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Original Research Article

Family dysfunction among depressed HIV/AIDS patients on HAART, in a secondary health institution, in north central Nigeria

R.O. Shittu^{a,*}, B.A. Issa^{b,1}, G.T. Olanrewaju^{b,2}, A.O. Mahmoud^{c,3}, L.O. Odeigah^{d,4},
A.G. Sule^{e,5}

^a Department of Family Medicine, Kwara State Specialist Hospital, Sobi, Ilorin, Kwara State, Nigeria

^b Department of Behavioural Sciences, University of Ilorin Teaching Hospital, Ilorin, Kwara State, Nigeria

^c Department of Ophthalmology, University of Ilorin Teaching Hospital, Ilorin, Nigeria

^d Department of Family Medicine, University of Ilorin Teaching Hospital, Ilorin, Kwara State, Nigeria

^e Department of Family Medicine, Ahmadu Bello University Teaching Hospital, Zaria, Nigeria

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ABSTRACT

Objective: Family and caregiver distress can impair optimal care and support of the patients, particularly those suffering from stigmatizing diseases requiring life-long treatment such as HIV/AIDS. This study aimed at determining the relationship between family dysfunction and depression among HIV/AIDS patients.

Methods: This was a hospital based, cross sectional, descriptive study, of 300 adult HIV/AIDS patients attending the HIV clinic. Depression was assessed using the PHQ-9 scale. A family APGAR questionnaire was then used to determine, the prevalence of self-reported family dysfunction, among the depressed patients.

Results: The prevalence of depression among the HIV/AIDS patient was 56.7% with the following level of depression viz., minimal 109 (64%), mild 44 (25.9%), moderate 10 (5.9%), moderately severe 3 (1.8%), and 4 (2.4%), severely depressed. Moreover, there was severe family dysfunction in 75 (44.1%) and moderate dysfunction in 48 (28.2%) of the respondents. Only 47 (27.6%) had highly functional family.

Conclusion: Depression is very prevalent among HIV/AIDS patient. They have low family APGAR score, because family dysfunction is a common problem among them. There was a significant association between depression and family dysfunction. This may partly be responsible for non-disclosure of their HIV/AIDS status to their family members.

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1. Introduction

The family is a psychosocial group consisting of one or more persons, children or adults in which there is a commitment for members to nurture each other [1]. The family is defined as a group of individuals, connected, biologically, legally or by choice, from whom the individuals can expect a measure of support in the

form of food, shelter, finance and emotional nurturing that share a past, a present and a future together [2]. The families demonstrate integrity of the components of Adaptability, Partnership, Growth, Affection and Resolve (APGAR) [1]. The family APGAR assesses an adult's perceptions of family support and low scores may indicate parental distress, which will sometimes reflect on parental depression [3]. This empirical measurement allows the development of a family function paradigm that may be likened to the body's organ system, in that, each component has a unique function yet each is interrelated to the whole.

The major family resources can be categorized as social, cultural, religious, economic, educational and medical. The acronym SCREAM may serve to remind the physician of these family resources [1]. Problems in the various family resources are considered to exist when the family is severely dysfunctional.

The workup of the family in difficulty requires the identification and evaluation of the family's crises, determining the level of family functioning through the use of the family APGAR and

* Corresponding author at: Oorelope Hospital (Consultant Specialist Clinics), KM 8, Apata Yakuba, Ilorin, Kwara State, Nigeria. Tel.: +234 8035062687.

E-mail addresses: oorelopehospital@gmail.com, e_hospital@gmail.com (R.O. Shittu), issababa2002@yahoo.com (B.A. Issa), laromoye554@yahoo.com (G.T. Olanrewaju), mahmoud.ao@yahoo.com (A.O. Mahmoud), loideigah@yahoo.com (L.O. Odeigah), gbsule@yahoo.com (A.G. Sule).

¹ Tel.: +234 8033559293.

² Tel.: +234 8035703492.

³ Tel.: +234 8033781200.

⁴ Tel.: +234 8069048555.

⁵ Tel.: +234 8065535088.

ascertaining the family resources through the same assessment. The data base of the family is a record of three areas; the present, past family crises and the intra and extra familial resources as well as the APGAR components of family functioning. The assessment is a report of the significance, of various crises to family members [4,5], the Family APGAR status and the status of family resources (SCREEM items). The assessment should also note the intra and extra familial resources and the physician may eventually recommend assisting certain members in improving family functioning. The follow up will record whether the management plan was effective or not, as well as the physician's future plan for the family [1].

The presence of clinically important depressive symptoms among People Living With HIV/AIDS (PLWAs) as result of multiple factors. Dysfunctional family is one of such factors [6]. The support and involvement of the family can therefore play a critical role in assisting someone who is depressed [7]. Depressed patients reported poor interpersonal relationship [8].

Mengel, while studying the use of family APGAR in screening for family dysfunction in a family practice center, found out that 24% of patients reported family dysfunction (APGAR less than 6). He then, concluded that family dysfunction is a common problem in family practice patients [9]. Furthermore, Cogollo, [6] while studying the association between family dysfunction and clinically important depressive symptoms among students of Cartagena, Colombia, concluded that dysfunctional families, relate positively with depressive symptoms with clinical significance. Moreover, Hairong et al. [10] while examining the effects of depressive symptoms and family satisfaction on health related quality of life: in the Hong Kong family study concluded that higher family satisfaction and presence of depressive symptoms were significantly associated with Health Related Quality of Life (HRQoL).

Though literature abounds in other parts of the world on the effect of depression on family dysfunction [3,9,10], there is paucity of data in Africa in general, and Nigeria in particular, on the effects of depression on family dysfunction among PLWAs. This study therefore set out to examine the effects of family dysfunction on depression, among People Living With HIV/AIDS (PLWAs).

2. Methods

This study was conducted at a designated HIV/AIDS treatment centre, located in the North Central Nigeria. The Hospital is a 400-bed secondary health facility with over 12 health departments offering health services to the residents of Kwara State and neighboring states. It was established by the Kwara State Government in April 1985. The HIV/AIDS treatment centre took off in the hospital in May 2009. Eight hundred patients have been enrolled and over 600 are on Highly Active Antiretroviral Therapy (HAART). The centre is currently being founded by a Non-Governmental Organization (NGO), Friends for Global Health.

This study was a descriptive, cross-sectional study carried out from 1st of March to 30th July, 2013. The inclusion criteria were all depressed HIV positive patients, who presented at the Clinic. The exclusion criteria were the critically ill patients.

The sample size was estimated using the Fisher formular [11], using 21.3% from a previous study [12], as the best estimate of depressive disorders among People Living With HIV/AIDS. A minimum size of 218 was calculated using Fisher's formula but 300 was used to increase the power and reliability of the study. Pretesting was carried out using 30 respondents (10% of the sample size).

Ethical approval was obtained from the Ethical Review Committee of the Kwara State Ministry of Health before commencement of the study. The respondents were adequately informed about the nature of the study and its benefits. An informed consent was obtained from each participant, after adequate information about

the study. An interviewer administered questionnaire was used. However, for subjects who do not understand English, a local dialect version of the instrument was used. These were arrived at, through the process of translation and back translation by panel of bilingual experts.

The socio-demographic data were viz., age, sex, religion, ethnicity, marital status, occupation level of education, current ailment and medications. The prevalence of depressive disorders among HIV/AIDS patients were assessed, using the PHQ-9 scale (Appendix A).

The Family APGAR questionnaire was used to determine the prevalence of self-reported family dysfunction present in the respondent (Appendix B).

Completed questionnaire and measurements were entered into a computer data base. The data were analyzed using the epidemiological information (Epi-info) 2005 software package. The 2 by 2 contingency tables were used to carry out Chi-square test and to find out the level of significance and values less than 0.05 were regarded as statistically significant.

3. Results

Table 1 shows the socio-demographic characteristics of the respondents. A total of 170 sero-positive respondents with

Table 1
Socio-demographic characteristics of respondents.

Variable	N = 170	(%)
Age group (years)		Mean age is 39y with SD of ± 10.8
<26	19	11.2
26–30	27	15.9
31–35	20	11.8
36–40	50	29.4
41–45	11	6.5
46–50	19	11.1
51–55	6	3.5
56–60	11	6.5
>60	7	4.1
Gender		
Male	31	18.2
Female	139	81.8
Ethnicity		
Hausa	39	22.9
Yoruba	92	54.1
Igbo	28	16.5
Others	11	6.5
Religion		
Christianity	30	17.6
Islam	139	81.8
Traditional	1	0.6
Marital status		
Single	14	8.2
Married	14	8.2
Separated/divorced	116	68.3
Widowed/widower	26	15.3
Educational level		
Non-formal	56	32.9
Primary	55	32.4
Secondary	42	24.7
Tertiary	17	10.0
Occupation		
Trader	91	53.5
Civil servant	16	9.4
Self-employed	43	25.4
Unemployed	14	8.2
Students	6	3.5
Monthly income		
No income	20	11.8
≤ 20000	129	75.9
20,001–30,000	10	5.8
30,001–40,000	6	3.5
40,001–50,000	3	1.8
>50,000	2	1.2

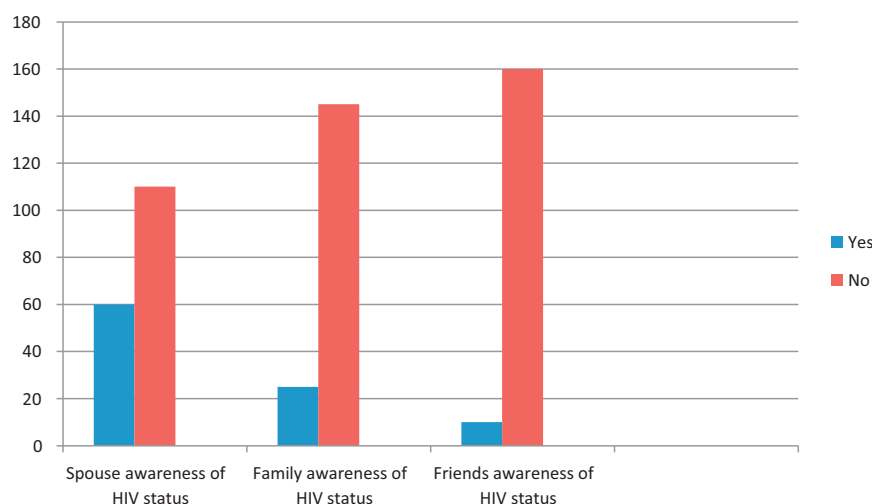


Fig. 1. HIV status declaration among sero-positive patients with depression.

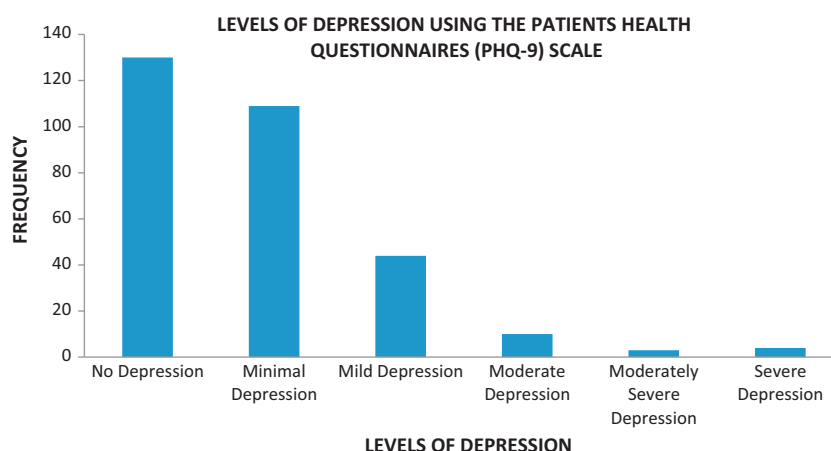


FIG. 2. Levels of depression among the respondents, using the patients health questionnaires (PHQ-9) scale.

depression were recruited to the study. The age range 36–40 years had the highest number of respondents 50 (29.4%). Females 139 (81.8%) outnumbered males 31 (18.2%) giving a male: female ratio of 1:4.5. Predominantly, 139 (81.8%) were Muslims, while Christian constituted 30 (17.6%). Fourteen (8.2%) were married while the same number were single. One hundred and sixteen (68.3%) were separated/divorce while 26 (15.3%), were widow/widower. The majority of them 56 (32.9%) had no formal education, 55 (32.4%), had primary education while 42 (24.7%) had secondary education. Only 17 (10.0%) attended tertiary institution. Majority, 91 (53.5%) were traders, while 14 (8.2%) were unemployed. Six (3.5%) were students.

Fig. 1 shows the HIV status disclosure pattern. 60 (35.3) declare their status to their spouse, while One hundred and ten (64.7%) did not. On the other hand only 25 (14.7%) of the family know their

HIV/AIDS status, 145 (83.3%) did not. One hundred and sixty (94.1%) out of the 170 respondents did not know their friends status.

Fig. 2 shows that 130 (43.3%) of the respondents were not depressed. However 170 (56.7%) respondents satisfied the criteria for a depressive disorder using the PHQ-9 score. Among the depressed respondents, 109 (64%) had minimal depression, 44 (25.9%) had mild depression, 10 (5.9%) had moderate depression, 3 (1.8%) had moderately severe depression, while 4 (2.4%) were severely depressed.

Table 2 shows that 80 (47.1%) of the respondents could not turn to their family for help when something was wrong. Seventy-eight (45.9%) were not satisfied with the way the family supported them. Seventy-eight (45.9%) were not satisfied with the support of the family not to take on new activities or direction. Eighty (47.1%) had

Table 2

Family APGAR in screening for family dysfunction among depressed HIV/AIDS patients.

APGAR	Situation	Almost always = 2	Some of the time = 1	Hardly ever = 0
Adaptation	Can you turn to your family for help when something is troubling you?	40 (23.5%)	50 (29.4%)	80 (47.1%)
Partnership	Are you satisfied with the way your family talks things over with you and shares problems with you?	40 (23.5%)	52 (30.6%)	78 (45.9%)
Growth	Are you satisfied that your family accepts and supports your wishes to take on new activities or directions?	39 (22.9%)	53 (31.2%)	78 (45.9%)
Affection	Are you satisfied with the way your family expresses affection and responds to your emotions, such as anger, or love?	41 (24.1%)	49 (28.8%)	80 (47.1%)
Resolve	Are you satisfied with the way your family share time together with you?	42 (27.4%)	50 (29.4%)	78 (45.9%)

Table 3
Association between family APGAR and depression among sero-positive HIV patients.

Family APGAR		Depressed HIV/AIDS patients		Total
		Yes (%)	No (%)	
Severely dysfunctional family	0–3	75 (44.1)	67 (51.5)	142 (47.3)
Moderate dysfunctional family	4–6	48 (28.3)	29 (22.3)	77 (25.7)
Highly functional family	7–10	47 (27.6)	34 (26.2)	81 (27.0)
Total		170 (100.0)	130 (100.0)	300 (100.0)

Chi-square = 0.382.

Table 4
Association between family functioning and depression in males and females sero-positive hiv patients.

Depression	Family functioning			
	0–3	4–6	7–10	Total (%)
Depressed males	11 (35.4)	6 (19.4)	14 (45.2)	31 (100.0)
Depressed females	64 (46.0)	42 (30.3)	33 (23.7)	139 (100.0)

Chi-Square = 5.906, *p*-value = .052.

not being showed affection. Seventy-eight (45.9%) of the respondents family did not devote time for their physical and emotional nurturing.

Table 3 shows that 170 (56.7%) were depressed while 130 (43.3%) were not. Out of the depressed, 75 (44.1%) had severely dysfunctional family while 48 (28.2%) had moderate dysfunctional family. However, 47 (27.6%) had highly functional family.

Table 4 shows that 11 (35.5%) male had severe dysfunctional families as opposed to 64 (46%) of the females. This is statistically significant (*p*-value = .052)

4. Discussion

The prevalence of depressive disorders among HIV/AIDS patients attending the lentiviral clinic was 56.7%. Depressive symptomatology in the study population mirrored the presentation of depression in other settings. Our finding was similar to the previous ones with regard to the prevalence of depressive disorders among People Living With HIV/AIDS (PLWHs) patients in Nigeria in particular. It also falls within the rates seen internationally [13–15]. Although it was lower in Uganda where Eugene [16] found the prevalence of 8.1%, a figure comparable to that of 9.6% reported by Chibanda et al. in Zimbabwe [17], Bradley in semi urban center in Cameroon used 400 HIV respondents and found a prevalence of 7% [18]. All the studies above derived from sub-Saharan Africa used International Diagnostic Criteria to make a diagnosis of depression [16].

The prevalence of depression obtained from this study also agrees with most local studies [19–21]. In this study, 130 (43.3%) of the respondents were not depressed. Out of the 170 (56.7%) who were clinically depressed 109 (64%) were minimally depressed, 44 (25.9%) were mildly depressed, 10 (5.9%) moderately depressed, 3 (1.8%) moderately severely depressed, while 4 (2.4%) were severely depressed.

Eighty (47.1%) of the respondents, could not turn to their family for help when they needed support nor were they shown affection. Moreover 78 (45.9%) of the respondents were not satisfied with the way the family shared their problems with them nor support the respondent's wishes to take on new activities or direction. In terms of severity of the family dysfunction, 75 (44.1%) had severely dysfunctional family while 48 (28.2%) had moderate dysfunctional

family. However, 47 (27.6%) had highly functional family. This contrast sharply with Mengel studies while studying, the use of family APGAR in screening for family dysfunction, in a family practice centre, who found out that 24% of the patients, reported family dysfunction with APGAR score of less than six [9].

There were severely dysfunctional families in 11 (35.5%) male respondents and moderate dysfunctional families in 6 (19.4%) male respondents. On the other hand, 14 (45.2%) male respondents had highly functional families. This contrasted sharply with the female gender, who had 64 (46.0%) severely dysfunctional families, and 42 (30.2%) moderately dysfunctional families with 33 (23.7%) of the respondents presenting with highly functional families. This study, also found that 106 (62.35%) females experienced more family dysfunction, than males who had 17 (30.0%). This is statistically significant (*p*-value = .052). Paucity of data on family dysfunction among depressed People Living With HIV/AIDS (PLWAs) make comparison difficult.

The family as a group is supposed to generate, tolerate or connect health issues within its membership. Whatever happens to one member of the family, has some effects upon the family collectively and requires a whole sense of accommodation on the part of the other family members. From the foregoing, it is clear that most of the depressed HIV/AIDS patients, had dysfunctional families hence deviated from the Stevenson's family [22] developmental model, which views family tasks, as sustaining appropriate health patterns and providing mutual support and acculturation of family members. The family tasks of satisfying the biological, cultural and personal needs and aspiration were not met. Furthermore, the needs of the patients, according to Maslow's hierarchy [23], were far from being satisfied. This included the physical needs, safety needs, need for love and belonging, the needs for esteem and finally the need for self-actualization.

5. Conclusion

The family is essential to the patients with HIV/AIDS and depression; hence the knowledge of the structures and functions of the patient's family should be paramount to the practitioners. Dysfunctional family pattern is one of the contributing factors in developing and maintaining depression. The management of patients with depressive disorders should therefore, not only be focused on symptom reduction but also to help them to establish and maintain supportive relationships with the rest of the family members to build a positive self-image. Furthermore, if there is no change in these domains, there will be no change in health status of these patients in the end and they will present repeatedly with similar symptoms.

6. Recommendation

Since family dysfunction is associated with depression, practitioners should assess family configuration, functioning and social support as part of the routine evaluation of the HIV-infected patients and indeed by extension, all other patients assessing treatment in our health facilities. Practitioners should access family configuration, functioning and existing social support as part of the routing evaluation of depression in PLWAs.

7. Limitation of the study

There are few limitations of the study that may reduce the generalization of our findings. The relatively small sample may be a potential limitation, but its calculation, estimated this number as sufficient to detect depression rates difference between asymptomatic and symptomatic HIV/AIDS patients. Furthermore like all cross-sectional studies, it is difficult to establish causal association between dependent and independent variables.

Conflict of interest

None declared.

Financial disclosure

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Appendix A.

See Table A.1.

Table A.1
The Patient Health Questionnaire-9 (PHQ-9).

	Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1.	Little interest or pleasure in doing things	0	1	2	3
2.	Feeling down, depressed, or hopeless	0	1	2	3
3.	Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4.	Feeling tired or having little energy	0	1	2	3
5.	Poor appetite or overeating	0	1	2	3
6.	Feeling bad about yourself-or that you are a failure or have let yourself or your family down	0	1	2	3
7.	Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8.	Moving or speaking so slowly that other people could have noticed, or the opposite-being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9.	Thoughts that you would be better off dead, or of hurting yourself in some way.	0	1	2	3
Add columns:		0	+_____	+_____	+_____
		= Total Score:			

Scoring: 1–4: minimal depression; 5–9: mild depression; 10–14: moderate depression; 15–19: moderately severe depression; 20–27: severe depression.

Appendix B.

See Table B.1.

Table B.1

The family APGAR questionnaire was used to determine the prevalence of self-reported family dysfunction present in the depressed HIV patients.

Open-ended requests for family function information	
Components	Relevant open-ended questions
Adaptation	How have family members aided each other in time of need? In what way have family members received help or assistance from friend and community agencies?
Partnership	How do family members communicate with each other about such matters as vacations, finances, medical care, large purchases, and personal problems?
Growth	How have Family members changed during the past years? How has this change been accepted by family members? In what way have family members aided each other in growing or developing independent life-styles? How many family members reacted to your desire for change?
Affection	How have members of your family responded to emotional expressions such as affection, love, sorrow, or anger?
Resolve	How do members of your family share time, space and money?

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