Factors Associated with depression among People Living with HIV at Bushenyi Health Centre IV

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ABSTRACT

The objective of this study was to assess for factors associated with depression among people living with HIV attending Bushenyi Health Center IV in Bushenyi District. A cross-sectional descriptive study was carried out among 80 ART patients who were assessed by researcher administered questionnaire. Findings were analyzed by SPSS version 27.0. Findings revealed that prevalence of depression was found to be 23 were depressed and regarding to severity of depression,11[48%], 9[39%], 2[9%] and 1[4%] had mild, moderate, severe and extreme depression, respectively and socio-demographic factors like age, residence and occupation were more likely to be associated with depression among people living with HIV as participants who were unemployed were 4.4 times more at risk of being depressed than participants who were employed (aOR 4.4, 95%CI 1.25-15.35, P=0.02). ART −Related factor like adherence was smore likely to be associated with depression among people living with HIV.
Keywords: Factors, HIV, depression.

INTRODUCTION

Globally, 350 million people are affected by depression and people living with HIV/AIDS face different challenges, including HIV-related perceived stigma, lack of social support and also depression [1-7]. Currently, 39% of HIV patients are reported to suffer from depression. This population is more likely to experience worsening disease states and, thus, poorer health outcomes [8]. In Developed countries, Depression affects about 20-30 percent of persons receiving HIV medical care. Persons living with HIV who are effectively treated for depression are more likely to adhere to antiretroviral therapy over time, with sustained virologic suppression to enjoy better health and improved quality of life. Although rates of current and lifetime major depression have been reported to be higher among HIV-infected persons than in the general population, effective pharmacologic treatment and psychotherapy are available for depression in persons living with HIV [9-14]. In Africa, the prevalence of depression among HIV-positive patients in Eastern Nigeria and to explore its association with HIV-related stigma. 105 HIV patients attending HIV clinics in Eastern Nigeria completed a Patient's Health Questionnaire (to measure depression) and the Berger HIV stigma scale. As many as 33.3% of participants were considered depressed. Depression was positively correlated with overall stigma score with further analysis finding a positive correlation with all four subscales of the questionnaire (personalized stigma, disclosure, negative self-image and public attitudes). Individuals experiencing more side effects of HIV treatment were also rated as more depressed [15]. Furthermore, out of 3989 articles, 31 studies were included in the review. The prevalence of CMDs in YLWH widely varied ranging between 16.0% and 40.8% for major depression, 4.4% and 52.6% for depressive symptoms and 2.2% [16]. Sub-Saharan Africa, Depression was one of the most common psychiatric disorders, was 2-3 times more prevalent in PLHIV than in the general population in many settings as shown in western countries but remains neglected in sub-Saharan Africa (SSA) aimed to summarize the available evidence on the prevalence of depression and associated factors according to the scales used and the treatment status in PLHIV in SSA. The pooled prevalence estimates of depression ranged between 9% and 32% in PLHIV on antiretroviral treatment (ART) and in untreated or mixed (treated/untreated) ones, with a substantial variability according to the measurement scale used and also for a given scale. Low socio-economic conditions in PLHIV on ART, female sex and immunosuppression in mixed/untreated PLHIV were frequently

reported as associated factors but with no consensus. As depression could have deleterious consequences on the PLHIV life, it was critical to encourage its screening and management, integrating these dimensions in HIV care throughout SSA [17]. In East Africa, a meta-analysis the pooled prevalence of depression in PLHIV was 38% (95% CI 29.30-47.54). However, in the past decades, studies have determined the prevalence of depression in PLHIV; previous studies reported prevalence rates between 2.7% and 76 [18]. In Uganda, a prevalence estimates of any depressive disorder, subclinical depression, both current and lifetime major depression, and bipolar depression were 46.4%, 17.8%, 25% and 3.6% respectively [19]. Western Uganda, the study carried out revealed that, 336 adolescents with a median age of 13 years, 62% of whom were female. A third (37%) had disclosed their HIV/AIDS status and 13% were sexually active. Overall, 154 (~46%, [95% CI: 40.5–51.2]) had depressive symptoms. On bivariate analysis, the odds of having depressive symptoms were higher among adolescents who were ≥ 15 years, had disclosed HIV status, traveled >30 min for routine care and had risky sexual practices [20].

Purpose of the study
To assess factors associated with depression among people living with HIV at Bushenyi Health center IV.

METHODOLOGY
Study Design and rationale
A descriptive cross section study used involved quantitative methods of data collection. A cross-sectional study was one that carried out at appoint in time or over a short period of time.it was a good design since the purpose of study was descriptive and helped to find the prevalence of the outcome of interest for a group in a population.it was chosen because of its simplicity and nature of the study which was descriptive and numerical data is required.

Study setting
The study was carried out in Bushenyi Health center IV found in Bushenyi town in Ishaka-Bushenyi municipality in Western part of Uganda.

Study Population
The study population was all PLWH attending ART clinic at Bushenyi Health center IV and who were included in to the sample. They were chosen because were at risk of depression and many cases of depression were reported.

Sample size determination
The sample size was determined using Yamane's formulate of 1999 to calculate the sample size

Which stated $\quad n = \frac{N}{1+N(e^2)}$

Where n = desired sample size
E=level of precision 0.05 at 90% confidence interval
N= sample present at Study area attending weekly 50 hence2 weeks were 100

$n = \frac{100}{1+100(0.05^2)}$

n = 80

Sampling procedure
In this study, simple random sampling method was used to select participants from the study area where by 80 participants were chosen at random from total list of PLWH at Bushenyi Health center IV. This method was preferred because it was easily understood, time saving, economical and it involved a selection process in which each member in population was having equal independent chances of being selected.

Inclusion criteria
I . PLWH who attended ART clinic at Bushenyi Health center IV
II. Respondents who had voluntarily consented.

Exclusion
Those who hadn't consented to be included in the study.

Data collection procedure
The data collected was checked by the supervisor for any incompleteness and inconsistency. That helped to make clear adjustments where necessary before the primary data collection. Every participant in the study consented and each was given a questionnaire. Privacy and confidentiality were maintained throughout the process of data

collection. Responses was recorded in the questionnaire following the interviews. It was done because the researcher wanted a reliable and correct data from respondents.

Data processing and analysis

Data entry and analysis was performed using SPSS version20 software package. The study population in relation to relevant variables, frequencies, percentages and summary statistics was used. Associations between dependent and independent variables was assessed and presented using tables, graphs and pie charts.
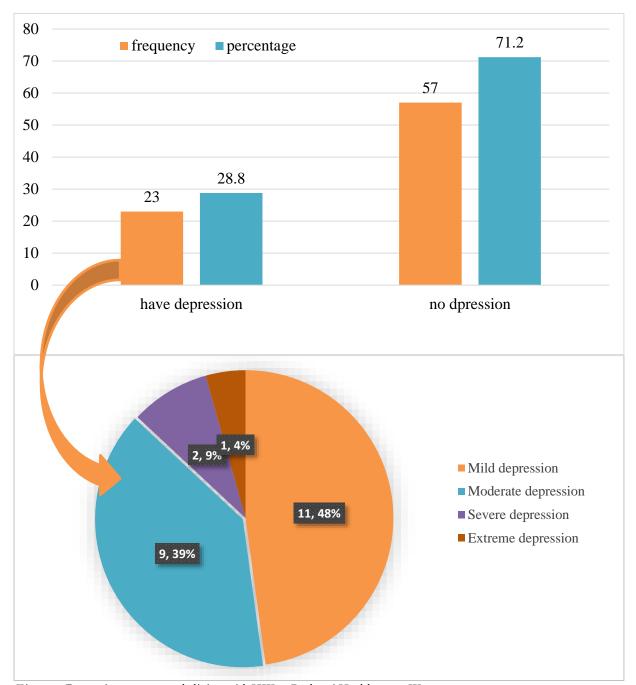
Ethical considerations

The Health Centre where the study was conducted l presented with an introductory letter from KIU seeking approval to undertake the study. Voluntarily participation in the study was ensured by explaining its direct benefits to the patients before obtaining written consent. The respondents were asked to consent before being interviewed. Interviews was conducted in a manner that enabled every patient to respond freely and openly in absence of any other person for confidentiality. Name of the respondents was not included in the questionnaire to ensure confidentiality. The respondents were explained that they could withdraw at any time and there's no penalty at all.

RESULTS
Table 1: Socio–demographic findings

	Frequency (n=80)	Percent (%)
Age		
13-20	13	15.8
21-30	36	44.7
31 and above	31	39.5
Marital status		
Single	25	31.6
Married	36	44.7
Divorced	6	7.9
Widowed	13	15.8
Education level		
Educated	34	42.1
Not educated	46	57.9
Occupation		
Employed	29	36.8
Unemployed	51	63.2
Residence		
Urban	36	44.7
Rural	44	55.3
Sex		
Male	36	44.7
Female	44	55.3

According to research findings of the study shown in the table 1 above, results show that majority 36[44.7%] participants aged 21-30 while the minority 13[15.85] were aged 13-20 years. It was also found that most 36[44.7%] were married while 13[15.8%] were widowed. Furthermore 46[57.9%] were not educated while 34[42.1%] were educated, more than a half 51[63.2%] of participants were not employed while 29[36.8%] were employed, more so 44[55.3%] were living in rural areas while 36[44.7%] were living in urban, it was also found that 44[55.3%] were females while 36[44.7%] were males.

Figure 1: Depression among people living with HIV at Bushenyi Health center IV
Figure show that 23 were depressed and regarding to severity of depression, 11[48%], 9[39%], 2[9%] and 1[4%] had mild, moderate, severe and extreme depression, respectively.

Table 2: bivariate logistic regression to determine Socio-demographic factors associated with depression among people living with HIV at Bushenyi Health center IV

Variables	ression		Cor	95% CI	P-Value
	Depressed	depressed			
Age					
13-20 years	3	10	Reference		
21-30 years	11	25	1.0	0.32-3.23	0.096
31 years and above	10	21	1.7	0.40-7.24	0.478
Residence					
Urban	7	29	Reference		
Rural	16	28	1.8	0.23-14.49	0.157
Sex					
Female	17	19	Reference		
Male	6	38	1.1	0.36-3.62	0.829
Marital status					
Married/Cohabiting	12	32	Reference		
Single/divorced/widow	11	25	0.5	0.07-4.38	0.572
Occupation					
Employed	6	23	Reference		
Unemployed	17	34	3.5	0.97-12.95	0.055
Education					
Educated	8	26	Reference		
Uneducated	15	31	1.5	0.18-11.80	0.717

P value = significant value, cOR= Crude ODD Risk, CI= Confidence interval.

Shown in table 2 above is the result of the bivariate logistic regression which was run to determine socio-demographic factors associated with depression among people living with HIV at Bushenyi Health center IV. Results of the analysis revealed that age, residence and occupation had p-values less than 0.2. Thus, they were proceeded for the next stage (multivariate stage). ART related Factors associated with depression among people living with HIV at Bushenyi Health center.

Table 3; bivariate logistic regression to determine ART related Factors associated with depression among people living with HIV at Bushenyi Health center

Variables	ression		cOR	95% CI	P-Value
	Depressed	depressed			
Experience any disturbance at night					
Yes	18	29	Reference		
No	5	28	0.8	0.26-2.26	0.472
Ever told anyone about your condition					
Yes	8	23	Reference		
No	15	34	1.8	0.23-14.49	0.638
Taking drugs daily as instructed					
Yes	10	46	Reference		
No	13	11	5.5	1.81- 17.00	0.003

P-value is significant Value, cOR= Crude Odd Ratio, CI= Confidence interval.

A bivariate logistic regression was run to establish the Art related factors associated with depression among people living with HIV at Bushenyi Health center IV and the results are shown in Table 3 above showed that only taking drugs daily as instructed had a P-value less than 0.2. Thus, was proceeded for the next stage (multivariate stage)

Table 4: Multivariate logistic regression to establish factors independently associated with depression among people living with HIV at Bushenyi Health center IV

Variables	aOR	95% CI	P-Value
Age			
13-20	Reference		
21-30 years	3.4	0.81-13.94	0.095
31 and above	0.86	0.32-2.34	0.77
Occupation			
Employed	Reference		
Unemployed	4.4	1.25-15.35	0.021
Residence			
Urban	Reference		
Rural	0.4	0.09-1.40	0.065
Taking drugs daily as instructed			
Yes	Reference		
No	11.3	2.58-49.46	0.001

P value = significant value, aOR= Adjusted Odd Ratio, CI= Confidence interval.

Table 4 shows multivariate logistic regression analysis of factors associated with depression among people living with HIV at Bushenyi Health center IV. Factors with a p-value less than 0.2 with the occurrence of depression at bivariate logistic regression analysis were considered for multivariate analysis. **At the multivariate stage shown table 4, participants who were unemployed were 4.4 times more at risk of being depressed than participants who were employed (aOR 4.4, 95%CI 1.25-15.35, P=0.02). On the other hand, study participants who never took drugs daily as instructed were 11.3 times more likely to be depressed compared to participants who took drugs daily as instructed (aOR 11.3, 95%CI 2.58-49.46, P=0.001).**

DISCUSSION

According to research findings of the study shown in the table 1 above, results show that majority 36[44.7%] participants aged 21-30 years. This could be a true representative of age groups affected depression among people living with HIV in Nigeria as shown that depression in HIV/AIDS was significantly associated with younger age at diagnosis. At this age, physical factors like feeling sick from antiretroviral treatment and anxiety about people finding out their retroviral status pose a lot of challenge; Guilt, worry about life style changes and the possibility of having children could also contribute to depression. Majority of the participants were diagnosed with HIV between the ages of 20-39years, with males diagnosed at an older mean age [21]. It was also found that 44[55.3%] were females while 36[44.7%] were males. Almost similar to the study done in Malawi reviewed that out of the 562 participants enrolled (mean age, 14.5 years 56.1 % female), the prevalence of depression was 18.9 %. In multivariate linear regression, the variables significantly associated with higher BDI-II score were female gender, fewer years of schooling, death in the family/household, failing a school term/class, having a boyfriend/girlfriend, not disclosed or not having shared one's HIV status with someone else, more severe immunosuppression, and bullied for taking medications [22]. It was also found that most 36[44.7%] were married out of 80 participants and 12[52.2%] were depressed. On contrary the study done in southwest Ethiopia found that the marital status of the HIV-infected person was significant factor for comorbidity with depression. Widowhood predisposed a person nearly 4 times to develop depression when compared to those who had a stable marital life. The findings were in line with studies conducted in Harar and Hawassa (Ethiopia) and Tehran in Iran. Unstable marital relationships and loss of partner predispose for depression, but presence of good social support can be a buffer against stress and depression [23].

More than a half 51[63.2%] of participants were not employed while 29[36.8%] were employed out of 80 participants and 17[73.9%] were depressed, At the multivariate stage shown table 4, participants who were unemployed were 4.4 times more at risk of being depressed than participants who were employed (aOR 4.4, 95%CI 1.25-15.35, P=0.02). Similarly, the study done in Ethiopia shown that prevalence of depression was higher in unemployed (70.6%) than those working as government employee (46.6%) or in private sector (43.6%) and 71.4% were working as a daily wager. This was statistically significant 6.466 times compared to employed ones. According to the nature of occupation, a high percentage of depression was found in laborers (84.6%), drivers (91.67%), army personnel (100%) and commercial sex workers (CSW) (80%). Depression was highest in those lost their jobs due to illness followed by those who could not work due to ill health. The longer was the duration, higher was the prevalence of depression [24]. More so 44[55.3%] were living in rural areas out of 80 participants and 16 [69.6%] were depressed. On centrally the study done in Uganda shown that there were significant differences in urban compared to rural residences of the two groups, Those in the HIV group were 43.357times more likely to be living in urban regions than those in rural [25]. Furthermore 46[57.9%] were not educated out of 80 participants and 15[65.2%] were depressed. Similarly, the study done in southwest regional hospital in Cameroon reviewed that the prevalence of depressive symptoms was higher in participants with a formal education, indicating that the level of education plays an important role in the prevalence of depression in patients. This might because those with a higher level of education have a better understanding of their illness and its symptoms. This is similar to findings in Canada where respondents whose educational levels were less than secondary education had the lowest rate of depression and the highest prevalence rate of depression was seen among those with tertiary education. Our findings however contrast with findings by Shittu in Nigeria and Kitshoff in South Africa [26].Study participants who never took drugs daily as instructed were 11.3 times more likely to be depressed compared to participants who took drugs daily as instructed (aOR 11.3, 95%CI 2.58-49.46, P=0.001). Similarly In a study done in Cameroon it reported that the non-adherence was associated with the presence of depressed moods. It suggested that providing care for mental health issues such as depression to subjects enrolled in Cameroon ART programs could improve adherence.it also demonstrated that non-adherence was associated with the presence of ART drug side effects, and may result from these side effects [28]. Finding of the results shown that 23 were depressed and regarding to severity of depression ,11[48%], 9[39%], 2[9%] and 1[4%] had mild, moderate, severe and extreme depression, respectively.

CONCLUSION

From findings of this research study, it found out that socio-demographic factors like age, residence and occupation were more likely to be associated with depression among people living with HIV as participants who were unemployed were 4.4 times more at risk of being depressed than participants who were employed. whereas other factors like marital status, education and sex were notART –Related factor like adherence was more likely to be associated with depression among people living with HIV.

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