ORIGINAL ARTICLE

Depression in HIV Positives under ART in TUTH Clinic: A Cross-Sectional Study

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Abstract

Introduction: *Among PLWHA, most studies have reported a high prevalence (20-37%) of depression, which negatively impacts the adherence to ART, and leads to increased morbidity and mortality.*
Objective: *This study aims to study depression among PLWHA who were under ART in the out-patient HIV clinic*
Method: *This study was conducted at the outpatient HIV clinic in a tertiary center (TUTH). All relevant information were noted in a semistructured proforma designed for the study. BDI-II and ICD-10 DCR were the tools used.*
Result: *Out of total 99 patients, 34 were depressed (34.2%), moderate depression with somatic syndrome category being the majority (19, 19.2%) ($p< 0.05$). Depression was significantly associated with low family income, alcohol use and past history of depression.*
Conclusion: *Depression was found to be highly prevalent in PLWHA who were under ART.*

Keywords: PLWHA, Depression, ART

INTRODUCTION

HIV may lead to depression via the psychological reaction of having acquired the illness, sub-cortical injury by the virus, opportunistic infections occurring in the AIDS, side effects of ART, and others. Depression may make an individual vulnerable to acquiring HIV, because those depressed often make maladaptive or inappropriate choices like unsafe sexual practices and drug abuse. Depression further is associated with high morbidity and mortality, particularly due to impaired adherence to ART.[1,2] However, depression is under-recognized, under-diagnosed and under-treated, so screening for depression should be attempted regularly, especially at the time of diagnosis and before initiating HAART[3,4]

Most western studies report the prevalence of depression in PLWHA as 2-3 times more than in the general population. Especially, studies after 1996, reported elevated rates of depression.[5] Most African studies from report point prevalence of MDD between 3-54%.[6] In a Chinese study, almost 79% (n = 22) of HIV+ but just 4% (n = 1) of HIV− groups reported lifetime major depression. Of the 22 HIV+ individuals with lifetime MDD, only one had onset before learning of HIV status. The remainder developed MDD within 6 months after testing HIV positive.[7] Few studies in India[6,8] report the

variable range 8-37%, reflecting differences in sample characteristics, methodology, study setting, operational definition of depression, and other factors. A community based cross-sectional study of 322 adult PLWHA in the Kathmandu valley, reported 25.5% to have BDI-defined depression.[9] An specialty HIV clinic at a tertiary care centre of South India reported syndromal depression in 40 percent of seropositive individuals. Severity of depressive symptoms was related to abuse or dependence on alcohol (47%), and poor social support (43%)[8]

This study was an attempt to study depression in PLWHA under ART in an out-patient clinic in TUTH, a tertiary centre hospital of this country located in the capital city, Kathmandu. Our hypothesis was that the prevalence of depression would replicate most of the earlier studies.

MATERIAL AND METHOD

Study Design and subjects

A descriptive cross-sectional study was conducted among HIV positive patients under ART in a TUTH clinic with the aim of studying depression for the 1-year-period (October, 2013 to September, 2014). A total (N) of 99 subjects were included based on strict criteria for inclusion (age 18-60 yrs; on ART for at least 6 months) and exclusion (speech disorder; mental retardation; delirium; dementia; serious medical illnesses like COPD, heart diseases, renal failure)

Procedure

The semi- structured proforma was filled with adequate information, the history taken from patients and informants. The clinical diagnosis was made after the Mental State Examination. Beck Depression Inventory (BDI-II) was used for comparison with the clinical diagnosis of depression. The diagnosis of depression was confirmed by ICD-10 classification of Mental and Behavioral Disorders-Diagnostic Criteria for Research (WHO-1992) in patients after thorough discussion with consultant psychiatrists who were available on their respective OPD days. The socio-demographic information, the clinical medical information as well as information regarding HIV parameters were obtained by the principal researcher from the patients' medical records in the HIV clinic. Finally, all the data were analyzed by using suitable statistical tools.

Statistical tools

Data were analyzed using SPSS version 16 (Chicago, Illinois, USA). Descriptive analysis was performed, and mean, median, range were calculated. The data were explained as mean± standard deviation (SD) wherever suitable. Spearman's rank correlation was performed for ordinal dataset. Chi- square tests were applied for categorical data. Independent sample t test, ANOVA tests were applied wherever applicable. P- value of <0.05 was considered significant.

RESULT

The major results of the study have been depicted in the following tables after which a brief discussion is attempted.

Table 2 shows that most patients (n=65, 65.7%) were not depressed, while 19 (19.2%) had moderate depression with somatic syndrome, 5 (5.1%) had moderate depression with somatic syndrome, 6 (6.1%) had mild depression, and 4 (4%) had severe depression without psychotic features.

Table no. 1: Association of Socio-demographic Variables and Depression categories

Variables		Depression					Total	Significance (χ^2)
		No	Mild	Moderate Without Somatic Syndrome	Moderate with Somatic Syndrome	Severe Without Psychotic Features		
Age,yrs	<30	18	1	0	9	2	30	
	30-39	24	4	1	6	1	36	0.618
	40-49	11	1	2	2	1	17	
	50-59	12	0	2	2	0	16	
Sex	Male	33	2	4	10	0	49	
	Female	32	4	1	9	4	50	0.163
Marital status	Single	9	2	0	6	0	17	
	Married	46	4	5	10	4	69	0.533
	Divorced	1	0	0	1	0	2	
	Widowed	8	0	0	1	0	9	
0ccupation	Housewife	28	2	3	9	4	46	
	Student	3	1	0	2	0	6	
	Businessman	1	1	2	3	0	7	
	Farmer	7	0	0	0	0	7	
	CSW	3	0	0	1	0	4	0.269
	Service	8	0	0	1	0	9	
	Laborer	0	0	0	1	0	1	
	Retired	6	0	0	0	0	6	
	Unemployed	9	2	0	2	0	13	
Religion	Hindu	56	4	4	15	4	83	
	Buddhist	8	2	1	2	0	13	0.474
	Christian	1	0	0	2	0	3	
Caste	Brahmin	19	0	1	3	2	25	
	Chhetri	21	3	1	8	2	35	0.667
	Newar	2	1	1	0	0	4	
	Mongolian	15	2	2	7	0	26	
	Dalit	2	0	0	0	0	2	
	Others	6	0	0	1	0	7	
Address	Kathmandu valley	34	4	4	12	3	57	
	Outside of valley	31	2	1	7	1	42	0.003
Family type	Nuclear	14	2	1	1	2	20	
	Joint	25	3	2	9	2	41	
	Extended	23	1	2	8	0	34	0.789
	Not applicable	3	0	0	1	0	4	
Family income, rs	1000-5000	1	0	0	2	0	3	
	5001-10000	9	2	4	16	4	35	
	10001-15000	8	3	0	1	0	12	0.000
	5001-20000	25	1	1	0	0	27	
	>20000	22	0	0	0	0	22	
Family h/o depression	Yes	6	0	1	4	0	11	0.436
	No	59	6	4	15	4	88	
Past h/o depression	before HIV	1	0	0	9	0	10	0.000
	after HIV	0	0	2	1	1	4	
	none	64	6	3	9	3	85	

Table no. 3: Diagnosis Based on ICD(10) DCR

ICD category	Frequency	Percent
no depression	65	65.7
mild depression	6	6.1
moderate depression without somatic syndrome	5	5.1
moderate depression with somatic syndrome	19	19.2
severe depression without psychotic features	4	4.0
Total	99	100.0

DISCUSSION:

Demography:

Like most previous studies,[2] our study did not find any significant association of depression among HIV subjects with age, sex, marital status, education, occupation, income, caste, religion and family type. MDD among HIV population was associated with family history of affective disorder, alcohol dependency disorder, and female gender.[9]

Similar to previous studies[11,12] our study showed that majority (n=36, 36.4%) belonged to age group 30-39 yrs. In our study, the males (n=49, 49.5%) and the females (n=50, 50.5%) were almost equal in number, which can be counted for one of the strengths of the study. This coincidental occurrence during the purposive random sampling can be explained by the fact that most females had acquired HIV by heterosexual transmission from their husbands who were also under ART in the same HIV clinic. The maximum number of patients were married (n=69, 69.7%). The maximum number of patients educated were upto primary level (n=47, 47.5%), The majority were housewives (n=46, 46.5%); while unemployed were 13 (13.1%), thus implying that those not having specific paid jobs were around 60% (59/99=n/N). Our finding matches the finding of some previous studies that unemployment is associated with depression among PLWHA.[3,12,4]

In our study, patients from the Kathmandu valley (kathmandu, lalitpur, bhaktapur) were 57(57.5%), while those from outside the valley were 42(42.4%). This comparable number of patients from within and outside the valley could be due to our site being the tertiary referral center. Our finding shows that majority were Hindus (n=83, 83%), belonged to joint family (n=41, 41.4%) with total family income between Rs. 5000-10,000.

Our finding shows that most patients (n=85, 85.9%) had no past history of affective disorder. Our results show significant association (X2=0.000) between current depression and past history of depression. Past history of depressive disorder is a major risk factor for current affective disorder, which like in other studies, has not been controlled for (limitation) in this study, and may be the reason for the high prevalence of depression in HIV positives. Our results show that majority (n=88, 88.9%) had no family history of depressive disorder. Though family history of depressive disorder was not controlled for (limitation of the study), majority had none, which gives more weight to our finding of depression among HIV positives. Previous study showed risk of depression to be associated with family history of depressive disorder among PLWHA.[10]

In our sample, most patients, took alcohol socially (n=78, 78.8%), and most (n=82, 82.8%) never used any addictive substance. This may be due to the fact that half the sample consisted of females, and mostly housewives.

Types and severity of depression:

Our results, in accordance with the prevailing literature, show that most patients (n=65, 65.7%) were not depressed, while 19 (19.2%) had moderate depression with somatic syndrome, 5 (5.1%) had moderate depression without somatic syndrome, 6 (6.1%) had mild depression, and 4 (4%) had severe depression without psychotic features. Our study showed more number of subjects moderately depressed than severely depressed which is consistent with previous studies[13,14,15] Clinical experience also shows that usually moderate to severely depressed patients seek help than mildly depressed.

Limitations

It was a cross- sectional study, so causality among associations could not be established. The sampling method was simple purposive. The researcher was not blind to the psychiatric diagnosis of depressive disorder. Normal controls were not used in the study. Past history

and family history of affective disorder, which are risk factors for current affective disorder in the individuals, were not excluded in the study. Alcohol/substance use and other confounding factors could not be controlled for in this study. The study can't be generalized on the national level, because although the site of study is a tertiary referral centre, the catchment area is the Central Development Region of the country.

CONCLUSION:

In our context, depression is highly prevalent among PLWHA. However, due to various reasons it may be too early to generalize it for the whole country. Nevertheless, the finding is consistent with most previous studies. The significant association between MDD and past history of depression was found. MDD was not significantly associated with other analysed variables.

REFERENCES:

1. *Saddock, B. J. (2000). Kaplan & Saddock's Comprehensive Textbook of Psychiatry (2 Volume Set): Lippincott Williams & Wilkins.*
2. *Shittu, R. O., Issa, B. A., Olanrewaju, G. T., Mahmoud, A. O., Aderibigbe, S. A., & Odeigah, L. O. (2013). A Comparison of Clinical Features of Depressed and Non-Depressed People Living with HIV/AIDS, in Nigeria, West Africa. Open Journal of Medical Psychology, 3, 60.*
3. *Asch, S. M., Kilbourne, A. M., Gifford, A. L., Burnam, M. A., Turner, B., Shapiro, M. F., & Bozzette, S. A. (2003). Underdiagnosis of depression in HIV. J Gen Intern Med, 18(6), 450-460.*
4. *Rodkjaer, L., Laursen, T., Balle, N., & Sodemann, M. (2010). Depression in patients with HIV is under-diagnosed: a cross-sectional study in Denmark. HIV Med, 11(1), 46-53.*
5. *Ciesla, J. A., & Roberts, J. E. (2001). Meta-analysis of the relationship between HIV infection and risk for depressive disorders. Am J Psychiatry, 158(5), 725-730*
6. *Nebhinani, N., Mattoo, S. K., & Wanchu, A. (2011). Psychiatric morbidity in HIV-positive subjects: a study from India. J Psychosom Res, 70(5), 449-454.*
7. *Jin, H., Hampton Atkinson, J., Yu, X., Heaton, R. K., Shi, C., Marcotte, T. P. (2006). Depression and suicidality in HIV/AIDS in China. J Affect Disord, 94(1), 269-275.*
8. *Chandra, P. S., Desai, G., & Ranjan, S. (2005). HIV & psychiatric disorders. Indian J Med Res, 121(4), 451-467.*
9. *Amiya, R. M., Poudel, K. C., Poudel-Tandukar, K., Pandey, B. D., & Jimba, M. (2014). Perceived family support, depression, and suicidal ideation among people living with HIV/AIDS: a cross-sectional study in the Kathmandu Valley, Nepal. PLoS One, 9(3).*
10. *Kinyanda, E., Hoskins, S., Nakku, J., Nawaz, S., & Patel, V. (2011). Prevalence and risk factors of major depressive disorder in HIV/AIDS as seen in semi-urban Entebbe district, Uganda. BMC Psychiatry, 11, 205. doi: 10.1186/1471-244X-11-205*
11. *Olley, B., Seedat, S., Nei, D., & Stein, D. (2004). Predictors of major depression in recently diagnosed patients with HIV/AIDS in South Africa. AIDS Patient Care STDS, 18(8), 481-487.*
12. *Bing, E. G., Burnam, M. A., Longshore, D., Fleishman, J. A., Sherbourne, C. D., London.(2001). Psychiatric disorders and drug use among human immunodeficiency virus–infected adults in the United States. Arch Gen Psychiatry, 58(8), 721-728.*
13. *Marwick, K. F., & Kaaya, S. F. (2010). Prevalence of depression and anxiety disorders in HIV-positive outpatients in rural Tanzania. AIDS Care, 22(4), 415-419.*
14. *Clarke, T., Gibson, R., Barrow, G., Abel, W., & Barton, E. (2010). Depression among persons attending a HIV/AIDS outpatient clinic in Kingston, Jamaica. West Indian Medical Journal, 59(4), 369-373.*
15. *Gaynes, B. N., Pence, B. W., Atashili, J., O'Donnell, J., Kats, D., & Ndumbe, P. M. (2012). Prevalence and predictors of major depression in HIV-infected patients on antiretroviral therapy in Bamenda, a semi-urban center in Cameroon. PLoS One, 7(7)*