

Research Article

Anxiety among people living with HIV/AIDS on antiretroviral treatment attending tertiary care hospitals in Lucknow, Uttar Pradesh, India

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ABSTRACT

Background: One of the major health challenges faced by India is the rapid growth of HIV/AIDS and its impact upon human life. Co-morbidities like anxiety are often overlooked while providing ART services to HIV/AIDS patients. Therefore the present study was conducted to assess the anxiety and associated factors among PLHA (People Living with HIV/AIDS) on antiretroviral treatment attending tertiary care hospitals in Lucknow.

Methods: Hospital-based cross-sectional study was conducted from November 2013 to March 2014 among 170 patients on treatment attending antiretroviral therapy (ART) centre of two tertiary care hospitals of Lucknow. Systematic random sampling was used to recruit patients. The anxiety level of all included patients was scored as per Hamilton anxiety rating scale.

Results: The mean HAM-A score of 179 patients was 10.74 ± 6.04 . Majority (92.1%) of the patients had HAM-A score less than 17 indicating mild severity, 5.0% of the patient had mild to moderate severity while only 2.7% had moderate to severe level of anxiety symptoms. None of the patient had very severe level of anxiety. Significant association was found between level of anxiety symptoms with educational status (0.03), perception of side-effects during last one month (0.03) and duration of treatment (0.04).

Conclusions: People living with HIV/AIDS need to be periodically educated and informed about various issues associated with the disease severity and antiretroviral treatment along with its side-effects so that they could better cope with disease and its treatment outcomes over time and be able to seek early treatment accordingly.

Key Words: Antiretroviral therapy, PLHA, anxiety

INTRODUCTION

HIV/AIDS has gained prominence in India as a growing public health issue. Currently, India has an estimated prevalence of 0.23-0.33%.¹ Healthcare providers are increasingly confronted by comorbid psychiatric illness among HIV patients.² Anxiety and depression are among the most commonly diagnosed psychiatric conditions

affecting HIV infected patients. Fear of stigma and feeling of anxiety were frequently reported among HIV positive patients.³ Apart from that, excessive anxiety contributes to a sense of helplessness in which a person feels little control over the present or future and continues maladaptive behaviour patterns.⁴ Probability of premature death, physical disability and pain, loss of employment, social isolation, costs of medical treatment, anxiety about

the future of family members may act as potential stressors and such persons may respond with signs of psychological distress thereby leading to comparatively higher level of anxiety and depression due to social, physiological and psychological factors.⁵ Anxiety has been shown to be more prevalent among patients who have recently been diagnosed with HIV.⁶

Anxiety is a state of apprehension, tension and worry. In the general sense anxiety is a vague, very unpleasant feeling of fear, nervousness and apprehension without any apparent stimulus, associated with physiological change.⁷ Among those with HIV, up to 28% may have adjustment disorder, 25.36% may suffer from anxiety and there is a higher prevalence of post-traumatic stress disorder scores among people living with HIV/AIDS.⁸⁻¹¹

Health care providers are therefore required to recognize and address the psychosocial needs of people with HIV and AIDS accordingly.¹² Therefore the present study was conducted to assess the anxiety and associated factors among PLHA on antiretroviral treatment.

METHODS

Hospital based cross-sectional study. The study was conducted at the ART centres of King George's Medical University, and Ram Manohar Lohia Institute of Medical Sciences, Lucknow. Adult patients with age ≥ 18 years on ART at least for six months were included for this study. Patients who were on medications for other chronic disorders and those with the previous history of anxiety or any other psychological problems associated with anxiety were excluded from the study. A total 170 patients on ART were enrolled in the study using systematic random sampling and were interviewed with the help of a predesigned and pretested schedule covering detailed information regarding socio-demographic profile and treatment history of the patient. Non-willing patients, patients who were unable to communicate and seriously ill patients were excluded from the study.

Assessment of anxiety

Symptoms of anxiety were entered in the HAM-A to reach at a total score.¹⁴ This scale measures in a total score range of 0-56, where <17 indicates mild severity, 18-24 mild to moderate severity, 25-30 moderate to severe, and >30 very severe level of anxiety. For the analysis purpose, the score ≥ 25 being used indicative of moderate to very severe depression.

Ethical clearance

Prior to the onset of the study, the study protocols were extensively reviewed and approved by Institutional Ethics Committee, King George's Medical University, Lucknow. Written informed consent was obtained from each patient before getting them enrolled in the study.

Data management

The information collected on the study schedule was transferred on the pre- designed classified tables and analysed according to the aims and objectives. Statistical analysis was carried out using essentially the chi-square test.

RESULTS

Socio-demographic characteristics of the study population

The mean age of 179 patients was 38.16 ± 8.93 . A significant proportion (71.5%) were young (less than 40 years), married (63.7%) and majority were employed (72.1%). About two-third of the participants were male, while 33.5 % were female and majority (66.5%) of them were from socio-economic status upper lower and below. 79.3% were Hindus and majority (60.3%) of them belonged to nuclear family with almost equal distribution among urban and rural residence. Almost four-fifth of the patients were educated either up to high school or below.

Table 1: Distribution of patients attending ART center on the basis of anxiety symptoms.

| Level of anxiety symptoms | No. of cases | Percentage |
|---------------------------|--------------|------------|
| Mild | 165 | 92.1 |
| Mild to moderate | 9 | 5.0 |
| Moderate to severe | 5 | 2.7 |
| Very severe | 0 | 0.0 |

*HAM-A Anxiety Score

Treatment profile of PLHA

Almost half (52.0%) of the patients were on anti-retroviral therapy between one to four years while about one-fifth were for treatment less than a year. About 17.3% of the patients had perceived the side effects of medication during the previous one month.

Factors associated with anxiety symptoms in PLHA

The mean HAM-A score of 179 patients was 10.74 ± 6.04 . Majority (92.1%) of the patients had HAM-A score less than 17 indicating mild severity, 5.0% of the patients had mild to moderate severity while only 2.7% had moderate to severe level of anxiety symptoms. None of the patients had very severe level of anxiety. Significant association was found between level of anxiety symptoms with educational status (0.03), perception of side-effects during last one month (0.03) and duration of treatment (0.04). Comparatively higher proportion of patients with moderate to very severe level of anxiety symptoms were found among those educated less than high school, who perceived any sort of side effects and those with duration of treatment less than one year. Out of five patients with

moderate to very severe level of anxiety symptoms, four were educated less than high school. Also the proportion of patients with moderate to very severe level of anxiety symptoms increases significantly with increase in duration of treatment. However the association between

level of anxiety symptoms with other baseline variables like age, gender, marital status, type of family, place of residence, employment status, religion, social class, socioeconomic status, living arrangement etc. was found to be insignificant.

Table 2: Factors associated with anxiety among patients attending ART centre (N=179).

| | | Level of anxiety symptoms | | |
|-------------------------------------|------------------------|---------------------------|------------------|-------------------------|
| | | Mild | Mild to moderate | Moderate to very severe |
| Age | 18-30 | 33 (20.0) | 1 (11.1) | 1 (20.0) |
| | 31-40 | 83 (50.3) | 6 (66.7) | 4 (80.0) |
| | 41-50 | 30 (18.2) | 2 (22.2) | 0 (0.0) |
| | >50 | 19 (11.5) | 0 (0.0) | 0 (0.0) |
| X ² =4.1 df= 6 p=0.65 | | | | |
| Gender | Female | 53 (32.1) | 5(55.6) | 2 (40.0) |
| | Male | 12 (67.9) | 4(44.4) | 3 (60.0) |
| X ² =2.2 df=2 p=0.33 | | | | |
| Marital status* | Married | 109 (66.1) | 3 (33.3) | 2 (40.0) |
| | Single | 56 (33.9) | 6 (66.7) | 3 (60.0) |
| X ² =5.2 df=2 p=0.07 | | | | |
| Type of family | Nuclear | 100 (60.6) | 5 (55.6) | 3 (60.0) |
| | Joint | 65 (39.4) | 4 (44.4) | 2 (40.0) |
| X ² =0.09 df=2 p=0.95 | | | | |
| Residence | Urban | 82 (49.7) | 4 (44.4) | 2 (40.0) |
| | Rural | 83 (50.3) | 5 (55.6) | 3 (60.0) |
| X ² =0.2 df=2 p=0.87 | | | | |
| Current Employment Status | Employed | 121 (73.3) | 6 (66.7) | 2 (40.0) |
| | Unemployed | 44 (26.7) | 3 (33.3) | 3 (60.0) |
| X ² = 2.8 df=2 p=0.24 | | | | |
| Religion | Hindu | 132 (80.0) | 7 (77.7) | 3 (60.0) |
| | Non-hindu | 33 (20.0) | 2 (22.3) | 2 (40.0) |
| X ² = 1.5df=2 p=0.81 | | | | |
| Category | General | 66 (40.0) | 5 (55.6) | 1 (20.0) |
| | OBC | 78 (47.3) | 3 (33.3) | 3 (60.0) |
| | SC/ST | 21 (12.7) | 1 (11.1) | 1 (20.0) |
| X ² =1.7 df=4 p=0.77 | | | | |
| Education | Up to high school | 134 (81.2) | 4 (44.4) | 4 (80.0) |
| | More than high school | 31(18.8) | 5 (55.6) | 1 (20.0) |
| X ² =7.0 df=2 p=0.03 | | | | |
| Socioeconomic status ** | Upper lower and below | 110 (66.7) | 6 (66.7) | 3 (60.0) |
| | Lower middle and above | 55 (33.3) | 3 (33.3) | 2 (40.0) |
| X ² =0.09 df=2 p=0.95 | | | | |
| Perceived Side-effects of ART | Yes | 25 (15.2) | 4 (44.4) | 2 (40.0) |
| | No | 140 (84.8) | 5 (55.6) | 3 (60.0) |
| X ² = 6.9 df=2 p=0.03 | | | | |
| Time elapsed since last counselling | >3month | 27 (16.4) | 3 (33.3) | 2 (40.0) |
| | <3 month | 138 (83.6) | 6 (66.7) | 3 (60.0) |
| X ² =3.3 df=2 p=0.18 | | | | |
| Duration of treatment (yrs.) | <1 | 37 (22.4) | 1 (11.1) | 0 (0.0) |
| | 1-4 | 87 (52.7) | 2 (22.2) | 4 (80.0) |
| | >4 | 41 (24.8) | 41 (24.8) | 1 (20.0) |
| X ² = 9.56 df=4 p=0.04 | | | | |
| Living arrangement | With somebody | 159 (96.4) | 9 (100.0) | 5 (100.0) |
| | Alone | 6 (3.6) | 0 (0.0) | 0 (0.0) |
| X ² = df=2 p=0.76 | | | | |

DISCUSSION

Psychological analysis revealed lower proportion (2.7%) of patients with moderate to severe level of anxiety symptoms. Globally, various studies viz., Jacob *et al.* and Perkins *et al.* reported a prevalence range of anxiety disorders from 2% to 38% respectively.^{13,14}

Belete *et al* in Ethiopia reported anxiety among 22.2% of the PLHAs.⁶ In Indian context, findings reported by Khan *et al.* suggested that majority the cases (63.4%) with very high level of anxiety.¹⁵ This wide variation might be due difference in sample size or diagnostic criteria used by studies for assessment of anxiety, for example, Khan *et al.* assessed anxiety using Comprehensive Anxiety Test (CA-Test) while in the present study anxiety level of all included patients was scored as per Hamilton Anxiety Rating Scale.¹⁵

Gascon *et al* opined that level of schooling expresses differences about perception of health and illness between people, also in terms of access to information, with important determinants to health.¹⁶

This might be the reason for comparatively larger proportion of PLHAs with anxiety symptoms among those educated up to high school or below. This finding revealed the need of intensified health education and counselling session for these patients so that they could better cope with the sign and symptoms of their illness as well as forthcoming complications.

In the present study the level of anxiety was found to be statistically significant with perception of side effects of drugs. Possible reason might be the fact that side effects simulates like somatic symptoms of physical illness behaviour. This might be the cause for comparatively more proportion of patients with anxiety symptoms among those persons having side effects. Similar findings were also reported by Mwiya *et al.*⁴

Gupta *et al.* reported counselling is to be an effective technique for reducing anxiety level in AIDS patients.⁵ However in present study counselling was found to had no role in preventing and reducing anxiety among patients.

Moreover, anxiety symptoms were found to be higher among those with duration of treatment more than one year. Severe anxiety symptoms were reported in none of the patients with duration of treatment less than one year. Shukla *et al* reported catastrophic out-of-pocket expenditure in about one-fifth (16.1%) patients during their visit to centre for availing ART services.¹⁷

Inability of these patients to adapt coping strategies so as to combat financial as well as psychological distress over time might be the possible reason for anxiety symptoms among the patients.

CONCLUSION

The upshot of the findings concludes that majority (92.1%) of the patients had anxiety symptoms with mild severity, 5.0% of the patient had mild to moderate severity symptoms while only 2.7% had moderate to severe level of anxiety symptoms.

Level of anxiety symptoms were found to be statistically associated with educational status of the HIV patients, perceived side-effects during last one month and duration of treatment. Small sample size was the main limitation of this study. Further study including a larger sample size can enlighten additional information for complicated problem of anxiety and its management.

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