Unmet Needs for Personal Assistance with Activities of Daily Living among the Elderly in Rural and Urban Communities in Nigeria: Determinants and Policy Implications

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ABSTRACT

Background: Understanding the extent of the determinants of unmet needs for assistance with activities of daily living (ADL) among the elderly is germane in formulating the right policies. **Objectives:** This study assessed the determinants of unmet needs for assistance with ADL among the elderly in rural and urban areas in Kwara State Central Senatorial District, Nigeria. **Materials and Methods:** It was a cross-sectional analytical study. Data was collected, using a pre-tested semi-structured interviewer-administered questionnaire from 300 elderly persons using the multistage sampling technique. Data analysis was done using IBM Statistical Package for Social Sciences (IBM-SPSS) version 20. The level of significance was predetermined at a p-value less than 0.05 at 95% confidence level. **Results:** The significant odds of having unmet needs for assistance with ADL in the rural group were amongst the unemployed (OR= 3.422 p=0.002), those with morbid conditions (OR= 2.285, p=0.032), had >4 ADL difficulty (OR= 8.167, p<0.001), had no children as carer (OR=9.205, p<0.001) or no children alive (OR=17, p=0.018, however, widowed (OR= 3.918, p <0.001), females (OR= 4.098, p= 0.001), and persons not cohabiting with children (OR=2.154, p=0.043) were for the urban group. Persons without children as carers in the rural group were almost 5 times more likely to have unmet needs for assistance with ADL (AOR 4.714 p=0.002). **Conclusion:** There were different determinants of unmet needs for assistance with ADL among the elderly in rural and urban areas. The Government of Nigeria should develop and implement innovative policies to improve the care of the elderly.

Keywords: Activities of Daily Living, Determinants of unmet needs, Elderly, Kwara State North-Central Nigeria.

INTRODUCTION

The proportion of people aged 60 years and older is increasing than any other age group in almost every country due to, but not limited to, increasing life expectancy and declining fertility rate. [1] This increasing population of the elderly in Nigeria has not translated to the geriatric care services impacting the *unmet needs* of the elderly thus marginalizing this group further. Unmet needs

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occur when assistance is not provided or is inadequate. Therefore, unmet needs for assistance with ADL among the elderly refers to inability of an elderly to get the assistance needed in performing ADL or does not get enough assistance needed.[2] Community social services (either private or public) are scarce in Nigeria contrary to what is obtained in other climes. [3] Meeting the needs of elderly people is onerous on the closest relatives in global south nations, unlike interventions set up in global north nations. [3] The most common way to screen for disabilities in the elderly is evaluating basic activities of daily living (BADL) and instrumental activities of daily living (IADL). [4]

Studies have shown that age, [5] sex, [2, 5-6] educational level, [5,7] income, [5,7] ethnic groups, [8,9] living arrangements, [1,2,4,7,9-11] type of carers, number of BADL/IADL disabilities, presence of morbidities, [5,8] were factors associated with unmet needs for assistance with ADL. Assessment of needs and unmet needs for assistance with ADL (BADL and IADL) among the elderly is important for geriatric care services. Nevertheless, in resource constrained settings like Nigeria, it is important to identify the factors associated with unmet needs for assistance with ADLs so that elderly ones who majorly require the services may be identified and reached more efficiently. [1] Besides being essential for planning long term policy on care of the elderly, understanding the factors associated with unmet needs can also be beneficial in avoiding poor health outcomes. [7,11] There is still a dearth of studies on unmet needs for personal assistance with ADL and IADLs and their determinants by rural-urban location in Nigeria. [12] Therefore, the objective of this study was to determine the factors associated with unmet needs for assistance among elderly in Kwara Central Senatorial district of Nigeria.

MATERIALS AND METHODS

This study was a part of a bigger study earlier conducted. A part of the work has already been published. [13] The findings that have not been published before are published here.

Description of the Study Area

Kwara State is one of the 36 states in Nigeria. It has three senatorial districts, which are Kwara Central Senatorial District, Kwara South Senatorial District and Kwara North Senatorial District. Kwara Central Senatorial District was the study area. It was chosen because the capital of the state is within the senatorial district and also because the largest population of people of the state also fall within this senatorial district. [14] It is made up of four Local government areas (LGAs), which are Asa, Ilorin East, Ilorin West and Ilorin South LGAs with their headquarters at Afon, Oke-Oyi, Wara-osin area and Fufu respectively,

Study Population

The study population consisted of the elderly who were 60 years and older (both males and females) in rural and urban areas of Kwara Central Senatorial District.

Inclusion Criteria

The elderly (both males and females), in rural and urban communities in Kwara Central Senatorial District who are permanent residents for 6 months and above in the communities

Exclusion Criteria

The elderly who could not communicate through any means or those without sufficient cognitive ability to answer the study questions were exempted. Also, those who did not cooperate due to ill health were exempted.

Study Design

This was a cross-sectional comparative study carried out among elderly residents in the selected communities in both rural and urban Local Government Areas (LGAs) in Kwara Central Senatorial district, Nigeria.

Sample size determination

The minimum sample size was determined using the formula for comparison of two proportions. [15] After adjusting for 10% non-response, a minimum sample size of 294 was obtained. However, a total of 300 respondents were interviewed (150 each for rural

and urban areas) in 8 selected communities.

Sampling technique

A multi-stage sampling technique was used for the selection of the respondents. Stage one was selection of the rural and urban LGAs using simple random sampling by balloting. Stage two involved selection of wards using simple random sampling by balloting. Stage three was selection of the communities using simple random sampling with the use of table of random numbers. Stage four involved selection of households and respondents using systematic random sampling technique. Where there was more than one eligible elderly person in one household, simple random sampling technique by balloting was used to select one eligible elderly. When there was no elderly person in a household, an eligible respondent was selected from the next available household while maintaining the sampling interval subsequently.

Data Collection

The data was obtained using pre-tested, semi-structured interviewer administered questionnaires to elicit information from eligible respondents. The questionnaire was developed and adapted from BADL and IADL tools and review of relevant research work on the topic. [16,17] Data on socio-demographic characteristics, living arrangement, presence or absence of carers, presence or absence of morbidity, BADL and IADL were collected by trained interviewers. Basic activities of daily living (BADL) were assessed with the use of the Katz Index of Independence in ADL. These included eating, bathing, dressing, toileting, and transferring (i.e., getting in and out of a bed or chair). [16] Instrumental activities of daily living (IADLs) refer to more complex activities that permit one to manage one's affairs independently, such as shopping, taking medicines, using the phone, using public transportation, and managing finances. [17] For each BADL and IADL, respondents were asked whether they had any difficulty performing these activities. For the purposes of this study, we defined disability as difficulty performing ADL. Thereafter, respondents were asked whether they needed assistance in performing the BADL and IADL. Those that needed assistance were asked if they got the assistance needed or not. Respondents were categorized as having a met need if they reported having difficulty and receiving personal assistance and / or not needing more assistance. Unmet needs for ADL was termed as those who needed assistance but did not get the assistance needed and those who did not get enough needed assistance. Socio-demographic characteristics, number of chronic conditions, and level of ADL disability were considered as potential correlates of unmet needs.

Informed Consent

Informed consent was obtained, either signed or with a thumb print, from respondents before administration of the questionnaire. The purpose and benefits of the study were duly explained to the respondents before the commencement of the study and confidentiality was ensured. Participation in this study was voluntary and participants had the liberty to withdraw at any stage if they so desired. All participants were treated with same degree of respect and equity was ensured. Participants were treated with dignity.

Data Management

Data collected was presented in prose, frequency tables and other relevant summary statistics were generated. Descriptive statistics was used to examine the prevalence of those with difficulty in performing ADLs and IADLs. Then, for those indicating difficulty with at least one of the six BADLs or eight IADLs, the prevalence of those indicating no need, met need, and unmet need by each activity was determined. Thereafter, the unmet need for assistance with ADL among those with need for assistance was determined. The analytic sample to examine assistance need status (no need, met need, and unmet need) was restricted to those who reported one or more ADL or IADL difficulties, and the inferential analytic sample to detect factors associated with unmet assistance need was among those with unmet needs and the entire analytic sample.

Chi-square test and logistic regression analyses were performed to identify the correlates of unmet need. A confidence limit of 95% was used in this study and a

p- value of less than 0.05 was considered significant.

RESULTS

As shown in table 1, elderly respondents aged ≥ 90 years had the highest proportion [10 (38.5%)] of unmet needs for assistance with ADL when compared with other age groups in the rural group. However, this difference was not statistically significant p=0.362. For the urban group, those elderly respondents in the 80-89 years age group had the highest proportion [11 (50%)] of unmet needs for assistance with ADL. The difference between the various age groups was not statistically significant (0.141). There was a higher proportion of male respondents than females in the rural group with unmet needs for assistance with ADL. The observed difference was, however, not statistically significant (0.817). A higher proportion of female respondents 33 (39.3%) than males 9 (13.6%) in the urban group had unmet needs for assistance with ADL. Also, a higher proportion of the widowed 27 (44.3%) had unmet needs for assistance with ADL when compared to those not widowed in the urban group. These observed differences were statistically significant (0.001) and (<0.001) respectively.
A higher proportion of the unemployed in the rural group had unmet needs for assistance with ADL. This difference was statistically significant. (p=0.002). A higher proportion of the unemployed in the urban group also had unmet needs for assistance with ADL. However, this difference was not statistically significant. (P=0.664)

Table 2 showed that a higher proportion of those who had no children alive had unmet needs for assistance with ADL in both the rural group 3 (75%) and the urban group 1 (100%). This difference was statistically significant in the rural group (0.044). Those who did not live with any of their children had greater proportion of unmet needs for assistance with activities of daily living in both the rural 23 (29.5%) and urban group 15 (33.3%). However, this was only statistically significant in the urban group (p=0.041). Those who lived alone had greater proportion of unmet needs for assistance with ADL in both, the rural 9 (39.1%) and the urban group16 (51.6%). However, this was only statistically significant in the urban group (p=0.009).

Respondents who do not have their children as carers, had a higher proportion of unmet needs for assistance with ADL in both the rural 27 (45.0%) and urban group 15(30.0%). The difference was statistically significant in the rural group (p<0.001) as shown in table 3.

Table 4 showed that the respondents with > 4 ADL difficulties had the greatest proportion of unmet needs for assistance with activities of daily living in the rural group 21 (52.5%). The difference was statistically significant p<0.001. In the urban group, the respondents with 3-4 ADL difficulties had the greatest proportion of unmet needs for assistance with activities of daily living. The difference was however not statistically significant (p=0.704). The respondents with the presence of chronic morbidities had higher proportion of unmet needs for assistance with ADL in both the rural 18 (38.3%) and the urban group 28 (35%). The differences were statistically significant with p values of 0.030 and 0.41 respectively.

In table 5, the univariate analysis showed that in the rural group, the significant odds of having unmet needs for assistance with ADL were amongst those who were unemployed (OR= 3.422 p=0.002), no children as carer (OR=9.205, p<0.001), no children alive (OR=17, p=0.018), presence of morbidity (OR= 2.285, p=0.032) and those who had >4 ADL/IADL difficulty (OR= 8.167, p<0.001). However in the urban group, the odds of having unmet needs for assistance with ADL were significantly increased amongst those who were widowed (OR= 3.918, p <0.001), female (OR= 4.098, p= 0.001), Not cohabiting with children (OR=2.154, p=0.043).

As shown in table 6, the predictors of having unmet needs for assistance with ADL were determined by doing a multivariate analysis. In the rural group, the odds of having unmet needs for assistance with ADL were significantly increased amongst those who had

Table 1: Socio-demographic factors influencing unmet needs for assistance with activities of daily living among rural and urban respondents

Variable	Rural Unmet needs Yes n (%)	Rural Unmet needs No n (%)	Urban Unmet needs Yes n (%)	Urban Unmet needs No n (%)
Age group (years)				
60 – 69	10 (19.6)	41 (80.4)	13 (21.0)	49 (79.0)
70 – 79	11 (28.2)	28 (71.8)	13 (26.0)	37 (74.0)
80 – 89	9 (26.5)	25 (73.5)	11 (50.0)	11 (50.0)
≥90	10 (38.5)	16 (61.5)	5 (31.3)	11 (68.8)
	χ^2=3.197	**p=0.362**	**χ^2=5.464^Y**	**p=0.141**
Sex				
Male	15 (27.8)	39 (72.2)	9 (13.6)	57 (86.4)
Female	25 (26.0)	71 (74.0)	33 (39.3)	51 (60.7)
	χ^2=0.053	**p=0.817**	**χ^2=12.061**	**p=0.001***
Marital Status				
Married	18 (24.0)	57 (76.0)	15 (16.9)	74 (83.1)
Widowed	22 (29.3)	53 (70.7)	27 (44.3)	34 (55.7)
	χ^2=0.545	**p=0.460**	**χ^2=13.487**	**p<0.001***
Employment status				
Employed	23 (20.9)	87 (79.1)	2 (14.3)	12(85.7)
Unemployed	19 (47.5)	21 (52.5)	21 (30.4)	48 (69.6)
	χ^2=10.288	**p=0.002***	**χ^2=0.820^Y**	**p=0.664**
Educational Level				
No formal education	36 (27.1)	97 (72.9)	25 (35.2)	46 (64.8)
Primary education	3 (27.3)	8 (72.7)	11 (35.5)	20 (64.5)
Secondary education	1 (50.0)	1 (50.0)	1 (11.1)	8 (88.9)
Tertiary Education	0 (0.0)	4 (100.0)	5 (12.8)	34 (87.2)
	χ^2=0.501^Y	**p=0.919**	**χ^2=6.331^Y**	**p=0.097**
Monthly Income (naira)				
< 9000	29 (28.4)	73 (71.6)	22 (36.1)	39 (63.9)
≥ 9000	11 (22.9)	37 (77.1)	20 (22.5)	69 (77.5)
	χ^2=0.508	**p=0.476**	**χ^2=3.318**	**p=0.069**

χ^2: Chi square test, ^{Y}: Yates corrected, *: p value< 0.05 (statistically significant)

Table 2: Family system, Living arrangement and association with unmet needs for assistance with activities of daily living among rural and urban respondents

Variable	Rural Unmet needs Yes n (%)	Rural Unmet needs No n (%)	Urban Unmet needs Yes n (%)	Urban Unmet needs No n (%)
Number of children Alive (n=148)				
None	3 (75.0)	1 (25.0)	1 (100.0)	0 (0.0)
1 – 2	8 (34.8)	15 (65.2)	6 (46.2)	7 (53.8)
3 – 4	18 (33.3)	36 (66.7)	12 (23.1)	40 (76.9)
> 4	10 (14.9)	57 (85.1)	22 (26.8)	60 (73.2)
	χ^2=8.115^Y	p=**0.044***	**χ^2=1.984^Y**	p=**0.576**
Cohabit with any of the children				
Yes	17 (23.6)	55 (76.4)	14 (20.0)	56 (80.0)
No	23 (29.5)	55 (70.5)	28 (35.0)	52 (65.0)
	χ^2=0.661	**p=0.416**	**χ^2=4.167**	**p=0.041***
Living arrangement				
Living alone	9 (39.1)	14 (60.9)	16 (51.6)	15 (48.4)
Living with others	31 (24.4)	96 (75.6)	26 (22.0)	93 (78.0)
	χ^2=2.158	**0.142**	**χ^2=9.481**	**p=0.009***

χ^2: Chi square test, ^{Y}: Yates corrected, *: p value< 0.05 (statistically significant)

Table 3: Support system of respondents and association with unmet needs for assistance with activities of daily living among rural and urban respondents

Variable	Rural Unmet needs Yes n (%)	Rural Unmet needs No n (%)	Urban Unmet needs Yes n (%)	Urban Unmet needs No n (%)
Has carer				
Yes	31 (28.4)	78 (71.6)	27 (25.7)	78 (74.3)
No	9 (22.0)	32 (78.0)	15 (33.3)	30 (66.7)
	χ^2=0.642	**p=0.423**	**χ^2=0.907**	**p=0.341**
Carer				
***Spouse**				
Yes	13 (33.3)	26 (66.7)	7 (16.7)	35 (85.3)
No	18 (25.7)	52 (74.3)	20 (31.7)	43 (68.3)
	χ^2=0.714	**p=0.398**	**χ^2=3.000**	**p=0.083**
***Children**				
Yes	4 (8.2)	45 (91.8)	12 (21.8)	43 (78.2)
No	27 (45.0)	33 (55.0)	15 (30.0)	35 (70.0)
	χ^2=0.17.984	**p<0.001***	**χ^2=0.918**	**p=0.338**
***Grandchildren**				
Yes	11 (36.7)	19 (63.3)	7 (24.1)	22 (75.9)
No	20 (25.3)	59 (74.7)	20 (26.3)	56 (73.7)
	χ^2=1.376	**p=0.241**	**χ^2=0.052**	**p=0.819**
Paid carer				
Yes	0 (0.0)	3 (100.0)	4 (30.8)	9 (69.2)
No	31 (29.2)	75 (70.8)	23 (25.0)	69 (75.0)
	χ^2=0.210^Y	**p=0.647**	**χ^2=0.011^Y**	**p=0.916**
Non-paid carers				
Yes	3 (33.3)	6 (66.7)	0 (0.0)	4 (100.0)
No	28 (28.0)	72 (72.0)	27 (26.7)	74 (73.3)
	χ^2=0.002^Y	**p=0.964**	**χ^2=0.380^Y**	**p=0.537**

χ^2: Chi square test, ^{Y}: Yates corrected, *: p value< 0.05 (statistically significant)

Table 4: Morbidity, ADL limitation and association with unmet needs for assistance with activities of daily living among rural and urban respondents

Variable	Rural Unmet needs Yes n (%)	Rural Unmet needs No n (%)	Urban Unmet needs Yes n (%)	Urban Unmet needs No n (%)
ADL and IADL difficulty				
1 – 2	15 (37.5)	35 (74.5)	14 (33.3)	12 (42.9)
3 – 4	4 (10.0)	6 (12.8)	15 (35.7)	8 (28.6)
> 4	21 (52.5)	6 (12.8)	13 (31.0)	8 (28.6)
	χ^2=16.275	**P<0.001***	**χ^2=0.703**	**p=0.704**
Morbidity				
Yes	18 (38.3)	29 (61.7)	28 (35.0)	52 (65.0)
No	22 (21.4)	81 (78.6)	14 (20.0)	56 (80.0)
	χ^2 =4.735	**0.030***	**χ^2 =4.167**	**0.041***
Morbidity Number				
None	22 (21.4)	81 (78.6)	14 (20.0)	56 (80.0)
1	16 (41.0)	23 (59.0)	22 (40.0)	33 (60.0)
>1	2 (25.0)	6 (75.0)	6 (24.0)	19 (76.0)
	χ^2 =5.607	**0.061**	**χ^2= 6.349**	**0.042***

χ^2: Chi square test, ^{Y}: Yates corrected, *: p value< 0.05 (statistically significant)

Table 5: Factors contributing to unmet needs for assistance with activities of daily living among rural and urban respondents (Univariate analysis)

	Variable	B	*p* value	OR	95%Confidence interval Lower	Upper
Rural	**Employment Status**					
	Employed REF					
	Unemployed	1.230	0.002*	3.422	1.581	7.408
	No of children alive					
	None	2.839	0.018*	17.100	1.613	181.254
	1 -2	1.112	0.046	3.040	1.022	9.041
	3 – 4	1.047	0.019	2.850	1.184	6.860
	>4 REF					
	Morbidity					
	Present	.826	0.032*	2.285	1.076	4.855
	Absent REF					
	Children carer					
	Yes REF					
	No	2.220	<0.001*	9.205	2.938	15.841
	ADL and IADL difficulty					
	1 – 2 REF					
	3 – 4	0.442	0.537	1.556	0.383	6.323
	> 4	2.100	<0.001*	8.167	2.745	12.300
Urban	**Marital Status**					
	Married REF					
	Widowed	1.365	**<0.001***	3.918	1.850	8.298
	Sex					
	Male REF					
	Female	1.411	**0.001***	4.098	1.790	9.381
	Morbidity					
	Present	0.182	0.759	1.199	0.375	3.835
	Absent REF					
	Cohabit with children					
	Yes REF					
	No	0.767	**0.043***	2.154	1.023	4.534
	Number of Morbidity					
	None REF					
	Single	0.559	0.335	1.749	0.562	5.442
	Multiple					

B: Coefficient of logistic regression. OR: Odd's Ratio. REF: Reference category

Table 6: Factors contributing to unmet needs for assistance with activities of daily living among rural respondents and urban (Multivariate analysis)

	Variable	B	*p* value	AOR	95%Confidence interval Lower	Upper
Rural	**Employment Status**					
	Employed REF					
	Unemployed	0.407	0.597	1.502	0.333	6.778
	Morbidity					
	Present	0.470	0.556	1.601	0.335	7.651
	Absent REF					
	Children carer					
	Yes REF					
	No	4.714	**0.002***	9.506	5.848	15.992
	ADL and IADL difficulty					
	1 – 2 REF					
	3 – 4	-2.400	0.127	0.091	0.004	1.984
	> 4	1.566	0.108	4.786	0.711	8.225
Urban	**Marital Status**					
	Married REF					
	Widowed	0.846	0.059	2.330	0.969	5.601
	Sex					
	Male REF					
	Female	0.658	0.186	1.930	0.728	5.118
	Morbidity					
	Present	0.093	0.876	1.097	0.343	3.515
	Absent REF					
	Cohabit with children					
	Yes REF					
	No	0.477	0.252	1.611	0.712	3.645
	Number of Morbidity					
	None REF					
	Single	0.559	0.335	1.749	0.562	5.442
	Multiple					

B: Coefficient of logistic regression. AOR: Adjusted Odds Ratio. REF: Reference category

no children as their carers (0.002). This was after adjusting for the other variables. However, for the urban group, after adjusting for other variables, there were no significant predictors for unmet needs with assistance for ADL.

DISCUSSION

The findings from this study revealed that gender was significantly associated with unmet needs for assistance with ADL among the urban group, but it was not among the rural group. Females in the urban group were 4 times more likely to have unmet needs for assistance with ADL. This may be due to females preferring to do their chores themselves and worse still in the urban area, such assistance might not be readily available compared with the rural area. Other studies have also shown that there is an association between gender and unmet needs for assistance with ADL. Many reported that those with greater unmet need for assistance with ADL were more likely to be females. [4, 5] Though, a study reported males as more likely to have unmet needs for assistance with ADL. [18] However, in another study, there was no significant gender difference. [8] The pattern of the gender difference in the prevalence of unmet need may be explained by differences in the distribution of chronic health conditions, living arrangement, and marital status. [18]

This study also showed that marital status especially the widowed were 3 times more likely to have unmet need for assistance with ADL in the urban group but this was not so in the rural group where the unmet need did not vary with marital status. Those who were unemployed in the rural area were 3 times more likely to have unmet need for assistance when compared with those with one form of employment or the other. This could be because those in the urban areas have the capacity to employ the services of formal caregivers.

In this study, those without children were 17 times more likely to have unmet needs for assistance in the rural area whereas those who were not living with their children in the urban area had more unmet needs for assistance. This study revealed that those who lived alone in the urban area had unmet needs for assistance. This finding was consistent with the result reported by other studies. [1,2,4,7,9-11] It has been purported that those who have higher probability of having unmet needs are those who lived alone because they are unlikely to be married or have children, making them lack support that may be needed.[11]

Those who had disability performing more than 4 of the ADL (BADL and IADL) were 8 times more likely to have unmet needs for assistance in the rural area. This finding was similar to studies carried out in the United States of America and India that reported that those with multiple ADL difficulties had increased risk for unmet need [1,7] This was different from what was observed in the urban area in this study, where the higher the number of disabilities the lower the unmet needs for assistance. The finding in the urban area was similar to that reported by a study in Brazil which found that the higher the number of disabilities the lower the unmet needs for assistance. The reason for this was attributed to the fact that those with multiple disabilities cannot remain without help. [11]

The presence of chronic morbidity was significantly associated with unmet need for assistance with ADL for both the rural and urban group. Also, for the urban group, number of chronic health conditions was significantly associated with unmet needs for assistance with ADL. This finding supports several previous studies reporting a significant association between chronic health conditions and unmet need. [1, 5, 8, 19] This finding also supports several previous studies reporting no significant association between age of respondents and unmet needs for assistance with ADL. [4, 8, 18, 19] A study in the United States of America found out that increasing age was strongly associated with unmet needs for assistance with ADL. [8] In this study, monthly income was not found to be significantly associated with unmet needs for assistance with ADL. This was similar to what was found in a study conducted in Malaysia. [18] However, a study in the United States of America reported a significant association between income and unmet needs for assistance with ADL. [8]

In this study, sex, marital status, employment status, having or not having children as carers, living

arrangement, number of ADLs disability and morbidity status were the variables associated with unmet needs. Furthermore, the variable that significantly predicted unmet needs in the rural group was children not being the caregiver of the elderly (AOR 4.714, p=0.002), whereas in the urban group, none of the variables was a significant predictor when multivariate analysis was carried out. This may be because many of the children usually seek greener pastures in the urban areas leaving the elderly ones in the rural areas. The prevalence of unmet need did not vary by age, religion, ethnicity, family type, level of education and monthly income.

Despite the fast-growing number of the elderly in Nigeria, her government and most governments in Africa are faced with the challenge of development of policies and training of those that can understand and respond to the current social priorities and complex needs of an increasingly ageing population. [20] The elderly in Nigeria is presented with different challenges which include but are not limited to changing demographics; break down in family structure and absence of a solid social security system. It is apt to say that Nigeria has no functional national policy on the care and welfare of the elderly.[20] In this study some of the factors that determined unmet needs for ADL were more related with those that were socially isolated, especially those living alone, without children or without their carers being their children. Therefore, the Nigerian Government should investigate the implementation of the national social development policy, developed in 1989 for the care for the elderly. [21]

There had been no well-articulated and well implemented policy for the care of the elderly in Nigeria until the year 2018 when the President assented to and signed the National Senior Citizens Centre Act that seeks to establish National Senior Citizens Centre in the country to cater for the needs of the elderly. The Act also allows the establishment of the National Senior Citizens Centres by institutions and the three tiers of government in the country to cater for the needs of the senior citizens. [22] Unfortunately, there is problem with the implementation of these laws.

Apart from policies that support the elderly, we also need policies that support the carers, particularly the families that care for their elderly ones. This will in a way prevent neglect, particularly in the rural areas as found in this study where those that did not have children as carers had unmet needs for assistance with ADL.

This study was conducted among elderly in a particular senatorial district of a state, but we cannot generalize our findings to the whole country. Therefore, future studies may consider a national survey which will be more representative. The study is also cross-sectional in design which is a draw back in drawing conclusions on the causal relationship among the variables studied.

CONCLUSION

This study revealed that there were differences in the determinants of unmet needs for ADL between the rural and urban areas. The factors associated with unmet needs for assistance with ADL among the elderly in rural area included, employment status, having children or having children as carers, number of ADL disability and morbidity status whereas in the urban area, the determinants were sex, marital status and living arrangement. In the rural area not having children as carers was a major predictor for unmet needs for assistance with ADL.

It is imperative that the government of Nigeria make provisions for and implement innovative policies to improve the care and quality of life of the elderly. The elderly will benefit from community-based services such as psycho-social support, reduction of disability, management of chronic conditions and home visits and these should be considered. The stakeholders such as public social service agencies (governments), private social service agencies (NGOs), family service agencies, social workers, medical assistance, and other professional institutions are to collaborate in meeting the needs of the elderly.

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Author Contributions

Conceptualization-FMM, ATM ; Designed the study-FMM, ATM, MOI ; Data collection and analysis-

FMM, DKA, BMO, ; Drafting the manuscript-FMM, MOI,TS ; Proof read manuscript- ATM, DKA, BMO, TS ; Approval of the final draft- All the authors

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Conflict of Interests
None to declare

Ethical Approval
Ethical approval to conduct the study was obtained from the Ethical Review Committee of the University off Ilorin Teaching Hospital, Ilorin, Nigeria with approval number ERC PAN/2016/10/1606

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