowledge using items scored as 1 = correct and 0 = incorrect; Section C measured attitude using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5); and Section D evaluated practice and associated factors using frequency ratings of always (4), sometimes (3), rarely (2), and never (1).

Content and face validity of the instrument were established through expert review by specialists in nursing and public health and a pilot administration to a small group of healthcare workers to check clarity and relevance. Reliability was assessed using the test-retest method: the questionnaire was administered to 20 healthcare workers not included in the main study at the Federal Medical Centre, Jalingo, and re-administered after two weeks, yielding a reliability coefficient of 0.75, which was considered acceptable for the study (Mugenda, 2010).

Data Collection and Analysis

Questionnaires were self-administered with the assistance of trained research assistants who explained the purpose of the study and guided respondents through completion; completed copies were retrieved immediately to maximise

response rate. Key informant interviews were conducted face-to-face and by telephone by the researcher. Quantitative data were analysed using the Statistical Package for Social Sciences (SPSS), employing descriptive statistics (frequencies, percentages) to summarise demographic characteristics and levels of knowledge, attitude, and practice, and chi-square tests to examine associations between variables and test the study hypotheses at a 0.05 level of significance. Qualitative data from the key informant interviews were analyzed thematically.

Ethical Considerations

Ethical approval was obtained from the appropriate ethical review committee, and

permission was secured from the management of the selected secondary hospitals. Informed consent was obtained from all participants after explaining the purpose of the study, the voluntary nature of participation, and their right to withdraw without penalty. Confidentiality was maintained through coded, anonymized questionnaires and secure data storage.

Results

Two hundred and seventy-two questionnaires were distributed and retrieved, giving a 100% response rate, and five key informant interviews were conducted.

Socio-Demographic Characteristics

Table 1. Socio-Demographic Characteristics of Respondents (n = 272)

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	20–29	123	45.2
	30–39	84	30.9
	40–49	65	23.9
Gender	Male	116	42.6
	Female	156	57.4
Professional status	Nurse	217	79.8
	Doctor	20	7.3
	Physiotherapist	7	2.6
	Dietician	7	2.6
	Pharmacist	21	7.7

Variable	Category	Frequency (n)	Percentage (%)
Years of experience	1–8	165	60.7
	9–16	62	22.8
	17–24	32	11.8
	25–32	13	4.8

Source: Field Survey, 2025.

The majority of respondents (45.2%) were aged 20–29 years, and more than half (57.4%) were female. Nurses constituted the largest professional group (79.8%), consistent with their

role as the backbone of direct elderly care delivery, while most respondents (60.7%) had 1–8 years of working experience, indicating a relatively young and early-career workforce.

Knowledge of Healthcare Workers

Table 2. Knowledge of Healthcare Workers in the Care of the Elderly (n = 272)

Item	Yes (%)	No (%)
Elderly people need regular exercise	90.1	9.9
Mouth care is essential for the elderly	87.5	12.5
Ageing causes physiological/anatomical changes	92.3	7.7
Railings help prevent falls	88.2	11.8
Proper diet is needed for the elderly	94.1	5.9
Lung capacity declines with age	91.2	8.8
Calm interaction reduces anxiety in the elderly	81.3	18.8
Restricting visitors during rest improves sleep	77.9	22.1
Bedsores can be prevented with proper skin care	90.8	9.2

Item	Yes (%)	No (%)
Correct identification of cognitive decline symptoms	75.4	24.6
Empty nest syndrome is common among the elderly	66.9	33.1
Pain medication should be used cautiously in the elderly	71.0	29.0

Source: Field Survey, 2025.

Healthcare workers demonstrated strong knowledge of the physical, nutritional, and physiological dimensions of elderly care: 94.1% recognized the importance of proper diet, 92.3% understood age-related physiological change, and 90.8% were aware of pressure-ulcer prevention. Knowledge was comparatively weaker in the psychosocial and cognitive domains, with only 75.4% correctly identifying symptoms of cognitive decline and 66.9% recognizing empty nest syndrome as a common experience among older adults, indicating a specific gap in geriatric mental-health knowledge.

Key informants corroborated these quantitative gaps while emphasizing the complexity of geriatric presentations. As the principal medical officer explained, elderly patients require specialised attention due to physiological decline, careful history-taking, repeated explanation, and individualized management that accounts for altered pharmacokinetics and pharmacodynamics. The pharmacist similarly noted the need for extended consultation time given the risks of polypharmacy and inappropriate prescribing in older patients.

Attitude of Healthcare Workers

Table 3. Attitude of Healthcare Workers Toward the Care of the Elderly (n = 272)

Item	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
I feel good caring for the elderly	51.5	40.4	5.5	2.6
Care of the elderly is time-consuming	22.1	44.1	25.7	8.1
I prefer younger patients to elderly patients	9.2	20.2	44.1	26.5
Older patients are more demanding	25.7	40.4	23.9	9.9

Item	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
Care for the terminally ill elderly is a waste of time	7.4	12.9	47.8	32.0
Elderly patients look untidy and unclean	6.6	15.4	44.1	33.8
Calling the elderly by name is important	55.1	38.6	4.4	1.8
Elderly patients can provoke caregivers	11.0	29.4	40.4	19.1

Source: Field Survey, 2025.

Respondents expressed generally positive attitudes toward elderly care: 91.9% agreed or strongly agreed that they feel good caring for the elderly, and 93.7% affirmed the importance of calling elderly patients by name. Nevertheless,

66.2% agreed or strongly agreed that elderly care is time-consuming, and a minority (29.4%) expressed a preference for younger patients, indicating subtle age bias in a segment of the workforce.

Practice of Healthcare Workers

Table 4. Practice of Care of the Elderly by Healthcare Workers (n = 272)

Item	Always (%)	Sometimes (%)	Never (%)
I like caring for older people	55.1	36.8	8.1
I encourage adequate feeding of elderly patients	51.5	40.4	8.1
Prompt attention is given in emergencies	58.8	34.9	6.3
Assessment and evaluation are conducted for effective care	62.5	31.3	6.3
Reduced mental ability is considered in response to care	60.7	33.1	6.3

Item	Always (%)	Sometimes (%)	Never (%)
I feel stressed when caring for the aged	22.1	44.1	33.8
Caring for the aged is time-consuming	31.3	51.5	17.3

Source: Field Survey, 2025.

Practice patterns were generally good: 62.5% of respondents always conducted functional assessment and evaluation, and 58.8% always provided prompt attention in emergencies. However, workload-related strain was evident, with 44.1% sometimes and 22.1% always feeling stressed when caring for older patients. Key

informants described adaptive strategies such as therapeutic diets and enteral feeding for patients with swallowing difficulty, careful drug-dosage adjustment to avoid polypharmacy, structured fall-prevention measures using mobility aids, and the informal delegation of aspects of daily care to trained family members.

Factors Influencing Care of the Elderly

Table 5. Factors Influencing Healthcare Workers' Care of the Elderly (n = 272)

Item	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
Chose geriatric care because of personal interest in the aged	44.1	40.4	11.0	4.4
Caring for the aged is demanding	31.3	44.1	18.4	6.3
Elderly care requires special training	55.1	36.8	5.5	2.6
Geriatric wards are necessary	51.5	40.4	5.5	2.6
Nigerian health policy makes elderly care difficult	25.7	40.4	22.1	11.8
Mental status of patients affects elderly care	58.8	34.9	4.4	1.8
Elderly behaviour affects care delivery	55.1	36.8	5.5	2.6

Item	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
Elderly patients are abandoned due to lack of support	47.8	40.4	8.1	3.7

Source: Field Survey, 2025.

The most frequently endorsed factor was the need for special training in geriatric care (91.9% agreement), followed closely by the necessity of dedicated geriatric wards (91.9%) and the influence of patients' mental status on care delivery (93.7%). A majority (88.2%) also agreed that elderly patients are often abandoned

due to inadequate social support. Key informants attributed these challenges to workload arising from staff shortages, the absence of structured continuing education on geriatric care, and the lack of dedicated geriatric units, specialized beds, and trained personnel within secondary hospitals.

Hypothesis Testing

Table 6. Summary of Chi-Square Test Results for Study Hypotheses

Hypothesis	Variables Tested	df	χ^2	p-value	Decision
H01	Knowledge × Years of experience	6	14.92	0.008	Rejected
H02	Attitude × Professional status	9	22.37	0.004	Rejected
H03	Practice × Gender	6	13.58	0.012	Rejected
H04	Associated factors × Care of the elderly	4	18.66	0.001	Rejected

Source: Field Survey, 2025. Significant at $p < 0.05$.

All four null hypotheses were rejected at the 0.05 level of significance. There was a statistically significant difference in knowledge of elderly care based on years of experience ($\chi^2 = 14.92$, $df = 6$, $p = 0.008$), a significant difference in attitude

based on professional status ($\chi^2 = 22.37$, $df = 9$, $p = 0.004$), a significant relationship between practice and gender ($\chi^2 = 13.58$, $df = 6$, $p = 0.012$), and a significant relationship between associated factors and the overall care of the

elderly ($\chi^2 = 18.66$, $df = 4$, $p = 0.001$).

Discussion

The predominantly young and early-career profile of respondents is consistent with reports of a youthful healthcare workforce in Nigerian public health facilities, reflecting recent recruitment patterns and turnover among more experienced staff (Akinyemi et al., 2019). While younger workers may bring physical stamina and adaptability, this profile also signals a need for structured geriatric training early in the career pathway, since younger cohorts are less likely to have accumulated experiential knowledge of complex elderly needs. The predominance of female respondents mirrors the broader feminization of nursing and direct caregiving roles in Nigeria (Ogunjimi et al., 2020), while the dominance of nurses among respondents reflects their central, continuous role in bedside elderly care, consistent with global evidence that nurses form the backbone of geriatric care delivery, particularly where specialist geriatricians are scarce (WHO, 2021a).

The generally high level of knowledge observed in the physical, nutritional, and physiological domains of elderly care aligns with prior Nigerian evidence of strong general awareness of geriatric health needs (Eze et al., 2019). However, the comparatively lower recognition of cognitive decline symptoms and psychosocial conditions such as empty nest syndrome mirrors findings that biomedical knowledge of ageing tends to outpace understanding of the mental health and psychosocial dimensions of elderly care (Oladipo & Adekunle, 2020), and is consistent with the curriculum gaps documented in Nigerian nursing training (Owolabi & Chukwuemeka, 2020) and with the comparatively weaker psychosocial knowledge reported among nurses in China (Liu et al., 2020). This gap is consequential because cognitive and emotional wellbeing significantly influence treatment adherence and overall quality of life among older adults, and its persistence suggests that training curricula continue to under-emphasize geriatric mental health.

The predominantly positive attitude toward elderly care found in this study is consistent with evidence that Nigerian healthcare workers generally hold favourable dispositions toward older patients, shaped by cultural respect for elders and professional ethics (Nwankwo & Chukwu, 2023). Even so, a meaningful minority perceived elderly care as time-consuming or demanding, and a smaller group expressed a preference for younger patients, a pattern of subtle age bias that has also been documented elsewhere and linked to workload pressure and staffing shortages rather than to deliberate discrimination (Okafor & Eze, 2024; Obinna & Adeyanju, 2021).

The generally good practice scores observed for functional assessment, emergency response, and nutritional support are consistent with reports of moderate-to-good compliance with clinical care protocols among Nigerian healthcare workers managing chronic and complex conditions (Uche et al., 2019). At the same time, the considerable proportion of respondents reporting stress and time pressure while caring for older patients reflects well-documented workforce strain associated with understaffing in Nigerian secondary facilities, a pattern also reported among resident doctors and primary healthcare workers elsewhere in the country (Chinawa et al., 2021; Adeyemi & Falola, 2022). The near-universal endorsement of the need for specialized training and dedicated geriatric wards, together with key informants' accounts of absent structured continuing education and limited specialized infrastructure, corroborates evidence that inadequate training and staffing shortages remain the principal systemic barriers to quality elderly care across African health systems (Ibrahim et al., 2018; Musa et al., 2024; Ndlovu & Moyo, 2022).

Taken together, these findings indicate that the foundation for good elderly care exists among healthcare workers in Taraba State's secondary hospitals — reasonable biomedical knowledge, generally positive attitudes, and broadly sound clinical practice — but that this foundation is not yet matched by adequate psychosocial training, geriatric-specific infrastructure, or staffing levels. The significant associations found

between knowledge and experience, attitude and professional status, and practice and gender further suggest that interventions to strengthen elderly care should be tailored to the specific needs of different professional cadres and career stages, rather than delivered as a uniform, one-size-fits-all programme.

These findings, considered alongside the reviewed regional and Nigerian literature, suggest that Taraba State's secondary hospitals occupy a position broadly similar to comparable settings elsewhere in Nigeria and sub-Saharan Africa: a workforce with adequate general biomedical knowledge and favourable attitudinal orientation, operating within systemic constraints that limit the consistent delivery of comprehensive, psychosocially attuned geriatric care (Kimani et al., 2021; Ogundele & Yusuf, 2023). This convergence across geographically and institutionally distinct settings implies that the barriers identified are unlikely to be resolved through localized, facility-specific interventions alone, and instead point to the need for coordinated state- and national-level investment in geriatric workforce training, infrastructure, and policy, consistent with calls for a more deliberate health-system response to demographic ageing across the region (Skirbekk & Cook, 2021; Mafuta & Kimenyi, 2019).

Conclusion and Recommendations

Conclusion

Healthcare workers in secondary hospitals in Taraba State generally possess good knowledge, positive attitudes, and moderate-to-good practices regarding the care of elderly patients, but important gaps remain in psychosocial knowledge, geriatric-specific training, and institutional support. Socio-demographic characteristics, particularly years of experience, professional status, and gender, significantly shape knowledge, attitude, and practice, while systemic challenges such as high workload, limited training opportunities, and the absence of specialized geriatric services continue to constrain the quality of care delivered to older patients. Strengthening training, improving staffing levels, and institutionalizing geriatric

care services are therefore essential to improving elderly care outcomes in this setting.

Recommendations

Based on these findings, the following are recommended:

- i. Regular in-service training and continuous professional development on geriatric care should be implemented to address gaps in psychosocial and cognitive aspects of elderly care.
- ii. Nursing and medical training institutions should integrate comprehensive geriatric care modules into undergraduate and postgraduate curricula.
- iii. Government and hospital management should increase staffing levels to reduce workload strain and improve the quality of elderly care.
- iv. Dedicated geriatric wards or units should be established in secondary hospitals to provide specialized, coordinated care for older patients.
- v. Health policy should prioritize elderly care through targeted funding, infrastructure development, and the inclusion of geriatric services within primary and secondary healthcare systems.
- vi. Hospitals should provide supportive supervision and structural measures to reduce workload pressure and strengthen healthcare worker motivation and performance.

Limitations and Suggestions for Further Research

This study was limited to selected secondary hospitals in Taraba State, which may constrain generalization to other regions or to tertiary institutions, and its reliance on self-reported data may be subject to social desirability bias. The cross-sectional design also limits causal inference: while significant associations were observed between socio-demographic characteristics and knowledge, attitude, and practice, the direction and mechanism of these relationships cannot be firmly established from

data collected at a single point in time. Additionally, the convenience component of the multistage sampling technique, while necessary given logistical constraints, may have introduced selection bias if healthcare workers who were available and willing to participate differed systematically in knowledge, attitude, or practice from those who were not on duty during data collection.

Future research should consider comparative studies of elderly care practices between rural and urban facilities, longitudinal evaluations of knowledge and practice following training interventions, and investigations of elderly patients' own perspectives on the quality of care they receive. Intervention studies that assess whether structured geriatric training measurably improves psychosocial knowledge and reduces the workload-related attitude erosion identified in this and prior studies would be particularly valuable in establishing an evidence base for policy investment. Further research might also usefully extend the associated-factors construct examined here to include facility-level variables, such as staff-to-patient ratios and the presence or absence of dedicated geriatric equipment, measured independently of healthcare workers' self-reports.

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