African Journal of Social and Behavioural Sciences (AJSBS)
Volume 16, Number 3 (2026) ISSN: 2141-209X

SOCIODEMOGRAPHIC AND ILLNESS SEVERITY CORRELATES OF COPING STYLES AMONG CAREGIVERS OF SCHIZOPHRENIA OUTPATIENTS IN NIGERIA

Osemhen Bartholomew Ighedosa[1*], Hassan Taiwo Kilani[2], Olorunyomi Felix Olorunsogbon[3], Olusina Funmi Onasile[4] & Osalumese Chris Aigbedion[5]

[1,5]Department of Psychiatry, University of Benin Teaching Hospital, Benin City, Nigeria

[2]Community Specialist Mental Health Team, Essex Partnership University NHS Trust, Colchester, United Kingdom.

[3]Department of Health Promotion & Education, Faculty of Public Health, University of Ibadan, Nigeria

[4]Department of Clinical Services, Neuropsychiatric Hospital Aro, Abeokuta, Nigeria

*osemhenighedosa@gmail.com

ABSTRACT: Caring for patients with schizophrenia may be associated with considerable stress, and caregivers adopt various coping styles to mitigate untoward consequences arising from the caregiving role in a bid to maintain mental homeostasis. This study aims to assess coping style patterns and correlates among caregivers of schizophrenia outpatients at the Neuropsychiatric Hospital Aro, Abeokuta, Ogun State, South-west, Nigeria. It was a cross-sectional analytical study involving 244 caregivers. Data collection was carried out over a four-month period. Coping Orientations to Problems Experienced (COPE), Brief Psychiatric Rating Scale (BPRS) and sociodemographic questionnaire were used for data collection, while Mini International Neuropsychiatric Interview (MINI-Plus) re-validated the diagnosis of schizophrenia. Bivariate analysis was used to test for associations between variables and multivariate analysis assessed independent predictors. The most endorsed coping style was problem-focused coping, while the least was avoidance, with mean scores of 12.65 and 6.22, respectively. Being separated, divorced or widowed ($\beta = 0.56$; $p = 0.04$), not being supported in caregiving role ($\beta = 0.42$; $p = 0.01$) and duration of care > 60 months ($\beta = 0.47$; $p = 0.01$) independently predicted emotion-focused coping. Being male ($\beta = 0.58$; $p = 0.01$), non-immediate family member of patient ($\beta = 1.71$; $p = 0.003$), not being supported in caregiving role ($\beta = 0.72$; $p = 0.02$) and having a tertiary level education ($\beta = 1.70$; $p = 0.001$) were independent predictors of problem-focused coping. Being female ($\beta = 0.73$; $p = 0.01$), supported in caregiving role ($\beta = 0.97$; $p = 0.004$), having primary level education ($\beta = 1.01$; $p = 0.02$) and duration of care ≤ 60 months ($\beta = 1.03$; $p = 0.004$) independently predicted socially supported coping. While avoidance coping was not independently predicted by any of the variables, it was significantly associated with being < 40 years of age ($p = 0.001$) and being single (marital status) ($p = 0.022$). Patients' illness severity was not associated with caregivers' coping style in a statistically significant manner. This study revealed that caregivers' coping styles in schizophrenia outpatients are significantly influenced by sociodemographic factors rather than patients' illness severity, and the preponderant use of problem-focused coping may indicate a desire to actively cope with stress. It underscores the central role of caregiver sociodemographic characteristics in shaping adaptive coping, highlighting the need for targeted, contextually relevant interventions that address caregiver vulnerabilities and strengths in enhancing coping style, which is crucial to improving patients' quality of care.

Keywords: Coping, Caregiver, Schizophrenia, Illness Severity, Nigeria

INTRODUCTION

Schizophrenia is a severe and chronic psychiatric disorder characterised by disturbances in perception, thought, emotion, and behaviour, often resulting in marked impairment in social, occupational, and role functioning (American Psychiatric Association [APA], 2013). Individuals living with schizophrenia frequently experience persistent symptoms such as hallucinations, delusions, cognitive distortions, and negative symptoms, which limit their ability to maintain interpersonal relationships, interpret social cues, and perform activities of daily living. Although the course of the illness is variable, only about one-third of affected individuals achieve full symptomatic and functional recovery, while the majority follow a chronic or relapsing trajectory marked by residual symptoms and incomplete social reintegration (World Health Organization, 2022). Empirical evidence underscores this enduring burden; for example, Campbell et al. (2015) reported that approximately 60% of patients remained symptomatic after six months of treatment, while Akinfala et al. (2021) found that 26.8% continued to exhibit prominent psychotic symptoms after at least one year of care. This persistence of illness severity places sustained demands not only on patients but also on their caregivers.

In the context of global shifts toward deinstitutionalization, caregiving responsibilities for individuals with schizophrenia have increasingly fallen on family members, thereby amplifying the psychosocial burden experienced within the household (Sharma et al., 2017; Harmanci et al., 2017). Caregivers are often exposed to chronic stress arising from the protracted course of the illness, stigma, financial strain, as well as the demands of long-term supervision. Stress, broadly conceptualized as a response to events that threaten or disrupt psychological or physical equilibrium (Okoye, 2023), is particularly salient in caregiving contexts where demands may exceed available coping resources. However, the experience of stress is not determined solely by the objective presence of stressors; rather, it is mediated by the individual’s cognitive appraisal of those demands and their perceived capacity to predict, control, or manage them. According to the cognitive-transactional model proposed by Richard S. Lazarus and Susan Folkman (1984), stress arises when individuals evaluate environmental demands as taxing or exceeding their adaptive resources, thereby highlighting the central role of perception and coping in shaping stress responses. Importantly, coping has been identified as a key mediating process linking stress to psychological outcomes, influencing whether stress results in adaptation or psychopathology (Ilan et al., 2008; Gelder et al., 2007).

Coping, as conceptualized within the cognitive-transactional framework of stress and coping, refers to the dynamic cognitive and behavioral efforts employed to manage internal and external demands appraised as taxing or exceeding one’s resources (Folkman & Lazarus, as cited in Sharma et al., 2017). These efforts may take various forms, broadly categorized as adaptive or maladaptive, and as problem-focused or emotion-focused strategies (Bonsaksen et al., 2015). From a theoretical standpoint, coping serves a homeostatic function, preserving psychological stability in the face of adversity, while its failure may contribute to emotional distress or mental disorder (Pearlin & Schooler, 1978; Hobbs, 1984; Sadock et al., 2014).

Among caregivers of individuals with schizophrenia, maladaptive coping has been associated not only with caregiver psychological morbidity but also with poorer patient outcomes, including relapse, thereby reinforcing a cyclical pattern of stress and dysfunction (Gülseren et al., 2010; Obembe et al., 2019).

Emerging evidence suggests that coping among caregivers of individuals with schizophrenia is shaped by a complex interplay of structural and psychological determinants rather than being merely an individual dispositional response. Structural factors such as illness severity, chronicity, functional impairment, financial strain, and disruptions in family and social functioning, interact with psychological variables such as perceived burden, emotional distress, resilience, and coping disposition to influence how caregivers respond to the demands of caregiving. For instance, Kamarulbahri et al. (2022) demonstrated that caregivers' coping strategies are significantly associated with levels of psychological distress and the availability of social support, underscoring the importance of contextual resources in shaping adaptive responses. Similarly, Kochhar et al. (2024) found that both patient-related clinical characteristics and caregiver-related psychosocial factors which include emotional well-being, coping patterns, and spiritual orientation, jointly determine caregiving experiences. Extending this perspective, Liu (2023), in a scoping review, highlighted that caregiving experiences are embedded within broader socio-environmental contexts, where objective burdens such as financial and role strain coexist with subjective challenges such as stigma, uncertainty, and emotional distress, all of which interact to shape coping responses. Collectively, these findings reinforce the view that coping styles among caregivers are best understood within a biopsychosocial framework thus, enhancing the conceptual basis for examining sociodemographic and illness-related correlates of coping.

Despite the high burden of schizophrenia and the central role of caregivers in patient management, there is a relative paucity of empirical studies examining coping styles within the Nigerian context, particularly in relation to both sociodemographic factors and illness severity. Existing studies have tended to either focus on caregiver burden or examine coping without adequately integrating the multidimensional influences that shape it. This gap limits the development of culturally and contextually appropriate interventions aimed at supporting caregivers and improving the quality of care for patients with schizophrenia.

Against this backdrop, this study investigates coping styles among primary caregivers of outpatients with schizophrenia, with particular attention to how these coping patterns are associated with caregivers' sociodemographic characteristics and the severity of patients' illness. Specifically, it seeks to characterize the sociodemographic profile of caregivers, assess illness severity among patients, identify predominant pattern of caregivers' coping styles, and examine the relationships between these variables. By addressing structural dimensions of coping within a local clinical population, this study hopes to contribute to ongoing scholarly debates and provide evidence to inform targeted interventions for caregivers of schizophrenia outpatients in Nigeria.

METHODS

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

Inclusion and Exclusion Criteria

For this study, a Primary Caregiver was operationalized as an individual between the age range of 18 and 64 years, shares a significant personal relationship with someone diagnosed with schizophrenia, bears main responsibilities of assisting the ill person in carrying-out activities of daily living, lives in same household with the ill person for at least a year and not being paid for the services rendered (Masa'Deh, 2017).

Caregivers eligible for inclusion were adults who provided care for patients aged 18 years or older, with a validated diagnosis of schizophrenia (without comorbid psychiatric or physical illness) and had been on antipsychotic medication with engagement in follow-up care for at least six months.

Caregivers could be immediate family members (such as parents, spouses, siblings or children), extended family members (including uncles, aunts, cousins, nephews, or nieces), or non-relatives (such as friends, neighbors, or co-workers), provided they were not receiving financial compensation for care rendered.

Caregivers with a known history of mental illness or chronic physical illness were excluded from participation.

Sample size estimation was based on use of 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% in a similar study (Ukpong, 2012), Thus, an estimated sample size of 244 was used for this study.

A systematic random sampling method was used for data collection. There were 4 clinic days in a week, and the 4-month duration for 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 the sampling interval of 14. However, if the next person did not meet the eligibility criteria, the next serial number was considered; thereafter, sampling resumed from the eligible person until the target of 4 participants per clinic day was met. This procedure was repeated on each of the 64 clinic days throughout the 4-month period of data collection. Information relating to the research was explained to participants. They were also informed that no disadvantage would accrue to them from declining to participate in the study, and even if they decided to withdraw after enrolment. Subsequently, those who met the inclusion criteria were given an Informed Consent Form to append their signature. Thereafter, each participant was privately interviewed.

Ethical approval was obtained from the Health Research Ethics Committee of the Neuropsychiatric Hospital, Aro, Abeokuta, Ogun State (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.

The sociodemographic questionnaire was designed by the authors and used to obtain information relating to caregivers' characteristics, which included: Gender, age, religion, marital status, educational qualifications, occupational status, kinship, average weekly caregiving time commitment (hours), adequacy of income, availability of social support, etc.

The psychotic module of MINI-Plus was used to re-validate the diagnosis of schizophrenia in the care recipient.

The COPE (Coping Orientations to Problems Experienced) Scale

COPE is a multi-dimensional, self-administered instrument developed by Carver et al (1989) and designed to assess a broad range of coping responses. It consists of 15 scales, each with 4 items, for a total of 60 items. Each item is assigned a score of 1 to 4 depending on the response to each item. Thus, a total of 4-16 scores is obtainable for each scale. Problem-focused coping style is measured by 3 of the scales, 5 measure emotion-focused coping, another 3 measure socially supported coping, while the remaining 4 measure avoidance coping. Assessment of coping responses with COPE has been shown to significantly correlate with those obtained via other coping assessment tools, such as the Ways of Coping Questionnaire-Revised (WOCQ-R) by Lazarus and Folkman (Gutiérrez et al., 2007). Its Internal Consistency was acceptably high (> 0.6), and test-retest reliability ranged from 0.42 to 0.89, which indicates that coping tendencies were reasonably stable (Gutiérrez et al., 2007). It has been validated in Nigeria with validity and reliability coefficients of 0.75 and 0.76, respectively (Asuzu, 2009).

Brief Psychiatric Rating Scale (BPRS)

The BPRS is clinician-administered and assesses the severity of positive, negative and affective symptoms in psychotic disorders, especially schizophrenia (Overall & Gorham, 1988). Each of the 18 symptoms is rated on a Likert scale of 1 to 7, with scores ranging from 18 to 126, and higher scores correlating with greater severity. Scores were categorized based on recommendations by Leucht et al (2005), who linked BPRS scores to Clinical Global Impression (CGI) ratings. The study revealed that being "In Remission" corresponded to a BPRS score ≤ 30, "Mildly ill" corresponded to 31 to 40, "Moderately ill", 41 to 52 and "Markedly ill", 53 to 126. For the purpose of this study, the BPRS scores were further dichotomized into "Not markedly ill" corresponding to scores ≤ 52 and "Markedly ill", 53 to 126. This approach was adopted to enhance clinical interpretability, facilitate meaningful group comparisons, and ensure adequate sample sizes within categories for statistical analysis. It also helps to improve the quality of clinical and caregiver research, as continuous symptom scores are transformed into clinically meaningful categories to support practical decision-making, risk stratification, ease communication and interpretation (Altman & Royston, 2006; Streiner, 2002). Although it may result in some loss of information, including reduced granularity of symptom severity, masking of within-group variability, and diminished statistical power, it, however, remains useful in this context where distinctions between higher and lower illness severity are of primary clinical relevance. Though dichotomization may obscure gradations in illness severity and introduce potential misclassification among individuals with scores near the threshold. Nevertheless, the authors decided to consider this method as the study objectives seek to emphasise clinically meaningful distinctions in illness severity. BPRS has been reported to have a significant correlation with total score on Positive and Negative Syndrome Scale (PANSS), and its positive and negative symptoms have also demonstrated good internal consistency with Cronbach's alpha of 0.81 and 0.91, respectively (Bell et al, 1992).

Data Analysis

Data were analyzed using Statistical Package for the Social Sciences (SPSS version 25). Descriptive statistics were used to summarize sociodemographic characteristics, illness severity, and coping styles, and results were presented using frequencies, means, percentages, and standard deviations. Prior to inferential analyses, the assumptions underlying parametric tests were assessed and showed that the continuous variable (coping style scores) was approximately normally distributed, as evidenced by symmetric histograms, Q–Q plots with points lying close to the diagonal, and non-significant Shapiro-Wilk and Levene's tests. Scatterplots demonstrated linear relationships and homoscedasticity, with residuals evenly distributed around the regression line. Student's t-test was used to examine differences in mean coping style scores across dichotomous independent variables (sociodemographic and illness severity categories), while one-way Analysis of Variance (ANOVA) was employed for variables with more than two categories. Subsequently, linear regression analysis was conducted to identify independent predictors of coping styles. The level of statistical significance was set at $p < 0.05$, with a 95% confidence interval.

RESULT

Caregivers' Sociodemographic Characteristics and Patients' Illness Severity

As shown in Table 1, caregivers' ages ranged from 20 to 63 years, with a mean of 44.7 years (SD = 12.0). Slightly above a third (34.8%) were less than 40 years. Forty-eight percent were males, and 58.6% were married. About a tenth (10.7%) had primary education as their highest educational qualification, while 46.7% had tertiary education. More than a tenth (15.6%) had been caring for a patient for more than 60 months. About three-fifths (61.1%) were fathers, mothers, or siblings of the patient; a quarter (25.0%) reported Not Being Supported in the caregiving role; and 17.2% of patients were assessed as markedly ill.

Table 1: Caregivers' Sociodemographic Characteristics and Patients' Illness Severity

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
Religion		
Christianity	159	65.2
Islam	85	34.8
Employment Status		
Employed	218	89.3
Unemployed	26	10.7
Monthly Income		
<₦30,000 ($70.8)	22	9.0
≥₦30,000	222	91.0
Duration of Care		
≤60 months	206	84.4
>60 months	38	15.6
Weekly caregiving time commitment (hours)		
<36 hours	180	73.8
≥36 hours	64	26.2
Duration of Relationship		
≤30 years	144	59.0
>30 years	100	41.0
Kinship		
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
Severity of Patients' Symptoms		
Not Markedly ill	202	82.8
Markedly ill	42	17.2

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

Frequency of use of coping style

As shown in Table 2, the most used super scale (coping style) was problem-focused coping, with a mean of 12.65 ± 1.94, while the least was avoidance, 6.22 ± 1.01.

Table 2: Frequency of use of coping style (The higher the mean, the higher the frequency of use)

COPING STYLE	MEAN	SD
EMOTION FOCUS COPING	**11.04**	**1.07**
Restraint	11.59	1.29
PRG	13.07	1.75
Acceptance	10.64	1.92
Humour	4.51	1.06
Religion	15.38	1.26
PROBLEM FOCUS COPING	**12.65**	**1.94**
Planning	13.25	1.84
Active Coping	12.86	2.11
Suppression of competing activities	11.84	2.62
AVOIDANCE COPING	**6.22**	**1.01**
Behavioural Disengagement	5.24	1.00
Denial	5.06	1.37
Substance Use	6.53	1.54
Mental Disengagement	8.03	1.84
SOCIALLY SUPPORTED COPING	**12.58**	**2.19**
Emotional Social Support	13.45	2.16
Instrumental social support	13.58	1.94
Focus on and venting of emotions	10.71	2.73

PRG: Positive Re-interpretation and Growth

Association between caregivers' sociodemographics, patients' illness severity and coping styles

Caregivers' sociodemographics and emotion-focused coping

As shown in Table 3, emotion-focused coping was significantly associated with being ≥ 40 years old (11.14(1.08) v 10.84(1.02); p = 0.038), being separated, divorced or widowed

(11.41(1.24) v 11.05(1.05) v 10.72(0.88); p = 0s.005), being in caregiving role for > 60 months (11.46(0.98) v 10.96(1-07); p = 0.008), being the source of income for patient's care (11.21(1.07) v 10.78(1.03); p = 0.002) and not being supported in caregiving (11.46(1.02) v 10.90(1.05); p = 0.001).

Caregivers' sociodemographics and problem-focused coping.

Problem-focused coping was significantly associated with being a male caregiver (13.11(1.96) v 12.23(1.84); p = 0.001), having tertiary level of education (13.36(2.04) v 12.22(1.69) v 11.26(0.97); p = 0.001), being employed (12.79(1.98) v 11.45(0.94); p = 0.001), earning ≥ minimum wage of #30,000 ($70.8) (12.74(1.94) v 11.77(1.77); p = 0.026), committing < 36 hours per week in caregiving role (12.86(1.98) v 12.05(1.70); p = 0.004), being non-immediate family member of patient (14.33(3.10) v 12.60(1.89) v 12.53(1.79); p = 0.019), being the source of income for patient's care (12.95(2.05) v 12.20(1.68); p = 0.003) and not being supported in caregiving role (13.89(1.86) v 12.40(1.91); p = 0.001).

Caregivers' sociodemographics and avoidance coping

Avoidance coping was significantly associated with being < 40 years of age (6.50(1.52) v 6.06(0.54); p = 0.001) and being single (marital status) (6.53(1.52) v 6.14(0.87) v 6.03(0.26); p = 0.022).

Caregivers' sociodemographics and socially supported coping

Socially supported coping was significantly associated with being a female caregiver (13.09(2.10) v 12.02(2.04); p = 0.001), having primary level of education (13.36(2.29) v 12.92(2.27) v 12.10(1.99); p = 0.003) being unemployed (13.45(2.31) v 12.48(2.16); p = 0.032), being in caregiving role for ≤ 60 months (12.74(2.21) v 11.74(1.87); p = 0.009), not being the source of income for patient's care (13.19(2.14) v 12.17(2.13); p = 0.001) and being supported in caregiving role (12.94(2.22) v 11.51(1.71); p < 0.001).

Patients' illness severity and coping styles

There was no statistically significant association between patients' illness severity and caregivers' coping styles.

Table 3: Association between sociodemographic characteristics of caregivers and coping style

VARIABLE	EMOTION COPING		FOCUS		PROBLEM FOCUS COPING				AVOIDANCE COPING				SOCIALLY SUPPORTED COPING			
	Mean	**SD**	**t(F)**	**P**	**Mean**	**SD**	**t(F)**	**p**	**Mean**	**SD**	**t(F)**	**p**	**Mean**	**SD**	**t(F)**	**P**
Age Group																
<40 years	10.84	1.02	2.085	**0.038**	12.31	1.77	2.016	0.045	6.50	1.52	3.275	**0.001**	12.74	2.22	0.817	0.415
≥40 years	11.14	1.08			12.83	2.01			6.06	0.54			12.50	2.17		
Gender																
Male	11.07	0.97	0.501	0.617	13.11	1.96	3.601	**0.001**	6.32	1.24	1.500	0.135	12.02	2.04	-3.934	**0.001**
Female	11.00	1.16			12.23	1.84			6.12	0.73			13.09	2.10		
Marital Status																
Single	10.72	0.88	(5.350)	**0.005**	12.36	1.85	(0.945)	0.390	6.53	1.52	(3.857)	**0.022**	12.84	2.27	(0.614)	0.542
Married	11.05	1.05			12.78	2.00			6.14	0.87			12.53	2.19		
S/D/W	11.41	1.24			12.62	1.87			6.03	0.26			12.40	2.10		
Level of Education																
None/Primary	11.14	1.59	(1.695)	0.186	11.26	0.97	(19.414)	**0.001**	6.32	1.21	(0.220)	0.803	13.36	2.29	(5.887)	**0.003**
Secondary	10.89	1.08			12.22	1.69			6.18	0.92			12.92	2.27		
Tertiary	11.15	0.90			13.36	2.04			6.23	1.05			12.10	1.99		
Ethnicity																
Yoruba	10.94	1.15	-1.758	0.080	12.45	1.98	1.961	0.051	6.29	1.16	1.342	0.181	12.72	2.25	1.236	0.218
Non-Yoruba	11.18	0.92			12.95	1.85			6.11	0.73			12.37	2.09		
Religion																
Christianity	11.07	1.08	0.687	0.493	12.68	1.87	0.318	0.751	6.23	1.06	0.303	0.762	12.48	2.15	0.881	0.327
Islam	10.97	1.06			12.60	2.08			6.19	0.91			12.77	2.26		
Employment status																
Employed	11.08	1.07	1.941	0.053	12.79	1.98	3.412	**0.001**	6.19	0.96	-1.056	0.292	12.48	2.16	-2.156	**0.032**
Unemployed	10.65	1.02			11.45	0.94			6.41	1.37			13.45	2.31		
Monthly Income																
<₦30,000	10.84	1.37	-0.919	0.359	11.77	1.77	-2.242	**0.026**	6.57	1.81	1.721	0.087	12.95	2.39	0.840	0.402
≥₦30,000	11.06	1.04			12.74	1.94			6.18	0.90			12.54	2.17		

Duration of Care																
≤60 Months	10.96	1.07	-2.682	**0.008**	12.55	1.94	-1.886	0.061	6.21	1.01	0.913	0.990	12.74	2.21	2.618	**0.009**
>60 Months	11.46	0.98			13.19	1.88			6.22	1.02			11.74	1.87		
Weekly caregiving time commitment																
<36 Hours	10.96	0.95	-1.791	0.075	12.86	1.98	2.914	**0.004**	6.17	0.92	-1.256	0.210	12.61	2.18	0.365	0.716
≥36 Hours	11.24	1.34			12.05	1.70			6.35	1.24			12.49	2.22		
Duration of Relationship																
≤30 Years			2.011	0.045			-1.319	0.188			-0.094	0.925			-0.135	0.893
>30 Years	11.15	1.11			12.51	1.80			6.21	0.99			12.56	2.21		
	10.87	0.99			12.85	2.12			6.22	1.05			12.60	2.17		
Kinship																
Father/Mother/Sibling	10.97	1.07	(1.467)	0.235	12.60	1.89	(4.055)	**0.019**	6.16	0.84	(1.124)	0.327	12.74	2.19	(2.063)	0-129
Spouse/Child	11.19	1.09			12.53	1.79			6.34	1.30			12.23	2.14		
Others	10.76	0.69			14.33	3.10			6.00	0.00			13.27	2.28		
Source of Income																
Self	11.21	1.07	3.153	**0.002**	12.95	2.05	3.013	**0.003**	6.20	1.06	-0.150	0.881	12.17	2.13	-3.656	**0.001**
Others	10.78	1.03			12.20	1.68			6.23	0.94			13.19	2.14		
Income Adequacy																
Yes	11.04	1.04	0.103	0.902	12.78	1.89	1.999	0.047	6.15	0.81	-1.879	0.061	12.54	2.18	-0.579	0.563
No	11.02	1.17			12.17	2.08			6.45	1.54			12.74	2.28		
Support for Patient's Care																
Not Supported	11.46	1.02	3.630	**0.001**	13.89	1.86	3.506	**0.001**	6.06	0.26	-1.408	0.161	11.51	1.71	-4.573	**0.001**
Supported	10.90	1.05			12.40	1.91			6.27	1.16			12.94	2.22		
Severity of Patient's Symptoms																
Not markedly ill	11.00	1.06	-1.151	0.248	12.63	1.96	-0.293	0.770	6.21	1.02	-0.077	0.938	12.60	2.20	0.36	0.715
Markedly ill	11.21	1.11			12.73	1.89			6.23	1.00			12.47	2.13		

Independent predictors of caregivers' coping styles.

Independent predictors of emotion-focused coping

As shown in Table 4, emotion-focused coping was independently predicted by caregivers who were separated, divorced or widowed (β = 0.56; p = 0.04), being engaged in caregiving role for > 60 months (β = 0.47; p = 0.01) and reporting not being supported in caregiving role (β = 0.42; p = 0.01).

Independent predictors of problem-focused coping.

It was independently predicted by being a male caregiver (β = 0.58; p = 0.01), having secondary level of education (β = 0.86; p = 0.04), having tertiary level of education (β = 1.70; p = 0.001), being a non-immediate family member of care recipient (β = 1.90; p = 0.002) and report of not being supported in caregiving role (β = 0.71; p = 0.02).

Independent predictors of socially supported coping.

Independently predicted by being a female caregiver (β = 0.73; p = 0.01), having a primary level of education (β = 1.01; p = 0.02), being engaged in a caregiving role for ≤ 60 months (β =1.03; p = 0.004) and reporting being supported in the caregiving role (β = 0.97; p = 0.004).

Independent predictors of avoidance coping

None of the sociodemographic characteristics of being less than 40 years of age and being single was found to independently predict avoidance coping.

Table 4: Independent predictors of emotion-focused coping, problem-focused coping, avoidance coping and socially supported coping.

VARIABLE	β	Standardized Beta	95% CI	p-value
EMOTION-FOCUSED COPING				
Age Group				
≥40 years	0.10	0.05	-0.47, 0.26	0.58
<40 years				
Marital Status				
Married	0.25	0.11	-0.14, 0.64	0.22
S/D/W	0.56	0.20	0.04, 1.07	**0.04**
Single				
Duration of Care				
>60 Months	0.47	0.16	0.11, 0.84	**0.01**
≥60 Months				
Source of Income				
Self	0.20	0.09	-0.11, 0.50	0.20
Others				
Support for Patient's Care				
Not supported	0.42	0.17	0.09, 0.75	**0.01**
Supported				
PROBLEM-FOCUSED COPING				
Gender				
Male				
Female	0.58	0.15	0.12, 1.05	**0.01**
Level of Education				
Secondary	0.86	0.22	0.05, 1.67	**0.04**
Tertiary	1.70	0.44	0.85, 2.54	**0.001**
None/Primary				
Employment Status				
Employed	0.80	0.13	-0.01, 1.61	0.05
Unemployed				
Monthly Income				
≥₦30,000 ($70.8)	0.14	0.02	-0.72, 1.00	0.75
<₦30,000				
Hour of care weekly				
≥36 Hours	-0.16	0.04	-0.69, -0.37	0.56
<36 Hours				
Relationship with patient				
Father/Mother/Siblings				
Others	0.19	0.05	-0.31, 0.68	0.46
Spouse/Child	1.90	0.19	0.72, 3.08	0.002

Source of Income				
Self	0.04	0.01	-0.52, 0.60	0.89
Others				
Support for Patient's Care				
Not supported	0.71	0.16	0.13, 1.30	**0.02**
Supported				
AVOIDANCE COPING				
Age Group				
≥40 years	-0.34	0.16	0.01, -0.68	0.06
<40 years				
Marital Status				
Married	-0.17	-0.08	0.21, 0.54	0.39
S/D/W	-0.20	-0.07	0.30, 0.69	0.44
Single				
SOCIALLY SUPPORTED COPING				
Gender				
Male	-0.73	0.17	-1.27, 0.20	**0.01**
Female				
Level of Education				
Secondary	-0.51	-0.12	-1.38, 0.37	0.26
Tertiary	-1.01	-0.23	-1.88, -1.32	**0.02**
None/Primary				
Employment Status				
Employed	-0.27	0.04	-0.65, 1.19	0.56
Unemployed				
Duration of Care				
>60 months	-1.03	-2.90	-1.74, -0.33	**0.004**
≤60 Months				
Source of Income				
Self	-0.35	0.08	-0.28,0.99	0.27
Others				
Support for Patient's Care				
Not supported	-0.97	0.19	-1.64, -0.31	**0.004**
With Support				

DISCUSSION

The predominance of problem-focused coping observed in this study suggests that caregivers of individuals with schizophrenia may preferentially adopt active strategies aimed at managing or modifying stressors associated with caregiving. This pattern aligns with prior evidence indicating that caregivers often engage in task-oriented coping when faced with chronic caregiving demands, particularly in structured clinical contexts where treatment adherence and symptom monitoring require active involvement.

The increased use of emotion-focused coping among caregivers with longer caregiving duration (>5 years) is consistent with earlier findings (Sandeep et al., 2015), indicating a shift in coping patterns over time. Prolonged exposure to caregiving demands may lead to cumulative psychological strain, necessitating greater reliance on strategies aimed at emotional regulation rather than direct problem resolution (Chen & Greenberg, 2004). Importantly, contemporary research suggests that such patterns are not merely a function of duration alone but emerge from the interaction between chronic stress exposure, cognitive appraisal processes, and available psychosocial resources (Folkman, 2013). The observed reduction in socially supported coping among long-term caregivers may therefore reflect adaptive recalibration of coping strategies in response to perceived availability or effectiveness of support over time, rather than merely withdrawal.

Caregivers who reported lack of support demonstrated greater use of both problem-focused and emotion-focused coping, alongside reduced reliance on socially supported coping. While previous literature has linked poor social support with increased emotional coping (Sandeep et al., 2015), the present findings suggest a more nuanced pattern. Rather than attributing this solely to self-sufficiency, it may reflect a compensatory adaptation in which caregivers mobilise internal coping resources when external support systems are perceived as inadequate. This interpretation is supported by evidence that coping behaviors are shaped by dynamic interactions between perceived support, coping self-efficacy, and contextual demands, rather than by single dispositional traits (Park & Adler, 2023). Nonetheless, studies have shown that higher coping self-efficacy may reduce reliance on external support, thus making such individuals less favourably disposed to seeking social support (Freire et al., 2020).

Gender differences observed in this study, where males were more likely to use problem-focused coping and females more likely to utilize socially supported coping, are broadly consistent with existing literature. Prior studies suggest that women tend to engage more with interpersonal support systems, while men are more inclined toward instrumental coping strategies (Chukwu et al., 2019; Gattino et al., 2014). Although these patterns are often interpreted through socialization frameworks, recent evidence indicates that gender differences in coping are increasingly shaped by contextual and role-related factors rather than fixed norms alone (Theodoratou et al., 2023). The absence of a significant association between female gender and emotion-focused coping in this study further supports the notion that caregiving demands may attenuate traditional gender differences, compelling both male and female caregivers to adopt more pragmatic and situation-driven coping responses.

Educational attainment was positively associated with problem-focused coping and inversely associated with socially supported coping. This finding is consistent with earlier work suggesting that higher education enhances problem-solving skills, perceived control, and access to informational resources (Vitaliano et al., 1990; Shankland et al., 2009). However, rather than reflecting a simple increase in self-sufficiency, current perspectives emphasize that education interacts with cognitive appraisal and resource availability to shape coping choices (Freire et al., 2020). Individuals with higher education may be more likely to appraise stressors as modifiable and therefore engage in active coping, while simultaneously perceiving less need for social support.

The observed kinship differences in coping styles, with non-immediate relatives more likely to use problem-focused strategies, may reflect variations in emotional involvement and caregiving expectations. Immediate family members, such as spouses and children, may experience greater emotional burden, which could predispose them toward emotion-focused coping. In contrast, non-immediate relatives may adopt more task-oriented approaches due to relatively lower emotional entanglement. Nevertheless, these patterns should be interpreted cautiously, as emerging evidence suggests that caregiver coping is influenced by the interplay of relational closeness, role expectations, and perceived burden rather than kinship category alone (Makanjuola & Ngcobo, 2025).

Although younger caregivers (<40 years) showed a bivariate association with avoidance coping, this relationship did not persist in multivariate analysis, suggesting the influence of confounding factors, such as marital status. This observation was similarly reported among a cohort of younger nurses (<40 years) in south-west Nigeria (Asuzu, 2009). It highlights the importance of considering multiple interacting sociodemographic variables when examining coping behaviors, as single-variable associations may not adequately capture underlying dynamics.

Notably, this study did not find a statistically significant association between patients' illness severity and caregivers' coping styles. This finding is consistent with prior research (Mishra et al., 2017) and reinforces the growing body of evidence suggesting that coping is not solely determined by illness-related factors. Instead, coping patterns appear to be more strongly influenced by caregivers' cognitive appraisals, psychosocial resources, and sociodemographic context (Carver & Connor-Smith, 2010; Folkman & Moskowitz, 2004). This may indicate that caregivers adapt their coping strategies relatively independently of fluctuations in symptom severity, particularly in chronic conditions such as schizophrenia, where stressors are ongoing and multifaceted. From a clinical perspective, this underscores the need for interventions that focus not only on symptom control but also on strengthening caregivers' adaptive coping capacities and resilience.

Overall, the findings of this study support the cognitive-transactional model of stress, which posits that coping effectiveness depends on the fit between the individual's appraisal of a stressor and the coping strategy employed. Consistent with this model, caregivers appear to deploy different coping strategies based on perceived controllability and contextual demands rather than relying on a single dominant approach. This reinforces the importance of individualized and context-sensitive interventions that address both the structural and psychological determinants of coping among caregivers of individuals with schizophrenia.

Conclusion

This study demonstrates that caregivers' coping styles in schizophrenia outpatients are shaped more by sociodemographic characteristics than by patients' illness severity. The predominance of problem-focused coping suggests an active effort by caregivers to manage stress and preserve psychological stability. These findings highlight the central role of caregiver-related factors in determining adaptive coping, underscoring the importance of interventions that are tailored to caregivers' sociodemographic contexts, resources, and vulnerabilities. Importantly, the results suggest that optimizing caregiver well-being requires aligning coping strategies with both individual characteristics and the perceived controllability of caregiving stressors. Interventions that promote such alignment may enhance the adoption of more adaptive coping styles and, in turn, improve the overall quality of care provided to patients with schizophrenia.

Policy implication: These findings support the integration of structured caregiver assessment and support programs into routine mental health services, particularly within resource-constrained settings, with policies that prioritize caregiver-focused psychoeducation, social support access, and context-specific coping interventions as part of comprehensive schizophrenia care.

ACKNOWLEDGMENT

We are immensely grateful to all caregivers involved in this study, who were the very reason it was undertaken. May the findings of this research help to enhance their well-being.

DECLARATION OF INTEREST

The authors declare no conflict of interest.

FUNDING

This study was funded by the authors.

REFERENCES

Akinfala, A., Sowunmi, O., & Sakeeb, I. (2021). Prevalence and factors associated with depression among primary caregivers of patients with schizophrenia attending a Nigerian tertiary hospital. BJPsych Open, 7(S1), S128–S129. https://doi.org/10.1192/bjo.2021.378

Altman, D. G., & Royston, P. (2006). The cost of dichotomizing continuous variables. BMJ, 332(7549), 1080. https://doi.org/10.1136/bmj.332.7549.1080

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). American Psychiatric Publishing.

Asuzu, C. C. (2009). Shift duty and stress coping strategies among nurses in the University College Hospital, Ibadan. The Anthropologist, 11(2), 73–78.

Bell, M., Milstein, R., Beam-Goulet, J., Lysaker, P., & Cicchetti, D. (1992). The Positive and Negative Syndrome Scale and the Brief Psychiatric Rating Scale: Reliability, comparability, and predictive validity. Journal of Nervous and Mental Disease, 180(11), 723–728. https://doi.org/10.1097/00005053-199211000-00007

Bolarinwa, O. A. (2020). Sample size estimation for health and social science researchers: The principles and considerations for different study designs. Nigerian Postgraduate Medical Journal, 27, 67–75.

Bonsaksen, T., & Lerdal, A. (2015). Trajectories of self-efficacy in persons with chronic illness: An explorative longitudinal study. Scandinavian Journal of Public Health, 43(2), 168–175. https://doi.org/10.1177/1403494814560841

Campbell, E. A., Olagunju, A. T., Aina, O. F., & Ogbolu, R. E. (2015). Assessment of functioning among Nigerians with schizophrenia in a tertiary health facility: Influence of psychopathology, sociodemographic and treatment factors. Journal of Psychosocial Rehabilitation and Mental Health, 2(1), 35–41. https://doi.org/10.1007/s40737-015-0030-8

Carver, C. S., & Connor-Smith, J. (2010). Personality and coping. Annual Review of Psychology, 61, 679–704. https://doi.org/10.1146/annurev.psych.093008.100352

Carver, C. S., Scheier, M. F., & Weintraub, K. J. (1989). Assessing coping strategies: A theoretically based approach. Journal of Personality and Social Psychology, 56(2), 267–283. https://doi.org/10.1037/0022-3514.56.2.267

Chen, F., & Greenberg, J. S. (2004). A positive aspect of caregiving: The influence of social support on caregiving gains for family members of relatives with schizophrenia. Community Mental Health Journal, 40(5), 423–435. https://doi.org/10.1023/B:COMH.0000035222.26811.e0

Chukwu, N. E., Okoye, U. O., Onyeneho, N. G., & Okeibunor, J. C. (2019). Coping strategies of families of persons with learning disability in Imo State of Nigeria. Journal of Health, Population and Nutrition, 38(1), 1–9. https://doi.org/10.1186/s41043-019-0168-2

Dadson, D. A., Annor, F., & Yendork, J. S. (2018). The burden of care: Psychosocial experiences and coping strategies among caregivers of persons with mental illness in Ghana. Issues in Mental Health Nursing, 39(11), 915–923.

Folkman, S. (2013). Stress, coping and hope. Psycho-Oncology, 22(10), 2143–2146. https://doi.org/10.1002/pon.304

Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. Annual Review of Psychology, 55, 745–774. https://doi.org/10.1146/annurev.psych.55.090902.141456

Freire, C., Ferradás, M. M., Regueiro, B., Rodríguez, S., Valle, A., & Núñez, J. C. (2020). Coping strategies and self-efficacy in university students: A person-centered approach. Frontiers in Psychology, 11, 841. https://doi.org/10.3389/fpsyg.2020.00841

Gattino, S., Norma, D., & Chiara, R. (2014). The influence of coping strategies on quality of life from a gender perspective. Applied Research in Quality of Life, 9(4), 635–651. https://doi.org/10.1007/s11482-013-9257-2

Gülseren, L., Cam, B., Karakoç, B., Yiğit, T., Danacı, A. E., & Çubukçuoğlu, Z. (2010). The perceived burden of care and its correlates in schizophrenia. Turkish Journal of Psychiatry, 21(3), 203–212.

Gutiérrez, F., Peri, J. M., Torres, X., Caseras, X., & Valdés, M. (2007). Three dimensions of coping and a look at their evolutionary origin. Journal of Research in Personality, 41(5), 1032–1053. https://doi.org/10.1016/j.jrp.2006.06.002

Harmanci, P., & Çetinkaya, D. (2016). Investigating relationship between burden of caregivers of patients with schizophrenia and mental health conditions. Journal of Psychiatric Nursing, 7(2), 82–86. https://doi.org/10.5505/phd.2016.92654

Hobbs, M. (1984). Crisis intervention in theory and practice: A selective review. British Journal of Medical Psychology, 57(1), 23–34. https://doi.org/10.1111/j.2044-8341.1984.tb01580.x

Ilan, H. M., Schwartz, S., & David, M. (2008). Social patterning of stress and coping: Does disadvantaged social status confer more stress and fewer coping resources? Social Science & Medicine, 67(3), 368–379. https://doi.org/10.1016/j.socscimed.2008.03.012

Kamarulbahri, T. M. S. T., Ariaratnam, S., Nikmat, A. W., Abdullah, N. N., & Khing, T. L. (2022). Coping strategies and their associated factors among caregivers of patients with schizophrenia in Kuantan, Malaysia. Frontiers in Psychiatry, 13, 1004034. https://doi.org/10.3389/fpsyt.2022.1004034

Kochhar, S. S., Mishra, A. K., Chadda, R. K., Sood, M., & Bhargava, R. (2024). Psychosocial correlates of the experience of caregiving among caregivers of patients with schizophrenia. Cureus, 16(4), e58531. https://doi.org/10.7759/cureus.58531

Leucht, S., Kane, J. M., Kissling, W., Hamann, J., Etschel, E., & Engel, R. R. (2005). What does the Brief Psychiatric Rating Scale (BPRS) mean? Schizophrenia Research, 79(2–3), 231–238. https://doi.org/10.1016/j.schres.2005.04.008

Liu, Y.-C. (2023). Caregiving experience associated with unpaid carers of persons with schizophrenia: A scoping review. Social Work in Mental Health, 21(3), 219–249. https://doi.org/10.1080/15332985.2023.2282932

Makanjuola, O. J., & Ngcobo, W. B. (2025). Caregiver burden and the related factors among family caregivers of older persons with schizophrenia: A mixed methods study. International Journal of Older People Nursing, 20(5), e70047. https://doi.org/10.1111/opn.70047

Masa'deh, R. (2017). Perceived stress in family caregivers of individuals with mental illness. Journal of Psychosocial Nursing and Mental Health Services, 55(6), 30–35. https://doi.org/10.3928/02793695-20170519-04

Mishra, R., Shrestha, M. R., & Pandey, A. K. (2017). Coping strategies among caregivers of patients with schizophrenia attending a tertiary care hospital in Nepal. Journal of Psychiatrists' Association of Nepal, 6(2), 31–36. https://doi.org/10.3126/jpan.v6i2.20842

Obembe, O. B., Adeyemo, S., & Ogun, O. C. (2019). The relationship between coping styles and depression among caregivers of children with cerebral palsy in Nigeria, West Africa. Archives of Clinical Psychiatry, 46(6), 145–150. https://doi.org/10.1590/0101-60830000000213

Okoye, A. (2023). The concept of stress among the elderly: Psychosocial management strategies. Journal of Public Policy and Administration Research, 8(1), 34–41.

Overall, J. E., & Gorham, D. R. (1988). The Brief Psychiatric Rating Scale (BPRS): Recent developments in ascertainment and scaling. Psychopharmacology Bulletin, 24(1), 97–99.

Park, C. L., & Adler, N. E. (2023). Coping and resilience in caregiving: A socioecological perspective. Annual Review of Psychology, 74, 437–462. https://doi.org/10.1146/annurev-psych-020821-011820

Pearlin, L. I., & Schooler, C. (1978). The structure of coping. Journal of Health and Social Behavior, 19(1), 2–21.

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. Springer.

Sadock, B. J., Sadock, V. A., & Ruiz, P. (2014). Kaplan & Sadock's synopsis of psychiatry: Behavioral sciences/clinical psychiatry (11th ed.). Wolters Kluwer.

Sandeep, G. P., & Chakrabarti, S. (2015). Coping among the caregivers of patients with schizophrenia. Industrial Psychiatry Journal, 24(2), 221–233. https://doi.org/10.4103/0972-6748.181720

Shankland, R., & Genolini, C. M. (2009). Preliminary study on the role of alternative educational pathways in promoting the use of problem-focused coping strategies. European Journal of Psychology of Education, 24(4), 499–512. https://doi.org/10.1007/BF03178761

Sharma, H., Sharma, B., & Sharma, D. B. (2017). Burden, perceived stigma, and coping style of caregivers of patients with schizophrenia and bipolar disorder. International Journal of Health Sciences and Research, 7(11), 84–92.

Streiner, D. L. (2002). Breaking up is hard to do: The heartbreak of dichotomizing continuous data. Canadian Journal of Psychiatry, 47(3), 262–266. https://doi.org/10.1177/070674370204700307

Theodoratou, M., Kougioumtzis, G., Kaltsouda, A., Siouti, Z., Gkintoni, E., & Tsitsas, G. (2023). Emotion-focused coping, social support and active coping among university students: Gender differences. Journal of Psychology and Clinical Psychiatry, 14(1), 5–9.

Ukpong, D. (2012). Burden and psychological distress among Nigerian family caregivers of schizophrenic patients: The role of positive and negative symptoms. Turkish Journal of Psychiatry, 23(1), 40.

Vitaliano, P. P., DeWolfe, D. J., Maiuro, R. D., Russo, J., & Katon, W. (1990). Appraised changeability of a stressor as a modifier of the relationship between coping and depression: A test of the hypothesis of fit. Journal of Personality and Social Psychology, 59(3), 582–592. https://doi.org/10.1037/0022-3514.59.3.582

World Health Organization. (2022, January 10). Schizophrenia: Fact sheet. https://www.who.int/news-room/fact-sheets/detail/schizophrenia