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Depressive symptoms and suicidal ideation in people living with HIV/AIDS and their caregivers: a comparative study

Abstract

Background: Worldwide estimate indicates that more than 40.3 million people are living with HIV/AIDS and out of these, eight million are young people in the age group of 14-24 years. India is reported to be the second largest population of HIV-infected persons. **Aim:** A cross-sectional study was planned to assess the level of depressive symptoms and suicidal ideation in people living with HIV/AIDS and their caregivers. **Materials and methods:** A group of 300 participants was assessed on the Hamilton Depression Rating Scale and Suicidal Ideation Questionnaire. **Results:** The data were analysed using descriptive and inferential statistics. Overall, the results showed that people with HIV negative, HIV positive, and AIDS ($F=616.96$, $df=2,147$, $p<0.01$) as well as their caregivers ($F=1365.10$, $df=2,147$, $p<0.01$) significantly differed on depressive symptoms. Similarly, there were significant variations in suicidal ideation in caregivers of people with HIV negative, positive, and AIDS. **Conclusion:** Findings of the study highlight the need to develop targeted prevention initiatives including education, and counselling to prevent suicidal ideation and depressive symptoms in these individuals and their caregivers.

Keywords: Prevention. Education. Counselling.

Ravinder Kumar Prajapati[1], Radhey Shyam[2], Sushma Rathee[3]

[1]Department of Psychology, School of Education, College of Humanities and Education, Lautoka, Fiji, [2]Department of Psychology, Maharshi Dayanand University, Rohtak, Haryana, India, [3]Departmenr of Psychology, Maharshi Dayanand University, Rohtak, Haryana, India

Correspondence: Sushma Rathee, Research Scholar, Department of Psychology, Maharshi Dayanand University, Rohtak-124001, Haryana, India. sushmaratheecp@gmail.com

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INTRODUCTION

Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) is the most devastating condition; it appeared in the late 1970s when doctors began to see an increasing number of patients with an unusual strain of pneumonia and cancers. AIDS, caused by HIV, leads to specific damage to the immune system. In the later stage of this condition, individuals become prone to infections and tumours quickly. HIV/AIDS and depression are significantly related to each other. Depression is a psychiatric disorder which is related to mood, thought, disappointment, loneliness, hopelessness, self-doubt, and guilt. Depression has been divided into two major types: mild depression, where people have little and some short of symptoms which show limited effect on daily life; major depression, where symptoms intervene with ability of the person which help them to cope with daily life problems. There are some common symptoms in depression such as loss of interest in daily activities and appetite, and also, accompanied with weight changes, sleep disturbance, irritability, and loss of energy.[1] Suicidal ideation is a common symptom of depression wherein the person has suicidal thoughts and unusual preoccupation with suicide. Symptoms of suicidal ideation can be associated with feeling of helplessness, loneliness, excessive low energy, and low level of self-esteem.[2] A recent study conducted on 160 participants living with HIV/AIDS showed that the prevalence of depression in patients with HIV under antiretroviral therapy (ART) was 58.75% and the prevalence of depression increased with the severity of symptoms. Unemployed, uneducated, unmarried, belonging to joint families, low family income, poor relationship with spouse, and poor social support play important roles.[3] As suicidal ideation and depression are prevalent in HIV positive people and their family members, the aim of this study was to compare depressive symptoms and suicidal ideation among people with HIV negative, positive, and AIDS, and their caregivers. It was hypothesised that people with HIV negative, positive, and AIDS, and their caregivers would score differently on measures of depressive symptoms and suicidal ideation.

METHODS

Study design and population

To achieve the objective of the study, a multi-group design was used. There were three groups of people with HIV negative, positive, and those suffering from AIDS, and three groups of caregivers, i.e. caregivers of people with HIV negative, positive, and AIDS. The HIV negative individuals and their caregivers were taken as control, because it was believed that the HIV negative individuals and their caregivers have gone through the process of assessment equal to other HIV positive/AIDS individuals and they experienced more or less same level of stress than healthy people.

A total number of 300 participants (equal number of male and female) in the age range of 24 to 49 years were included in the present study. The duration of the study was from 2007 to 2009. The sample was selected on the basis of non-random purposive sampling from different Integrated Counselling and Testing Centres (ICTCs) including Safdarjung Hospital, New Delhi; Pandit Bhagwat Dayal Sharma Post Graduate Institute of Medical Sciences (PGIMS), Rohtak, Haryana; and Sawai Man Singh (SMS) Hospital, Jaipur, Rajasthan of India. In case of caregivers, only those who were the primary caregivers were included in the sample. Those having other physical and psychiatric disturbances were excluded from the sample. Layout of the sample is shown in Table 1.

The present study was a part of research work conducted for the award of Doctorate of Philosophy Degree to the first author. The proposal was cleared by statutory bodies of the university (Maharshi Dayanand University, Rohtak, Haryana, India). The second author was the supervisor and the third author helped in the data collection and analysis. Inform consent was taken from each and every participant besides seeking permission from the centres.

Tools

Information about sociodemographic factors was collected through the self-designed sociodemographic datasheet. In addition, measures of depressive symptoms and suicidal ideation were administered.

Depressive symptoms were measured using the Hamilton Depression Rating Scale (HDRS).[4] It consists of 21 questions to be rated on four-point scale and two items to be rated on zero to two spectrum. The interrater reliability coefficient for the HDRS score ranges from 0.87 to 0.95. The Suicidal Ideation Questionnaire (SIQ)[5] was used for measuring suicidal ideation. SIQ consists of 30 items and the respondents need to rank each of the items on seven-point rating scale, in which one indicative of very low or no suicidal ideas and seven indicates very severe level of suicidal ideation. The internal consistency reliability was computed by using Cranach's alpha and it ranged from 0.969 to 0.974.

Statistical analysis

Data were analysed using descriptive (mean and standard deviation [SD]) and inferential (Analysis of Variance [ANOVA] and Duncan's post hoc test) statistical tests. All p-values which were less than 0.05 considered as statistically significant. Statistical analyses were done with the help of Statistical Package for the Social Sciences (SPSS) version 16.0.

RESULTS

The main objective of the study was to assess and compare the depressive symptoms and suicidal ideation in people with HIV negative, positive, and AIDS, and their caregivers. The means, SDs, and summary of ANOVA are given in Tables 2-5.

Age range of the participants was found as mean (SD) 32.82 (6.52). Sample of the study was equally distributed on the basis of sex; in the occupation, majority of the sample belonged to driver and their wives. In the sample, majority of participants studied up to middle to higher education, and in the overall socioeconomic demographic variable, 60% belonged to low class and 40% were middle class (Table 2).

Results showed that people with HIV negative obtained low score on depression scale than people with HIV positive and AIDS. ANOVA revealed that all the three groups, i.e. HIV negative, HIV positive, and AIDS differed significantly ($F=616.96$, $df=2,147$, $p<0.01$) (Table 3). Post hoc comparison was done by Duncan's post hoc test and it was found that people with HIV positive scored significantly higher than people with AIDS and HIV negative on depressive symptoms (Table 4). The mean scores on depressive symptoms of people with HIV positive and AIDS however did not differ (Table 3); but, people with AIDS had scored significantly higher in depressive symptoms than people with HIV negative. It was found that the mean suicidal ideation scores of the three groups also differed significantly ($F=555.30$, $df=2,147$, $p<0.01$) (Table 3). Post hoc Duncan's test revealed that people with HIV positive and AIDS scored almost equally on suicidal ideation whereas people with HIV negative scored significantly less on suicidal ideation than both people with HIV patient and AIDS (Table 4).

The mean scores of caregivers of people with HIV negative, HIV positive, and AIDS on depressive symptoms differed significantly ($F=1365.10$, $df=2,147$, $p<0.01$) (Table 5). Post hoc Duncan's test revealed that the caregivers of people with HIV positive and AIDS did not differ significantly; however, the caregivers of people with HIV negative scored significantly less on depressive symptoms than both caregivers of people with HIV positive and AIDS (Table 4). In case of suicidal ideation, the caregivers of people with HIV negative, HIV positive, and AIDS differed significantly ($F=167.87$, $df=2,147$, $p<0.01$) (Table 5). Post hoc mean scores in caregivers of people with HIV negative was significantly less on suicidal ideation than people with HIV positive and AIDS (Table 4). The caregivers of people with AIDS scored significantly higher on suicidal ideation than the caregivers of people with HIV positive and negative (Table 4).

DISCUSSION

The present study was planned with the aim of assessing the severity of depressive symptoms and suicidal ideation in people living with HIV negative, HIV positive, and AIDS as well as their caregivers. We found that depressive symptoms were higher in people with HIV positive and AIDS as compared to people with HIV negative. A recent study

Table 1: Layout of the sample

People with HIV negative	People with HIV positive	People with AIDS	Caregiver of people with HIV negative	Caregivers of people with HIV positive	Caregivers of people with AIDS
50	50	50	50	50	50

HIV=Human Immunodeficiency Virus, AIDS=Acquired Immune Deficiency Syndrome

measured the frequency of major depressive disorder (MDD) in HIV positive participants in southern Brazil, in which a group of 61 participants were categorised under HIV (39) and controls (22).[6] It has found that HIV positive participants frequently experienced the episode of major depression as compared to HIV negative participants. That study also reflects that suicide risk was 18% in the HIV positive participants. It can be explained in terms of the stigma and shock the people with HIV positive and AIDS have gone through. It can also be explained in terms of stages of response to death [7].

Similarly, the high depressive symptoms and suicidal ideation in caregivers of people with HIV and AIDS can also be explained. In addition to the shock and stigma, they also bear the brunt of caring someone very dear to them knowing the end result. Moreover, they also face financial burden in terms of expenses on treatment and loss of job to the people with HIV and AIDS. Due to social stigma, they are also not able to share their problem with others including the relatives, friends, and neighbours.

In the results of present study, lower level of depression was found in people with HIV negative. It may be because of the visit to ICTC for HIV testing causing a stress in them. Till the results, they were not confirm that they are free from HIV or not. Findings of the present study revealed that people with HIV positive and AIDS had significantly high suicidal ideation than people with HIV negative and their caregivers. Suicidal ideation is one of the critical features of depression and therefore, keeping in line with the higher level of depression in people with HIV positive and AIDS, and their caregivers. The findings of the studies are in accordance to the results of reporting higher level of depression and suicidal ideation in people with HIV positive and AIDS.[8]

Similar results were found in another study in which prevalence and comparison of depressive disorder in people with HIV positive/AIDS and HIV negative were done.[9]

Table 2: Details of demographic variables

Variables	Classification	Frequency (percentage)
Age	Mean (SD)	32.82±6.52
Sex	Male	150 (50%)
	Female	150 (50%)
Education	Literate	6 (2%)
	Primary	13 (4.33%)
	Secondary	52 (17.33%)
	Middle	87 (29%)
	Higher	89 (29.67%)
	Graduate	39 (13%)
	Postgraduate and above	14 (4.67%)
Socioeconomic status	Low	180 (60%)
	Middle	120 (40%)

Table 3: Summary of ANOVA for people with HIV negative, positive, and AIDS (df=2,147)

Variables	Sources of variance	Sum of squares	Mean squares	F value
Depressive symptoms	Between groups	20929.70	10465	616.96*
	Within groups	2493.74	16.96	
Suicidal ideation	Between groups	1244.65	622.30	555.30*
	Within groups	164.74	1.12	

*=0.01 level

Table 4: Means and SDs of people with HIV negative, positive, and AIDS, and their caregivers

Variables	Categories											
	People with HIV negative		Caregivers of people with HIV negative		People with HIV positive		Caregivers of people with HIV positive		People with AIDS		Caregivers of people with AIDS	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Depressive symptoms	2.94[a]	2.07	3.86[a]	2.02	29.54[b]	5.36	32.50[b]	4.02	26.10[b]	4.22	31.74[b]	2.99
Suicidal ideation	0.40[a]	0.63	0.18[a]	0.38	6.60[b]	1.32	4.58[b]	2.76	6.46[b]	1.09	6.34[c]	1.09

a, b and c alphabet indicates Duncan's post hoc comparison. Similar/same alphabet indicates the non-significant difference, and dissimilar alphabet indicates significant difference between variables.

Table 5: Results of ANOVA for caregivers of people with HIV negative, positive, and AIDS (df=2,147)

Variables	Sources of variance	Sum of squares	Mean squares	F value
Depressive symptoms	Between groups	26635.36	13318	1365.10*
	Within groups	1434.14	9.75	
Suicidal ideation	Between groups	1006.72	503.36	167.87**
	Within groups	440.78	2.99	

*=0.0 1 level, **=0.05 level

Findings of that study showed high prevalence rate (67.3%) of depression in persons with HIV/AIDS and these people were at risk of depression.[9]

The people with AIDS have in a way came to terms with the status and might have entered the third stage whereby they may reveal their status to carefully selected significant others. It might act as a kind of catharsis and may result in decreases in depression. In support of the present study in Indian population, a recent work conducted on people living with HIV/AIDS suggested that mental health issues such as sadness, low mood, insomnia, and inability to cope with perceived stressors are prominent.[10] Another study reported suicidal thought in 13% of the sample and those people showing symptoms of suicidal risk also scored moderate to severe on anxiety symptoms.[11] Several other studies have also reported higher levels of depression and suicidal ideation, stress and anxiety in people diagnosed with HIV.[12,13] In a recent study, it had been found that behaviourally-infected adolescents were more likely to be depressed, anxious, report internalised stigma, express suicidal ideation, and report excessive substance use in the past year as compare to prenatal infected adolescents.[14] Moreover, behaviourally-infected HIV-positive adolescents who were also maternal orphans were more likely to report higher rates of depression.[14]

Conclusion

The findings of the study indicate that higher levels of suicidal ideation and depressive symptoms in people with HIV positive and AIDS as well as in caregivers showed the major area of concern for them. This study has implications for the family members as well as for the governmental agencies and non-government organisations. They should focus more on these critical issues to prevent the suicides by directing their efforts to plan for intervention programmes. Moreover, the findings of the study need to be generalised cautiously owing to its small sample size and keeping the sociodemographic characteristics of the sampled population in mind.

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