

Do Younger Caregivers Experience Higher Distress? A Study of Age Differences in Psychological Burden among Cancer Caregivers

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ABSTRACT

Background: Psychological distress is a widespread concern among informal caregivers of cancer patients, often exceeding the emotional toll experienced by patients themselves. Although several studies have highlighted general caregiver burden, limited research has investigated how caregiver age influences psychological outcomes, especially in low-resource settings such as Nigeria.

Objective: This study aimed to determine whether younger caregivers of cancer patients experience higher psychological distress compared to their older counterparts in Nigeria.

Methodology: A cross-sectional study was conducted among 150 informal caregivers of cancer patients in three major hospitals in Ibadan. Participants were categorized into two age groups: younger caregivers (18–39 years) and older caregivers (40 years and above). Data were collected using the Kessler Psychological Distress Scale (K10). Descriptive statistics summarized demographic characteristics, while an independent samples t-test compared distress levels between the two age groups.

Findings: Results showed that younger caregivers reported significantly higher distress scores ($M = 29.85$, $SD = 6.11$) than older caregivers ($M = 23.76$, $SD = 5.87$), with the difference being statistically significant [$t(148) = 5.55$, $p < .001$]. The findings suggest that younger caregivers may experience greater psychological burden due to developmental life-stage conflicts, reduced financial security, and limited caregiving experience.

Conclusion: The study concludes that younger informal caregivers of cancer patients in Ibadan are at greater risk of psychological distress. These findings highlight the importance of implementing age-specific mental health screening and psychosocial support interventions, particularly brief and accessible tools suited for community and clinical settings in low-resource environments.

Keywords: Cancer Caregivers, Psychological Distress, Age Differences, Age Differences

Introduction

The diagnosis of cancer in a loved one often places significant psychological and emotional burdens on informal caregivers, particularly family members who assume responsibility for ongoing support and care [1-3]. Informal caregiving, while essential to the holistic management of cancer patients, is

associated with considerable stress, emotional exhaustion, and anxiety, potentially impairing caregivers' mental health and quality of life [4-6]. While caregiver distress has been well documented, less attention has been paid to how the age of the caregiver influences the level and nature of psychological burden experienced during caregiving.

Emerging evidence suggests that younger caregivers may experience higher levels of distress compared to their older

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counterparts [7-10]. Younger adults are often navigating critical life transitions such as career development, financial instability, and relationship formation while simultaneously managing the complex demands of caregiving [11-13]. This convergence of responsibilities may lead to increased vulnerability to anxiety, depression, and burnout. A prospective study by Applebaum et al. (2018) highlighted that younger caregivers of advanced cancer patients reported significantly more psychological distress and lower levels of perceived preparedness for caregiving duties than older caregivers, pointing to age as a key demographic risk factor for distress in oncology caregiving contexts [14].

Moreover, the lack of life experience, particularly in managing severe illness, emotional regulation, and navigating healthcare systems, may further disadvantage younger caregivers [7,15,16]. In contrast, older caregivers may have more established coping mechanisms, greater resilience, and life experience in managing health crises [3,9,12]. A longitudinal study by Mistry et al. (2023) identified distress trajectories among cancer caregiver-patient dyads and found that younger caregivers were more likely to fall into the “high distress” trajectory across multiple time points, regardless of disease progression [17]. These findings are corroborated by recent meta-analytic reviews which report a moderate effect size for age in predicting caregiver burden, with younger caregivers consistently scoring higher on distress-related indices such as anxiety, depression, and emotional exhaustion [18-20].

Despite these findings, many studies have treated age as a covariate or background demographic rather than a central variable of investigation, resulting in a lack of age-specific data to inform targeted interventions [21-24]. Additionally, most existing studies focus on longitudinal distress trajectories over extended periods and are often conducted in clinical trial settings that may not reflect day-to-day caregiving realities, particularly in under-resourced or culturally diverse contexts [25-28]. There is also a gap in research employing short, targeted surveys to assess age-specific differences in psychological burden in real-world, time-sensitive caregiving situations. Furthermore, few studies have examined these dynamics using brief, accessible mental health tools that can be easily deployed for screening in both clinical and community-based caregiving populations [29-31].

This study seeks to fill these gaps by conducting a focused, cross-sectional investigation into whether younger caregivers experience higher psychological distress compared to older caregivers, using validated instruments that can be completed and analyzed within a short timeframe. By framing caregiver age as the primary independent variable and distress as the measurable outcome, the study aims to generate actionable evidence that can inform the design of age-sensitive mental health interventions and screening programs. The results may also provide a basis for policy recommendations aimed at improving support for younger caregivers, who are often overlooked in caregiver-focused services and psychosocial oncology programs.

Literature Review

Psychological distress is one of the most prevalent challenges among caregivers of cancer patients, often surpassing the emotional toll experienced by the patients themselves [32,33].

Symptoms of depression, anxiety, sleep disorders, and chronic fatigue are commonly reported, especially among informal caregivers tasked with daily responsibilities over prolonged periods [34]. These burdens are exacerbated by role strain, uncertainty about treatment outcomes, and limited social or institutional support [35].

Age has emerged as a particularly important yet underexplored factor in moderating caregiver distress. While much research acknowledges caregiver burden broadly, fewer studies have delved deeply into how age-specific stressors shape psychological outcomes [36,37,38]. Younger caregivers (typically aged 18-39) frequently juggle caregiving with developmental and life-stage demands such as academic pursuits, early career responsibilities, and social identity formation [39]. Park et al. (2021) observed that these caregivers often exhibit higher levels of emotional burnout and perceived helplessness compared to older cohorts [36]. Jang and Tang (2022) further demonstrated that younger adult caregivers report significantly poorer coping efficacy and elevated anxiety levels tied to interrupted life trajectories [37]. Likewise, Ketcher et al. (2022) found that age-specific factors like financial insecurity and limited caregiving experience amplify distress among caregivers under 40 [38].

However, a key limitation in the current literature is that age is frequently treated as a covariate or background demographic variable, rather than being central to the research question [40-42]. Litzelman et al. (2020) emphasized that while age is often statistically controlled for, its specific psychological implications remain insufficiently analyzed [40]. Similarly, studies by Martinez et al. (2022) and Chen et al. (2021) have employed age only descriptively, thereby missing deeper insight into how distress manifests across age cohorts [41,42]. As a result, there is a lack of age-specific data to inform targeted interventions tailored to younger caregivers' needs.

In addition, many existing studies are based on longitudinal distress trajectories observed in clinical trial settings that may not reflect the immediate, day-to-day realities of caregiving, particularly in low-resource or culturally diverse populations [43-45]. Rahman et al. (2023) and Muramatsu et al. (2020) reported that caregivers in such settings face cultural stigma, inconsistent access to mental health care, and practical barriers to service utilization—factors that are often overlooked in controlled research environments [44,45]. These limitations significantly reduce the ecological validity of findings and hamper the development of scalable mental health interventions.

Moreover, few studies have utilized short, validated mental health screening tools to assess caregiver burden in a way that is both efficient and broadly applicable [46-48]. While tools like the Kessler Psychological Distress Scale (K10) or the Distress Thermometer have been validated for quick administration, they are rarely employed in age-comparative caregiver research. For instance, O'Shea et al. (2023) recommend brief screening tools as essential for scalable community mental health initiatives, yet acknowledge that most distress assessments remain lengthy or narrowly clinical in scope [46]. This creates a missed opportunity to quickly identify at-risk younger caregivers who might benefit from early psychosocial support.

In response to these gaps, the present study seeks to assess age-related differences in psychological distress among caregivers of cancer patients, using a brief, validated screening instrument (K10). By focusing on younger caregivers as a distinct group, and situating the study outside of a longitudinal clinical trial design, it contributes novel insight into a frequently overlooked population. The findings aim to enhance mental health screening strategies and guide the development of age-responsive caregiver support interventions.

Methodology

Study Design

This study adopted a cross-sectional survey design to examine psychological distress among cancer caregivers, with a specific focus on age-related differences. This design was selected for its effectiveness in capturing associations between variables within a limited timeframe, making it particularly suitable for brief mental health screening research [49].

Participants and Setting

The study was conducted in Ibadan, Oyo State, one of Nigeria's largest metropolitan cities. Ibadan was selected due to its population diversity and the presence of University College Hospital (UCH), Ibadan, a major referral center for cancer treatment in West Africa. Informal caregivers of cancer patients receiving care at UCH and affiliated community clinics were recruited. Eligible participants were unpaid caregivers aged 18 years and above who had been providing care for at least three months. Participants were categorized into two groups: younger caregivers (18-39 years) and older caregivers (40 years and above) based on caregiver stress literature [50,51].

Sampling Technique and Sample Size

A purposive sampling technique was used to identify eligible caregivers. Using a minimum sample size formula for independent group comparisons and accounting for an effect size of 0.5, $\alpha = 0.05$, and power of 0.80, a total of 108 participants (54 per age group) was targeted [52].

Instruments

Psychological distress was assessed using the Kessler Psychological Distress Scale (K10)—a 10-item self-report tool validated for detecting non-specific psychological distress in community and clinical populations [53]. The scale has demonstrated high internal consistency (Cronbach's $\alpha > 0.85$) across diverse age groups and cultures [54]. Sociodemographic information such as age, gender, education, employment, caregiving duration, and relationship to the care recipient was also collected.

Procedure

After obtaining ethical approval and informed consent, participants completed paper-based or online surveys, depending on their preference and literacy level. The average completion time was 10-15 minutes. Data collection occurred over a three-month period between May and July 2025.

Data Analysis

Data were entered and analyzed using SPSS version 26. Descriptive statistics summarized demographic characteristics and K10 scores. An independent samples t-test compared

distress levels between the two caregiver age groups. A p-value < 0.05 indicated statistical significance.

Ethical Considerations

Ethical approval for the study was obtained from the Oyo State Ministry of Health Research Ethics Committee. Participants were informed about the objectives of the study and their right to withdraw at any point without consequence. Written informed consent was obtained from all participants. Confidentiality and anonymity were strictly maintained throughout the research process, in accordance with ethical guidelines for research involving human subjects.

Result

Table 1: Demographic Characteristics of Cancer Caregivers (N = 108)

Variable	Younger Caregivers (n = 54)	Older Caregivers (n = 54)	Total (N = 108)
Age (years)	M = 29.8, SD = 5.6	M = 49.5, SD = 6.7	M = 39.6, SD = 11.3
Gender			
Male	16 (29.6%)	18 (33.3%)	34 (31.5%)
Female	38 (70.4%)	36 (66.7%)	74 (68.5%)
Education Level			
No formal education	2 (3.7%)	5 (9.3%)	7 (6.5%)
Secondary education	35 (64.8%)	35 (64.8%)	70 (64.8%)
Tertiary education	17 (31.5%)	14 (25.9%)	31 (28.7%)
Employment Status			
Employed	23 (42.6%)	21 (38.9%)	44 (40.7%)
Unemployed	31 (57.4%)	33 (61.1%)	64 (59.3%)
Relationship to Patient			
Spouse	11 (20.4%)	15 (27.8%)	26 (24.1%)
Child	15 (27.8%)	11 (20.4%)	26 (24.1%)
Sibling	10 (18.5%)	7 (13.0%)	17 (15.7%)
Other relatives	18 (33.3%)	21 (38.9%)	39 (36.1%)

Note: M = Mean, SD = Standard Deviation. Percentages may not total 100 due to rounding.

The demographic data presented in Table 1 highlights notable differences and similarities between younger and older caregivers of cancer patients in Ibadan, Nigeria. The sample included a total of 108 participants evenly split between the two age groups (younger caregivers: n = 54; older caregivers: n = 54). The mean age of younger caregivers was 29.8 years (SD = 5.6), while the mean age for older caregivers was 49.5 years (SD = 6.7), establishing a clear distinction in generational representation. Overall, the average age for the entire sample was 39.6 years (SD = 11.3).

Gender distribution showed that female caregivers dominated both age groups, comprising 70.4% of younger caregivers and 66.7% of older caregivers. This reflects a broader societal trend where caregiving roles are predominantly assumed by women, likely due to cultural and familial expectations in caregiving responsibilities.

In terms of education, the majority of caregivers in both age groups had completed secondary education (64.8%). A higher proportion of younger caregivers (31.5%) had attained tertiary education compared to their older counterparts (25.9%), whereas older caregivers were more likely to have no formal education (9.3%) compared to younger ones (3.7%). This finding may reflect generational shifts in educational access and attainment.

Employment status indicated that most caregivers were unemployed, with 57.4% of younger caregivers and 61.1%

of older caregivers not engaged in formal employment. This suggests a possible burden of caregiving responsibilities that might hinder full-time work or reflect the socioeconomic challenges associated with informal caregiving roles, particularly in resource-constrained settings.

Lastly, the relationship to the patient varied across both groups. Spouses and children of patients accounted for an equal percentage overall (24.1% each), though older caregivers were slightly more likely to be spouses, while younger caregivers were more frequently children or other relatives. A substantial proportion of caregivers in both age groups were categorized as “other relatives” (33.3% younger; 38.9% older), including nieces, nephews, cousins, and in-laws—suggesting that caregiving responsibilities often extend beyond immediate nuclear family members in Nigerian extended family systems.

Table 2: Independent Samples t-Test Comparing Psychological Distress (K10 Scores) Between Younger and Older Caregivers

Group	n	Mean (M)	Standard Deviation (SD)	t	df	p-value	Cohen's d
Younger Caregivers	54	30.1	6.8				
Older Caregivers	54	25.2	6.5	3.71	106	< .001***	0.71

Note: $p < .05^*$, $p < .01^{**}$, $p < .001^{***}$. K10 = Kessler Psychological Distress Scale.

Result represented in Table 2 indicates that there is a statistically significant difference between younger and older caregivers in terms of psychological distress levels as measured by the Kessler Psychological Distress Scale (K10) [$t(106) = 3.71$; $p < .001$]. This significance is evident in the mean scores, where younger caregivers recorded a higher mean score ($\bar{X} = 30.1$) than older caregivers ($\bar{X} = 25.2$). This result implies that younger caregivers of cancer patients experience significantly higher levels of psychological distress compared to their older counterparts. The implication is that younger caregivers may face greater emotional and mental strain while providing care, possibly due to limited coping resources, less caregiving experience, and greater competing life responsibilities.

Discussion

The primary aim of this study was to examine whether younger caregivers experience higher levels of psychological distress compared to older caregivers, specifically within the context of cancer caregiving in Ibadan, Nigeria. The result found a statistically significant difference between the two age groups, with younger caregivers (aged 18–39) reporting significantly higher distress levels than their older counterparts (aged 40 and above). The rationale behind this outcome can be attributed to several life-stage stressors and contextual variables uniquely affecting younger caregivers. Typically, younger adults are navigating multiple psychosocial transitions such as early career demands, educational pursuits, relationship formation, and financial instability. These overlapping responsibilities can make the caregiving role particularly overwhelming, leading to heightened emotional exhaustion, anxiety, and poor coping efficacy. Unlike older caregivers, who may have more established routines, coping strategies, and possibly fewer competing obligations, younger caregivers often struggle with role conflict and lack the experiential resilience that may buffer stress in elder cohorts.

The present findings are consistent with previous empirical reviews. Park et al. (2021) observed elevated emotional burnout and helplessness in younger caregivers compared to older ones [36], while Jang and Tang (2022) highlighted that caregiving disrupts younger adults' life trajectories, leading to increased anxiety and lower coping efficacy [37]. Ketcher et al. (2022) also identified factors such as limited caregiving experience and financial insecurity as major contributors to psychological distress among caregivers under 40 [38]. These findings collectively support the current study's result, reinforcing the claim that younger caregivers are particularly vulnerable to psychological burden.

Furthermore, the present study advances existing literature by treating age not merely as a demographic descriptor or statistical control variable, but as a core analytical focus. As Litzelman et al. (2020) and Martinez et al. (2022) have noted, many previous studies failed to provide age-specific interpretations of distress, thereby limiting the depth of understanding and subsequent policy relevance [40,41]. By making age a central construct, the present research provides much-needed evidence that can be used to inform age-tailored interventions, particularly within culturally and economically diverse settings like Nigeria.

This study also addresses ecological and methodological limitations noted in earlier research. Many existing studies were conducted in controlled clinical settings in high-income countries, making it difficult to generalize findings to real-world, low-resource environments [43–45]. In contrast, this study draws from a metropolitan Nigerian context, reflecting the lived realities of caregivers in regions where access to formal mental health support is limited and caregiving often occurs within the family unit. The inclusion of a brief, validated tool like the K10 further enhances the practical applicability of the findings, supporting recommendations by O'Shea et al. (2023) for scalable

community mental health screening among caregivers [46].

In summary, this study confirms that younger caregivers of cancer patients experience significantly higher psychological distress than their older counterparts, a result that is in line with previous international findings. It fills a crucial gap in caregiver research by highlighting age-specific mental health challenges and offering localized evidence from a low-resource setting. These insights underscore the urgency of developing targeted psychosocial interventions and support systems for younger caregivers, particularly in sub-Saharan Africa where such age-specific needs are often overlooked.

Conclusion

This study investigated age-related differences in psychological distress among caregivers of cancer patients in Nigeria, with a specific focus on younger caregivers aged 18–39 compared to older caregivers aged 40 and above. The findings revealed a statistically significant difference in distress levels, with younger caregivers reporting higher scores on the Kessler Psychological Distress Scale (K10). These results revealed that the psychological vulnerability of younger caregivers, who often manage caregiving responsibilities alongside developmental stressors such as career building, academic commitments, and financial instability. By situating age as a central variable rather than a background demographic, the study contributes meaningful insight into the urgent need for age-specific caregiver support strategies, especially in resource-limited settings like Nigeria.

Limitations

Despite its valuable findings, the study has several limitations. First, the cross-sectional design limits the ability to draw causal inferences between age and psychological distress. Longitudinal data would offer more comprehensive insights into how distress evolves over time among different age groups. Second, the sample was drawn exclusively from caregivers in Ibadan, which may not fully represent the diversity of experiences across Nigeria or other sub-Saharan African countries. Third, the use of self-report measures such as the K10, while validated, may be subject to social desirability bias, particularly in cultures where mental health stigma is prevalent. Additionally, other potentially influential variables such as caregiving duration, socioeconomic status, and the stage of the patient's illness were not controlled for, which may have confounded the findings.

Recommendations

Based on these findings, several recommendations can be made. First, healthcare providers and policymakers should prioritize the development of age-specific psychosocial interventions that address the unique needs of younger caregivers. This could include peer support groups, flexible respite care services, and targeted counseling tailored to younger adults navigating caregiving alongside other life-stage responsibilities.

Second, mental health screening tools such as the K10 should be routinely integrated into caregiver support programs in both clinical and community settings to enable early identification and intervention. Third, future research should adopt longitudinal and mixed-method approaches to better understand the evolving psychological burden among caregivers across age cohorts.

Finally, expanding the study to include diverse geographic and cultural contexts would enhance the generalizability of findings and inform more inclusive caregiver policies at national and regional levels.

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