



CULTURAL BELIEFS, ATTITUDES, AND COGNITIVE IMPAIRMENT AMONG INSTITUTIONALISED OLDER ADULTS IN IBADAN, OYO STATE, NIGERIA

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Abstract

This study investigated the influence of cultural beliefs and attitudes on cognitive impairment among institutionalised older adults in Ibadan, Oyo State, Nigeria. A quantitative cross-sectional survey design was adopted. Total population sampling yielded 137 respondents, comprising 109 older adults aged 60 years and above and 28 caregivers, drawn from nine registered elderly care facilities. Data were collected using a structured questionnaire containing a sociodemographic section, an 18-point adapted cognitive screening measure derived from the Mini-Mental State Examination and the Montreal Cognitive Assessment, and a 10-item Cultural Attitude and Belief Scale completed by caregivers. Data were analysed using descriptive statistics, Pearson product-moment correlation and multiple regression at the .05 level of significance. Caregivers endorsed culturally rooted beliefs that constrain evidence-based cognitive care: 71.5% attributed cognitive symptoms to spiritual forces, 82.1% reported that families delay seeking medical help, 64.3% strongly agreed that affected older adults are stigmatised, 89.3% agreed that women face greater stigma than men, and 64.2% did not prefer medical to spiritual or traditional treatment. The correlation between facility-level cultural barrier orientation and residents' cognitive scores was weak and non-significant ($r = -0.061$, $p = 0.546$). Multiple regression identified age ($\beta = 0.361$), gender ($\beta = -0.260$), educational attainment ($\beta = 1.273$) and length of institutional stay ($\beta = -1.215$) as significant predictors of cognitive scores. The study concludes that although a direct association between cultural beliefs and cognitive scores was not demonstrated, the prevailing cultural care environment and demographic disadvantage justify culturally responsive, evidence-based intervention in institutional elderly care.

Keywords: Cultural Beliefs, Cognitive Impairment, Institutionalised Older Adults, Caregiver Attitudes, Stigma

Introduction

Ageing is an ongoing, broad and inevitable process of change in the biological, psychological and social aspects of the human condition, as time passes. The United Nations and World Health Organization generally consider older age to be beginning at the age of 60, which is the customary age in many low and middle income countries. In most high-income countries, however, this stage is typically regarded as starting when people reach 65 years, coinciding with the age of pension retirement. This article sets at 60 years the age of older adults in line with the Nigerian retirement policy and the age of the residential facilities reviewed. Poor cognitive health can have significant implications for well-being in older adults—such as maintaining independence, safety, taking medications, participating socially, and expressing preferences for care. Individuals with deteriorating cognition lose their independence earlier,



are vulnerable to preventable health problems and generate a growing and largely unrecognized burden on their families and care homes.

Cognitive impairment refers to an objectively measurable deficit in one or more cognitive functions (memory, attention, language, executive function, orientation, and visuospatial function) that is demonstrated by standardized testing. It can be from some impairment to the point where one can live independently, to such that they can no longer function normally, which is called dementia. The main construct for this article is cognitive impairment, which is the construct that the study measured, and dementia is reserved for evidence of diagnosed dementia syndromes. More than 55 million people in the world suffer from dementia, almost 10 million new cases are reported annually (World Health Organization, 2021). There is also a significant lack of diagnostic and specialist capacity in sub-Saharan Africa, despite the growing burden, and ageing populations (Guerchet et al., 2017). The pooled crude prevalence of dementia from Nigeria in a systematic review of evidence was estimated at 4.9% (95% CI 3.0–6.9); and was higher among women (6.7%) than men (3.1%) (Adeloye et al., 2019). Moreover, the incidence of 21.85 per person-year in the Ibadan Study of Ageing was higher than previous rates in West Africa. Sex (females), age (older), rural living, low income, and poor social involvement were all found to be risk factors (Gureje et al., 2011). However, this is a challenge that cognitive impairment in Nigeria remains seriously underdiagnosed and factors contributing to this include clinical and cultural.

Culture is the shared beliefs, values, customs and practices that affect the perception of health, illness, and ageing within a society. It can affect the way memory loss, confusion or behavioural change is interpreted, as it may be seen as sickness, ageing or something else altogether (Norbury & Sparks, 2013). If forgetfulness is considered a medical problem, then people will evaluate and intervene, but if it is regarded as a normal part of ageing or as a spiritual event, then it will not trigger a response. This difference in interpretation has important implications for the timing of diagnosis, and hence for the course of the impairment. These behaviors associated with cognitive decline in sub-Saharan Africa are sometimes seen as witchcraft, curses or divine punishment. In Ghana and Nigeria, older women with dementia are accused of witchcraft and as a result neglected and abandoned, or even beaten (Kyei et al., 2014). These types of attributions cause families to go elsewhere to consult traditional healers, prayer camps and religious leaders, thereby delaying biomedical evaluation. However, biomedical explanatory models remain parallel to clinical evidence, and even more, go hand in hand and are jointly accepted by families and at times by health workers as well, reflecting a pluralism that does not mean that one explanation supersedes the other, but rather that it is coexisting with it (Subu et al., 2022). Similar trends can be seen in older adults from Korea, Cambodia, Samoa, and China, who hold ancestral memory or spiritual possession beliefs about memory loss that also slow the time to diagnosis (Zhai et al., 2022). The process of decline is normalised in many communities in Nigeria, with the elderly person being viewed as a person who has forgotten things. Only at a very advanced, and largely irreversible, stage is the person regarded as having a problem.

Stigma exacerbates the lag in acknowledgement. The language used for cognitive problems (e.g., stubbornness, madness, spiritual affliction) can shape the amount of care and/or neglect an older person receives (Frost, 2011). The impact of stigma on people is compounded: stigma leads to loss of self-confidence, social isolation and poorer mental health which increases cognitive vulnerability (Mitchell et al., 2021). Furthermore, not being able to participate in the community, family, and religious life of the parish, increases the risk of underdiagnosis (Cuellar, 2016), the tendency to hide symptoms, and the lack of seeking help. It is important to understand that the depth of stigma will vary over time. The problem has been drastically reduced through public awareness campaigns and biomedical framing, in the western context. However, in areas with lower biomedical literacy, the repercussions continue to be severe, sometimes resulting in violence, and disproportionately affect older women (Lamont & Mizrachi, 2013). Stigma is thus an adjustable focus for psychoeducational intervention instead of being an unchanging cultural element.

Cultural values also influence providers of care and where care is provided. In collectivist society, the care of old-age parents is seen more as a duty and not an option. Filial piety and respect for elders and



reciprocity are concepts that influence caregiving roles, decision making, and the management of carer stress in African, African American, and Chinese American families (Sun et al., 2012). These are typically negotiated between and among women, with primary responsibility for the care transferred to wives, daughters, and daughters-in-law (Revenson et al., 2016). This work is frequently done without compensation, skills training or relief, creating physical, emotional and economic stress for the carers, which adversely affect their health and the quality of their care. Opposition to residential placement (even where clinically indicated) is driven by the same ethical concerns as above, i.e. that the placement equates with abandonment and a failure of familial responsibility. This perception results in guilt and ambivalence among institutional carers about the care they provide, as they share similar values (McCleary & Blain, 2013).

Another, and mainly technical, difficulty is the evaluation process. The development of assessments such as the Mini-Mental State Examination and Montreal Cognitive Assessment is in a Western context and makes assumptions about literacy level, understanding of formal testing, and knowledge specific to certain cultures (Sayegh & Knight, 2013). The incorrect classification of older people who have received little or no education may be due to educational differences rather than neurological differences in the ability to reverse the spelling of words, remember random lists of words, or duplicate geometric shapes. Culture and preferred language are independent factors of social cognition and test performance, even when a person is neurologically normal (Koelkebeck et al., 2017). Moreover, cross-cultural research on Alzheimer's disease shows that there is diagnostic bias beyond and after the inclusion of known confounds, and due to the minority population's under-representation in normative samples (Rosselli et al., 2022). Language is an important barrier in the assessment and management of cognitive impairment in older Nigerians. Most people in the facilities assessed are Yoruba speakers, and the assessment tools are in English. Furthermore, a lack of knowledge of formal testing procedures can cause anxiety and hinder performance (Faugno et al., 2025). Impairment rates derived from such tests should be read as reflecting cultural, linguistic and educational factors of test performance as well as neuropathological factors. This highlights the need for culturally and linguistically validated tools.

In an analysis of 26 studies involving 1,201 cognitively impaired individuals, no statistically significant clinical cognitive benefits were found from culturally oriented activities although significant improvements were found on emotional and social aspects of well-being (Delfa-Lobato et al., 2023). This offers a starting point for culturally appropriate story-based initiatives in Nigeria that aim to improve quality of life instead of test scores, and that are deeply rooted in storytelling, oral tradition, communal assembly, and religious engagement. In general, evidence-based interventions that are culturally adapted are more effective than those that are not adapted for culturally diverse groups (Huang & Zane, 2016). Furthermore, the concept of filial obligation (Sun et al., 2012) is related to willingness to engage with formal services, as well as the quality of informal care. Effectiveness, then, requires first adaptation to the particular belief system based on spiritual attribution, filial piety and gendered stigma, not courtesy.

This study follows the Biopsychosocial Model, which was developed by George L. Engel in 1977 due to the narrowness of a purely biomedical approach to disease. This model suggests that health and illness are the result of the interaction of biological, psychological and social factors, and not solely to biological dysfunction (Gagliese et al., 2018). In relation to later life, the model considers ageing to be a biological process which consistently moves through psychological factors (personality, coping resources and resilience) and social factors (culture, family, socioeconomic status, health services). It acknowledges that amyloid deposits, vascular injury, and neuronal loss, are all central to the disease process of CI, but do not fully explain the differences in onset, severity, and progression among various populations (Miaskowski et al., 2020). Cardiovascular diseases, diabetes, and hypertension represent a high burden of disease in Nigeria, and are biological risks that are closely related to dementia. Furthermore, psychological hazards, like impoverishment, financial insecurity, loss of autonomy, and bereavement are important. (Guerchet et al., 2017). The notion of cultural socialisation affects habitual attention, memory encoding, and reasoning (Kastanakis & Voyer, 2014).



Social cohesion (shared living, stories, and shared devotion) are forms of psychosocial protection, and also forms of deterrence for biomedical services when they offer alternative explanatory models. Therefore, the model provides a good framework to explore the interaction among the cultural beliefs and attitudes at the societal level, the biological ageing, and psychological state in relation to cognitive outcomes within Nigerian institutional care. Taken together, the current literature provides a clear trajectory: cultural beliefs and attitudes shape the perception of cognitive impairment, which then impacts on care-seeking behaviours and practices, which in turn shapes the outcomes of cognitive care. There is still paucity of numerical evidence in Nigeria on the strength of these ties in the institutional setting, and how the cultural orientation and the demographic interact when both are examined together. This investigation tackles that deficiency.

Statement of the Problem

Cognitive impairment is a growing health problem among older Nigerians, resulting in reduced independence, avoidable health problems, burden on caregivers and early institutionalisation. Institutionalized people are at high risk because of their age, health problems, reduced independence and family contact. A combination of a number of clinical and cultural factors affect management. Symptoms can be understood as a result of spiritual activity, witchcraft or divine punishment, and people will visit traditional or faith healers for healing. Memory loss and confusion may be considered a normal part of ageing and may be missed, causing delay in recognition and intervention. Elderly people with such problems might be seen as burdensome, deviant, or dangerous, and are hidden and socially excluded. Furthermore, these perceptions can be gendered, as the women's perceived age can lead to greater suspicion, accusations of witchcraft, neglect or abandonment. Placement to residential care may be perceived as abandonment of the family, leading to unawareness and mixed emotions on the part of carers. But, there is a strong bias towards epidemiological and biomedical studies in Nigeria. The cultural issues addressed, have tended to be community based, not institutional based which has limited the quantification of the relationship between specific cultural beliefs and cognitive impairment in residential settings. Furthermore, there is little comparison between these cultural factors and demographic factors like age, gender, education and length of stay. Multiple regression analysis is used in this study to examine the relationship between cultural beliefs and cognitive impairment in the institutionalised older person. It seeks to determine the comparative effect of the different demographic variables which may provide some evidence that can enhance the culturally responsive social work intervention and support for institutionalized older Nigerians.

Research Objectives

This article is directed by the following objective: to ascertain how cultural beliefs and attitudes toward aging and mental health affect the manifestation of cognitive disorders among institutionalized older adults in Ibadan, Oyo State, Nigeria.

Research Question

The following research question guided the study:

1. How do cultural beliefs and attitudes toward aging and mental health affect the manifestation of cognitive disorders among institutionalized older adults in Ibadan?

Hypothesis

The following hypothesis was tested at 0.05 significant level:



1. There will be no significant relative influence of demographic and cultural factors on cognitive disorders among institutionalized older adults in Ibadan (tested at 0.05 level of significance).

Methodology

This study employed a quantitative cross sectional survey design and the data reported in this study have been quantitative only, no qualitative data have been analysed and presented. The investigation was conducted in Ibadan, Oyo state, Nigeria where at the time of study 14 elderly care facilities had registered themselves officially with the relevant local government authority. Only facilities that met certain criteria were selected: facilities had to be registered, offer residential services (not day only services), have a minimum of 60 older residents, and accept institutional visits for research. These facilities are Rossetti Care, Divine Senior Citizens Palace Foundation, Alayande Rehabilitation Center, Assurance Imperial Home, Graceful Heritage, Fortune Care Home, Senior Citizens Palace, Supporters Care Home and Hebron Love. Unregistered facilities and those providing only outpatient or day services were not included in the study, nor were those facilities that refused access. Therefore, the results are not generalizable to all the types of elderly care services provided in Oyo State but only to other registered residential facilities similar to the one being studied. All 109 resident older adults (aged 60 years or over) present at these facilities and who gave consent to participate in the total population sampling, and all 28 carers employed at these facilities (including nurses, social workers, care attendants and allied health staff) were invited to participate, and 137 responded. Facility level had two units of analysis and were interdependent. All cognitive outcomes were assessed in 109 residents as the unit of analysis. A total of 28 carers were administered the Cultural Attitude and Belief Scale, with answers reflecting the cultural care environment of the care setting and not necessarily the beliefs of an individual resident. For correlation analysis, the mean cultural barrier orientation score of the carers at their respective facility was given to each resident. This cultural trait is an ecological measure, at the facility level, that is associated with the individual resident. It is significant to note that there is no claim about the congruence of beliefs between one particular caregiver or beliefs and one particular cognitive status among one resident, this is further discussed.

Four sections of a structured questionnaire were used. In Section A, data were collected on sociodemographic and institutional factors such as age, gender, marital status, highest level of education, socioeconomic status at admission, nature of presenting illness, length of stay etc. Sociodemographic and institutional factors were collected in Section A, including age, sex, marriage status, highest level of education, socioeconomic status before admission, type of illness presenting to hospital, and length of stay. The second (section B) included an 18-item Adapted Cognitive Screening Measure for Older Nigerians which was derived from the Mini-Mental State Examination (MMSE) (orientation, registration, attention and calculation, recall, naming, repetition, three stage command) and the Montreal Cognitive Assessment (MCA) (verbal fluency, abstraction, delayed recall, clock drawing). This measure was adapted for oral presentation in the Yoruba and stimuli with literacy or cultural meaning were substituted with culturally familiar stimuli. For each item 1 is given for correct responses and 0 for incorrect responses (range 0–18; higher score = better functioning). Cognitive impairment was classified based on a score of 12 and below, using an MMSE screening threshold that is proportionally equivalent to that used in low education Nigerian samples (Ogunniyi & Osuntokun, 1993; Baiyewu et al., 2002). The instrument is an adaptation and should not be used in place of the standard MMSE or MoCA. Also, there are no published norms for either of its scores. Section C was a 10-item scale measuring the orientations of carers towards ageing, cognitive impairment and institutional care with respect to cultural attitudes and beliefs. A belief profile was assessed using a four-point Likert scale (1 = strongly disagree to 4 = strongly agree; range 10–40) and a higher score indicated a greater orientation towards cultural barriers, with a higher score for ratings that were not aligned with the early recognition and evidence-based management of cognitive impairment, termed the cultural barrier orientation score. The institutional characteristics (staffing, resident characteristics, and services provided) were documented in section D.

Content and face validity were established by five experts in the fields of educational psychology, geriatric care and social work, who reviewed each item for clarity, cultural appropriateness and relevance. Items that were unclear or culturally inappropriate were modified or clarified. The



Yoruba version was obtained by translation and independent back-translation, with the aim of achieving semantic equivalence. The internal consistency of the items was tested independently by Cronbach's alpha and an acceptable value was .70. Results showed $\alpha = .81$ for the Adapted Cognitive Screening Measure and $\alpha = .78$ for the Cultural Attitude and Belief Scale. Pilot study was carried out with 15 older people and 6 carers in a Registered Residential Elderly Care Facility (RRECF) in Ogbomoso of Oyo State. It was a similar type of facility to the study facilities but not a part of the principal study. The pilot was not part of the main sample and the study was limited to informing the item wording, estimating the administration time, and developing the training protocol for research assistants in the main study. Assistants were trained to administer and score the cognitive measure and were skilled in both Yoruba and English. Each resident was evaluated separately in a quiet room of his/her facility using his/her preferred language with rest breaks and the Cultural Attitude and Belief Scale was completed independently by the carers. Oyo State Ministry of Health Research Ethics Review Committee gave ethical clearance. The management of each of the facilities involved allowed participation, and informed written consent was obtained from each participant. Where it was not clear if the resident could consent, consent was requested from the resident as well as from the next of kin or facility guardian. The project was entirely voluntary and people could drop out at any time, without repercussions. Besides, anonymisation of all data were carried out for privacy. IBM SPSS Statistics version 25 was used for analysis. Means, standard deviations and percentages were used for descriptive statistics of the cultural belief profiles of carers and the cognitive scores of residents. To examine the associations between facility-level cultural barrier orientation score and residents' total cognitive score, a Pearson product-moment correlation was performed. Additionally, multiple regression analysis employing the enter method was used to evaluate the relative influence of seven predictors age, gender, marital status, highest level of education, length of stay, estimated socioeconomic status prior to admission, and nature of illness on the total cognitive score for the 109 residents, resulting in approximately 15.6 cases per predictor, which surpasses the conventional minimum of 10–15. The cultural barrier orientation score was excluded as an individual-level predictor since it was assessed at the facility level and remains constant among residents of the same facility. Consequently, its relationship with cognitive functioning was analysed correlationally. All tests were conducted as two-tailed, with significance established at $p < 0.05$.

Results

Caregiver Cultural Belief Profile

Descriptive analysis of the ten-item Cultural Attitude and Belief Scale completed by the 28 caregivers revealed a consistent pattern of culturally rooted orientations that constrain the identification, reporting and evidence-based management of cognitive impairment. Table 1 presents the items with the highest and lowest endorsement.

Table 1: Descriptive Statistics for Selected Items of the Cultural Attitude and Belief Scale (N = 28)

S/N	Belief Item	Mean	SD	Majority Response (%)
1	Cognitive problems are caused by spiritual forces	3.04	0.84	71.5% agree/strongly agree
2	Families delay seeking medical help for cognitive symptoms	3.39	0.62	82.1% agree/strongly agree
3	Older adults with cognitive impairment are stigmatised	3.64	0.49	64.3% strongly agree
4	Placing older adults in care homes constitutes family neglect	3.64	0.49	64.3% strongly agree
5	Medical treatment is preferred over spiritual/traditional alternatives	1.86	0.97	64.2% disagree
6	Confusion and aggressive behaviour in the elderly is normal/acceptable	3.39	0.62	82.1% agree/strongly agree



S/N	Belief Item	Mean	SD	Majority Response (%)
7	Women with cognitive impairment face greater stigma than men	3.39	0.62	89.3% agree/strongly agree

Source: Fieldwork, 2026. Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree. Items shown are the seven of ten scale items reported here; serial numbers refer to the order of presentation in this table. Overall cultural barrier orientation score: $M = 30.88$, $SD = 3.15$ (possible range 10–40).

The highest endorsement ratings were seen for two items: the stigmatisation of older adults with cognitive impairment (Item 3: $M = 3.64$, $SD = 0.49$; 64.3% strongly agreed) and residential placement is family neglect (Item 4: $M = 3.64$, $SD = 0.49$; 64.3% strongly agreed), as seen in Table 1. The highest level of consensus was found with regard to women having cognitive impairment being stigmatised more than men (Item 7: $M = 3.39$, $SD = 0.62$) (89.3% agreed or strongly agreed). The lowest mean was for Item 5: Prefer medical treatment over spiritual/traditional care ($M = 1.86$, $SD = 0.97$). Notably, 64.2% of carers disagreed, indicating that a large proportion were less supportive of biomedical care as a desirable treatment for cognitive impairment. The profile as a whole demonstrates a care context that is replete with explanatory models within a cultural context and the presence of stigma that are systemic to the quality delivery of cognitive care.

Cultural Barrier Orientation and Cognitive Scores

To examine the association between the cultural care environment and cognitive outcomes, a Pearson product-moment correlation was computed between the facility-level cultural barrier orientation score ($M = 30.88$, $SD = 3.15$) and residents' total cognitive score ($M = 13.21$, $SD = 2.52$).

Table 2: Pearson Correlation between Cultural Barrier Orientation Score and Total Cognitive Score (N = 109)

Variables	Mean	SD	r	p
Cultural Barrier Orientation Score	30.88	3.15		
Total Cognitive Score	13.21	2.52	−0.061	0.546

Source: Fieldwork, 2026. Two-tailed test; $df = 107$; significance set at $p < 0.05$.

There was a weak relationship between the cultural barrier orientation score and the total cognitive score, which did not reach a statistically significant level ($r = -.061$, $p = .546$) (see Table 2). In this case, the null hypothesis that there is no association is therefore maintained. The result is to be interpreted with reference to the facility-level methodology used (where cultural orientation was measured at the facility level not at the individual resident level) and the inability to measure intra-facility variation in the extent to which all residents are exposed to cultural beliefs in the facility. Moreover, the way in which the beliefs are believed to affect cognition, including delayed diagnosis, reduced cognitive stimulation and social isolation of the patient by the caregivers, are indirect and multiplicative. A single bivariate correlation measure at a single time cannot effectively measure these complexities.

Test of Hypothesis

H₀1: Stated that there is no significant relative influence of demographic, socioeconomic and institutional characteristics on cognitive impairment among institutionalised older adults in Ibadan. Multiple regression was conducted to assess the independent contribution of each predictor within the joint model. Table 3 presents the coefficients.



Table 3: Multiple Regression showing the Relative Influence of Demographic, Socioeconomic and Institutional Characteristics on Cognitive Scores of Institutionalised Older Adults in Ibadan (N = 109)

Predictor	B	Std. Error	B	t	p
(Constant)	11.730	0.955		12.287	<0.001
Age	0.425	0.104	0.361	4.075	<0.001
Gender	-1.097	0.428	-0.260	-2.562	0.012
Marital status	0.258	0.285	0.077	0.907	0.367
Highest level of education	2.394	0.307	1.273	7.806	<0.001
Length of stay in institution	-2.257	0.314	-1.215	-7.177	<0.001
Estimated socio-economic status before admission	-0.130	0.287	-0.039	-0.452	0.653
Nature of the illness	0.084	0.077	0.095	1.083	0.282

Source: Fieldwork, 2026. Dependent variable: total cognitive score (range 0–18).

Table 3 shows that four of the seven predictors had significant independent contributions to the cognitive scores of residents. Age emerged as a notable positive predictor ($B = 0.425$, $\beta = 0.361$, $t = 4.075$, $p < 0.001$). However, gender was a significant predictor ($B = -1.097$, $\beta = -0.260$, $t = -2.562$, $p = 0.012$), suggesting there was a difference in cognitive scores between males and females after adjusting for other predictors. The highest level of education emerged as a notable positive predictor ($B = 2.394$, $\beta = 1.273$, $t = 7.806$, $p < 0.001$), while the length of stay in the institution was identified as a significant negative predictor ($B = -2.257$, $\beta = -1.215$, $t = -7.177$, $p < 0.001$). There were no discernable contributions from marital status ($p = .367$), estimated socioeconomic status before admission ($p = 0.653$) and nature of illness ($p = 0.282$). It is therefore ruled out in respect of age, gender, education and length of stay and confirmed in the case of marital status, socioeconomic status and nature of illness. Two of these coefficients are to be taken with caution. Both coefficients ($\beta = 1.273$ for education and a $\beta = -1.215$ for length of stay) exceed the limit of ± 1.00 . Intercorrelations among predictors or a suppressor predictor are perfectly acceptable and legitimate reasons for a standardised beta to exceed unity. These values usually mean that there is multicollinearity, and that the two coefficients should not be thought of as simple effect sizes. The pattern is quite plausible in this sample, because educational level and length of institutional stay are likely correlated, as well as age and past socioeconomic status. The collinearity diagnostics such as the tolerance and variance inflation factors must be reported following this model. Further, the relative sizes of these two coefficients cannot be compared to the coefficient of age and gender in the absence of these two. This is again one of the restrictions.

Discussion of Findings

The cultural belief profile of institutional caregivers in Ibadan revealed a set of orientations that constrain the recognition, reporting and evidence-based management of cognitive impairment. Three findings define this environment. First, 71.5% of caregivers agreed or strongly agreed that cognitive problems are caused by spiritual forces, and 82.1% agreed that families delay seeking medical help. Second, 64.3% strongly agreed that residential placement constitutes family neglect. Third, 64.2% disagreed with the statement that medical treatment is preferred over spiritual or traditional alternatives. These three percentages derive from separate scale items measuring distinct constructs attribution of cause, moral evaluation of placement, and treatment preference and are reported separately here rather than combined, since they are not directly comparable quantities. Together they describe a culturally constituted care environment that operates as a structural constraint on quality cognitive care for all residents, independent of individual clinical profiles. The pattern is consistent with evidence that traditional and religious explanatory models of illness delay access to biomedical services (Subu et al., 2022; Kyei et al., 2014).

The strong consensus that older adults with cognitive impairment are stigmatised accords with West African evidence in which dementia is associated with social exclusion, witchcraft accusation and, in extreme cases, violence against older women (Guerchet et al., 2017; Kyei et al., 2014). The finding that 89.3% of caregivers regard women as facing greater stigma than men reinforces this and is particularly



consequential given that dementia prevalence and incidence in Nigeria are themselves higher among women (Adeloye et al., 2019; Gureje et al., 2011). The equally strong endorsement of the view that institutional placement is familial neglect mirrors findings among Chinese American dementia caregivers and points to a shared organising principle in collectivist cultures: the care of ageing parents as a moral duty (Sun et al., 2012). In the Yoruba cultural context of Ibadan this moral position generates resistance to placement even where it is clinically indicated, and leaves institutional caregivers who share the value with guilt and ambivalence that may affect the consistency and quality of the cognitive care they provide (McCleary & Blain, 2013).

The absence of a significant correlation between facility-level cultural barrier orientation and residents' cognitive scores ($r = -0.061$, $p = 0.546$) does not demonstrate that cultural beliefs are unrelated to cognitive outcomes, but neither does it provide evidence that they are. The appropriate conclusion is that this study did not detect such an association, and two explanations are available. The first is measurement: cultural orientation was assessed at the facility level, so the design could not capture variation in individual residents' exposure to cultural beliefs, and ecological measures routinely attenuate individual-level associations. The second is theoretical: cultural influence on cognition is understood to operate indirectly, through the interpretation of symptoms and the care behaviours that follow, rather than as a direct and immediately observable effect (Angel & Thoits, 1987), and to be expressed through habitual patterns of attention, memory encoding and reasoning that are shaped over long periods by cultural socialisation (Kastanakis & Voyer, 2014). Neither explanation licenses a causal claim from these data, nor is none made.

It was clear that the highest standardised coefficient was educational attainment ($\beta = 1.273$, $p < 0.001$) and as mentioned above, this is a standardised coefficient and should be interpreted with care and not compared directly with that of age, unless collinearity diagnostics has been performed. This direction of the association is however compatible with the literature of the cognitive reserve. Historical inequalities stemming from colonial educational policy, combined with limited access to education among women and low socioeconomic status, have led to an older generation of Nigerians with low level of formal education and in turn, cognitive reserve, increasing their vulnerability to cognitive decline (Asimwe et al., 2020). The disadvantage is further compounded culturally; low education is correlated with less likely to view cognitive symptoms as medical, less ability to negotiate health system navigation, and more likely to use spiritual explanatory models, all of which delay the appropriate care. The same caution in interpretation applies to length of institutional stay which was a significant negative predictor of cognitive scores ($\beta = -1.215$, $p < 0.001$). There is no cross-sectional data to make a determination of 2 readings. It may be the sum total of the effects of ageing and progressive decline over the period of the stay, with the longer a resident has lived in the association, the older they are, and the farther along any progressive course of decline. But rather, it could just be selection; the residents who are admitted first are different from the new admissions in education and previous socioeconomic status. The potential protective role of an institutional context (cognitive risk attenuation effect of a well-resourced and socially structured care environment) cannot be evaluated from these data, and would need a longitudinal follow-up. What the finding does confirm is the importance of focusing on the institutional environment itself, and in this instance, there is some good evidence that structured cultural programming storytelling groups, oral tradition activities, intergenerational dialogue and faith-based reminiscence are beneficial in enhancing emotional wellbeing and social engagement, even if they do not enhance cognitive test scores among people with cognitive impairment (Delfa-Lobato et al., 2023).

Demographic confounders were important and in the multivariate model sex differences in cognitive health were significantly predicted ($\beta = -0.260$, $p = 0.012$). The direction of the coefficient shows that, controlling for age, education, length of stay, and the other covariates, women had higher cognitive scores. This contradicts the overall findings of increased rates of dementia in women (Ferretti et al. 2020, Adeloye et al. 2019) and may be due to "survivor selection" in an institutional population, as women tend to outlive men and cognitively healthier women may be overrepresented among long term residents. This is an interpretation that is being advanced for further testing, but it should not be considered a discovery.



Conclusion

The study aimed to examine the effect of cultural beliefs and attitudes on cognitive impairment among the institutionalized older people in Ibadan, Oyo state, Nigeria. They found that spiritual interpretations of cognitive symptoms, reluctance of seeking medical help, stigma, increased perceived stigma for women, ideas of institutionalisation as a kind of abandonment by the family, and a preference for spiritual or traditional treatment characterised the care environment. The orientation toward cultural barriers did not, however, correlate significantly with residents' cognitive scores ($r = -.061$, $p = .546$), suggesting that the results are not an endorsement of a direct influence of cultural beliefs on cognitive outcomes. Age, gender, educational level and length of institutional stay, in contrast, were significant independent predictors of the scores of cognitive function, with marital status, prior socioeconomic status and nature of illness showing no significant predictive value. Results highlight the need for culturally relevant interventions to tackle stigma, spiritual beliefs and misunderstandings, delayed help-seeking, and concerns about institutional care. In addition, the need to recognize educational disadvantage and other demographic factors that can lead to cognitive vulnerability in older people in institutional environments is important.

Recommendations

Based on the objectives and findings of this study, the following are recommended:

1. The Oyo State Ministry of Health, working with facility management, should implement a culturally sensitive, Yoruba-language caregiver training programme addressing the specific beliefs identified in this study: spiritual attribution of cognitive symptoms, stigma towards affected residents, gendered stigma towards older women, and the framing of residential placement as family neglect.
2. Facilities should incorporate structured cultural programming, storytelling groups, oral tradition activities, intergenerational dialogue and faith-based reminiscence as routine practice, on the evidence that such activities improve emotional well-being and social engagement among older adults with cognitive impairment.

References

- Angel, R., & Thoits, P. (1987). The impact of culture on the cognitive structure of illness. *Culture, Medicine and Psychiatry*, 11, 465–494.
- Asiimwe, S. B., Farrell, M., Kobayashi, L. C., Manne-Goehler, J., Kahn, K., Tollman, S. M., & Barnighausen, T. (2020). Cognitive differences associated with HIV serostatus and antiretroviral therapy use in a population-based sample of older adults in South Africa. *Scientific Reports*, 10(1), Article 16625.
- Cuellar, N. G. (2016). Marginalization of cultural groups. *Journal of Transcultural Nursing*, 27(2), 93–93.
- Delfa-Lobato, L., Feliu-Torruella, M., Cañete-Massé, C., Ruiz-Torras, S., & Guàrdia-Olmos, J. (2023). Benefits of cultural activities on people with cognitive impairment: A meta-analysis. *Healthcare*, 11, 1854.
- Faugno, E., Galbraith, A. A., Walsh, K., Maglione, P. J., Farmer, J. R., & Ong, M. S. (2025). Experiences with diagnostic delay among underserved racial and ethnic patients: A systematic review of the qualitative literature. *BMJ Quality & Safety*, 34(3), 190–200.
- Ferretti, M. T., Martinkova, J., Biskup, E., Benke, T., Gialdini, G., Nedelska, Z., & Schmidt, R. (2020). Sex and gender differences in Alzheimer's disease: Current challenges and implications for clinical practice: Position paper of the Dementia and Cognitive Disorders Panel of the European Academy of Neurology. *European Journal of Neurology*, 27(6), 928–943.



- Frost, D. M. (2011). Social stigma and its consequences for the socially stigmatized. *Social and Personality Psychology Compass*, 5(11), 824–839.
- Gagliese, L., Gauthier, L. R., Narain, N., & Freedman, T. (2018). Pain, aging and dementia: Towards a biopsychosocial model. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 87, 207–215.
- Guerchet, M., Mayston, R., Lloyd-Sherlock, P., Prince, M., Akinyemi, R., Paddick, S. M., & Aboderin, I. (2017). *Dementia in sub-Saharan Africa: Challenges and opportunities*. Alzheimer's Disease International.
- Huang, C. Y., & Zane, N. (2016). Cultural influences in mental health treatment. *Current Opinion in Psychology*, 131–136.
- Kastanakis, M. N., & Voyer, B. G. (2014). The effect of culture on perception and cognition: A conceptual framework. *Journal of Business Research*, 67, 425–433.
- Koelkebeck, K., Uwatoko, T., Tanaka, J., & Kret, M. E. (2017). How culture shapes social cognition deficits in mental disorders: A review. *Social Neuroscience*, 12, 102–112.
- Kyei, J. J., Dueck, A., Indart, M. J., & Nyarko, N. Y. (2014). Supernatural belief systems, mental health and perceptions of mental disorders in Ghana. *International Journal of Culture and Mental Health*, 7(2), 137–151.
- Lamont, M., & Mizrachi, N. (2013). Responses to stigmatization in comparative perspective. Routledge.
- McCleary, L., & Blain, J. (2013). Cultural values and family caregiving for persons with dementia. *Indian Journal of Gerontology*, 27(1), 178–201.
- Miaskowski, C., Blyth, F., Nicosia, F., Haan, M., Keefe, F., Smith, A., & Ritchie, C. (2020). A biopsychosocial model of chronic pain for older adults. *Pain Medicine*, 21(9), 1793–1805.
- Mitchell, U. A., Nishida, A., Fletcher, F. E., & Molina, Y. (2021). The long arm of oppression: How structural stigma against marginalized communities perpetuates within-group health disparities. *Health Education & Behavior*, 48(3), 342–351.
- Norbury, C. F., & Sparks, A. (2013). Difference or disorder? Cultural issues in understanding neurodevelopmental disorders. *Developmental Psychology*, 49, 45–58.
- Revenson, T. A., Griva, K., Luszczynska, A., Morrison, V., Panagopoulou, E., Vilchinsky, N., & Hagedoorn, M. (2016). Gender and caregiving: The costs of caregiving for women. In *Caregiving in the illness context* (pp. 48–63). Palgrave Macmillan UK.
- Rosselli, M., Uribe, I. V., Ahne, E., & Shihadeh, L. (2022). Culture, ethnicity, and level of education in Alzheimer's disease. *Neurotherapeutics*, 19, 26–54.
- Sayegh, P., & Knight, B. G. (2013). Cross-cultural differences in dementia: The Sociocultural Health Belief Model. *International Psychogeriatrics*, 25(4), 517–530.
- Subu, M. A., Holmes, D., Arumugam, A., Al-Yateem, N., Maria Dias, J., Rahman, S. A., & Abraham, M. S. (2022). Traditional, religious, and cultural perspectives on mental illness: A qualitative study on causal beliefs and treatment use. *International Journal of Qualitative Studies on Health and Well-Being*, 17(1), Article 2123090.
- Sun, F., Ong, R., & Burnette, D. (2012). The influence of ethnicity and culture on dementia caregiving: A review of empirical studies on Chinese Americans. *American Journal of Alzheimer's Disease and Other Dementias*, 27, 13–22.
- World Health Organization (2021). Global status report on the public health response to dementia.
- Yeonwoo, K., & Jang, S. (2025). Socioeconomic disparities in cognitive impairment: The role of neighborhood social cohesion. *Innovation in Aging*, 1–8.
- Zhai, S., Kim, B., Li, J., Wi, D., Chey, S., Li, G., & Belza, B. (2022). Perceptions and beliefs of memory loss and dementia among Korean, Samoan, Cambodian, and Chinese older adults: A cross-cultural qualitative study. *Journal of Gerontological Nursing*, 48(6), 40–48.