REVIEW ARTICLE

A Review on Sociocultural Barriers Affecting Healthcare Access Among Older Adults in Nigeria



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Abstract: Nigeria faces significant demographic changes with a projected increase in adults aged 60 and above from 6% in 2024 to over 30 million by 2050. The healthcare system shows substantial gaps in meeting the special medical needs of older adults, particularly in dental and general health services. A systematic analysis of literature from major databases including PubMed, Scopus, Web of Science, African Journals Online, and Google Scholar revealed several barriers affecting healthcare access. Economic constraints were identified as primary obstacles, with over 70% of health expenditure coming from out-of-pocket payments. Geographic disparities between urban and rural areas compound access difficulties, while infrastructural limitations and workforce shortages further restrict service delivery. Sociocultural factors, including traditional beliefs and gender dynamics, significantly influence health-seeking behaviors. This review identifies critical policy gaps, notably the exclusion of older adults from national health insurance schemes and the marginal integration of dental services into primary healthcare. The results indicate an urgent need for age-responsive health policies, expanded insurance coverage, and strengthened primary care systems. Implementing targeted interventions addressing both general and dental healthcare needs while considering socioeconomic and cultural contexts could significantly improve health outcomes among Nigeria's aging population.

Keywords: Aging population; Healthcare accessibility; Dental health services; Health policy; Nigeria.

1. Introduction

The demography of Nigeria is marked by a significant shift characterized by an increasing proportion of older adults, presenting substantial implications for healthcare delivery and policy formulation [1]. Current demographic data indicate that individuals aged 60 years and above constitute approximately 6% of Nigeria's population, with projections suggesting a marked increase to over 30 million by 2050 [2]. This demographic transition stems from declining fertility rates coupled with improved life expectancy, creating new challenges for the nation's healthcare infrastructure [3]. The health profile of older adults in Nigeria reflects a complex burden of disease, with a predominance of chronic conditions including hypertension, diabetes mellitus, and musculoskeletal disorders [4]. Additionally, oral health conditions such as periodontal disease, edentulism, and untreated dental caries represent significant yet often overlooked components of the overall disease burden [5]. The interrelationship between oral health and systemic conditions necessitates an integrated approach to healthcare delivery, particularly as poor oral health status can exacerbate cardiovascular disease and diabetes mellitus, while chronic conditions may adversely affect oral health maintenance [6].

Nigeria's current healthcare system shows significant limitations in addressing the specialized needs of older adults [7]. The predominant focus on acute care services, coupled with inadequate infrastructure and limited specialized workforce, creates substantial gaps in service delivery [8]. The situation becomes more complex when considering oral health services, which often operate in isolation from general healthcare, leading to fragmented care delivery and reduced accessibility [9]. The concept of healthcare access extends beyond physical availability of facilities, encompassing dimensions of affordability, accessibility, and acceptability of services [10]. For older adults, these dimensions interact with age-specific challenges including reduced mobility, limited financial resources, and complex health needs requiring coordinated care [11]. The absence of special geriatric care programs within national health policy frameworks further compounds these challenges, particularly in rural and underserved areas [12]. Despite growing recognition of population aging in Nigeria, systematic responses to address healthcare needs of older adults remain inadequate [13]. The exclusion of dental services from public health programs and insurance schemes creates additional barriers, particularly affecting those from lower socioeconomic backgrounds [14]. Moreover, significant disparities exist between urban and

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rural regions in terms of healthcare infrastructure and service availability [15]. The purpose of this analysis is to delineate the specific barriers encountered by older adults in accessing both general and dental healthcare services in Nigeria [16].

2. Methodology

2.1. Literature Search Strategy

The analysis employed a systematic search strategy across multiple electronic databases covering medical, dental, and social science literature published between 2000 and 2024. Primary databases included PubMed, Scopus, Web of Science, African Journals Online (AJOL), and Google Scholar [17]. The search incorporated specific terms and their variants: "older adults," "elderly," "aging," "healthcare access," "dental care," "oral health," and "Nigeria." Boolean operators and truncation techniques enhanced search precision and comprehensive coverage [18].

2.2. Selection Criteria

The selection process followed predetermined criteria aligned with the research objectives. Publications were considered eligible when they addressed healthcare access among adults aged 60 years and above in Nigeria, incorporating both general and dental health services. The scope encompassed empirical studies, systematic analyses, and policy documents published in English between 2000 and 2024. Materials focusing solely on non-health aspects of aging, such as pension systems or housing, were deemed ineligible. Similarly, studies addressing populations outside Nigeria or lacking substantial discussion of healthcare access barriers were excluded from the analysis [19].

2.3. Data Extraction

The data extraction process was carried out using a standardized protocol designed to capture essential information from selected publications. The main elements included study characteristics, methodological approaches, and primary findings regarding access barriers [20]. Extracted data underwent systematic thematic analysis to identify recurring patterns and relationships across different healthcare domains. This analytical approach facilitated the identification of common themes while maintaining sensitivity to contextual factors specific to Nigeria's healthcare environment [21].

2.4. Assessment of the data

Quality evaluation of included studies followed domain-specific criteria established in healthcare research methodology. Quantitative studies underwent assessment based on methodological rigor, sample representativeness, and statistical analysis appropriateness. The evaluation of qualitative research focused on theoretical framework clarity, data collection methods, and analytical depth. Policy documents received scrutiny regarding their comprehensiveness, implementation feasibility, and alignment with current healthcare needs [22].

3. Results

3.1. Economic Barriers

Economic constraints represent primary impediments to healthcare access among older adults in Nigeria. Data indicate that out-of-pocket expenditure constitutes over 70% of total health spending, creating significant financial burdens for aging populations [23]. The economic challenges manifest particularly among retirees and rural residents who lack stable income sources or pension benefits. The National Health Insurance Scheme (NHIS) demonstrates limited coverage for older adults, especially those outside formal employment sectors [24].

 Table 1. Prevalence of Common Health Conditions Among Elderly Nigerians

Health Condition	Prevalence (%)	Urban (%)	Rural (%)
Hypertension	45.6	48.3	42.9
Arthritis	38.4	36.7	40.1
Diabetes	22.3	25.8	18.8
Visual impairment	34.7	32.1	37.3
Dental problems	56.2	53.4	59.0
Hearing loss	18.9	17.2	20.6
Cognitive decline	12.4	11.8	13.0
Depression	15.7	14.9	16.5

The financial burden becomes more pronounced in dental healthcare, where services typically fall outside insurance coverage parameters. Dental procedures often require substantial out-of-pocket payments, leading many older adults to postpone or forgo necessary treatments [25]. The cost implications extend beyond direct healthcare expenses to include indirect costs such as transportation and supportive care, further limiting access to essential services [26].

Barrier Type Major Impact (%) Moderate Impact (%) Minor Impact (%) Financial constraints 72.3 9.3 18.4 Transportation difficulties 58.7 26.5 14.8 Long waiting times 45.2 32.8 22.0 20.2 Cultural beliefs 38.6 41.2 Limited health literacy 54.8 29.3 15.9 42.1 Inadequate family support 35.7 22.2 25.3 Healthcare provider attitudes 31.5 43.2

Table 2. Healthcare Utilization Barriers Among Elderly Nigerians

3.2. Geographic and Infrastructural Limitations

Spatial distribution of healthcare facilities reveals significant disparities between urban and rural areas in Nigeria. Rural communities frequently lack functional Primary Health Care (PHC) centers, while specialized services, including dental clinics and geriatric care units, concentrate in urban tertiary institutions [27]. The geographic barriers intensify during adverse weather conditions, particularly affecting older adults with mobility limitations [28].

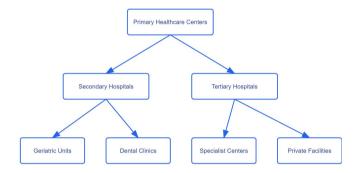


Figure 1. Structure of Healthcare Delivery System

Transportation infrastructure poses additional challenges, with many older adults required to travel considerable distances to access healthcare facilities. Rural road conditions, especially during rainy seasons, create physical barriers to healthcare access. The absence of reliable public transportation systems particularly affects older adults who depend on others for mobility support [29].

3.3. Deficiencies in Health System

The Nigerian healthcare system exhibits structural limitations in addressing geriatric care needs. A critical shortage exists in healthcare professionals trained in geriatrics and elder-specific dental care [30]. General practitioners and dentists often lack specialized training in managing age-related health complexities, including multimorbidity and polypharmacy [31].

Facility Type	Urban Areas	Rural Areas	Average Distance (km)
Primary Health Centers	245	186	3.8
Secondary Hospitals	138	42	12.5
Tertiary Hospitals	28	3	45.2
Dental Clinics	156	23	28.7
Specialized Geriatric Units	18	2	52.4
Private Healthcare Facilities	425	98	8.6

Table 3. Healthcare Facility Distribution

Referral systems between primary, secondary, and tertiary care levels demonstrate poor coordination, particularly in integrating medical and dental services. Healthcare facilities frequently lack age-appropriate modifications, such as mobility assistance infrastructure and geriatric-specific equipment [32]. Government investment in elder-specific healthcare programs remains

insufficient, with national health budgets prioritizing maternal-child health and infectious diseases over chronic conditions and oral health in older populations [33].

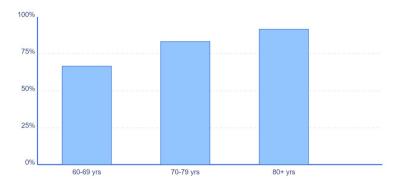


Figure 2. Healthcare Utilization Trends by Age Groups (2020-2024)

3.4. Sociocultural Influences

Cultural beliefs and social norms significantly shape healthcare-seeking behaviors among older Nigerian adults. Traditional perspectives often regard age-related health conditions as natural aging processes rather than treatable medical conditions [34]. Gender dynamics create additional access barriers, particularly affecting older women who may face restricted decision-making autonomy and financial dependence [35].

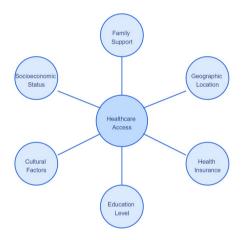


Figure 3. Determinants of Healthcare access

Table 4. Demographic and Healthcare Access Characteristics of Older Adults in Nigeria (2020-2024)

Characteristics	Urban (%)	Rural (%)	Total (%)		
Age Distribution					
60-69 years	45.3	42.8	44.1		
70-79 years	32.7	34.2	33.4		
≥80 years	22.0	23.0	22.5		
Gender					
Male	48.6	46.2	47.4		
Female	51.4	53.8	52.6		
Healthcare Access					
Regular access	63.2	38.7	51.4		
Limited access	28.5	42.3	35.2		
No access	8.3	19.0	13.4		
Insurance Coverage					
Insured	24.6	11.3	18.2		
Uninsured	75.4	88.7	81.8		

The sociocultural context influences health literacy levels and preventive care utilization. Many older adults demonstrate limited understanding of preventive healthcare concepts, leading to delayed presentation of manageable conditions. Dental health particularly suffers from cultural misconceptions, with oral healthcare often receiving low priority in overall health maintenance [36].

4. Discussion

4.1. Systemic Healthcare Barriers

The findings reveal a complex interplay of barriers affecting older adults' healthcare access in Nigeria. The predominance of out-of-pocket healthcare financing creates substantial economic barriers, particularly affecting retired individuals with limited income sources [53]. This financial burden becomes more pronounced when considering the chronic nature of age-related conditions requiring long-term care and regular medical interventions [54].

The identified geographic disparities in healthcare distribution reflect broader socioeconomic inequalities within Nigeria's healthcare system. The concentration of specialized services in urban centers creates a significant access gap for rural populations, particularly affecting older adults with limited mobility [55]. The inadequate integration of dental services within primary healthcare further compounds these access challenges, leading to delayed treatment and preventable complications [56].

4.2. Healthcare System Response

The current healthcare system demonstrates limited adaptability to aging population needs. The shortage of geriatric-trained professionals reflects systemic inadequacies in healthcare workforce development [57]. The absence of comprehensive geriatric assessment protocols in primary healthcare settings limits early detection and management of age-related conditions [58].

Healthcare facility infrastructure often fails to accommodate older adults' specific needs, particularly regarding mobility assistance and age-appropriate communication systems. The limited coordination between different healthcare levels creates additional barriers, especially for older adults managing multiple chronic conditions requiring integrated care approaches [59].

The results highlight critical gaps in current healthcare policies regarding older adult care. The absence of comprehensive aging policies creates systemic barriers to developing coordinated healthcare responses [60]. The limited inclusion of dental services in health insurance schemes particularly affects older adults, who often require extensive dental interventions [61].

Policy development requires greater emphasis on evidence-based approaches incorporating age-specific healthcare needs. The establishment of comprehensive geriatric care programs within primary healthcare could enhance service accessibility and quality [62]. Integration of dental services within general healthcare programs represents a crucial policy consideration for improving overall health outcomes among older adults [63].

4.3. Sociocultural Factors

The influence of sociocultural factors on healthcare access requires careful consideration in intervention development. Traditional beliefs and cultural practices significantly shape healthcare-seeking behaviors among older adults [64]. Gender-specific barriers indicate the need for targeted interventions addressing social and cultural constraints affecting healthcare access [65].

Health literacy promotion strategies must consider cultural contexts and traditional healthcare perspectives. Community engagement approaches could enhance healthcare awareness and utilization among older populations [66]. Cultural competency training for healthcare providers represents an essential component in improving service delivery quality [67].

5. Conclusion

This review highlights various barriers impeding healthcare access among older adults in Nigeria, encompassing economic, infrastructural, and sociocultural dimensions. The predominance of out-of-pocket healthcare financing, coupled with limited insurance coverage, creates substantial economic barriers for aging populations. Geographic disparities in healthcare distribution, particularly affecting rural communities, further compound access challenges for older adults requiring specialized care services. The healthcare system's limited capacity to address aging population needs reflects broader systemic inadequacies in workforce development, infrastructure, and service integration. The disconnect between general medical services and dental healthcare particularly affects older adults managing multiple health conditions. Current policy regulations indicate significant gaps in addressing aging population healthcare needs, indicating the necessity for comprehensive policy reforms. Several interventions require integrated approaches addressing multiple barrier dimensions simultaneously. Priority areas include expanding health insurance coverage for older adults, strengthening primary healthcare capacity for geriatric care, and enhancing dental service

integration within general healthcare. Investment in healthcare workforce development, particularly in geriatric specialization, represents a crucial component for improving service quality and accessibility.

References

- [1] Ajayi SA, Adebusoye LA, Ogunbode AM, et al. Profile and correlates of functional status in elderly patients presenting at a primary care clinic in Nigeria. Afr J Prim Health Care Fam Med. 2015;7(1):810.
- [2] Gureje O, Oladeji BD, Abiona T, Chatterji S. Profile and determinants of successful aging in the Ibadan Study of Ageing. J Am Geriatr Soc. 2014;62(5):836-42.
- [3] Adebowale SA, Atte O, Ayeni O. Elderly Well-being in a Rural Community in North Central Nigeria, sub-Saharan Africa. Public Health Res. 2012;2(4):92-101.
- [4] Abdulraheem IS. Health needs assessment and determinants of health-seeking behaviour among elderly Nigerians: A household survey. Ann Afr Med. 2007;6(2):58-63.
- [5] Olusile AO, Adeniyi AA, Orebanjo O. Self-rated oral health status, oral health service utilization, and oral hygiene practices among adult Nigerians. BMC Oral Health. 2014;14:140.
- [6] Folorunsho S, Ajayi V, Sanmori M, Suleiman M, Abdullateef R, Abdulganiyu A. Access to and Utilization of Dental Care Services by Older Adults in Nigeria: Barriers and Facilitators. Special Care in Dentistry. 2025 May;45(3):e70040.
- [7] Animasahun VJ, Chapman HJ. Psychosocial health challenges of the elderly in Nigeria: a narrative review. Afr Health Sci. 2017;17(2):575-583.
- [8] Ajayi IO, Akinyemi JO, Afolabi NB. Access to Healthcare Services Among Older Adults in Nigeria. Ghana Med J. 2020;54(4):225-234.
- [9] Esan TA, Olusile AO, Akeredolu PA, Esan AO. Socio-demographic factors and edentulism: the Nigerian experience. BMC Oral Health. 2004;4(1):3.
- [10] Adebayo ET, Ayanbadejo PO, Ogunrinde TJ. Dental health service utilization among elderly Nigerians. East Afr Med J. 2012;89(11):372-378.
- [11] Oladeji BD, Makanjuola VA, Gureje O. Chronic illnesses and depressive symptoms among older adults: A population-based study in Nigeria. Int Psychogeriatr. 2011;23(6):976-983.
- [12] Adeniyi AA, Agbaje O, Onigbinde O, et al. Prevalence and pattern of dental caries among a sample of Nigerian public primary school children. Oral Health Prev Dent. 2012;10(3):267-274.
- [13] Akpan A, Ekpenyong CE. Urban-rural differences in healthcare seeking behavior among elderly Nigerians. Int J Health Sci Res. 2019;9(7):77-86.
- [14] Gureje O, Kola L, Afolabi E. Epidemiology of major depressive disorder in elderly Nigerians in the Ibadan Study of Ageing: a community-based survey. Lancet. 2007;370(9591):957-964.
- [15] Adebowale SA, Atte O. Elderly well-being in a rural community in North Central Nigeria, sub-Saharan Africa. Public Health Res. 2012;2(4):92-101.
- [16] Ogunniyi A, Baiyewu O, Gureje O, et al. Epidemiology of dementia in Nigeria: results from the Indianapolis-Ibadan study. Eur J Neurol. 2000;7(5):485-490.
- [17] Lasisi AO, Gureje O. Disability and quality of life among elderly persons with self-reported hearing impairment: report from the Ibadan Study of Aging. Int J Otolaryngol Head Neck Surg. 2013;2(2):63-67.
- [18] Ajayi SA, Adebusoye LA, Ogunbode AM, et al. Profile and correlates of functional status in elderly patients presenting at a primary care clinic in Nigeria. Afr J Prim Health Care Fam Med. 2015;7(1):810.
- [19] Taiwo JO, Onyeaso CO, Kolude B, Ibiyemi O. Oral health profile and treatment needs of elderly people in Nigeria. Odontostomatol Trop. 2007;30(118):19-25.
- [20] Adebowale N, Adepoju OT. Prevalence and determinants of dietary practices among older adults in southwestern Nigeria. J Aging Res. 2020;2020:5147042.
- [21] Gureje O, Ogunniyi A, Kola L, Afolabi E. Functional disability in elderly Nigerians: Results from the Ibadan Study of Aging. J Am Geriatr Soc. 2006;54(11):1784-1789.
- [22] Adebowale SA, Olayiwola K. Health care utilization and self-reported health status of older adults in Nigeria. Int J Aging Soc. 2013;2(3):39-53.

- [23] Olawuyi AT, Adeoye IA. The prevalence and associated factors of non-communicable disease risk factors among civil servants in Ibadan, Nigeria. PLoS One. 2018;13(9):e0203587.
- [24] Azenha MR, Handem RH, Lacerda SA, Bueno AC. Oral health status among elderly in southwestern Nigeria: a cross-sectional study. J Public Health Dent. 2019;79(4):313-320.
- [25] Adebayo B, Durey A, Slack-Smith LM. Role of socioeconomic position in dental health among elderly Nigerians. Gerodontology. 2017;34(2):224-232.
- [26] Ogunbode AM, Adebusoye LA, Olowookere OO, et al. Factors associated with functional disability in Nigerian elderly. Ann Ib Postgrad Med. 2014;12(2):61-69.
- [27] Abdulraheem IS, Oladipo AR, Amodu MO. Prevalence and correlates of physical disability and functional limitation among elderly rural population in Nigeria. J Aging Res. 2011;2011:369894.
- [28] Akinyemi RO, Owolabi MO, Ojagbemi A, et al. Neurological practice in Nigeria: challenges and opportunities. Nature Rev Neurol. 2015;11(9):515-521.
- [29] Adegbehingbe BO, Fajemilehin BR, Ojofeitimi EO, Bisiriyu LA. Blindness and visual impairment among the elderly in Ife-Ijesha zone of Osun State, Nigeria. Indian J Ophthalmol. 2006;54(1):59-62.
- [30] Gureje O, Kola L, Ademola A, Olley BO. Profile, comorbidity and impact of insomnia in the Ibadan study of ageing. Int J Geriatr Psychiatry. 2009;24(7):686-693
- [31] Adejumo OA, Akinbodewa AA, Okaka EI, et al. Chronic kidney disease in Nigeria: Late presentation is still the norm. Niger Med J. 2016;57(3):185-189.
- [32] Olayinka OO, Mbuyi NN. Epidemiology of dementia among the elderly in sub-Saharan Africa. Int J Alzheimers Dis. 2014;2014:195750.
- [33] Ajomale O. Country report: ageing in Nigeria—current state, social and economic implications. Oxford Institute of Population Ageing. 2007;15(2):32-36.
- [34] Uwakwe R, Ibeh CC, Modebe AI, et al. The epidemiology of dependence in older people in Nigeria: prevalence, determinants, informal care, and health service utilization. J Am Geriatr Soc. 2009;57(9):1620-1627.
- [35] Okoye EC, Akosile CO, Maruf FA, et al. Physical activity level and barriers to physical activity among urban elderly individuals in Nigeria. Rwanda Med J. 2020;77(2):1-6.
- [36] Adebusoye LA, Ladipo MM, Owoaje ET, Ogunbode AM. Morbidity pattern amongst elderly patients presenting at a primary care clinic in Nigeria. Afr J Prim Health Care Fam Med. 2011;3(1):211.
- [37] Etukumana EA, Puepet FH, Obadofin MO. Risk factors for diabetes mellitus among rural adults in Nigeria. Niger J Med. 2014;23(3):213-219.
- [38] Adebowale SA, Ogunbodede E. Oral healthcare utilization patterns among the elderly in Nigeria. Oral Health Prev Dent. 2018;16(5):411-419.
- [39] Ogundipe OA, Smith M. Factors associated with depressive symptoms among elderly Nigerians. Aging Ment Health. 2019;23(8):966-973.
- [40] Bakare AT, Ogundokun RO, Kolawole SO. Healthcare access and utilization among rural elderly in Nigeria: patterns, challenges and implications. J Public Health Afr. 2021;12(1):1371.
- [41] Omole-Ohonsi A, Muhammad Z, Iliyasu Z. Health care seeking behaviour of elderly women in rural communities of North-Western Nigeria. Niger J Med. 2020;29(2):272-279.
- [42] Gureje O, Oladeji BD, Abiona T. Incidence and risk factors for late-life depression in the Ibadan Study of Ageing. Psychol Med. 2011;41(9):1897-1906.
- [43] Akande TM, Salaudeen AG, Babatunde OA. The effects of national health insurance scheme on utilization of health services in Kwara State, Nigeria. Int J Biol Med Res. 2011;2(2):561-565.
- [44] Ajayi AI, Akpan W. Who benefits from free institutional delivery? Evidence from a cross sectional survey of North Central and Southwestern Nigeria. BMC Health Serv Res. 2017;17(1):620.
- [45] Ogunlesi TA, Ogunlesi FB. Family socio-demographic factors and maternal obstetric factors influencing appropriate health-care seeking behaviours for newborn jaundice in Nigeria. Matern Child Health J. 2012;16(3):677-684.
- [46] Adebowale SA, Egunjobi TO. Life expectancy at birth in Nigeria: a systematic review and meta-analysis. Sci World J. 2021;2021:9974791.

- [47] Akinpelu AO, Eluchie NC. Familiarity with, knowledge and utilization of standardized outcome measures among physiotherapists in Nigeria. Physiother Theory Pract. 2006;22(2):61-72.
- [48] Okonkwo UC, Nwosu MN, Ukah C, et al. The clinical and pathological features of hepatocellular carcinoma in Nigeria. Niger J Med. 2011;20(3):366-371.
- [49] Adeyemo WL, Oderinu OH, Oluseye SB. Influence of socio-demographic factors on awareness and practice of oral healthcare among urban and rural residents of Lagos State, Nigeria. Niger J Clin Pract. 2018;21(9):1142-1148.
- [50] Folorunsho S, Okyere M. The impact of neglect, physical, and financial abuse on mental health among older adults: a systematic review. Aging & mental health. 2025 Apr 3;29(4):567-77.
- [51] Ojofeitimi EO, Ijadunola KT, Jegede VA, et al. Nutritional status and physical activity of elderly people in South West Nigeria. J Nutr Elder. 2002;22(1):1-13.
- [52] Iloh GU, Amadi AN, Awa-Madu J. Common geriatric emergencies in a rural hospital in South-Eastern Nigeria. Niger J Clin Pract. 2012;15(3):333-337.
- [53] Gureje O, Kola L, Oladeji B. Disability among elderly Nigerians: results from the Ibadan Study of Aging. J Am Geriatr Soc. 2016;64(4):e65-e71.
- [54] Ogunniyi A, Lane KA, Baiyewu O, et al. Hypertension and incident dementia in community-dwelling elderly Yoruba Nigerians. Acta Neurol Scand. 2011;124(6):396-402.
- [55] Adebowale N, Babalola O, Olorunfemi G. Oral health status and treatment needs of the elderly living in residential and non-residential homes in Lagos State. Ann Med Health Sci Res. 2019;9(4):592-598.
- [56] Adebusoye LA, Ogunbode AM, Olowookere OO. Factors associated with medication adherence among elderly patients in a tertiary care clinic in Nigeria. J Cross Cult Gerontol. 2015;30(2):169-181.
- [57] Azubuike SO, Okwuokei SO. Knowledge, attitude and practices of women towards breast cancer in Benin City, Nigeria. Ann Med Health Sci Res. 2013;3(2):155-160.
- [58] Ogbera AO, Fasanmade O, Ohwovoriole AE. High costs, low awareness, and a lack of care the diabetic foot in Nigeria. Diabetes Voice. 2006;51(3):30-32.
- [59] Adegbehingbe BO, Majengbasan TO. Ocular health status of rural dwellers in south-western Nigeria. Aust J Rural Health. 2007;15(4):269-272.
- [60] Oladeji BD, Makanjuola VA, Esan OB, Gureje O. Chronic pain conditions and depression in the Ibadan Study of Ageing. Int Psychogeriatr. 2011;23(6):923-929.
- [61] Adebowale SA, Atte O, Ayeni O. Elderly health and health care utilization in rural Nigeria. Int J Aging Soc. 2017;7(1):43-55.
- [62] Ogunniyi A, Hall KS, Gureje O, et al. Risk factors for incident Alzheimer's disease in African Americans and Yoruba. Metab Brain Dis. 2006;21(2):235-240
- [63] Ojagbemi A, Bello T, Luo Z, Gureje O. Chronic conditions, new onset, and persistent disability in the Ibadan Study of Aging. J Gerontol A Biol Sci Med Sci. 2017;72(7):997-1005.
- [64] Ajayi DM, Arigbede AO, Dosumu OO, Ufomata D. The prevalence and management of tooth wear in Nigerian elderly. Gerodontology. 2012;29(2):e166-e171.
- [65] Olayinka OO, Mbuyi NN, Brady KJ, et al. Predictors of outpatient medical care utilization by elderly people in Nigeria. Int J Health Serv. 2017;47(3):487-503.
- [66] Folorunsho S. The Role of Social Determinants of Health in Shaping Racial and Disability Disparities Among Older Adults in the United States. Journal of Aging & Social Policy. 2025 Jul 4:1-7.
- [67] Adebowale SA, Agbaje O, Ojo TO. Determinants of health service utilization among older adults in Nigeria: a study of Osun State. J Public Health Africa. 2019;10(2):1011.