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The Influence of the Family on Prevalence and Morbidity of Geriatric Depression among Elderly Gopd Attendees at UPTH

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Abstract: The study was done to determine the influence of the family on the prevalence of geriatric depression among the General Outpatient Department of the University of Port Harcourt Teaching Hospital (UPTH) attendees. This was done against the background of the family being the most important influence on health and disease outcomes. Conversely, the family is the first to be affected when any member of the family falls ill. A descriptive cross-sectional study of one hundred and fifty randomly selected elderly patients attending the GOPD was carried out. A structured questionnaire containing the geriatric depression scale and the family questionnaire was administered to the patients that had satisfied the inclusion and exclusion criteria. Data was entered into the computer using the Epi-Info Version 3.2.2 Software and analysed. Lack of family and social support, marital disharmony, parents living with their children and feeling of not mattering by the elderly were among the family attributes that were associated with depression. Living alone was not a risk factor. It was also found that the family had a significant role to play in the prevalence and morbidity of depression in the respondents. Likewise, the care of depressed patients took a toll on the family caregivers making them react adversely thereby worsening the condition of the recipients of care.

Key words: UPTH, GOPD, Geriatric Depression Scale, family, care

INTRODUCTION

Statement of the problem: In the environment where the extended family system is still widely practiced and mental disorders have become increasingly important health problems in both the developed and the developing world (Abe *et al*., 2003), it is pertinent to know the disease burden and to identify factors that could influence them. Key among these factors is the role of the family. Depressive illness is the most prevalent mental disorder in the elderly (Press, 2006).

Literature review: Globally, the prevalence of depression is 10-15% (Press, 2006). It has been found to be the third most common reason for consultation in primary care (Press, 2006; Baldwin and Wild, 2004). It is second only to hypertension as the most chronic condition encountered in general medical practice (Whooley and Simon, 1942). Wilson *et al*. (2006) in their UK-based study on the role of loneliness on the prevalence of geriatric depression came to the conclusion that not living with close friends and family, poor satisfaction with living accommodation and poor satisfaction with finances were significant risk factors for depression in the elderly (Wilson *et al*., 2006).

Relevance: In this part of the world, nursing homes are few and poorly managed and even if they were standard establishments for the infirm elderly, the cultural barrier will be responsible for their underutilization. Most senior citizens reside with their immediate or extended families. It is therefore expected that because of the supposedly greater family and social support, the prevalence of depression should be relatively low. It should be taken into cognizance that other factors could actually be responsible for high geriatric depression prevalence.

Objectives: It is pertinent to explore the effect of depression suffered by elderly patients on their families (who are also their caregivers). Knowledge of the family member's perception of the depressive illness, care-giving stressors, their coping mechanisms, the effect on their mental health and overall well-being is paramount to the management of geriatric depression (Abe *et al*., 2003).

Sewitch *et al*. (2004) studied the impact of frail elders on family caregivers and arrived at the conclusion that caregivers (mostly spouses and adult children) of depressed elderly patients suffered from poor mental health and this in turn was associated with depression in the elderly people they were caring for.

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MATERIALS AND METHODS

Study design: A cross-sectional study was conducted at the General Outpatient Department (GOPD) of the University of Port Harcourt Teaching Hospital (UPTH) located in Choba, near Port Harcourt, the capital of Rivers State, Nigeria between July and September 2007. This is situated in the South-South geo-political zone of Nigeria. Port Harcourt has a population of 3.9 million people.

The General Outpatient Department (GOPD) of the hospital provides primary and secondary health services. It is involved in the management of health problems, pre-employment and pre-admission comprehensive medical tests and acts as a referring point for patients that need other specialist care. All new patients are assessed, treated or referred to appropriate specialties where necessary or are managed in the clinic. The different specialties offer the tertiary health care services.

The geriatric patients are seen by both the consultant family physicians and the family medicine residents. An average of about five hundred geriatric patients are seen every month (20 working days) and approximately six thousand annually. This represents roughly 25% of the total number of patients seen.

A total of 150 men and women, 65 years and older were recruited into the study by the systematic random sampling technique using a sampling ratio of 1:5 every 5th elderly patient was recruited into the study, clerked, physically examined and eventually administered a questionnaire that included the geriatric depression scale, until the required number was attained. Where necessary, relevant laboratory investigations were requested for to ascertain the significance of somatic complaints and detect the presence of co-morbid medical conditions. The Geriatric Depression Scale and the family questionnaire were administered to the respondents.

Sample size: The Leslie and Kish equation (Araoye, 2003) in a descriptive study was used:

$$N = \frac{z^2 pq}{d^2}$$

- N = The desired sample size when the population is >10,000
- d = Desired precision at 5% (0.05). It is the degree of accuracy desired
- z = Confidence limits. A consent at 95% confidence level = 1.96
- p = Prevalence of depression in the elderly = 11% = 0.11 in the elderly (Buckley and Lachman, 2007)
- q = 1-p (proportion of the elderly not suffering from depression); 1-0.11 = 0.89

$$N = \frac{(1.96)^2 (0.11 \times 0.89)}{0.05^2} = 150$$

Therefore, 150 subjects were recruited for the study.

Statistical method: Data analysis was done using the EPI-INFO Version 6.0 Software package. Epi-Info is a software program for data collection and analysis including common statistical tests. The programme was created and maintained by the centre for disease control. It was designed particularly for epidemiological studies. After data entry, the frequencies of all variables were generated and checked for confounding variables. All errors found were corrected before data analysis.

Frequencies of categorical data were determined and the mean and standard deviation of some continuous variables computed. Bivariate analysis was used to explore the relationship between the independent variables which included sex, age group, socioeconomic class etc and dependent variables which included those that scored 10 and above on the geriatric depression scale. Association between categorical variables such as age and sex was determined using the Chi-square. The χ^2-test was used to determine significance of association between the groups. The outcome of the test of significance was expressed in terms of Probability (P). The p-value of 0.05 or less was the criterion for significance. Significance indicates that an observed result represents a real difference and it could not have occurred by chance or due to sampling error.

Ethical considerations: Ethical approval was obtained from the hospital ethical committee. Informed consent from the subjects was obtained as well and the latter were assured that they were free to opt out of the study at any stage and that if the did they would not be victimised in any way.

RESULTS

Figure 1 show a total of 150 questionnaires were retrieved and analysed giving a response rate of 100%. Table 1 shows the patients' perceptions of the roles they now play in their families. Those that did not perceive a change in role and those that still saw themselves as breadwinners had significantly lower prevalence rates of depression than those that saw themselves as being burdens on their families ($\chi^2 = 31.7$; df = 4; p = 0.000).

Those whose illnesses affected the relationship with their families had a higher depression prevalence than those whose illnesses had no effect on their relationship

Table 1: Relationship between the family dynamics of the respondents and depression

Family dynamics	Not depressed (%)	Mildly to moderately depressed (%)	Severely depressed (%)	Total	χ^2	p-value
Perception of role in the family						
Breadwinner	32 (84.2)	6 (15.8)	0 (0.0)	38.000	31.717	0.000
Burden	8 (30.8)	12 (46.2)	6 (23.1)	26.000		
No change	68 (79.1)	15 (17.44)	3 (3.5)	86.000		
Effect of respondents' illnesses on the relationship with family caregivers						
No	91 (7.8)	25 (20.8)	4 (3.3)	120.000	8.707	0.013
Yes	17 (56.7)	8 (26.7)	6 (16.7)	30.000		
How the respondents' illnesses affected their relationship with the family caregivers						
Negatively	2 (28.6)	1 (14.3)	4 (57.1)	7.000	10.772	0.005
Positively	15 (62.2)	7 (30.4)	1 (4.3)	23.000		
Relationship between the levels of family support and prevalence of depression						
Very good	60 (88.2)	7 (10.3)	1 (1.5)	68.000	29.308	0.000
Fairly good	42 (66.7)	15 (23.8)	6 (9.5)	63.000		
Poor	6 (35.3)	9 (52.9)	2 (11.7)	17.000		
Very poor	0 (0.0)	2 (100.0)	0 (0.0)	2.000		
Relationship with spouse by prevalence of depression						
Good	31 (88.6)	4 (11.4)	0 (0.0)	35.000	19.455	0.003
Cordial	18 (85.4)	1 (4.8)	2 (9.5)	21.000		
Fair	8 (58.3)	3 (25.0)	2 (16.7)	13.000		
Bad	1 (25.00)	3 (75.0)	0 (0.0)	4.000		
Having people to confide in by prevalence of depression						
Yes	101 (79.5)	26 (20.5)	127	23.280	0.000	
No	7 (30.4)	16 (69.6)	23			
Prevalence of depression among those who felt their families had contributed to their illnesses						
Yes	18 (16.7)	18 (54.5)	4 (44.4)	40.000	20.093	0.000
No	90 (83.3)	15 (45.5)	5 (55.6)	110.000		
Prevalence of depression among those that felt neglected by their families						
Yes	5 (4.6)	9 (2.73)	3 (33.3)	17.000	17.508	0.000
No	103 (95.4)	24 (72.7)	6 (66.7)	133.000		
Prevalence of depression among respondents who had relations that were a source of concern to them						
Yes	42 (38.9)	24 (72.7)	7 (6)	73.000	14.833	0.001
No	66 (61.1)	9 (11.7)	2 (2.6)	77.000		
Relationship between perceptions of family members about the respondents' illnesses and depression						
As the will of God	11 (78.6)	0 (0.0)	3 (21.4)	14.000	30.024	0.000
Spiritual connotation	10 (58.8)	6 (35.3)	1 (5.9)	17.000		
Part of growing old	46 (90.2)	4 (7.8)	1 (2.0)	51.000		
Excessive stress	27 (52.9)	20 (39.2)	4 (7.8)	51.000		
Other	14 (82.4)	3 (17.6)	0 (0.0)	17.000		
Prevalence of depression among those whose relations felt burdened by their illnesses						
Yes	5 (23.8)	8 (38.1)	8 (38.1)	21.000	52.735	0.000
No	105 (81.4)	23 (17.8)	1 (0.01)	129.000		
Ways in which these feelings were expressed						
Elder abuse	0	3	0	3.000		
Frequent quarrels	3 (18.8)	6 (37.5)	7 (43.8)	16.000		
Other	2 (50)	1 (25)	1 (25)	4.000		

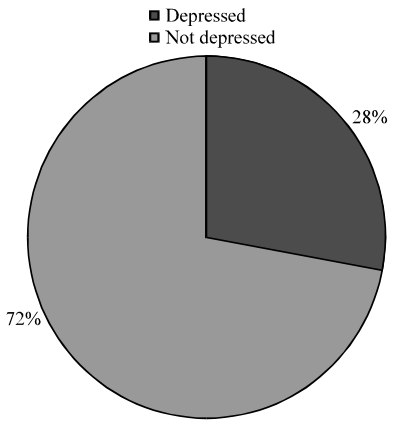

Fig. 1: Prevalence of depression among the respondent

with their families and this difference is statistically significant (χ^2 = 8.7; df = 2; p = 0.013). The respondents whose illnesses had affected the relationship with their families negatively had a higher prevalence of depression which was statistically significant (χ^2 = 10.77; df = 2; p = 0.005).

The NB Negative effects refer to situations that jeopardised the patient's relationships with their family care givers, e.g., frequent quarrels. Positive effects refer to situations that ultimately improve family cohesion, e.g., greater exhibition of love and care by the caregivers towards the patients. The relationship between family support and prevalence of depression is clearly illustrated. Those patients that had very good family support had the least prevalence of depression while more

of those who had poor support were depressed. These differences are statistically significant ($\chi^2 = 29.31$; df = 6; p = 0.000).

Table 1 shows that there is a statistically significant association between good or cordial marital relationship and a lower prevalence of depression. ($\chi^2 = 19.455$; df = 6 p = 0.003). It is clearly illustrated that those subjects that had no people to confide in had a significantly higher prevalence of depression ($\chi^2 = 23.280$; df = 2; p = 0.000). Table 1 also shows that those that felt that their families had contributed to their illnesses had a higher prevalence of depression than those that did not. This difference is statistically significant ($\chi^2 = 20.09$; df = 2; p = 0.000).

It is clear from Table 1 that those that felt neglected by their families constituted a minority and had a significantly higher prevalence of depression ($\chi^2 = 17.51$; df = 2; p = 0.000). It can be deduced from Table 1 that those with family members that are a source of concern to them have a significantly higher prevalence of depression than those that do not ($\chi^2 = 14.83$; df = 2; p = 0.001). The table clearly shows that those patients whose family members perceived their illnesses to be stress related and those who felt there were spiritual connotations to their illnesses had the highestprevalence of depression which was statistically significant ($\chi^2 = 30.024$; df = 8; p = 0.000).

Table 1 also shows that 18 out of 23 (78.3%) of patient whose relatives felt burdened by their illnesses were depressed. This has been shown to be statistically significant ($\chi^2 = 52.735$; df = 2; p = 0.000). It is clearly illustrated that most patients' relations that feel burdened, express their frustrations by frequent quarrels and the patients represented by this group have a higher prevalence of depression (13/16, i.e., 81.3%).

Relationship between who the patients live with and prevalence of depression: Table 2 shows that those living with their children constituted the largest number and had the highest prevalence of depression. About 33, 20 and 14.3% of patients were depressed (mildly, moderately and severely) among those patients living alone with other relations and with their spouses, respectively. These differences are statistically significant ($\chi^2 = 16.752$; df = 8; p = 0.033).

Table 2: Relationship between who the patients live with and prevalence of depression

	Prevalence of depression			
Who patient live with	Not depressed	Mildly to moderately depressed	Severely depressed	Total
Alone	10 (66.7)	5 (33.3)	0 (0.0)	15
With spouse	42 (85.7)	5 (10.2)	2 (4.1)	49
With children	42 (59.1)	22 (31.0)	7 (9.9)	71
With house help	10 (100.0)	0 (0.0)	0 (0.0)	10
Other relatives	4 (80.0)	1 (20.0)	0 (0.0)	5
Total	108.0	33.0	9.0	150

p-value = 0.033; $\chi^2 = 16.752$

Home visits: Home visits were done for twelve patients (eight females and four males) who met the diagnostic criteria for depression. Areas visited include, D-line, Mile 3 in Diobu, Rumuola, Okujagu village near the Port Harcourt zoo, Alakahia village near UPTH, Elechi beach, Elekahia and Oyigbo.

Socio-demographic characteristics: Nine of them (three males and six females) lived in Port Harcourt and three in rural areas near Port Harcourt. Eight of respondents comprising five females and three males had no formal education and belonged to social class 5. Three out of the eight respondents in social class 5 (two females and one male) had no formal education, resided in the villages where they engaged in subsistence farming. All three lived alone but had other relations that lived nearby who frequently visited them. They depended mostly on their children for their financial needs. The rest of those residing in Port Harcourt (three females and two males) were staying permanently with their children in rented flats located in the suburbs mostly under deplorable conditions. Most of them had either no formal or primary school education. They were mostly unemployed and they all depended on their children for their financial needs to a great extent. Three of the respondents (three females) belonged to social class 4. All 3 were widowed petty traders with primary school education and resided with their children on whom they depended for most of their financial needs. Only one respondent (a male) belonging to social class 3 was visited. He was a retired clerk who was a secondary school certificate holder residing with his wife. He depended on his pension and his children for his financial needs. Most of the respondents either never exercised or did so suboptimally (once or twice a week).

Family-related stressors: Most of the respondents belonging to social class 5 were widowed, resided with their children and generally had poor family support. They lacked people (including family members) they could confide in and felt neglected by their family caregivers. In addition most of them attributed their illness to the negative attitudes of their family caregivers. The three respondents living in the villages complained that they rarely exchanged visits with their children even though they would have loved to. Two of the three women (belonging to social class 5) residing in Port Harcourt were widowed. One of the latter had lost her only son and

the other was worried about her daughter's infertility. The third woman lived with her husband and had a poor marital relationship stemming from her inability to produce a male heir for her husband. One of the remaining two males belonging to social class 5 resided with his children. He was a widower who detested having to depend on his disrespectful children for financial support. The other resided with his wife and children. His wife was much younger than him and he suspected that she was having an extramarital affair as a result of his poor financial status and the fact that he suffered from erectile dysfunction. His first daughter, a lawyer who resided with her husband catered for most of his financial needs. However, the stipends were infrequent and grossly inadequate.

The three women belonging to social class 4 resided with their children. All three were widowed and two of them had problems with their daughters-in-law. The third woman resided with her married daughter who was yet to conceive after 5 years of marriage. This bothered her as her son-in-law was rapidly becoming impatient.

The only responded belonging to social class 3 was unhappy at his inability to provide adequately for his family. Even though his children supported him financially, he resented the fact that he was no longer a breadwinner and as a result, no longer wielded much influence on his children who often disobeyed him with impunity.

DISCUSSION

This hospital based study was conducted at the University of Port Harcourt Teaching Hospital in Choba near Port Harcourt which is a cosmopolitan city in the South-South geo-political zone of Nigeria. The objectives of the study were to determine the prevalence and the influence of depression on the family caregiver and vice versa. Nigeria, like other developing countries is currently undergoing a rapid change in demographics (Akanji *et al*., 2002) there is an increase in the rural-urban drift with the younger population in urban areas leaving the elderly behind in the rural areas. With this change, the practice of communalism or the extended family system hitherto practiced in the culture has been jeopardised and this has greatly compromised the support the elderly receive from their family caregivers.

Those that had the perception that they were a burden to their families numbered 26 (17.3% of the study population). They had a significantly higher overall prevalence of depression (69.3%) than those who still felt they were breadwinners or there was no change in the role they had been playing in their families (0.000). This is in agreement with Dixon's in 2007 study that feeling of not mattering by the elderly constituted a risk factor for depression (Holley *et al*., 2006). As breadwinners, they still felt they were in control and therefore, retained their sense of purpose and relevance in their families.

Those whose illnesses had an effect (either negative or positive) on their relationships with their families numbered 30 (constituting 20% of the study population). This group of respondents were significantly more depressed than those whose family relationships had not been affected by their illnesses ($p = 0.013$). Most of the aforementioned group of respondents (23 out of 30) claimed their illnesses had had positive effects on their relationship with their families, e.g., more frequent visits, more pocket money etc there was a correspondingly lower depression prevalence that was statistically significant ($p = 0.005$).

This further buttresses the importance of good family support the absence of which was found to be a risk factor for depression in this study ($p = 0.000$). This is in agreement with most documented findings including that of Wilson *et al*. (2006) and Rakel (2002). Those who had good and cordial relationships with their spouses constituted the majority 56 (76.71%) of all the 73 respondents that were still married. Yet, only 7 (12.5%) of them were either mildly to moderately or severely depressed. This shows that there is a significant association between marital relationship and the prevalence of depression ($p = 0.005$). It is obvious that a good marital relationship brings about good family support, thereby causing a reduction in the prevalence of depression (Wilson *et al*., 2006).

Those who had people they could confide in numbered 127 constituting 84.6% of the studied population. About one-fifth (20.5%) of this group of respondents were depressed 69.5% of those that had no confidants were depressed. This clearly illustrates the significant relationship between having a confidant (social support) and the prevalence of depression ($p = 0.000$). It could be erroneously assumed that the mere fact that most of these patients resided with family caregivers (who could be spouses or children), they should automatically have had people to confide in. In this study, even though the respondents claimed to have good relationships with their families, it became clear on further questioning that a large percentage of them did not confide in their children or spouses.

About 40 respondents (26.67% of study population) felt that their family members had contributed (negatively) to their illnesses. A little over half (55%) of that number were either mildly/ moderately or severely depressed. This shows that the family had a significant role to play in the prevalence and morbidity of depression in the

respondents in this study (p = 0.000). This is in keeping with the Wilson *et al.* (2006)'s findings and vividly documented in Rakel's textbook of family practice (Rakel, 2002).

Similarly, those who had felt neglected by their family members numbered 17 (11.33% of the study population) and 70.5% of them were depressed. Therefore, they were significantly more depressed than those who did not nurse such feelings (p = 0.000). However, it is not very clear whether it was the mere perception of neglect or actual neglect by family members that lead to the high prevalence of depression among this group of respondents.

Those who had family members who were a source of concern to them were significantly more depressed than those who had not (p = 0.001). This further buttresses the fact that the family has a powerful influence on the prevalence of depression. Those whose family members had attributed excessive stress and spiritual problems to the cause of their illnesses had a higher depression prevalence which was statistically significant (p = 0.000). This finding agrees with that of Tomilson *et al.* (2007) who documented the spiritual nature of complaints among depressed patients in sub-Saharan Africa (Tomilson *et al.*, 2007).

Thus, perceptions of family caregivers about the causes of the respondents' illnesses could draw the attention of the family physician to the likelihood of the presenting symptoms being part of the symptomatology of depression. This could be either in the presence or absence of other chronic medical conditions in the study environment.

Those patients whose relations had felt burdened by the patients' illnesses constituted a minority (21 out of 150); yet 78.3% of them were catering for depressed elderly family members (p = 0.000). The significance of this finding is that those that are depressed are more likely to generate feelings of frustration in their family caregivers. Interestingly, these feelings of frustration were mostly expressed as frequent quarrels with the patients. It would be interesting to know if it were the quarrels that had led to depression or vice versa. Perhaps it is a vicious cycle as illustrated by Sewitch *et al.* (2004) in their study on the impact frail elders on family caregivers (Sewitch *et al.*, 2004).

In this study, the majority 71 (47.3%), stayed with their children. About 49 (32.7%) of the patients stayed with their spouses, 15 (10%) lived with their house helps and other relations and 15 (10%) lived alone. Ironically, those that lived with their children had significantly higher depression prevalence than those that lived alone. This is in contrast with the findings of Wilson *et al.* (2006) who studied depressive symptoms in the elderly living alone who found that loneliness was a risk factor for depression (Evans and Mottram, 2000). The findings in this study (in the study environment) could be a reflection of a combination of factors operational in this setting.

The fact that the respondents had been taken away from the environment they were accustomed to and expected to adapt to a totally different environment could be a predisposing factor for depression in this study. Poor family support including antisocial behaviour, loss of self esteem, financial constraints of the family caregivers (in this case, the children) are contributory. Moreover, unlike those living in the industrialized countries those living alone in the environment are rarely really alone as there are a host of relations that frequently visit them or invite them for various social engagements (good social support network) especially in the rural setting.

CONCLUSION

The result of this study suggests that the prevalence of depression among the respondents was influenced significantly by the family.

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