

# Extraversion personality traits and social support as determinants of coping responses among individuals with HIV/AIDS

## Abstract

The objective of the present study was to investigate the relationship between extraversion personality trait, social support and coping responses among individuals with HIV/AIDS. After detailed literature review, following hypotheses were formulated

1. There would be a positive correlation between Extraversion and problem-focused coping in individual with HIV/AIDS.
2. Social support play a role as mediating factor in the relationship between coping responses and Extraversion in individual with HIV/AIDS.

This study is based on co-relational research design. The sample consisted of 60 participants, selected from different organizations and hospitals that deal with HIV/AIDS patients. As in Karachi (Pakistan) most of the identified HIV/AIDS cases were substance addicts, hence the entire sample was of male substance addicts; selected in order to study the phenomenon from their perspective. The age range of the participants was from 18 to 50years (mean age; 32years; SD=8.4). After taking the consent from the participants, NEO Five factor Inventory NEO- FFI;<sup>1</sup> (Urdu translation), The Coping Responses Inventory- Adult Form CRI-Adult;<sup>2</sup> (Urdu translation) and Multidimensional Scale for Perceived social support,<sup>3</sup> (Urdu translation) were administered to measure personality traits, coping responses and level of social support respectively. Prior to the administration of tests permission for Urdu translation was taken from the publishers.

To obtain the results descriptive statistics, Pearson Product Moment co-efficient of correlation and step-wise regression were calculated. It was found that there is a significant positive relationship between extraversion and problem-focused coping ( $r = 0.420$ ,  $p < 0.001$ ) and it was found that extraversion predicts problem focused coping responses ( $F$ , 6.105,  $p < 0.05$ ). Research findings from the present study showed that those HIV/AIDS patients who have extraversion personality traits are more likely to use problem focused coping in order to cope with their disease and social support is a mediating factor in coping. Avenues for further research have also been suggested.

**Keywords:** personality, social support, HIV/AIDS

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Azra Shaheen,<sup>1</sup> Uzma Ali,<sup>1</sup> Haresh Kumar<sup>2</sup>

<sup>1</sup>Institute of Clinical Psychology, University of Karachi, Pakistan

<sup>2</sup>Institute of psychiatry, Baqai medical university, Pakistan

**Correspondence:** Azra Shaheen, Institute of Clinical Psychology, University of Karachi, Pakistan, Email azra\_fayaz@yahoo.com

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**Abbreviations:** AIDS, acquired immune deficiency syndrome; HIV, human immunodeficiency virus; CRI, coping responses inventory; FFI, five factors inventory; MSPPSS, multidimensional scale for perceived social support

## Introduction

AIDS (Acquired Immune Deficiency Syndrome) is caused by a virus called human immunodeficiency virus (HIV). It is blood-borne virus transmitted via sexual intercourse, sharing needles, blood diffusion and from mother to child. Immune system provides the body's defense against micro-organisms such as bacteria, viruses and fungi etc., In a healthy person, which produces antibodies to fight off or kill these micro-organisms to preventing the occurrence of the disease. In an immune deficient individual this ability to combat disease causing germs is lost. The groups at increased risk of acquiring the HIV infection have been defined in Pakistan and are the persons; blood and blood product recipients, IV drug addicts, STD patients ("Preventing HIV/AIDS in Pakistan" Retrieved 2014).

Drug addicts are a high risk group for contracting and transmitting diseases, in that intravenous drug abuser are most vulnerable group for HIV transmission. The rate of intravenous drug is increasing

day by day in Pakistan. People shift from inhalation to injecting the drugs because injecting drug is more economical than other means. Other factors like personality traits, socio-economic status, and poor interpersonal relationships, physical and psychological problems may predispose a person to engage in drug taking behavior. People using drugs may also engage in unsafe sex or work as sex workers which make them more vulnerable to contracting and spreading HIV infection.<sup>4</sup>

Studies show that the HIV/AIDS disease is spreading in Asia faster than anywhere else in the world and perhaps as fast as it did in Africa. An estimated 700,000 adults, 450,000 males are infected in South and South-east Asia in the course of the year 2000. The region in 2000 estimated to have 5.8million adults and children living with HIV/AIDS ("Preventing HIV/AIDS in Pakistan" Retrieved 2014).

The perception of level of stress associated with HIV/AIDS affects the coping style of the individual. The perception of high level of stress related to the disease was negatively related to problem-focused coping and positively related to emotion-focused coping; perception of control on the disease was positively related to problem-focused coping and negatively related to emotion-focused coping.<sup>5</sup> Baron & Byrne described coping as "responding to stress in a way that reduces

the threat and effects, what a person does, feels or thinks in order to master, tolerate or decrease the negative effects of the stressful situation.<sup>7</sup>

According to the above definition coping consists not only, behavioral efforts but also cognitive strategies to deal with stressful situations. "Behavioral strategies" include engaging in physical activities in order to reduce the negative feelings associated with stress for example using drugs, outings, expressing anger and seeking emotional support from friends. "Cognitive strategies" thought process or reappraising the situation to deal with stress, for example logical thinking to solve the problem and also simply stop thinking about the situation to reducing the negative feelings related to the situation.

Pakenham & Rinaldis<sup>6</sup> worked on the utility of stress and coping model of challenge adjustment to HIV/AIDS. Results indicated that problem-focused coping, more social support, high appraisal and low threat appraisal were related to better adjustment with illness. According to Piedmont<sup>7</sup> Personality can be defined as the 'intrinsic organization of an individual's mental world that is stable overtime and consistent over situations'. Every person has a different internal structure which makes them unique from others and enables individual to handle the external demands differently and choose goals and directions in life.

Recent work in the area of personality uses the five-factor model to understand the dimensions of personality in different settings. Five-factor model is a comprehensive description of normal personality dispositions which is constructed using different theoretical models to predict different life outcomes. Although these factors (Neuroticism, extraversion, openness to experience, agreeableness and conscientiousness.) are description of non-clinical functioning but provides valuable information to understand abnormal functioning.<sup>7</sup>

According to Ironson et al.,<sup>8</sup> personality plays an important role in progression of disease in HIV and health related behavior. They found that personality traits such as conscientiousness and extraversion are positively related with positive health-out-comes in various diseases including HIV, while openness, extraversion and conscientiousness have important role to slow the disease progression. Kardum & Krapic<sup>9</sup> concluded that extraversion is positively related to problem and emotion-focused coping while.

Personality traits, Social support and HIV/AIDS neuroticism and psychoticism were positively related with avoidance coping style. Kathy et al.,<sup>10</sup> studied the effect of coping strategies and perceived social support on the psychological adjustment in intravenous drug users with AIDS. They found that the coping strategy and seeking social support was correlated with psychological adjustment, while perceived social support from family was positively associated with psychological adjustment.

Social support play important role in dealing with stress. It is resource against stress which we get from our relationships, that affects individual's perception about stress and coping abilities. It is positively related with enhancing health.<sup>11</sup> Asante<sup>12</sup> suggested that social support is a key factor in positive health out-comes and wellbeing. People who have greater personal resources in the form of social support from family or friends react and cope better to stress and chronic pain than others. Social support may provide buffer against illness in many ways, through the behavior related to health, the cognition, handling of the illness and physiological response in stressful situations. Social support plays role of moderator in different coping strategies. According to Edwards<sup>13</sup> factors which enhance

adherence of treatment of HIV/AIDS in women family support and having children, while factors which create hindrance in treatment are lack of emotional support and having partner with HIV/AIDS.

HIV/AIDS is a life long phenomenon people experience many social, physical and psychological problems. Counseling along with antiretroviral therapy assists people to better cope with their condition. This study's purpose was to investigate relationship between extraversion and problem-focused coping and mediating role of social support in individual with HIV/AIDS.

## Methods

### Participants

Sample consisted of 60 males who were substance addicts at in recovery suffering from HIV/AIDS; age range of participants was 18 to 50years (mean age 32years SD=8.4). Through purposive sampling techniques the entire sample was drawn from different hospitals and organizations located in Karachi Pakistan. These organizations were dealing with substance addiction with collaboration with centers for treatment of HIV/AIDS. The minimum duration of illness was one year and maximum was six years. They were all recovered opiate addicts. They belonged to lower middle and middle socioeconomic classes were estimated on the basis of Household expenditure and Survey (2001). Their educational level was from middle (grade 8th) to graduation. They were from both family structures; nuclear and joint.

### Measures

**Demographic information form:** The Demographic Information included; age, gender, education, family structure, socio economic status, job status, duration of illness and drug usage.

**NEO – five factor inventory (NEO –FFI):<sup>1</sup>** NEO Five factor Inventory (NEO - FFI) is a measure of the five major domains or factors of personality and some traits that define each domain. NEO five factors Inventory is a 60-item questionnaire. The 5 domain scales and facet scales of the NEO –FFI give comprehensive assessment personality.

The five domains are Neuroticism (N), Extraversion (E), Agreeableness (A), Openness to experience (O) and Conscientiousness(C). Each domain scale has 12 items. The NEO-FFI can be administered in groups or individually. The respondent is required to rate items on a 5-point Likert scale ranging from 1-strongly disagrees to 5-strongly agree. The internal consistency for the NEO-FFI was calculated using coefficient alpha. Coefficients were 0.86 for N, 0.77 for E, 0.73 for O, 0.68 for A, and 0.81 for C. NEO-FFI has demonstrated good cross observer, convergent and discriminant validity. Urdu translation of this scale was used in this study.

**Coping responses inventory- adult form (CRI-Adult):<sup>2</sup>** Coping Responses Inventory-Adult Form (CRI-Adult) is a measure of coping responses. The Inventory consist of 48 items, measures eight different types of coping responses which are combined under two approaches; Approach coping responses and Avoidance coping responses. Sub scales of Approach coping responses are Logical Analysis, Positive Reappraisal, problem solving, seeking gaudiness and support. Sub scales of avoidance coping responses are Cognitive Avoidance, Acceptance, Seeking alternative rewards and Emotional discharge. Each scale consists of 6 items. CRI-Adult can be administered individually or in groups. In responding to the CRI-Adult, individual uses a 4- point scale varying from 'not at all' to 'fairly often'. Urdu translation of this scale was used in this study.

**Multidimensional scale for perceived social support:**<sup>3</sup> Multidimensional Scale for Perceived social support (MSPPSS) Urdu translation, is a measure of perceived social support, perception of social support in context of three specific sources include family, friends and significant others. MSPPSS is 12 item questionnaires.

## Procedure

### Stage I

First of all the researcher arranged the Urdu translation of scales used in this research. Urdu translations of Multidimensional Scale for Perceived social support (MSPPSS) and NEO-Five Factor Inventory (NEO-FFI) were already available with the publishers. However, the Urdu translation of Coping Responses Inventory- Adult Form (CRI-Adult) was not available. Researcher obtains permission to translate into Urdu language. It was translated by following the procedure of Urdu translation, back translation and then merging (selection of best representative items). In this procedure Clinical Psychologists were involved.

### Stage 2

At the initial stage researchers met the authorities of different organizations and hospitals located in Karachi who give treatment to substance addicts and patients of HIV/AIDS. In past decade of identified cases of HIV/AIDS were very low and people were also reluctant to do work in this area. After the discussions with authorities who were dealing with these cases under the United Nation AIDS Control Programs and Sindh AIDS Control Programs, the researchers got the list of different hospitals and organizations in Karachi Pakistan. HIV/AIDS patients, already diagnosed by psychiatrist and physician were selected on the basis of purposive sampling technique. Their age was 18-50. For the collection of data formal permission was taken from the concerned authorities of hospitals and organizations. The researcher introduced herself, took informed consent, built rapport, ensures confidentiality and briefly told the purpose of research.

The participants first completed the demographic sheet and NEO five factors Inventory (NEO -FFI; 1, 1992 Urdu translation). After 10minutes break, Coping Responses Inventory Adult-Form (2 Urdu Translation) was administered and after a further 5minutes break, Multidimensional Scale for Perceived social support (3 Urdu Translation). Responses were scored according to the manuals.

## Statistical analysis

In order to interpret the data, Pearson Product Moment co-efficient of correlation and a step-wise regression analysis were computed through SPSS. Descriptive statistic was also computed to analyze sample characteristics (Table 1-4).

## Discussion

Individuals' personality traits affect their tendency to think, feel and act in specific ways which influence their health and well-being. Personality characteristics of the individual and social network can be important factors in coping with life stressors such as life threatening disease HIV/AIDS. The first hypothesis is supported by the results and is significant at  $p < 0.001$ . (Table 3). It demonstrate that individuals who score high on the variable of Extraversion use more problem-focused coping while dealing with their stress.

The results of this study supported the previous findings (as mentioned earlier) that extroversion is related with problem-

focused coping. Kardum & Krapic<sup>9</sup> studied the relationship between personality traits, stressful life events and coping styles. He found that there was a positive relationship between extraversion and problem-focused coping, while neuroticism and psychoticism were positively related with avoidance coping style. Extraversion is not only related to sociability, being a part of large groups, and assertiveness but also their activity level is high. They prefer situations of high stimulation and have optimistic approach towards situations.<sup>14</sup> Extraverts generally have a positive appraisal and directly deal the problem. Extraversion is associated with the use of problem-focused coping strategies and seeking more social support which help them to perceive problem positively.<sup>15,16</sup>

Another study investigated the relationship between active and passive coping with emotional distress and physical symptoms. The finding suggested that active coping has a protective role; active coping increased when physical symptoms increased while passive coping. It suggested that active coping helps the individual in adjustment with HIV/AIDS. According to Ironson et al.,<sup>8</sup> personality traits conscientiousness, extraversion and openness are associated with slow disease progression in HIV patients. Friedman & Booth-Kewley<sup>17</sup> also found that the rate of physical illness low in extraverts and they experience better physical well-being. Extraversion and internal control found to be associated with problem-focused coping such as rational thinking, acceptance and social support.

The hypothesis Social support is a mediating factor in the relationship between coping responses and Extraversion in individual with HIV/AIDS is supported by the results and is significant at  $p < 0.05$ . (Table 4). In our study the results are significant and also extend the existing knowledge shared by western researches. Social support is a major mediating factor which plays a significant role in dealing with stressful events. It is a form of comfort we can receive from our family, friends and significant others in stressful life situations. Social support can be physical and emotional and give people a sense of importance and is important in coping with stress and diseases.<sup>18</sup>

Kulik & Mahler<sup>19</sup> found that social support was significantly linked with health-related out-comes. Better social network help individuals to develop more sense of control which lead them to use more adaptive coping. Social support is considered a stronger predictor of health in HIV and other illnesses. Song<sup>20</sup> studied the relationship between perceived social-support, coping and mood disturbance in HIV patients. He found that level of social support is associated with mood disturbance and coping. Low level of perceived social support associated with more mood disturbance and unhealthy coping such as denial.

Previously Lesrman, Perkins & Evans explained that social support was found to be associated with more adaptive coping, such as fighting spirit, reframing stress, plan of action for stress and less depression in HIV/AIDS patients. Moreover Hooker et al.,<sup>21</sup> showed that extraversion was positively correlated with adaptive coping, especially problem-focused coping and seeking support. Neuroticism was related with emotion-focused coping but no relationship found between openness and coping strategies. Further Amirkhan et al.,<sup>22</sup> also found that extraversion was significantly related to social support. They further affirmed that all coping strategies were interrelated with different aspects of personality. In line with this Folkman & Lazarus<sup>23</sup> concluded that people almost use all of the varying coping styles in different situations.

Previous studies showed pathways between health and personality are separate but have some relations. Personality traits, coping style

and social support are all interrelated. Personality traits affect the selection of coping strategy which in turn influences the level of stress perceived. Social support impact on the perception of stress, coping and the person's health.

## Conclusion

Our results suggested that there is a strong association between Extraversion personality trait, social support and coping. Social support appears to be a mediator in Extraversion personality trait and coping.

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## Conflicts of interest

Author declares there are no conflicts of interest.

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