The International Journal of Indian Psychology
ISSN 2348-5396 (e) | ISSN: 2349-3429 (p)
Volume 2, Issue 3, Paper ID: B00325V2I32015
http://www.ijip.in | April to June 2015

Social Interaction Anxiety between HIV Positive and HIV Negative Adults: A Comparative Study

Tina Fernandes[1], Nandini Sanyal[2], Arpana Amarnath[3], Usha C.V.[4], Geeta Sunkarapalli[5]

ABSTRACT:

The present research aims to examine the nature of social interaction anxiety in HIV positive adults and HIV negative adults as well as the effect of gender on social interaction anxiety (SIA). This study attempts to focus on some of the specific aspects of SIA that distinguish the HIV positive adults from the HIV negative adults and thus, place the former at a higher risk of further health care problems. A sample (N =60) of 30 HIV positive adults (15 men and 15 women) and 30 HIV negative adults (15 men and 15 women), aged between 18 to 25 years, responded to the Social Interaction Anxiety Scale (SIAS) (Mattick & Clarke, 1998). Findings indicated that the HIV positive adults reported higher *social interaction anxiety* than the HIV negative adults. Specifically, the HIV positive adults experienced higher levels of *worry and tension*, higher anxiety with respect to *interpersonal skills*, and greater *fear of being judged* than the HIV negative adults. The present study calls for further research to be done on the impact of social, economic, environmental (rural and urban) and educational backgrounds, family settings, personality and self-esteem of HIV positive adults on SIA.

Keywords: *Anxiety, HIV*

Social interaction anxiety is defined as extreme distress when initiating and maintaining conversations with friends, strangers, or potential mates (Mattick & Clarke, 1989). Being the third largest mental health care problem in the world today (Richard, 2010), social anxiety is the fear of social situations that involve interaction with other people. Put another way, social anxiety is the fear and anxiety of being judged and evaluated by other people. People with social anxiety are many times seen by others as being shy, quiet, backward, withdrawn, inhibited, unfriendly, nervous, aloof, and disinterested. Ironically, people with social anxiety want to make friends.

[1]Dept. of Psychology, St. Francis College for Women, Begumpet, Hyderabad
[2]Dept. of Psychology, St. Francis College for Women, Begumpet, Hyderabad
[3]Dept. of Psychology, St. Francis College for Women, Begumpet, Hyderabad
[4]Dept. of Psychology, St. Francis College for Women, Begumpet, Hyderabad
[5]Dept. of Psychology, St. Francis College for Women, Begumpet, Hyderabad

They want to be included in groups, and be involved in social interactions but having social anxiety prevents these people from being able to do the things they want to do. Although people with social anxiety want to be social, open and friendly, it is fear (anxiety) that holds them back. People with social anxiety usually experience significant distress in many situations including being introduced to other people, being teased or criticized, being the centre of attention, being watched or observed while doing something, having to say something in a formal, public situation, meeting people in authority, etc.

HIV, the virus that causes AIDS, "acquired immunodeficiency syndrome" (UNAIDS, 2012), has become one of the world's most serious health and development challenges. The first cases were reported in 1981 and today, more than 30 years later, there are approximately 34 million people currently living with HIV and nearly 30 million people have died of AIDS-related causes since the beginning of the epidemic (UNAIDS, 2011, 2012). Young people bear the brunt of the global HIV/AIDS epidemic, with youth under the age of 25 accounting for approximately 40% of all new HIV infections each year (UNAIDS, 2012). Those between the ages of 15-24 are particularly hard hit, especially girls and young women who comprise the majority of young people living with the disease. While cases have been reported in all regions of the world, almost all those living with HIV (97%) reside in low- and middle-income countries. In India, the Government of India estimates that about 2.40 million Indians are living with HIV (1.93 - 3.04 million) with an adult prevalence of 0.31% in 2009. Of these 83% are the in age group 15-49 years with, 39% (930,000) of HIV infections affecting women (World Bank, 2012).

Dealing with HIV can be an emotionally fraught business for those afflicted (Galloway, 2012). It is all-too-easy for the negative thoughts, worry, fear and stress to compromise dealing with the disease. Those afflicted with HIV often need to keep up with a regimen of medications taken at regular intervals, attend regular medical appointments, deal with the change to their treatment and the illness such as changes in symptoms or changed bodily sensation, all of which can easily prey on their mental state. With a compromised immune system, what were ordinary illnesses to cope with on their own can now become deadly. This knowledge may reinforce feelings of anxiety and depression. Thus, the impact of the disease is not only an immunological one but also elicits mental and social responses of fear, denial, stigma and discrimination.

Studies have shown that anxiety disorders are much higher in the seropositive individuals of populations when compared with their normative counterparts (Ceisla & Roberts, 2001; Wainberg et al., 2008; Imasiku, 2009). These disorders include panic disorder, generalized anxiety disorder, obsessive compulsive disorder and post traumatic stress disorder (Vitiello & Bing, 2003; Gonzalez et al., 2010, 2012.) Gonzalez et al. (2010) found that higher levels of HIV symptom distress were related to higher levels of panic disorder, social anxiety disorder and depression symptoms, while Vitiello & Bing's (2003) studies have shown that among HIV-infected patients receiving medical care, 20.3% have an anxiety disorder, with 12.3% meeting the criteria for panic disorder, 10.4% for PTSD, and 2.8% having generalized anxiety disorder.

AIDS stigma exists around the world in a variety of ways including ostracism, rejection, discrimination and avoidance of HIV infected people; compulsory HIV testing without prior consent or protection of confidentiality; violence against HIV infected individuals or people who are perceived to be infected with HIV; and the quarantine of HIV infected individuals. Stigma-related violence or the fear of violence prevents many people from seeking HIV testing, returning for their results, or securing treatments, possibly turning what could be a manageable chronic illness into a death sentence and perpetuating the spread of HIV. The stigma associated with HIV is so stark that most often people do not want to seek out treatment in their own district (Kumar, World Vision, 2012).

Anxiety especially among those that have recently been diagnosed with HIV has been shown to be more prevalent among patients with stress or excess social stigma related to their diagnosis. A substantial proportion of HIV-positive individuals report experiencing HIV/AIDS stigma by noticing that others avoid being near them or exclude them from social events because of their HIV status (Vanable, Carey, Blair & Littlewood, 2005).

Members of the American Journal of Psychiatry found, in their most recent study (2011) a higher rate of anxiety symptoms in HIV seropositive women. Women are particularly vulnerable since they are faced with specific burdens when living with HIV. They often feel isolated and experience shame, stigma, anxiety and feelings of ambivalence and, in addition, are challenged in their roles as caregivers, mothers and wives (Chung & Magraw, 1992). A study by Lekganyane and Plessis (2012) showed that HIV related stigma was experienced by women with a sense of loss that gave rise to feelings of fear and shame. To cope with this, women isolate themselves, become secretive about their health, disclose strategically and enlisted support.

Among HIV-positive men who have sex with men, internalized stigma is associated with higher anxiety, (Lee, Kochman & Sikkema, 2002) which could be in part due to social anxiety about being judged negatively for being HIV positive. They also found that the higher social interaction anxiety among men who have sex with women than among men who have sex with men, which may be due to the higher internalized stigma among heterosexual than among non-heterosexual HIV-positive populations. HIV/AIDS stigma may be associated with greater social anxiety among HIV-positive populations in general, thereby potentially increasing risky sexual behaviour (Hart, James, Purcell & Farber, 2008).

To help patients receive optimal care, clinicians need to be aware of the differences among these specific disorders. Furthermore, patients with histories of anxiety or mood disorders are susceptible to recurrence of anxiety symptoms during the course of HIV illness. Patients with limited social support may be particularly susceptible to developing anxiety symptoms. Most studies on negative affect and HIV risk have focused on the role of depression and anxiety but not social interaction anxiety. Given the paucity of research in this area and the potential importance of social interaction anxiety as a mental health factor affecting the fear of stigma and

rejection of HIV people the current study examined the presence of social interaction anxiety in HIV positive adults and HIV negative control group. The study explored the following question – Does HIV status affect social interaction anxiety?

Objectives

Specifically the objectives of the current research are

- To assess the difference in social interaction anxiety between HIV positive adults and HIV negative adults.
- To assess the difference in social interaction anxiety between HIV positive men and women.

HYPOTHESES

H1a. There will be a significant effect of *HIV status* (viz. HIV negative and HIV positive) of the adults on *social interaction anxiety*.
H1b. There will be a significant effect of *HIV status* (viz. HIV negative and HIV positive) of the adults on *worry and tension* (F1).
H1c. There will be a significant effect of *HIV status* (viz. HIV negative and HIV positive) of the adults on *interpersonal skills* (F2).
H1d. There will be a significant effect of *HIV status* (viz. HIV negative and HIV positive) of the adults on *discomfort in social situations* (F3).
H1e. There will be a significant effect of *HIV status* (viz. HIV negative and HIV positive) of the adults on *fear of communication* (F4).
H1f. There will be a significant effect of *HIV status* (viz. HIV negative and HIV positive) of the adults on *fear of being judged* (F5).
H1g. There will be a significant effect of *HIV status* (viz. HIV negative and HIV positive) of the adults on *fear of talking to the opposite sex* (F6).
H2a. There will be a significant effect of *gender* (viz. male and female) of the adults on *social interaction anxiety*.
H2b. There will be a significant effect of *gender* (viz. male and female) of the adults on *worry and tension* (F1).
H2c. There will be a significant effect of *gender* (viz. male and female) of the adults on *interpersonal skills* (F2).
H2d. There will be a significant effect of *gender* (viz. male and female) of the adults on *discomfort in social situations* (F3).
H2e. There will be a significant effect of *gender* (viz. male and female) of the adults on *fear of communication* (F4).
H2f. There will be a significant effect of *gender* (viz. male and female) of the adults on *fear of being judged* (F5).
H2g. There will be a significant effect of *gender* (viz. male and female) of the adults on *fear of talking to the opposite sex* (F6).
H3a. There will be a significant interaction effect of *HIV status* and *gender* of the adults on *social interaction anxiety*.
H3b. There will be a significant interaction effect of *HIV status* and *gender* of the adults on *worry and tension* (F1).

H3c. There will be a significant interaction effect of *HIV status* and *gender* of the adults on *interpersonal skills* (F2).
H3d. There will be a significant interaction effect of *HIV status* and *gender* of the adults on *discomfort in social situations* (F3).
H3e. There will be a significant interaction effect of *HIV status* and *gender* of the adults on *fear of communication* (F4).
H3f. There will be a significant interaction effect of *HIV status* and *gender* of the adults on *fear of being judged* (F5).
H3g. There will be a significant interaction effect of *HIV status* and *gender* of the adults on *fear of talking to the opposite sex* (F6).
H4. There will be a significant difference between HIV positive men and HIV positive women with respect to *social interaction anxiety*.

METHOD

Study Design

The present study used a between-group design to find the difference in Social Interaction Anxiety (SIA) between HIV positive and HIV negative adult men and women. This study also adopted a within-group design to measure the difference in social interaction anxiety between HIV positive men and women.

Sample

The sample consisted of 30 men and 30 women aged between 18-25 years. The sampling technique used to select the groups of participants was purposive sampling. The sample was collected from Freedom Foundation and ACCEPT in Bengaluru. After obtaining approval from the authority at Freedom Foundation and ACCEPT in Bengaluru 30 participants were chosen from these two organisations.

The Inclusion criteria was 15 out of the 30 men were HIV positive and 15 out of the 30 women were HIV positive; the rest were HIV negative. Every member was between the age groups of 18-25 years and was either HIV positive or HIV negative.

The Exclusion criteria was individuals below the age of 18, above the age of 25 or who suffer from any psychotic disorders were not included in the sample.

Instrument

The Demographic information collected from the sample was Gender and Age. The sample was administered the Social Interaction Anxiety Scale (SIAS) which was developed and published by Mattick and Clarke in 1998 and has been used to assess the prevalence of social interaction anxiety. The SIAS consists of twenty items that are rated from 0 (not at all characteristic or true of me) to 4 (extremely characteristic or true of me). Items are self-statements describing one's representative reaction to situations that involve social interaction in dyads or groups. The SIAS is scored by summing the ratings (after reversing the 3 positively worded items number 5, 9 and

11). Total scores range from 0 to 80, with higher scores representing higher levels of social interaction anxiety. The Cronbach's alpha for this instrument ranged from .88 - .93, test retest correlation coefficient exceeded .90 after intervals of 1 and 3 months, and the reliability was 0.67 – 0.90.

For the purpose of the study, indepth analysis was done by using factor analysis. The researcher identified six factors, namely (F1) Worry and Tension, (F2) Interpersonal Skills, (F3) Discomfort in Social Situations, (F4) Fear of Communication, (F5) Fear of Being Judged, and (F6) Fear of Talking to the Opposite Sex. Factor 1 consisted of 7 items (viz. Item nos.2, 4, 6, 8, 13, 18, and19). Factor 2 was composed of 4 items (viz. Item nos.5, 9, 10, and 11). Factor 3 had 3 items (viz. Item nos.7, 15, and 16). Factor consisted of 3 items (viz. Item nos. 3, 12, and 17). Factor 5 had 2 items number (viz. Item nos. 1 and 20) and Factor 6 had 1 item (viz. Item no.14). For the purpose of the study every item was scored, and the total of all the 20 items for every participant was computed. This gave the total SIA score. In addition, the factor-wise totals were computed for every participant.

Ethical Issues

Informed Consent was taken from every participant and confidentiality was maintained. The date and time was adjusted according to their convenience. The participant was told that they are free to withdraw from the study whenever he/she wanted to.

Procedure

The test was administered on a one to one basis. Each participant was approached individually and was briefed about the purpose of the study. The consent was taken before commencement and the participant was allowed to withdraw from the study whenever he/she pleased. Instructions were read out by the researcher in order to clear all doubts. The questionnaire was given and the subject was asked to answer the questionnaire carefully based on personal experience. The participant was asked to work through the items as accurately as possible, indicating a cross mark against the appropriate answer. All doubts and any kind of ambiguity that arose in the participant's mind were clarified. After the test was administered, the researcher expressed her gratitude to the participant for his/her cooperation. Questionnaires were collected, the responses were scored, and statistically analysed using descriptive statistics (Mean and Standard Deviation) and inferential statistics (ANOVA and t-test).

Statistical Treatment

The data was analyzed using descriptive statistics (Mean and Standard Deviation) and inferential statistics (ANOVA and t-test). Univariate Analysis of Variance was conducted for testing the difference between the variances of the groups of adults categorized on the basis of *HIV status* and *gender.* T-test was computed to test the difference between HIV positive men and HIV positive women in terms of social interaction anxiety.

RESULTS AND INTERPRETATION

Table 1 – Means and standard deviations of social interaction anxiety and the six factors of social interaction anxiety for the HIV negative and HIV positive adults (N=60).

Factors	HIV Status			
	HIV Negative Adults (N=30)		HIV Positive Adults (N=30)	
	Mean	SD	Mean	SD
Social Interaction Anxiety (Total)	18.567	10.689	30.500	5.238
Worry and Tension (F1)	4.367	3.996	9.500	2.933
Interpersonal Skills (F2)	4.000	2.889	9.500	2.209
Discomfort in Social Situations (F3)	3.000	2.691	4.100	2.187
Fear of Communication (F4)	3.800	2.552	4.167	1.599
Fear of Being Judged (F5)	2.333	1.936	3.633	1.402
Fear of Talking to the Opposite Sex (F6)	1.067	1.311	1.100	0.845

Table 2 – Means and standard deviations of social interaction anxiety and the six factors of social interaction anxiety for the male and female participants (N=60).

Factors	Gender			
	Males (N=30)		Females (N=30)	
	Mean	SD	Mean	SD
Social Interaction Anxiety (Total)	24.200	11.081	24.867	9.609
Worry and Tension (F1)	6.833	4.403	7.033	4.335
Interpersonal Skills (F2)	6.267	3.877	7.233	3.655
Discomfort in Social Situations (F3)	3.567	2.609	3.533	2.417
Fear of Communication (F4)	4.233	2.096	3.733	2.149
Fear of Being Judged (F5)	2.867	1.756	3.100	1.863
Fear of Talking to the Opposite Sex (F6)	1.067	1.229	1.100	0.959

Table 3 – Results of Univariate ANOVA with HIV Status and Gender as IVs and the six factors & total of Social Interaction Anxiety as the separate DVs

Source	DVs	Type III SS	df	Mean Square	F	p
HIV Status	Social Interaction Anxiety (Total)	2136.067	1	2136.067	29.164**	0.000
	Worry and Tension (F1)	395.267	1	395.267	32.067**	0.000
	Interpersonal Skills (F2)	453.750	1	453.750	70.453**	0.000
	Discomfort in Social Situations (F3)	18.150	1	18.150	2.916	0.093
	Fear of Communication (F4)	2.017	1	2.017	0.442	0.509
	Fear of Being Judged (F5)	25.350	1	25.350	8.621**	0.005
	Fear of Talking to the Opposite Sex (F6)	0.017	1	0.017	0.013	0.91
Gender	Social Interaction Anxiety (Total)	6.667	1	6.667	0.091	0.76
	Worry and Tension (F1)	0.600	1	0.600	0.049	0.83
	Interpersonal Skills (F2)	14.017	1	14.017	2.176	0.15
	Discomfort in Social Situations (F3)	0.017	1	0.017	0.003	0.96
	Fear of Communication (F4)	3.750	1	3.750	0.822	0.37
	Fear of Being Judged (F5)	0.817	1	0.817	0.278	0.600
	Fear of Talking to the Opposite Sex (F6)	0.017	1	0.017	0.013	0.91
HIV Status x Gender	Social Interaction Anxiety (Total)	0.600	1	0.600	0.008	0.93
	Worry and Tension (F1)	21.600	1	21.600	1.752	0.19
	Interpersonal Skills (F2)	8.817	1	8.817	1.369	0.25
	Discomfort in Social Situations (F3)	0.150	1	0.150	0.024	0.88
	Fear of Communication (F4)	3.750	1	3.750	,822	0.37
	Fear of Being Judged (F5)	0.150	1	0.150	0.051	0.82
	Fear of Talking to the Opposite Sex (F6)	0.417	1	0.417	0.333	0.57

****p<0.01**

Table 3 shows significant main effects of *HIV status* on *social interaction anxiety* (SIA) ($p<0.01$), *worry and tension* (F1) ($p<0.01$), *interpersonal skills* (F2) ($p<0.01$), and *fear of being judged* (F5) ($p<0.01$). Thus, **hypotheses H1a, H1b, H1c, and H1f were accepted**. In other words, this study reported significant effects of:

- *HIV status* (viz. HIV negative and HIV positive) of the adults on *social interaction anxiety.*
- *HIV status* (viz. HIV negative and HIV positive) of the adults on *worry and tension* (F1).
- *HIV status* (viz. HIV negative and HIV positive) of the adults on *interpersonal skills* (F2).
- *HIV status* (viz. HIV negative and HIV positive) of the adults on *fear of being judged* (F5).

The mean scores in Table 1 indicated that HIV positive adults (M = 30.500) experienced higher *social interaction anxiety* than the HIV negative adults (M = 18.567). Moreover, the HIV positive adults experienced higher levels of *worry and tension* (F1) (M = 9.500), higher anxiety with respect to *interpersonal skills* (F2) (M = 9.500) and greater *fear of being judged* (F5) (M = 3.633) than the HIV negative adults (M = 4.367, M = 4.000, M = 2.333 respectively).

On the other hand, Table 3 shows no significant effects of *HIV status* on *discomfort in social situations* (F3) ($p>0.05$), *fear of communication* (F4) ($p>0.05$),and *fear of talking to the opposite sex* (F6) ($p>0.05$). Thus, **hypotheses H1d, H1e, and H1g were rejected**. Similarly, the results revealed no significant effects of *gender* (viz. male and female) of the adults on *social interaction anxiety* (SIA), *worry and tension* (F1), *interpersonal skills* (F2), *discomfort in social situations* (F3), *fear of communication*(F4), *fear of being judged* (F5), and *fear of talking to the opposite sex* (F6) at 0.05 level of significance ($p>0.05$). Additionally, Table 3 indicated no significant interaction effects of *HIV status* and *gender* of the adults on *social interaction anxiety* and the six factors of social interaction anxiety (F1 – F6) at 0.05 level of significance ($p>0.05$). Hence, **hypotheses H2a – H3g were rejected**.

As the results revealed significant effects of *HIV status* (viz. HIV negative and HIV positive) of the adults on *worry and tension* (F1), *interpersonal skills* (F2), and *fear of being judged* (F5), further statistical analysis was conducted on these three factors. For every item of F1 (viz. Item nos.2, 4, 6, 8, 13, 18, and19), F2 (viz. Item nos.5, 9, 10, and 11), and F5 (viz. Item nos. 1 and 20), the percentage of HIV positive and HIV negative adults responding to option 2 ('**Moderately** characteristic or true of me'), or option 3 ('**Very** characteristic or true of me'),or option 4 ('**Extremely** characteristic or true of me') was calculated. These participants were assumed to be experiencing higher social interaction anxiety than those who responded to options 0 ('**Not at all** characteristic or true of me') or 1 ('**slightly** characteristic or true of me'). This was done to analyse the specific aspects of social interaction anxiety that significantly differentiate the HIV positive and HIV negative adults. The results are displayed in Table 4 – Table 6.

Table 4 – Percentage of HIV negative and HIV positive adults displaying high anxiety on the items of Factor 1 (Worry and Tension)

HIV Status	Worry and Tension (F1)						
	Item 2	Item 4	Item 6	Item 8	Item 13	Item 18	Item 19
HIV Negative (N=30)	20%	6.60%	20%	20%	26.70%	10%	13.30%
HIV Positive (N=30)	43.30%	40%	50%	36.70%	40%	36.60%	46.70%

Table 5 – Percentage of HIV negative and HIV positive adults displaying high anxiety on the items of Factor 2 (Interpersonal Skills)

HIV Status	Interpersonal Skills (F2)			
	Item 5	Item 9	Item 10	Item 11
HIV Negative (N=30)	20%	36.60%	23.40%	43.30%
HIV Positive (N=30)	90.10%	93.30%	46.60%	96.70%

Table 6 – Percentage of HIV negative and HIV positive adults displaying high anxiety on the items of Factor 5 (Fear of Being Judged)

HIV Status	Fear of Being Judged (F5)	
	Item 1	Item 20
HIV Negative (N=30)	36.70%	30%
HIV Positive (N=30)	13.30%	30%

Table 4 and Table 5 indicate that remarkably higher percentages of HIV positive adults responded to options 2, or 3, or 4 for all the items of worry and tension (F1) and interpersonal skills (F2) than HIV negative adults. Thus, as opposed to the HIV negative adults, the HIV positive adults experienced higher anxiety in the following areas social interaction:

- difficulty making eye contact with others (F1 – Item 2)
- difficult mixing comfortably with colleagues (F1 – Item 4)
- feeling tense when meeting with an acquaintance in the street (F1 – Item 6)

- feeling tense when alone with just one other person (F1 – Item 8)
- finding it difficult to disagree with another's point of view (F1 – Item 13)
- worrying about being ignored when mixing in a group (F1 – Item 18)
- tense mixing in a group (F1 – Item 19)
- ease of making friends of one's own age (F2 – Item 5)
- ease of meeting people at parties, etc. (F2 – Item 9)
- facing difficulty talking with other people (F2 – Item 10)
- ease of thinking of things to talk about (F2 – Item 11)

Table 6, on the other hand, indicates that the percentage of HIV positive and HIV negative adults responding to options 2, or 3, or 4 for Item No. 20 is identical (i.e., 30%). However, the percentage of HIV negative adults (36.7%) responding to options 2, or 3, or 4 for Item No. 1 ('I get nervous if I have to speak with someone in authority') is higher than the percentage of HIV positive adults (13.3%).

In addition to the above analysis, t-test was computed to test the significance of difference between HIV positive men and HIV positive women in terms of *social interaction anxiety*. The results are displayed below.

Table 7 – Means, standard deviations and t-ratio of Social Interaction Anxiety for HIV Positive Men and HIV Positive Women

Gender	Mean	S.D.	t	Mean Difference	df	p
HIV Positive Men (N=15)	30.067	4.891	0.447	0.867	28	0.658
HIV Positive Women (N=15)	30.933	5.701				

Table 7 reveals that HIV positive men and HIV positive women did not differ significantly on *social interaction anxiety* ($p>.05$). In other words, the levels of *social interaction anxiety* experienced by both the groups were similar, inferring that both the sexes are more or less equally affected by this healthcare problem. Thus, **hypothesis H4 was rejected**.
The results are discussed in the following section.

DISCUSSION

Very few studies are available which are focused on HIV men and women and the presence of Social Interaction Anxiety in them. The objective of the present research endeavour was to assess the difference in social interaction anxiety between HIV positive adults and HIV negative adults. This study also aimed to observe whether HIV positive men and women differ with

respect to the level of social interaction anxiety.

The present study reported that HIV status has a significant effect on *social interaction anxiety*. The results revealed that Social Interaction Anxiety of HIV negative adults is lower than the Social Interaction Anxiety of HIV positive adults. This anxiety may be because of the stigma attached to HIV status. This confirms with Grant & Atkinson (1995) study of psychiatric aspects of AIDS which revealed that over 20% of seropositive adults have been reported to experience anxiety symptoms at least once a month compared with negligible rates in the community among low risk controls. The present study also corroborates with the past research that HIV positive individuals experience a high level of anxiety (Ceisla & Roberts 2001; Wainberg et al., 2008; Imasiku, 2009; Vitiello & Bing, 2003; Gonzalez et al., 2010, 2012.)

The present study shows significant effects of HIV status on *worry and tension* (F1). This was confirmed by Galloway (2012), who said dealing with HIV can be an emotionally fraught business for those afflicted. The HIV positive adults experienced higher anxiety in the following areas of social interaction. 43.3% of the HIV positive adults found difficulty making eye contact with others (F1 – Item 2) as compared to the 20% of HIV negative (N = 30) adults. 40 % of the HIV positive adults found it difficult mixing comfortably with colleagues (F1 – Item 4) as compared to 6.6% of the HIV negative adults. 50% of the HIV positive adults felt tensed when meeting with an acquaintance in the street (F1 – Item 6) as compared to 20% of HIV negative adults. 36.7% of the HIV positive adults felt tensed when alone with just one other person (F1 – Item 8) as compared to 20% of HIV negative adults. 40% of the HIV positive adults found it difficult to disagree with another's point of view (F1 – Item 13) as compared to 26.7% of the HIV negative adults. 36.6% of the HIV positive adults, when mixing in a group found themselves worrying they will be ignored (F1 – Item 18) as compared to 10% of HIV negative adults. Lastly, 46.7% of the HIV positive adults felt tense mixing in a group (F1 – Item 19) as compared to the 13.3% of HIV negative adults.

Previous research has revealed that psychologically, HIV-related stigma can generate significant distress in the form of depression, anxiety, and lowered self-esteem (Lee, Kochman, & Sikkema, 2002; Stutterheim et al., 2009; Vanable, Carey, Blair, & Littlewood, 2006). Manifestations of stigma include avoidance, exclusion, rejection, isolation, social ostracism, blaming, violence, service denial, physical distance, indifference, awkward social interaction, and being advised to conceal one's status (Stutterheim et al., 2009). Relevant settings in which stigmatization can occur are with families, in communities, among friends and acquaintances, with sexual partners, in health care settings, with respect to housing, in the financial services sector, within religious institutions, at work, while travelling or migrating, and in educational settings (Greeff et al., 2008; Malcolm et al.,1998; Shamos, Hartwig, & Zindela, 2009; Stutterheim et al., 2009; Varas-Diaz, Serrano-Garcia, & Toro-Alfonso, 2005).

The present study shows significant effects of HIV status on *interpersonal skills* (F2). Hart, et al., (2008) suggest that Social Anxiety influences the patterns of interpersonal behaviour of HIV positive adults. In the current study, the HIV positive adults experienced higher anxiety in the

following areas of social interaction. Almost more than 90% of the HIV positive adults found it difficult to make friends of one's own age (F2 – Item 5), to meet people at parties, etc. (F2 – Item 9), and to think of things to talk about (F2 – Item 11) when compared with 40% of HIV negative adults. 46.6% of the HIV positive men had difficulty talking with other people (F2 – Item 10) as compared to 23.4% of the HIV negative adults. This is confirmed by Vanable *et al*. (2005) who found that a substantial proportion of HIV positive individuals report experiencing HIV-AIDS stigma by noticing that others avoid being near them or exclude them from social events because of their HIV status. It also negatively impacts social interactions between people living with HIV (PLWH) and others, and can result in decreased social network size, limited social support, and social isolation (Lee & Craft, 2002; Lichtenstein, Laska, & Clair, 2002). Clearly, the negative consequences of stigmatization toward PLWH are substantial. Because PLWH are often acutely aware of the public stigma surrounding HIV, the impact of stigma can also come from an anticipation of negative reactions from others if their condition is known. This anticipation can cause PLWH to live in secrecy and constantly be concerned about their condition being revealed (Black & Miles, 2002; Steward et al., 2008; Weiss, Ramakrishna, & Somma, 2006).

The present study shows significant effects of HIV status on *fear of being judged* (F5). However, further analysis shows that a higher percentage of HIV negative adults (36.7%) than HIV positive adults (13.3%) have expressed a fear dealing with authority (F5 – Item 1). This leads us to assume that fear of dealing with authority is not dependent on HIV status. Equal percentages of both the groups (30%) have exhibited anxiety on Item No.20. i.e., "I am unsure whether to greet someone I know only slightly". Regarding this aspect, the study suggests that perhaps an indepth analysis conducted on a larger sample encompassing other personality correlates could give a clearer picture.

Additionally Table 3 indicated no significant effects of gender of the adults on social interaction anxiety and the six factors of social interaction anxiety. Similarly, no significant interaction effects of HIV status and gender were found on the dependent variable. Since previous research (Chung & Magraw, 1992; American Journal of Psychiatry, 2011; Lekganyane & Plessis, 2012) found that HIV positive women are particularly vulnerable and face isolation, shame, fear and feelings of ambivalence, the researchers were curious to find whether there are significant differences in the presence of social interaction anxiety between HIV positive women and men. But Table 7 shows that with regards to gender, HIV positive men and HIV positive women did not differ significantly with respect to *social interaction anxiety*. In other words, there was no significant difference between the SIA exhibited by HIV positive men and HIV positive women inferring that both the sexes are more or less equally affected by the stigma, discrimination and the rejection by the others. This may be because, both HIV positive males and females seem to experience extreme discomfort in social situations and have a tendency to be disengaged or avoid them altogether. Social interaction tension, fears and hence avoidance behaviours can be expected to interfere with the initiation of positive social encounters and the development of close relationship with others. While investigating SIA among the Chinese adolescents, in a

cross-sectional health survey conducted in Guangzhou city of the Guangdong Province in high school students aged 13 to 18 years, Peng et al. (2011) found that there were no significant results in gender related to SIA. Analyses by Garcia et al. (2005) revealed no significant interactions between gender and social anxiety with alcohol usage. That gender did not have an effect on social anxiety and its relationship to hazardous drinking and drinking problems was also confirmed by Benavides *et al*. (2005)

CONCLUSIONS

Hypotheses **H1a, H1b, H1c, and H1f were accepted**. In other words, this study reported significant effects of:

- *HIV status* (viz. HIV negative and HIV positive) of the adults on *social interaction anxiety*.
- *HIV status* (viz. HIV negative and HIV positive) of the adults on *worry and tension* (F1).
- *HIV status* (viz. HIV negative and HIV positive) of the adults on *interpersonal skills* (F2).
- *HIV status* (viz. HIV negative and HIV positive) of the adults on *fear of being judged* (F5).

This study has uniquely contributed to our understanding that there are significant effects of *HIV status* (viz. HIV negative and HIV positive) especially on the factors of *worry and tension*, and *interpersonal skills*. Since SIA can emerge in a range of situations, essentially whenever we are in contact with other people, the following areas and behaviours can be worked on and helped through counselling to further follow up for health care and can be used for therapeutic purpose:

- making eye contact with others (F1 – Item 2)
- mixing comfortably with colleagues (F1 – Item 4)
- feeling tense when meeting with an acquaintance in the street (F1 – Item 6)
- feeling tense when alone with just one other person (F1 – Item 8)
- finding it difficult to disagree with another's point of view (F1 – Item 13)
- worrying about being ignored when mixing in a group (F1 – Item 18)
- feeling tense when mixing in a group (F1 – Item 19)
- ease of making friends of one's own age (F2 – Item 5)
- ease of meeting people at parties, etc. (F2 – Item 9)
- facing difficulty talking with other people (F2 – Item 10)
- ease of thinking of things to talk about (F2 – Item 11)

The results revealed no significant effects of *HIV status* on *discomfort in social situations* (F3) ($p>0.05$), *fear of communication* (F4) ($p>0.05$), and *fear of talking to the opposite sex* (F6) ($p>0.05$). Thus, **hypotheses H1d, H1e, and H1g were rejected**. Similarly, the results revealed no significant effects of *gender* (viz. male and female) of the adults on *social interaction anxiety* (SIA), *worry and tension* (F1), *interpersonal skills* (F2), *discomfort in social situations* (F3), *fear*

of communication(F4), *fear of being judged* (F5), and *fear of talking to the opposite sex* (F6) at 0.05 level of significance ($p>0.05$). Additionally, Table 3 indicated no significant interaction effects of *HIV status* and *gender* of the adults on *social interaction anxiety* and the six factors of social interaction anxiety (F1 – F6). Thus, **hypotheses H2a – H3g were rejected**. Lastly, the results showed no significant difference between HIV positive men and HIV positive women with respect to *social interaction anxiety.* Thus, **hypothesis H4 was rejected**.

RECOMMENDATIONS

The sample was recruited from two NGOs primarily serving patients diagnosed with Aids. Age and Gender were considered for this investigation. Based on the findings, the study recommends further research with a sample consisting of adults with different social, economic, environmental (rural and urban) and educational backgrounds, family settings, personality and self-esteem. A relationship between social interaction anxiety symptoms and measures of physical symptoms can also be explored.

IMPLICATIONS

Apart from highlighting the presence of the third largest mental health care problem in the world, this study throws light on the anxiety, worry and tension, and decreased interpersonal skills of HIV positive adults (18 to 24 years). Educating people about HIV/AIDS and how it can be prevented is complicated in India, as a number of major languages and hundreds of different dialects are spoken within its population. This means that, although some HIV/AIDS prevention and education can be done at the national level, many of the efforts are best carried out at the state and local level. The third stage of the National AIDS Control Programme (NACP-III) was launched in 2006 and continues to run currently. Increased psychological support services for both men and women living with HIV and the interventions by health care services and counsellors should be further commissioned and planned.

ACKNOWLEDGEMENTS

The authors would like to thank Prof. C. Beena, retired HOD of the Department of Psychology, Osmania University; Prof. Archana Shukla, Head, Department of Psychology, Lucknow University; Prof. Murthy, Department of Psychology, Osmania University; Prof. Sibnath Deb, Head, Department of Applied Psychology, Pondicherry University and Dr. Sr. Alphonsa Vattoly, Principal, St. Francis College for Women, Begumpet, Hyderabad.

REFERENCES

1. Benavides David, Ham Lindsay S., PhD, Garcia Tracey, Perez B.A., Dalia, Martinez Yesenia.(2005); *Social Anxiety, Gender & Drinking: Comparison of Social Anxiety Measures.*

2. Galloway, C. (2012). *AIDS Patient Care and STDs*, Vol.26 (*3*).
3. Chung, J. & Magraw, M. M. (1992). *A Group Approach to Psychosocial Issues Faced by HIV-positive Women.* Hospital and Community Psychiatry, Vol.43: 891-894.
4. Garcia, T. A., Ham, L. S., Montgomery, M., & Hernandez, L., (2005, March). *An initial examination of the role of gender in social anxiety and self-medication.* Poster session presented at the annual meeting of the Anxiety Disorders Association of America, Miami.
5. Grant, I. and Atkinson, J.H. (1995) Natural history of neuropsychiatric manifestations of HIV disease. In: *Psychiatric Manifestations of HIV Disease.* Psychiatric Clinics of North America 17, 17-33.
6. Greeff, M., Phetlhu, R., Makoae, L. N., Dlamini, P. S., Holzemer, W. L., Naidoo, J. R., etal. (2008).
7. Disclosure of HIV status: Experiences and perceptions of persons living with HIV/AIDS and nurses involved in their care in Africa. Qualitative Health Research, 18 (*3*), 311-324.
8. Hart, T.A., James, C.A., Purcell, D.W., Farber, E. Social anxiety and HIV transmission risk among HIV-seropositive male patients. AIDS Patient Care and STDs. 2008; 22:879–886.
9. Imasiku M, 2009, *A Comparative Study Of Anxiety Among HIV Seropositive Individuals From The Normative Population.* Medical journal of Zambia.
10. Kumar, S. (2012), *Braving The Odds For A Positive Life* (by PV Srividya), The Hindu, Dec 22.
11. Lee, J. D., & Craft, E. A. (2002). Protecting one's self from a stigmatized disease...once one has it. Deviant Behavior, 23 (*3*), 267-299.
12. Lee, R.S., Kochman, A., & Sikkema, K.J. (2002). *Internalized Stigma Among People Living With HIV/AIDS.* AIDS Behav. (2002). 6:303–319.
13. Lichtenstein, B., Laska, M. K., & Clair, J. M. (2002). Chronic sorrow in the HIV-positivepatient: Issues of race, gender, and social support. AIDS Patient Care and STDs, 16 (*1*), 27-38.
14. Malcolm, A., Aggleton, P., Bronfman, M., Galvão, J., Mane, P., & Verral, J. (1998). HIV-related stigmatization and discrimination: Its forms and contexts. Critical Public Health, 8 (*4*), 347-370.
15. Mattick, R. P., & Clarke, J. C. (1989). *Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. Unpublished manuscript*.
16. Peng, Z.W., Lam, L.T., & Jin, J. (2011) Factors associated with social interaction anxiety among Chinese adolescents; 21(*4*):135-41.
17. Shamos, S., Hartwig, K. A., & Zindela, N. (2009). Men's and women's experiences with HIV and stigma in Swaziland. Qualitative Health Research, 19 (12), 1678-1689.
18. Stutterheim, S. E., Pryor, J. B., Bos, A. E., Hoogendijk, R., Muris, P., & Schaalma, H.P. (2009). HIV-related stigma and psychological distress: The harmful effects of specific stigma manifestations in various social settings.AIDS, 23(17), 2353-2357.
19. Vanable, P.A., Carey, M.P., Blair, D.C. & Littlewood, R.A.(2005) *Impact Of HIV-Related Stigma On Health Behaviors And Psychological Adjustment Among HIV-Positive Men And Women. AIDS Behav.*;10: 473–482.

20. Varas-Diaz, N., Serrano-Garcia, I., & Toro-Alfonso, J. (2005). AIDS-related stigma andsocial interaction: Puerto Ricans living with HIV/AIDS. Qualitative Health Research, 15 (2), 169-187.
21. Vitiello, B., & Bing, E.G., (2003). *Use of Psychotropic Medications among HIV-Infected Patients In The United States*. American Journal Psychiatry; 160:547-554.
22. Wainberg, M.L., Faragon, J., & Cournos, F., (2008). *Psychiatric Medications and HIV Antiretrovirals: A Guide to Interactions for Clinicians, 2nd Edition*. Laminated booklet produced by the New York/New Jersey AIDS Education and Training Centre, U.S. Health Resources and Services Administration.