Original Research Article

Depression and anxiety among people living with HIV in a coastal city of Karnataka

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ABSTRACT

Background: Living with HIV/AIDS not only hampers physical health but also mental and social well-being. The aim of this study was to assess the proportion of depression and anxiety among people living with HIV in the coastal city of Karnataka.
Methods: A cross sectional study was conducted in a community based organization in Mangaluru. It involved 169 study participants selected by simple random sampling technique. After the informed consent, the data was collected by interviewer's method using Beck's depression scale and Hamilton's anxiety scale. The data was analysed using SPSS software version 22.
Results: Of the 169 participants, the most prevalent age at diagnosis of HIV infection was found to be 26-34yrs (40.8%) and 57.9% belonged to rural community. 22% of them had borderline clinical depression and 12% had mild to moderate anxiety. Depression and age at diagnosis (χ^2=35.199, p=0.00); relationship status (χ^2=6.241, p=0.00) showed a significant association.
Conclusions: Though counselling is a part of ART services but still there is lack of follow up of cases and assessing the need of psychiatric support.

Keywords: HIV, Depression, Anxiety, Coastal Karnataka

INTRODUCTION

Human immunodeficiency virus/AIDS is one of the life succumbing diseases well known to the world. According to the recent annual report from NACO, the total number of people living with HIV in India was found to be 21.17 lakhs accounting to 0.26% of the total population.[1]

HIV is more of a burden because of its multifactorial impact on one's health, the most vulnerable of them being the psychological consequences. Many a times dealing with their life term disease state and further the social stigma received from the society including the health sector eventually leads to depression and anxiety.[2]

There are studies which explain the rationale for the psychological distress like a study by Charles et al indicated that enacted stigma, internalized stigma and disclosure avoidance were all associated with symptoms of depression. PLHA who had severe personalized stigma and negative self-image had 3.4 (1.6-7.0) and 2.1 (1.0-4.1) times higher risk of severe depression respectively (p<0.001).[3]

Furthermore the probability of disease circulation and is analogous with poor cohesion to antiretroviral therapy[4]. Studies show that dejection among infected individuals become involved in risky sexual activity.[5] In the study by Jeffrey et al, the results of meta-analysis, based on 95

independent samples totaling more than 35,000 patients, suggested that depression is consistently associated with non-adherence to HIV treatment and study by Haftu et al, those who live alone were 2.5 times more likely to have depression compared to those who live with their family (AOR=2.465 (95% C.I: 1.196, 5.078).[6,7]

Though HIV/ AIDS is under continuous scrutiny, but the focus goes on ART and very less on the prevalence of morbid factors associated with it, understanding the need of patient requiring intervention in mental health sector is very much important knowing its outcome and as there are less research studies on psychological aspect of PLHIV conducted in south coastal region. Hence the study was taken up to know the proportion of depression and anxiety among people living with HIV.

METHODS

The above cross –sectional study was executed in a community based organization, Hongirana from December 2016 to February 2017. After explaining the objectives of the study and seeking permission from the director of the organization and informed consent from the study participants, the study was proceeded on selecting the study participants based on the below mentioned criterias.

Inclusion criteria

Inclusion criteria were all HIV positive individuals.

Exclusion criteria

Exclusion criteria were individuals not willing to participate in the study.

A total of 169 participants were randomly chosen using lottery method, in reference to the proportion of depression (12%) among the PLHA in a study done by Charles et al and a relative precision of 5%.[3]

Sample size calculation

$$=4pq/r^2$$
$$=4*0.12*0.88/ (0.05)^2$$
$$=169$$

Following the consent from the study participants, a standard structured questionnaire on depression and anxiety i.e. Beck's depression inventory scale and Hamilton anxiety rating scale respectively were used to collect data.

Beck's depression inventory scale is a 21 multiple choice questionnaire with affective and somatic components.[8] The assessment is made on the individual's last 2 weeks experience on those components. The score range from 1-40. At the end, depending upon the scores level of depression was assessed.

Hamilton anxiety rating scale, a 5 point scale for each of the 14 criterions and the total score at the end assess the severity of the anxiety.[9] A score of 60-70 indicates severe anxiety and 50-60 score have mild to moderate anxiety state.

The data collected was analyzed using SPSS software version 22. Statistical analysis was represented in terms of frequencies and proportions. Socio-demographic characteristics and the association between the variables was assessed using chi-square test and p value less than 0.05 was considered to be statistically significant.

RESULTS

The above study came up with the following results to begin, the socio-demographic characteristics of the sample participants had more of 26-34 yrs age group people 47.3% and 57.9% belonged to rural community. 65% of them were female and most of them were either single or married. The most prevalent age at diagnosis of HIV infection was found to be 26-34 yrs (40.8%).

Table 1: Socio-demographic characteristics of the study participants.

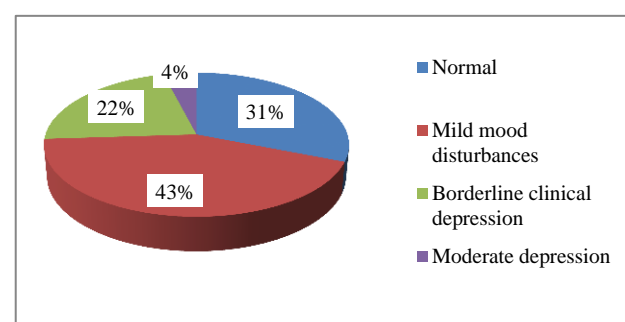| Characteristics		Frequency N=169 (%)
Age in years	18-25	30 (17.7)
	26-34	75 (47.3)
	35-48	64 (37.8)
Gender	Male	59 (34.9)
	Female	110 (65.0)
Place of residence	Urban	71 (42.0)
	Rural	98 (57.9)
Relationship status	Single	60 (35.5)
	Married	52 (30.7)
	Divorced	37 (21.8)
	Widow	20 (11.8)
Age at diagnosis	<18 yrs	20(11.8)
	18-25 yrs	42(24.8)
	26-34 yrs	69 (40.8)
	35-48 yrs	38 (22.4)

Figure 1: Proportion of depression among the study participants as assessed using Becks depression scale (N=169).

The total proportion of depression among the study group was found to be 69% in which 43% of them had mild mood disturbances, borderline clinical depression (22%) and moderate depression (4%) which is represented in Figure 1.

And as per the assessment made using Hamilton's anxiety scale 82% of the total participants were found to have anxiety of which 87% had mild anxiety and 12% of them had mild to moderate anxiety.

In Table 2, the analysis of association between depression and socio-demographic variables was made using chi square test in which a very significant association of 0.00 was found between depression and age at diagnosis with a chi- square value of 35.199. There was also a significant association between relationship status and depression ($\chi^2=6.241$, p=0.00).

Table 3, which showcases the association between anxiety and socio-demographic characteristics showed no significant association.

Table 2: Association between depression and socio-demographic characteristics (N**=116).

Characteristics		Frequencies N=116 (%)	Chi-square value	P value
Age in years	18-25	20 (17.2)	3.411	0.815
	26-34	42 (36.2)		
	35-48	54 (46.5)		
Gender	Male	34 (29.3)	4.789	0.198
	Female	82 (70.6)		
Place of residence	Urban	42 (36.2)	0.211	0.866
	Rural	74 (64.7)		
Relationship status	Single	43 (37.0)	6.241	0.004*
	Married	33 (28.4)		
	Divorced	28 (24.1)		
	Widow	12 (10.3)		
Age at diagnosis	<18 yrs	17 (14.6)	35.199	0.00*
	18-25 yrs	45 (38.7)		
	26-34 yrs	40 (34.4)		
	35-48 yrs	14 (12.0)		

*P>0.05 is significant; **Total number of participants with score >10 after Becks depression inventory scale analysis.

Table 3: Association between anxiety and socio- demographic characteristics (N**=139).

Characteristics		Frequencies N=139 (%)	Chi-square value	P value
Age in years	18-25	28 (20.1)	4.439	0.144
	26-34	65 (46.7)		
	35-48	58 (41.7)		
Gender	Male	42 (30.2)	0.007	1.00
	Female	97 (69.7)		
Place of residence	Urban	63 (45.3)	0.244	0.754
	Rural	76 (54.6)		
Relationship status	Single	52 (37.4)	0.400	0.877
	Married	43 (30.9)		
	Divorced	26 (18.7)		
	Widow	18 (12.9)		
Age at diagnosis	<18yrs	18 (12.9)	8.027	0.079
	18-25yrs	36 (25.8)		
	26-34yrs	69 (49.6)		
	35-48yrs	16 (11.5)		

**Total number of participants with anxiety assessed using Hamilton anxiety scale.

DISCUSSION

Initially depression and anxiety was unrevealed and/ or unrecognized, has it might lead to added stigma or ignorance, but now recognized to be the common psychological morbidity among PLHIV. Among the 169 study participants, women were known to have more of anxiety (62.1%) and depression (59.4%) similar to the study by Charles et al and Kaneez.[3,10]

The above study conducted showed proportion of depression among the study group to be 69% similar to the study by L'akoa et al were in the prevalence of depression was found to be 63% and results of Unnikrishnan et al study showed prevalence of 51.1%.[2,4]

Further the most important finding was the association between age at diagnosis and depression. This result is further supported by Savetsky et al were in 71% of their urban cohort were reported to have depression following a mean period of 840 days after diagnosis.[11] Other studies in this support are L'akoa et al and Lyketsos et al.[4,12]

Limitations

The study has its own limitations has the study was conducted in a CBO the results cannot be generalized to the HIV population. The depression can also be due to the ART drugs as per the results in a study by Morrison et al, but in our study the details of treatment were not collected.[5]

CONCLUSION

HIV infection and AIDS being a dreaded disease, presence of psychological burden hampers the will to live. To summarize, people living with HIV showed increased proportion of study subjects mild mood disturbances and almost half of them having mild anxiety. Has age at diagnosis and relationship status showed significant association with depression, there is a need consider psychological counseling with regular follow up and focus on mental health education among the people living with HIV and counseling of their peer groups.

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