The Journal of Behavioral Science
2010, Vol.5, No.1, 60-74

ISSN: 1906-4675

Extraversion, Neuroticism, Anger and Self-Esteem of HIV Positive Youth

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A glimpse at the increasing incidences of HIV positive cases the world over, makes it necessary for behavioral scientists to probe into the psyche of youth, to see what prompts them to become prey to HIV. The present study was an attempt to identify some personality correlates of HIV positive individuals. A sample of 250 HIV positive persons (190 males and 60 females), in the age range of 15-25 years, from two prominent cities of India (Chandigarh and Delhi) were tested. An HIV free sample was selected from colleges of Chandigarh (125 males and 125 females) to compare with the HIV positive sample. These samples were administered Eysenck's Personality Inventory, Anger Expression Inventory and Self Esteem Scale. The main findings of the research indicated that on the traits of Extraversion and Neuroticism, HIV positive males scored higher than HIV positive females, while overall the HIV Positive subjects scored higher than the HIV free subjects. The results do not show any significant gender difference on Self-Esteem; however both the HIV positive genders show low Self Esteem.

Keywords*:* personality, anger, self-esteem, HIV positive youth

The Human Immunodeficiency Virus (HIV) pandemic has posed a formidable challenge to the biomedical-research and public health communities of the world. What began as a handful of recognized cases among homosexual men in the United States has become a global pandemic of such proportions that it clearly ranks as one of the most destructive microbial scourges in history.

Over the past 27 years, nearly 25 million people have died from Acquired Immune Deficiency Syndrome or AIDS as it's known (UNAIDS, 2009). HIV/AIDS causes debilitating illness and premature death in people during their prime years of life and has adversely affected the families and communities. The impact of HIV/AIDS on children and young people is a severe and growing problem. In 2008, 430,000 children under age 15 were infected with HIV and 270,000 died of AIDS. In addition, about 15 million children have lost one or both parents due to the disease (UNAIDS, 2008).

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The statistics of HIV in India is equally terrifying:

- AIDS is on the increase in India ever since 1998.
- India represents approximately 72% of HIV/AIDS prevalence in the South/South East Asian region and 13% of global prevalence. India represents 17% of the world's population.
- Six Indian states are considered to have high HIV/AIDS prevalence (>1%) – Manipur, Nagaland, Andhra Pradesh, Tamil Nadu, Karnataka and Maharashtra.
- Most HIV infections in India are due to sexual transmission (84-86%).
- Women account for 39% of India's estimated HIV/AIDS prevalence. Among young people, ages 15-24, the estimated number of young women living with HIV/AIDS was almost twice that of young men.

AIDS and HIV

AIDS is the abbreviated form for Acquired Immune Deficiency Syndrome. As the name implies it is a condition caused by a deficiency in the body's immune system. It is a syndrome because it encompasses a pattern of symptoms with varied manifestations in different cases. It is acquired because AIDS is an infectious disease caused by virus, which is spread from person to person through a variety of routes (Hubley, Chawdhury, & Chandramouli, 1995). AIDS is caused by HIV which is a virus that gradually attacks immune system cells. As HIV progressively damages these cells, the body becomes more vulnerable to infections. This makes it different from other immune deficiency conditions due to its genetic causes.

The most vulnerable groups for AIDS are sex workers, truck drivers, armed forces personals, and adolescents. According to Mohan (2005), "the adolescents often lack knowledge about sex and sexuality. Exposure to conflicting moral values, media and Internet focusing on pornography, and intercultural variations make them a high risk taking population. Also the belief "this can not happen to us", along with inadequate information of health care, indifferent home environment and family values and peer group pressures in school/college are the strong factors which make them vulnerable to the disease". The author has further said, "This period is of rapid Physiological changes. These changes are primarily sexual in nature along with emotional urges and longings. These changes make the adolescent period a high-risk period and one of the major risks these days is the exposure to HIV/AIDS" (Mohan, 2005).

Many studies have been undertaken to study HIV in relation to social stigma and medical parameters, but hardly any work has been done on the psychological parameters which may predispose the individual for acquiring HIV. The current study was an endeavor to probe into this area.

Rationale for the Present Study

When AIDS emerged, two decades ago, few people could predict how the epidemic would evolve, and fewer still could describe with any certainty the best ways of combating it. Though medical sciences have enough evidence on the cause and spread of HIV/AIDS, unfortunately very few studies are available which link and relate certain personality variables and their psychological impacts to high risk taking behavior, which subsequently may lead to acquiring AIDS. The present study proposed to fill this gap. There is a dire need for inquiring into the psychological factors which may predispose an individual to indulge in high risk behavior. The present investigation aimed at studying the psychological correlates of HIV positive subjects, namely-Neuroticism, Extraversion, Anger, and Self Esteem. The secondary aim was to find if any gender differences existed in the relationship between AIDS/HIV and personality variables. Thus, the main objectives of the study were:

- To identify whether HIV positive individuals show personality correlates, like, Extraversion, Neuroticism, Anger and Self Esteem.
- To find whether Anger influences indulgence in high risk taking sexual behavior.
- The study aimed to find whether individuals with lower Self Esteem are at a higher risk of getting involved in high risk taking sexual behavior.

In the following section, the personality characteristics (neuroticism, extraversion, anger, and self-esteem) taken for the present study are discussed along with their related hypotheses.

Personality

Eysenck (1947) defined personality as, “the sum total of the actual or potential behavior patterns of the organism, as determined by heredity and environment.” Eysenck also perceived personality as the more or less stable and enduring

organization of a person's character, temperament, intellect and physique, which determines his unique adjustment to the environment. His definition of personality included four main sectors of behavior-patterns, the cognitive sector (intelligence), the conative sector (character), the effective sector (temperament), and somatic sector (constitution). The four personality characteristics chosen for this study were neuroticism, extraversion, anger, and self-esteem.

Extraversion and Neuroticism

According to Eysenck (1947, 1960), individuals can be broadly allocated along two dimensions of personality i.e., Extraversion/Introversion (E/I), and Neuroticism (N).

Eysenck and Eysenck (1968) describe Extraversion as impulsive behavior with sociable tendencies. The typical extravert is sociable, likes parties has many friends, needs to have people to talk to and does not like reading or studying by himself. He craves for excitement, takes chances and is generally an impulsive individual.

Neuroticism refers to a general emotional over responsiveness, emotional ability and liability to neurotic breakdown under stress. The general nature of Neuroticism is assessed as instability, inadaptability, depressive moods, weak dependable attitude, narrow interest and symptoms of nervous breakdown (Eysenck, 1953).

Penedo et al. (2003) evaluated relationship between personality traits and quality of life among 116 men and women living with HIV/AIDS. Results showed that personality traits such as neuroticism were significantly associated with poorer quality of life. Conscientiousness and extraversion were associated with better quality of life.

Fenaughty and Fisher (1998) developed a typology from a sample of 283 drug users based on alcohol use variables. This study showed that neuroticism in the alcohol typology was significantly related to several sexual risk behaviors.

These two dimensions were taken up in the present work. Extraverts would be more influenced by the peer group pressures; they are also sensation seeking. The neurotics would be predisposed to anxiety prone impulsive behaviour making them more susceptible to HIV which is risk proneness. In the light of the research work done on Extraversion and Neuroticism, the first hypothesis was proposed:

***Hypothesis 1*:** The HIV positive individuals will score relatively higher on Extraversion and Neuroticism.

Anger

According to Spielberger (1988) "the concept of 'Anger' refers to an emotional state that consists of feeling that varies in intensity, from mild irritation or annoyance, to intense fury and rage. Although 'hostility' usually involves angry feelings, this concept has the connotation of the complex set of attitudes that motivate aggressive behaviors directed towards destroying objects or injuring other people…..while anger and hostility refer to feelings and attitudes, the concept of 'aggression' generally implies destructive or punitive behavior directed towards other persons or objects.".

Mohan (2003) observed that adolescent violence is often related to intimate relationships, such as violence in dating situations. Dating violence may be defined as the penetration or threat of an act of violence by at least one member of unmarried couple on the other member within the context of dating or courtship. When frustrated and angry for a long time, a person may develop a hostile aggressive and a violent behavior, by forcing unsafe sex, and rape attempts on either their spouse or girlfriends that can lead to a high risk of HIV infection. As the studies show, anger is an outcome of frustration, because of which an individual may fall prey to high risk behavior, and hence the second hypothesis was proposed:

Hypothesis 2: HIV/AIDS positive individuals will score relatively higher on both Anger-S (state) and Anger-T (trait).

Self-Esteem

Self-esteem is a concept that includes a person's sense of self-respect, of their competence, and their acceptability to others. It encompasses their internal self-scheme, based on their past experiences of success or failure and their interpersonal experiences of acceptance or rejection. In regard to HIV, low self-esteem may be a factor in not protecting themselves or others from HIV. No one has been able to measure a drop in self-esteem as a result of becoming infected because self-esteem

may have been low to start with. However, with stigmatization, guilt, loss of a positive body image, loss of roles, loss of work, and loss of social network, it seems intuitive that self-esteem would be threatened (Hoffman, 1996).

The relationship between low Self-Esteem and HIV-related risk behaviors, and the factors that predict self-esteem levels of "at risk" women, was explored by Sterk, Klein, and Elifson (2000). Poor self esteem is thus likely to make an individual fall prey to peer pressure and faulty behavior and hence the third hypothesis was proposed:

Hypothesis 3: HIV positive individuals will have relatively lower self esteem.

Method

The investigation aimed to study the personality correlates of HIV positive individuals, in terms of, Extraversion, Neuroticism, Anger, and Self Esteem.

Participants

Due to the Confidentiality Act by the Supreme Court of India, Art.21, "Constitution of India, everybody has the Right to privacy {Nature and scope-Doctor-patient relationship-duty to maintain confidentiality-need for disclosure and invasion of right of privacy-disclosure when justified-right to privacy, held, not absolute (1998) 8 SCC}", no sampling technique could be used. The method thus used for the selection of participants was that of incidental sampling; hence the patients who were available were taken for this study. This study was carried out in two important cities of North India, namely, Delhi, and Chandigarh. The respondents of the study are a group of people with HIV/AIDS, living in non-governmental organizations in New Delhi and Chandigarh.

A total of 250 HIV positive participants were selected for this research, out of which there were 160 males and 90 females, within the age range of 15-25 years. The HIV free sample was selected from two colleges in Chandigarh. Equal number of male and female subjects was selected out of the total 250 HIV free sample. They were within the age range of 16 to 25 years. Due to confidentiality factor no other matching was possible.

Measures

The instruments used for the present study were following:

- *Eysenck Personality Inventory* (Eysenck & Eysenck, 1968). For the assessment of personality,We used Eysenck Personality Inventory (Eyesenck & Eysenck, 1968) to measure two dimensions of personality; Extroversion/Introversion and Neuroticism/ Emotional Stability. This form is a 57 item true-false questionnaire, out of which 24 items are for assessing Neuroticism/Emotional Stability, 24 items for assessing Extroversion/Introversion, and the rest of 9 items for constituting the Lie scale.
- *The State-Trait Anger Expression Inventory* by Spielberger (1988). Anger Expression Inventory was used to assess the dimensions of State Anger, Trait Anger, Anger-in, Anger-out, and Anger Control. This form consists of 44 items which use a four-point frequency scale ranging from 1 (almost never) to 4 (almost always).
- *Self Esteem Scale* by Connie Palladino (1999). Self-Esteem was assessed with the Self-Esteem Scale, a 15 item self report instrument with five-point Likert-type scale, initially developed by Connie Palladino (5 = very high, 4 = moderately high, 3 = average, 2 = moderately low, 1 = very low) which measures about how much your self-esteem is related to feeling of success.

Results

The Means and SD's of all the variables of males, females, and total samples of HIV positive and HIV free subjects on all the tests were computed. In order to find the gender difference, t-ratios were calculated, however which were not found to be significant. The data was then pooled to find the relationships of the variables under study. The total sample was analyzed for correlation.

Since the t-ratios were not found to be significant for gender differences on nearly all the variables in table 1, the data was then pooled to find the relation of the variables under study. The total sample was analyzed for comparison between the HIV positive sample and HIV free sample as shown in table 2.

Table 1

t-Ratios of the Personality Variables for Gender Difference of HIV + Sample & HIV Free Sample.

		HIV positive sample			HIV free sample		
EPI	Sex	*Mean*	*SD*	*t-ratio*	*Mean*	*SD*	*t-ratio*
E/I	M	11.08	3.150	-.628	10.84	3.298	.814
	F	11.32	2.767		10.52	2.909	
N	M	13.97	3.354	2.890*	11.31	3.792	1.059
	F	12.63	3.590		11.82	3.852	
L	M	4.02	1.680	2.102*	3.58	1.742	2.372*
	F	4.47	1.581		4.08	1.559	
ANGER							
Anger S	M	29.57	7.352	.349	28.02	7.383	-.008
	F	29.22	7.632		28.03	7.850	
Anger T	M	32.05	6.979	-.342	31.84	5.680	-.372
	F	32.38	7.450		32.12	6.204	
Self-Esteem	M	13.20	5.597	.077	11.25	3.447	.974
	F	13.14	5.354		10.83	3.301	

Note: HIV positive sample, males (n) = 160, females (n) = 90. HIV free sample, males (n) = 125, females (n)=125.
** p < .05 . ** p < .01 level.*

Table 2

A Comparison of the HIV+ & HIV Free Sample for Personality, Anger & Self-Esteem

EPI	**Status**	***Mean***	***SD***	***t-ratio***
E/I	HIV + ve	11.17	3.015	-1.782
	HIV - ve	10.68	3.107	
N	HIV + ve	13.49	3.493	-5.862**
	HIV - ve	11.57	3.823	
L	HIV + ve	4.18	1.656	-2.341*
	HIV - ve	3.83	1.668	
ANGER				
Anger S	HIV + ve	29.44	7.440	-2.104*
	HIV - ve	28.03	7.605	
Anger T	HIV + ve	32.17	7.139	-.320
	HIV - ve	31.98	5.938	
Self-Esteem	HIV + ve	13.18	5.500	-5.244**
	HIV - ve	11.04	3.375	

*Note. HIV positive sample (HIV+ ve) = 250. HIV Free Sample (HIV – ve) = 250. * p < .05 . ** p < .01 level.*

The scores of males, females and the total sample were analyzed to find their correlation with other variables under study, i.e. Extraversion, Neuroticism, Anger and Self-Esteem. These are presented in tables 3 and 4.

Table 3

Inter Correlations of the Personality Variables of HIV+ Males & Females.

	Personality Males			Anger	Self-Esteem	
	E/I	N	L	Anger State	Anger Trait	Self-Esteem
E/I	1	-.135	-.028	-.043	-.081	.292**
N	-.049	1	-.385**	.148	.085	-.264**
L	-.024	-.082	1	-.227**	-.047	.236**
Anger S	.065	.029	.015	1	.291**	-.059
Anger T	.117	.241	.094	.473**	1	-.045
Self-Esteem	.300**	-.114	.192	.411	.264*	1

*Note. * p < .05. ** p < .01.*

Table 4

Inter Correlations of the Personality Variables of HIV+ Total Sample.

	Personality				**Anger**	
	E/I	**N**	**L**	**Anger State**	**Anger Trait**	**Self-Esteem**
E/I	1	-.110	-.021	-.007	-.012	.294**
N		1	-.292**	.105	.139*	-.204**
L			1	-.143*	.006	.219**
Anger S				1	.360**	.109
Anger T					1	.067
Self-Esteem						1

*Note. * p < .05. ** p < .01.*

Discussion

The findings of the study have been discussed in two sections-gender differences and personality correlates of HIV/AIDS.

Gender Differences

HIV/AIDS affects women and men differently in terms of vulnerability and impact. There are biological factors, which make women more vulnerable to infection than men and structural inequalities in the status of men that make it harder for them to take measures, to prevent infection and also intensify the impact of AIDS on them. Unprotected sex has been seen to be associated with being impulsive and sexually compulsive. Among women it has been related to being less empathetic, less assertive, and more rebellious (Crepaz & Marks, 2002).

In the present study the following results were obtained for gender differences extraversion, neuroticism, anger, and self esteem.

The results indicate that no differences were found on Extraversion, in both HIV+ and HIV- sample, hence this data could be pooled for further analysis. HIV positive males score higher than HIV positive females. On Neuroticism the HIV males score higher than the females, at .05 level, indicating that the HIV positive males may be slightly more anxious, worrying individuals, who are over responsive, However the normal group did not show any differences hence the data was pooled for further analysis.

On anger there was no significant gender difference between in the HIV positive sample, as well as the normal sample. As such the data of males & females could be pooled for further analysis.

The present study indicates no significant gender difference on Self Esteem for both HIV positive and HIV free samples. Study by Kling et al. (1999) showed that there is a small difference in the scores of males and females on Self Esteem But both males and females show low Self Esteem in the HIV+ group. Hence the scores on self esteem of both the sexes could be pooled for further analysis.

Psychological Parameters and HIV

The following discusses the findings of the personality parameters i.e., extraversion, neuroticism, anger, and self esteem and HIV positive individuals.

Eysenck's Personality & HIV

Extraversion (E/I) and Neuroticism (N) dimensions of Eysenck's Personality were studied presently. The first hypothesis is verified by the findings where it was stated that HIV positive individuals will score relatively higher on Extraversion and Neuroticism.

On Extraversion the comparison indicates that HIV positive subjects are slightly higher than the HIV free sample. The difference is significant at .05 level only. A typical Extravert is sociable, craves for excitement, is influenced by others, and is generally impulsive. It is their inconsistency between the thought and the behavior that despite intellectual ability of knowledge of HIV/AIDS unstable extraverted youth engage in behavior associated with risk behavior. Also their emotional instability that is inability to tolerate, boredom, sadness, intense outburst in mood, lead them to pursue pleasurable experiences, however risky they may be. Such impulsive youth is usually influenced by others and are more vulnerable to alcohol, drug abuse and get involved in experimental sex, therefore high risk of contracting infection. Therefore, there is a need to educate today's youth about the hazards of excitement seeking activities and helping them to divert their energies into positive directions.

On Neuroticism the present results show that HIV positive sample has scored significantly higher than the HIV free sample. Individuals who score high on neuroticism are more likely than the average to experience such feelings as anxiety, anger, guilt, and clinical depression (Wikipedia). A combination of anxiety, depression, worrying nature and reacting strongly to all kinds of stimuli may lead an individual high on Neuroticism to be vulnerable to high risk behavior, as is seen in the present study. The younger generation responds more poorly to environmental stress, and is more likely to interpret ordinary situations as threatening, and minor frustrations as hopelessly difficult. They are often self-conscious and shy, and they may have trouble controlling urges and delaying gratification, with the result out of anxiety they may get involved in high risk behaviors, leading to HIV Infection. These tendencies lead to having irrational ideas and an inability to cope with stress effectively, therefore the classroom teaching should help the young students to have

rational ideas, to deal with the situations properly and react in a socially approved manner without showing anxiety and depression.

Anger & HIV

The present study reveals that HIV positive individuals score significantly higher only on the anger state and not on the anger trait. The findings show that the second hypothesis is verified- HIV/AIDS positive individuals score relatively higher on both Anger-S (state) and Anger-T (trait).

The high scores of HIV positive individuals in the present study could be due to emotional immaturity frustration or unfair treatment which takes the form of anger/ aggressiveness, hence making them fall prey to sexually active behaviors. An aggressive person tries to force his will on others to fulfill his demands or desire to harm others. Lollis, Johnson, Antoni, and Hinkle (1995) also report anger to be associated with high risk behavior. Anger is a negatively toned emotion, subjectively experienced as an aroused state of antagonism towards someone or something perceived to be the source of an aversive event. Anger aggression and hostility have been found to be personality features of most of the chronic illness. Anger directed towards others may be expressed in physical acts such as assaulting other persons, destroying objects and slamming doors, verbal threats and the extreme use of profanity (Speilberger et al., 1983).

Self-Esteem & HIV

Individual who are low on Self-Esteem tend to be emotionally immature, unstable, insecure, and anxiety prone. The present study shows that HIV positive individuals score significantly lower on Self-Esteem than the HIV free Sample. The scale scores have to be read in an inverted manner i.e., the higher the score the lower the Self Esteem. These findings verify the hypothesis three of the research.

Self-Esteem refers to ones evaluation of oneself. It may be defined as the degree of correspondence between an individuals' ideal and actual concept of himself (Cohen, 1959). Low self esteem people are dependent on the receipt of positive

evaluation from others. As a result, they are likely to seek approval from others and more prone to conform to the beliefs and behaviors of those they respect than are high self esteem groups (Robins, 1999). This may have led the HIV positive subjects of the present study in peer pressure to get involved in high risk behavior.

Future Recommendations

These research findings about the HIV positive youth could provide some important information for building up a model for the prevention of HIV in educational institutions. Preventing the spread of HIV means imparting information that is easily understood and acceptable to the youth, so that they can take steps to avoid exposing themselves and their partners to the virus and the dreadful disease.

Education gives vision to improve the quality of life of an individual. Workshops on behavior modification of young children can be conducted in educational institutions to educate them about the negative effects of neurotic tendencies, high aggression level, and lower self esteem. Some preventive practice suggestions for today's youth in the educational institutions can be as follows:

- *Ending Silence and Stigma*-challenging eliminating the shame associated with HIV/AIDS.
- *Provide people with knowledge and education and create social mobilization*-both in the class rooms and beyond. The knowledge can be imparted, through schools, through community, through the use of media.
- *Impart proper sex education.* According to Mohan (2005) "The agenda of sex education should include the scientific study of the body, the reproductive system and functions.

To conclude, one can say that education plays an important role in making the youth aware of menace of this disease and protect them from high risk taking behaviors, by converting their negative energies into constructive energies, which would help them to develop a healthy balanced lifestyle with a good personality, free from anger and with high self regard.

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