

# **Experience of Burden of Care among Adult Caregivers of Elderly Persons in Oyo State, Nigeria**

## **Background**

Old age is associated with a diminished capacity to work as well as increased vulnerability due to reduction in physical strength thus leading to increased need for assistance with daily activities.<sup>1</sup>The preferred mode of care for older members of a family in both the developed and the developing countries is care within the family.<sup>2-4</sup> However, elderly in most African countries often remain under the care of younger family members within the extended family.<sup>5-8</sup> The proportion of the global population aged 60 years and above is increasing rapidly and is projected to double from 11% in 2006 to 22% in 2050.<sup>9,10</sup> The increasing proportion of the elderly population is however more in developing than in developed countries.<sup>3,4</sup> Nigeria, has an elderly dependency ratio of 5.2% and is reputed to have the highest elderly population in sub-Saharan Africa.<sup>10,11</sup> Caregivers often experience some stress or burden associated with the caregiving relationship.<sup>12</sup> This caregiver stress and perceived burden of care have been identified as possible risk factors for elder abuse.<sup>13</sup> While it has been noted that caregivers of elderly persons in Nigeria can experience some form of stress,<sup>14</sup> the burden of care has not been documented. We therefore conducted this study to determine the burden of care experienced by caregivers of elderly persons in Nigerian communities.

## **Methodology**

A descriptive cross-sectional study was conducted among adult caregivers of elderly persons aged 18 to 59 years in two local government areas (one rural and one urban) in Oyo State. A multistage sampling technique was used to select 1,119 caregivers of elderly persons from the selected local government areas. An interviewer-administered, structured questionnaire was used to collect information on sociodemographic characteristics, caregiving arrangements and burden of care experienced by the caregivers.

The level of burden of care experienced was determined using the Modified Short Version of the Zarit Burden Interview, a 12-item tool which was developed for screening<sup>15</sup>. This version is composed of 12 questions for screening caregivers for experience of burden of care and has been validated and shown to be a reliable tool for assessing burden of care among informal caregivers of elderly persons<sup>15,16</sup>. Level of elder's dependence for care was measured with the Katz assessment of dependence for Activities of Daily Living (ADL).<sup>17</sup> The mental health status of the caregivers was assessed using the 12-item General Health

Questionnaire (GHQ-12)<sup>18</sup>. Data analysis was carried out on IBM SPSS version 22<sup>19</sup> using descriptive statistics, univariate and multivariate analysis at 5% level of significance.

### *Ethical Considerations*

Participants in the study provided informed consent and confidentiality was maintained by deidentifying data provided and making it accessible only to the researchers. Ethical approval was obtained from the Oyo State Ministry of Health Ethics Committee.

## **Results**

### *Sociodemographic characteristics*

The mean age of the 1119 caregivers interviewed was  $38.6 \pm 8.7$  years with about half (50.2%) aged 40 years and above. There were 669(59.8%) females and 877 (78.4%) of them were married. A total of 600 (53.6%) of the respondents had secondary education while the commonest occupation was trading (46.5%). While 605 (54%) provided care for their parents, 22 (2%) cared for non-relatives.

### *Experience of burden of care*

Less than half (47.8%) of the caregivers received some assistance with caregiving. Although 80.3% of the elderly persons were reported to be fully independent for activities of daily living (ADL), many (74.0%) of the caregivers experienced burden of care with 28.2% reporting severe burden (Table 1).

Table 1 Details about the caregiving relationship and burden of care

<b>Characteristic</b>		<b>Frequency (%) N=1119</b>
<b>Receive assistance with caregiving</b>	Yes	535 (47.8)
	No	584 (52.2)
<b>Caregiver's mental health status</b>	Good	255 (22.8)
	Poor	864 (77.2)
<b>Dependence for care</b>		
Independent	Fully independent	898 (80.3)
Dependent [221 (19.7)]	Moderately dependent	93 (8.3)
	Fully dependent	128 (11.4)
<b>Presence of burden of care</b>		
Yes [828 (74.0)]	Mild burden	203 (18.1)
	Moderate burden	309 (27.6)
	Severe burden	316 (28.2)
	No burden	291 (26.0)
No		

### *Predictors of experience of burden of care*

As shown in Table 2, the adjusted predictors of experience of burden of care were location, mental health status of the caregivers and the level of dependence of the elders for ADL. Those who resided in rural areas had 10 times the odds of those in the urban areas of experiencing burden of care. The odds of experiencing burden of care was about 8 times higher among caregivers with poor mental health status and about 3 times higher among those caring for fully dependent elderly persons.

Table 2 Odds of experiencing burden of care

	Experience of burden of care			Odds (95% CI)		p value
	Yes	No	Total	Unadjusted	Adjusted	
<b>Sex</b>						
Male	328 (72.9)	122 (27.1)	450 (100)	1		na
Female	500 (74.7)	169 (25.3)	669 (100)	1.10 (0.84-1.44)		
<b>Marital status</b>						
Single	164 (67.8)	78 (32.2)	242 (100)	1	1	
Married	664 (75.7)	213 (24.3)	877 (100)	1.48 (1.09-2.02)	0.99 (0.70-1.39)	0.986
<b>Location</b>						
Urban	362 (64.3)	201 (35.7)	563 (100)	1		
Rural	466 (83.8)	90 (16.2)	556 (100)	2.88 (2.16-3.82)	10.09 (5.99-17.01)	<0.001*
<b>Receive assistance with care</b>						
No	411 (70.4)	173 (29.6)	584 (100)	1	1	
Yes	417 (77.9)	118 (22.1)	535 (100)	1.49 (1.14-1.89)	1.15 (0.85-1.55)	0.360
<b>Mental health status</b>						
Good	165 (64.7)	90 (35.3)	255 (100)	1	1	
Poor	663 (76.7)	201 (23.3)	864 (100)	1.78 (1.33-2.43)	7.90 (4.60-13.57)	<0.001*
<b>Dependence for care</b>						
Independent	632 (70.4)	266 (29.6)	898 (100)	1	1	
Dependent	196 (88.7)	25 (11.3)	221 (100)	3.30 (2.12-5.13)	2.74 (1.68-4.47)	<0.001*
<b>Care negatively impacts other relationships</b>						
No	267 (28.4)	674 (71.6)	941 (100)	1	1	
Yes	24 (13.5)	154 (86.5)	178 (100)	2.54 (1.62-4.00)	1.13 (0.67-1.91)	0.658

### **Discussion**

This study assessed the experience of caregiver burden among informal caregivers of elderly persons using the 12-item Zarit Burden Interview (ZBI). Most of the participants in this study were caregivers for their relatives, which is consistent with the existing literature<sup>2,3,20</sup>. It is expected that younger family members would care for their elderly relatives and multigenerational households are a common finding in sub-Saharan Africa<sup>21</sup>. Elderly persons whose children were unable to provide care for them or visit regularly have been known to report feeling neglected as found by Sijuwade (2008) and Wahab and Adedokun (2013)<sup>2,22</sup>.

Most of the caregivers had experienced some degree of burden of care with more than one quarter having experienced severe burden of care as measured by the 12-item ZBI.

Residing in the rural area was highly predictive of experiencing burden of care. This may be related to the fact that many young people migrate out of the rural areas in search of better economic opportunities<sup>23</sup>. This leaves the responsibility for care on the few people remaining in the rural areas putting pressure on them to care both for themselves and their families as well as the elderly persons. With a large proportion of the population living below poverty level, the economic pressures may be a cause of increased burden on the caregivers<sup>23</sup>. This fact is supported by our study's finding of people in the poorer wealth category experiencing burden of care compared with other categories.

Caregivers with poor mental health status had higher odds of experiencing burden of care than those with good mental health status. Perhaps one's outlook to life influences their relationship and affects their view of the responsibility of caregiving thus influencing their experience of burden of care. This may be further supported by Lin et al's finding of caregivers' mood status as an independent predictor of burden among family and paid caregivers of individuals with dementia<sup>24</sup>. Having an elderly care recipient who is fully dependent for activities of daily living was also positively associated with experiencing burden of care. Kim et al<sup>25</sup> reported that increasing impairment in terms of activities of daily living increases the burden of care for the caregiver because there is a need for higher levels of caregiver engagement.

### **Conclusion and Recommendations**

Many of our study participants experienced burden of care as assessed by the 12-item Zarit Burden Interview. The independent predictors of experience of caregiver burden were location of residence i.e. rural or urban, caregivers' mental health status and dependence of the elderly person for activities of daily living. Long term intervention to reduce the burden of care among caregivers will include improving the standard of living in the rural areas by ensuring adequate social amenities. This will serve to reduce migration to urban areas thus ensuring there are more people available to provide care for elderly persons in the rural area. In addition, introduction of formal medical and social geriatric services will help to reduce the burden of care on the caregivers. Caregivers who are found to have poor mental health status may require psychological support, counselling and if necessary, mental health treatment.

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