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WHO CARES FOR PERSONS WITH SCHIZOPHRENIA? SOCIODEMOGRAPHIC CHARACTERISTICS OF PRIMARY CAREGIVERS IN A NIGERIAN TERTIARY HOSPITAL

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ABSTRACT: Caregivers play a critical role in the long-term management of patients with schizophrenia, yet the sociocultural and demographic determinants shaping their experiences remain underexplored in many low-resource settings. This study aimed to assess the pattern of sociodemographic characteristics of primary caregivers of outpatients with schizophrenia in a Nigerian tertiary hospital. A cross-sectional descriptive design was employed, and 244 eligible primary caregivers were recruited (October 2022 to January 2023). Data were collected using a structured questionnaire assessing sociodemographic characteristics and caregiving commitments, while the Psychotic Module of MINI-Plus (Mini International Neuropsychiatric Interview) was used to re-validate schizophrenia diagnosis in care recipients. Caregivers were aged 20–63 years with a mean of 44.7 ± 12.0 years. Almost two-thirds (65.2%) were at least 40 years old, about half (46.7%) had a tertiary level of education, and the majority (89.3%) were occupationally engaged. A total of 15.6% had provided care for more than 60 months, and over a quarter (26.2%) committed 36 hours or more per week in the caregiving role. While 41.0% provided care for persons with whom the kinship duration was over 30 years, 61.1% were either parents or siblings. Nearly three-fifths (59.8%) financed patients' care by themselves, and a quarter (25.0%) reported receiving no support in the caregiving role. The pattern of caregiver sociodemographic characteristics observed in this study suggests that schizophrenia care in Nigeria is sustained largely by middle-aged, economically active family members who assume long-term, high-intensity caregiving roles with limited support. These findings underscore the necessity for mental health policies that extend beyond patient-focused care to incorporate structured, caregiver-centred interventions aimed at financial protection, psychosocial support, and work-compatible service delivery.

Keywords: Schizophrenia. Primary Caregivers. Sociodemographic Characteristics. Caregiving Responsibilities. Nigeria

INTRODUCTION

Schizophrenia is a chronic and severely disabling psychiatric disorder marked by disturbances in thought, perception, affect, and behavior, with a course often characterized by relapses and long-term functional impairment. Beyond its impact on affected individuals, schizophrenia imposes substantial and enduring demands on families and health systems worldwide. The World Health Organization recognizes schizophrenia as a major contributor to years lived with disability, underscoring its profound social and economic consequences, particularly in low- and middle-income countries where health system resources are constrained (World Health Organization [WHO], 2023).

In many low-resource settings, including Nigeria, the responsibility for long-term care of persons with schizophrenia rests largely on informal caregivers, most commonly family members. These caregivers assume multifaceted roles that include monitoring medication adherence, managing disruptive or residual symptoms, providing financial support, facilitating hospital attendance, and maintaining patients' social functioning. While this family-centered caregiving model may be culturally normative and often indispensable, it frequently occurs in the absence of structured institutional support, placing caregivers at heightened risk of adverse psychosocial outcomes.

Caregiver burden in schizophrenia is a multidimensional construct encompassing emotional distress, psychological morbidity, financial strain, role disruption, social isolation, and reduced quality of life. Empirical evidence consistently demonstrates that prolonged exposure to caregiving demands is associated with elevated rates of anxiety, depression, and stress-related disorders among caregivers (Adeosun, 2013; Onuorah et al., 2023). In Nigeria, these challenges are further intensified by pervasive stigma toward mental illness, limited access to community-based mental health services, and the near absence of formal caregiver support programs or social protection mechanisms (Iyidobi et al., 2022).

Importantly, caregiver burden is not uniformly experienced but is shaped by both caregiver and patient sociodemographic characteristics. Studies conducted in Nigeria have shown that female gender, parental or spousal kinship, older caregiver age, longer duration of caregiving, and greater time commitment are significantly associated with higher levels of burden and poorer caregiver well-being (Adeosun, 2013; Ighedosa et al., 2025; Onuorah et al., 2023). Patient-related factors such as unemployment, illness severity, and persistent negative symptoms may further exacerbate caregiving demands, compounding psychological strain on caregivers.

Despite the growing body of evidence documenting caregiver burden, caregiver mental health has received limited policy attention within Nigeria's mental health system. Current mental health service delivery remains predominantly patient-focused, with minimal integration of caregiver assessment, psychosocial support, or preventive mental health interventions. This gap represents a critical policy blind spot, given that caregiver distress has been shown to negatively influence treatment adherence, relapse rates, and overall patient outcomes. Integrating caregiver mental health considerations into service planning is therefore not only a welfare issue but also a strategic component of effective schizophrenia care.

Consequently, understanding the sociodemographic profile of primary caregivers is essential for informing targeted caregiver support policies, including psychoeducation, respite services, financial assistance, and mental health screening interventions. Such evidence is particularly relevant in tertiary hospital settings, which often serve as referral centers for severe and chronic cases of schizophrenia. Against this backdrop, the present study examines the sociodemographic characteristics of primary caregivers of persons with schizophrenia attending a Nigerian tertiary hospital, with the aim of generating empirical data that can inform caregiver-centered mental health policy implementation and service design.

Also, few studies are known to have particularly focused on describing the sociodemographic profile of caregivers of patients with severe mental illness in Nigerian tertiary outpatient settings and to the best of our knowledge, none has focused on describing this concept among primary caregivers of persons with schizophrenia at Neuropsychiatric Hospital Aro, Abeokuta, Ogun State, South-West Nigeria.

This study therefore aims to assess pattern of sociodemographic characteristics of primary caregivers of outpatients with schizophrenia at Neuropsychiatric Hospital Aro, Abeokuta, Ogun State. It hopes to stimulate further research in similar contexts, provide empirical basis to inform caregiving-intervention programs and improve outcomes for both caregivers and care recipients through effective and efficient healthcare policies especially in in low- and middle-income countries like Nigeria.

METHOD

For this study a Primary Caregiver is operationalized as an individual between the age range of 18 and 64 years, shares significant personal relationship with someone who has been diagnosed to have schizophrenia, bears the main responsibilities of assisting the ill person in carrying-out activities of daily living, has been living in the same household with the ill person for at least a year and not being paid for the services rendered.

This study was carried out at the outpatient clinic of Neuropsychiatric Hospital Aro, Abeokuta, Ogun State, Nigeria. It was a descriptive cross-sectional study, and data collection was conducted over four months, from October 2022 to January 2023.

Inclusion and exclusion Criteria

Caregivers eligible for inclusion were adults who provided care for patients aged 18 years or older with a diagnosis of schizophrenia (without comorbid psychiatric or physical illness), had been on antipsychotic medication and engaged in follow-up care for at least six months. Caregivers with a known history of mental illness or chronic physical illness were excluded from participation. Caregivers with chronic physical illnesses were excluded in order to minimize potential confounding effects related to functional limitation and health-related distress, enhance participant homogeneity, and improve interpretability of sociodemographic patterns among the primary caregivers.

Sample size estimation was based on Cochran formula for infinite population size (Bolarinwa, 2020), standard normal deviate of 1.96 at 95% Confidence Interval (two-tail), 16.5% prevalence rate of moderate degree of burden among caregivers of patients with schizophrenia (Dadson et al., 2020), desired degree of accuracy of 0.05, and a non-response rate of 15.8% (Ukpong, 2012), Thus, an estimated sample size of 244 was used for this study.

A systematic random sampling method was used for participant selection. There were 4 clinic days per week, and the 4-month duration of data collection translated to 64 clinic days. Information from the Medical Record Department revealed that an average of 56 patients with a diagnosis of schizophrenia, along with their caregivers, were expected on each clinic day; thus, this number served as the sampling frame for each clinic day. Participants sampled per day were calculated to be 244 divided by 64, which was approximately 4. The sampling interval was 56 divided by 4, which was 14. The first participant was selected via balloting among caregivers with serial numbers 1 to 14. Subsequent participants for each clinic day were determined based on a sampling interval of 14. However, if the selected person did not meet the inclusion criteria, the next eligible person was admitted into the study; thereafter, the sampling interval resumed from the eligible person until the target of 4 participants for each clinic day was met. This procedure was repeated on each of the 64 clinic days throughout the four months. Information relating to the research and expectations from participants was explained to them. They were informed that participation was voluntary and declining or withdrawing would not affect their care recipients' access to care. Subsequently, those who met the inclusion criteria were given an Informed Consent Form to append their signature. Thereafter, each participant was given a self-administered structured sociodemographic questionnaire to fill out.

Ethics approval was obtained from the Health Research Ethics Committee of Neuropsychiatric Hospital Aro (NHREC/08/01/2021). The research procedure was stated in the Information Sheet. International ethical norms and standards were strictly adhered to. The research protocol was consistent with the 1964 principles of the Declaration of Helsinki and its later amendments in 2013.

Data were collected using a structured questionnaire designed by the researchers to assess sociodemographic characteristics and caregiving commitments, while the Psychotic Module of MINI-Plus (Mini International Neuropsychiatric Interview) was used to revalidate the diagnosis of schizophrenia in care recipients.

Mini-International Neuropsychiatric Interview (M.I.N.I.-Plus)

The Mini-International Neuropsychiatric Interview (M.I.N.I.) is a brief, structured diagnostic interview developed to provide a standardized psychiatric assessment suitable for clinical practice, epidemiological surveys, and multicenter clinical trials (Sheehan et al., 1998). It is designed to generate diagnoses consistent with DSM and ICD criteria while requiring significantly less administration time than longer structured interviews.

Validation studies comparing the M.I.N.I. with established diagnostic instruments such as the Structured Clinical Interview for DSM Disorders—Patient Edition (SCID-P) and the Composite International Diagnostic Interview (CIDI) have demonstrated high diagnostic validity (0.93) and

good to excellent reliability, with kappa values ranging from 0.64 to 1.00 across diagnostic categories (Sheehan et al., 2010). In addition, a Nigerian validation study reported excellent inter-rater reliability for the M.I.N.I., with a Cohen's kappa coefficient of 0.90, supporting its applicability and reliability within the local context (Adewuya et al., 2009).

The M.I.N.I.-Plus is an expanded version of the original instrument and allows for a more comprehensive diagnostic assessment, including consideration of psychiatric symptoms attributable to general medical conditions, substance use, or alcohol-related disorders. The interview is organized into modules, each identified by a letter corresponding to a specific diagnostic category. Diagnostic decisions are guided by structured questions and standardized diagnostic algorithms.

Administration of the M.I.N.I.-Plus requires minimal formal training, as noted by its developers (Lecrubier et al., 1997). Diagnoses are derived through algorithm-based scoring that integrates patient responses, informant information where available, and the clinician's judgment. At the conclusion of each module, diagnostic check boxes enable the interviewer to indicate whether criteria for a given disorder are met. The psychotic disorders module assesses both current and lifetime psychotic symptoms.

In the study, the psychotic disorders module of M.I.N.I.-Plus was used to re-validate the diagnosis of schizophrenia among care recipients. The instrument was administered by two senior psychiatry registrars who had completed at least five years of residency training and were competently familiar with the use of the instrument.

Data were analyzed using Statistical Products and Service Solutions (SPSS) version 25. Information from descriptive statistics was presented using frequency, mean, percentage and standard deviation.

RESULT

A total of 244 eligible primary caregivers who met the inclusion criteria and gave informed consent were recruited for this study. As shown in the table, Caregivers were aged 20–63 years with a mean of 44.7 ± 12.0 years. Almost two-thirds (65.2%) were at least 40 years old, about half (46.7%) had a tertiary level of education, and the majority (89.3%) were occupationally engaged. A total of 15.6% had provided care for more than 60 months, and over a quarter (26.2%) committed 36 hours or more per week in the caregiving role. While 41.0% provided care for persons with whom the kinship duration was over 30 years, 61.1% were either parents or siblings. Nearly three-fifths (59.8%) financed patients' care by themselves, and a quarter (25.0%) reported receiving no support in the caregiving role.

Table 1: Sociodemographic characteristics of primary caregivers of outpatients with schizophrenia

Variable	Frequency	Percentage (%)
Age (Mean ± SD)	(44.7±12.0)	
Age Group (Years)		
< 40	85	34.8
≥ 40	159	65.2
Gender		
Male	117	48.0
Female	127	52.0
Marital Status		
Single	58	23.8
Married	143	58.6
*S/D/W	43	17.6
Level of Education		
None/Primary	26	10.7
Secondary	104	42.6
Tertiary	114	46.7
Ethnicity		
Yoruba	147	60.2
*Non-Yoruba	97	39.8
Employment Status		
Employed	218	89.3
Unemployed	26	10.7
Duration of Care		
≤60 months	206	84.4
>60 months	38	15.6
Hour of Care per Week		
<36 hours	180	73.8
≥36 hours	64	26.2
Duration of kinship		
≤30 years	144	59.0
>30 years	100	41.0

Relationship with Patient		
Father/Mother/Sibling	149	61.1
Spouse/Child	85	34.8
*Others	10	4.1
Source of Income		
Self	146	59.8
*Others	98	40.2
Adequacy of Income		
Yes	193	79.1
No	51	20.9
Support for Patient		
Not supported	61	25.0
Supported	183	75.0

**S/D/W: Separated/Divorced/Widowed*

DISCUSSION

This study examined the sociodemographic characteristics of primary caregivers of outpatients with schizophrenia in a Nigerian tertiary hospital, and the findings highlight significant patterns that reflect both local cultural contexts and global caregiving trends. The mean caregiver age of 44.7 years, with almost two-thirds aged 40 years and above, aligns with previous research indicating that caregiving responsibilities for persons with severe mental illness often fall on middle-aged adults (Adeosun, 2013; Onwumere et al., 2022). This age group is likely to experience dual responsibilities, balancing caregiving with employment and family commitments, which may predispose them to physical, emotional, and financial strain (Gupta et al., 2021). The predominance of caregivers in mid-life further underscores the chronic and long-term nature of schizophrenia, which often necessitates prolonged informal caregiving due to limited formal mental health support systems in low- and middle-income countries (LMICs) (WHO, 2022).

A slight female predominance (52%) was observed, consistent with global literature showing that women more frequently assume caregiving roles due to entrenched gender norms, social expectations, and perceived nurturing roles (Sharma et al., 2016; Etters et al., 2018). Recent African studies continue to report similar patterns, further suggesting that cultural beliefs regarding gender and caregiving persist across regions (Akinfala et al., 2021; Eze & Okonkwo, 2020). However, the relatively modest gap between male and female caregivers in this study may signal evolving gender roles in urban Nigerian contexts, potentially driven by economic pressures, changing family structures and social roles.

The high proportion of married caregivers (58.6%) mirrors findings in previous studies within Nigeria and West Africa (Ae-Ngibise et al., 2015; Yusuf et al., 2009). Marriage has been identified as a predictor of caregiving involvement due to shared household resources, co-residency, and stronger familial bonds (Marks, 2016; Khan et al., 2023). Conversely, unmarried or divorced

individuals may experience more social or financial vulnerabilities that reduce caregiving capacity. The finding that 41.0% of caregivers reported kinship duration spanning over 30 years further supports the notion that caregiving is deeply embedded within long-standing family structures and kinship systems.

Parents and siblings constituted the majority of caregivers (61.1%), which aligns with findings that schizophrenia's typical onset in late adolescence disrupts education, employment, and independent living, leaving the burden of care primarily on family members (Gogtay et al., 2011; Pillay et al., 2018). In LMIC contexts, where institutional care and supported housing options remain limited, reliance on family care is often a default rather than a choice (WHO, 2022; Abiodun et al., 2023). The long duration of caregiving observed, with 15.6% providing care for over five years and 26.2% committing more than 36 hours weekly, reinforces the chronicity of the disorder and the enduring role of informal caregivers.

The relatively high educational attainment (46.7% tertiary education) and employment rate (89.3%) reflect changing socioeconomic profiles of Nigerian caregivers, contrasting with earlier studies reporting lower employment among caregivers (Provencher et al., 2003; Adeosun, 2013). This pattern suggests increasing economic pressures necessitating the combination of paid employment and caregiving tasks. Although approximately 79% perceived their income as adequate, the fact that nearly 60% were the primary source of financial support indicates substantial financial responsibility. Income adequacy perceptions may thus be subjective and influenced by cultural framing of duty and expectations rather than objective economic comfort (Chen & Lukens, 2011; Ewelukwa & Ndukaihe, 2022). Notably, the finding that a quarter of caregivers reported lack of support highlights enduring gaps in formal and informal assistance, which is consistent with recent literature calling for stronger community-based mental health support systems in LMICs (Feroz & Shalaby, 2023).

Limitation and strength

For a more realistic approach, the findings reported herein are better interpreted in the light of the following limitations: First, as a hospital-based study with a single-center design, data generalizability to caregivers in community settings, primary or secondary care facilities, or those who are yet to access formal mental health services, has to be done cautiously. Secondly, the cross-sectional nature of the study precludes causal inferences and does not allow assessment of changes in caregiver characteristics over time or across different stages of illness in care recipients. There is also a potential reporting bias for some sociodemographic information, as the self-report nature of the questionnaire may be subject to recall or social desirability bias, especially in areas such as income, employment status, or duration of caregiving.

Despite these limitations, this study focused on an under-researched population which remains under-represented in psychiatric caregiving literature from low- and middle-income countries. Also, the use of M.I.N.I.-Plus to re-validate the diagnoses of schizophrenia in care recipients helps to enhance its clinical relevance and internal validity. In addition, its descriptive nature can provide a baseline for future analytic research exploring caregiver burden, coping strategies, caregiver depression, and longitudinal caregiving trajectories.

Conclusion

This study highlights pattern of caregivers' sociodemographic characteristics for persons with schizophrenia in a Nigerian tertiary hospital. Findings suggest that schizophrenia care in Nigeria is sustained largely by middle-aged, economically active family members who assume long-term, high-intensity caregiving roles with limited support. It underscores the necessity for mental health policies that extend beyond patient-focused care to incorporate structured, caregiver-centered interventions aimed at financial protection, psychosocial support, and work-compatible service delivery. It offers valuable insights into the sociodemographic profile of primary caregivers of persons with schizophrenia in a Nigerian tertiary hospital setting and provides empirical data to inform caregiver-inclusive mental health policies and targeted support interventions.

Recommendations

The relatively high level of educational attainment among caregivers in this study supports the consideration of structured psychoeducation on schizophrenia, treatment adherence, and relapse prevention, delivered in formats that promote active caregiver engagement in care.

As the majority of caregivers were occupationally engaged, work–care balance policies, such as flexible follow-up care schedules for their care recipients and caregiver leave, should be encouraged with the hope of reducing caregiving strain and enhancing continuity of care.

Caregivers providing long-term and greater time commitment care should be considered for respite services, supportive psychotherapy, and periodic caregiver assessments in order to mitigate the risk of burnout.

Given that most caregivers were parents or siblings with long-standing kinship ties, family-centered and caregiver-inclusive interventions should be contemplated for routine integration into schizophrenia care.

Finally, the high level of out-of-pocket financing and the absence of support for a quarter of caregivers highlight the need for financial protection mechanisms, expanded mental health insurance coverage, and community-based caregiver support networks.

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