

## A Comparative Study of Psychiatric Disorders and Coping Strategies between HIV Patients and Healthy Subjects in Khorramshahr

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### Abstract

**Introduction:** HIV infection is a common viral infection that affects humans and is one of the main causes of premature death, with a tremendous growth, particularly in Africa and developing countries and among young populations. In addition to the underlying factors, individuals' psychological traits and inability to cope with stressful situations are supposed to be among the accelerating factors in people with the disease. The aim of this study was to compare HIV patients with psychiatric disorders and coping strategies with healthy subjects in Khorramshahr, Iran

**Methods:** The subjects were purposefully selected. The tools were SCL90 and problem solving skills questionnaires. Subjects filled out both questionnaires individually. To compare psychological symptoms and quality of life between the groups, multivariate analysis and regression analysis were used.

**Findings:** The results showed that there was a significant difference between the two groups in obsessive scale ( $p = 0.034$  and  $T = 2.18$ ) and fear ( $p = 0.04$ ,  $T = 2.11$ ). Moreover, both groups were significantly different in strategies for coping stress, that is Problem-oriented coping style ( $p = 0.00$  and  $T = 4.631$ ), emotional ( $p = 0.01$  and  $T = 2.566$ ) and avoidant ( $p = 0.02$ ,  $T = -2.358$ ). Between the two groups no significant difference could be observed in four subscales of sensitivity, fear, paranoid thoughts, and psychosis.

**Conclusions:** The results of this study showed that HIV leads to a general decline in mental disorders and efficient and effective coping styles. Patients with HIV are faced with numerous psychological and biological problems which make them different from other people. In general, social and psychological factors are involved in building and creating this condition. The person's personal and social problems will increase after he is infected with HIV.

Taking measures to prevent the spread of the disease, as well as medical, psychological and social work to reduce disease progression and greater consistency can be effective in helping people with this disease.

**Keywords:** mental disorders, coping strategies, patients with HIV

### 1. Introduction

HIV infection is a common viral infection that affects humans and is one of the main causes of premature death with a tremendous growth, particularly in Africa and developing countries and among young populations. This disease is transmitted via different ways, including: high-risk sexual contacts, sharing of contaminated needles, mother to child transmission through contaminated blood and blood products and tools (15,7,23). 67% of infected people live in Africa, 17% in Asia, 8% in South America, 5% in North America, and 3% in Europe (6) and it is the first cause of death

in Africa and the fourth leading cause of death in the world. According to UN General Assembly Special Session on Aids in 2008(UNGASS:HIV/AIDS), Iran is among the countries with the prevalence of 5% -1% of Hiv infection (15).

In Iran, people were first infected by imported contaminated blood bags in 1986. However, in 1994 injecting drug users and since 2003, those involved in high-risk sexual behaviors were the highest infected groups. In addition to the underlying factors, individual psychological traits and the inability to cope with stressful situations are supposed to be among the accelerating factors in people with the disease. Optimism and adopting positive attitudes and coping behaviors and taking preventive measures, such as safe sex are effective ways to deal with the disease (20).

When talking about the psycho-social variables that influence their psychological adjustment and their ability to cope with the disease, it is worth mentioning that from the early detection of the disease, the patients fear it so greatly that they turn to uncharted ways to get medical care. Individuals with physical and verbal violence and verbal abuse are more common in the Community which can be in the range of psychosocial outcomes.

Patients may experience a wide range of psychological disturbances such as mild pathologic apathy, guilt, helplessness and despair to extreme conditions of anxiety disorders, depression and suicidal thoughts

Researchers have shown that all types of anxiety disorders may be observable in patients with infection but generalized anxiety disorder, post-traumatic stress disorder and obsessive-compulsive disorder are the most common ones. Adjustment disorder with depressed mood and anxiety have been reported in 5% to 20% of the cases of the infection. The rate of infection in patients with depression diagnostic criteria has been reported to be 4% to 40% (4). Depression is a significant predictor of mortality independent of age that is considered to accelerate progress towards Aids. Fear of death is not the only cause of depression. In people with poor social interaction, stigma and discrimination in the family and the community are involved in depression, too. Depression is known as a mediator between optimism and progress of the disease. Patients with depression or anxiety may be tempted to treat themselves and get used to drugs.

Anxiety and depression on the one hand and adapting inefficient coping styles that are derived from the experiences of humiliation on the other, make it more difficult to fight against stressors. People with cognitive and emotional responses to stressors who adapt inappropriate responses, quickly choose the style which is related to their previous life style.

Psycho-Social intervening therapies - help people manage their stress and anger and solve their interpersonal conflicts and can be an important strategy in response to the current crisis which can be achieved only after attitudes and cognitive processing instructions are changed.

Recent epidemiological studies have shown that people with mental disorders and hepatitis B are at increased risk of HIV infection. A multifaceted study of 929 individuals (a mental illness) showed that the prevalence rate of HIV in this population was 9.2%, and the prevalence of hepatitis B was 23.4%. Similarly, in a study of 141 patients with schizophrenia, the prevalence of HIV was 5.4%, and the prevalence of hepatitis was B.28% (13).

A 2-year follow-up study of the relationship between psychological factors - social and psychological recovery and emotional well-being of people living with the virus showed that using methods like active coping and relaxation experience, and the use of performance evaluation on one hand and lesser use of denial or avoidance methods on the other, predict higher levels of psychological well-being, emotional and physical performance. (12)

Anger, unrest, anxiety, apprehension, fear, depression, thoughts of suicide, poor health, social isolation and cognitive deficits (due to involvement of central nervous system with infection) may

occur (1). Studies Conducted on HIV in Iran mostly deal with the description of the symptoms of disease, or focus on the information that people have about it or just emphasize on the importance of changing attitudes of different groups of people towards this problem. Studies on the effects of this disease or spread of behavioral disorders have been very rare, however. This study aimed to investigate psychological disorders and its relationship with coping strategies in both healthy persons and patients with HIV.

## 2. Methodology

### 2.1. Participants

This cross-sectional study was done to compare the examples of the male population of HIV-infected persons and healthy ones in Khorramshahr in 2010. The research sample consisted of 50 males with an age range of 35-20 years, including 25 healthy men and 25 men with HIV. People with HIV were among those who had registered their names in Khorramshahr behavioral disorders counseling center. Control group (controls) were randomly selected from patients referred to the health centers in city of Khorramshahr were matched in age and education level.

### 2.2. Instruments

The tools used for the purpose of this study included the followings:

2.2.1. SCL90 and problem solving skills questionnaires: SCL90 questionnaire consists of 90 questions to assess psychiatric symptoms and 9 aspects of , obsessive, psychotic, sensitivities in relationships, depression, anxiety, hostility, phobia, paranoid ideation, and somatization. Several studies have been conducted to verify the validity and reliability of the test. In Iran Drmirzaie has shown that the reliability of the test in all aspects except for aggression, phobic anxiety and paranoid ideation has been greater than 0.8.

2.2.2. Coping Strategies Questionnaire (CS-R): The questionnaires was based on Lazarus model of stress and behavioral self-regulation model presented by Carver and Vyntrab Skinner (1989) Smdy performed (1998) the test in Isfahan and the reliability of the subscales were reported to be acceptable. To fill out the questionnaires, first, the participants were assured that their responses will remain strictly confidential. Then they were asked to answer the questions with sincerity. In the case of illiterate subjects, the questions were read carefully and the subjects' answers were recorded in the questionnaire by research associates.

For the comparing psychological symptoms and quality of life between the groups multivariate analyze and regression correlation were compared.

## 3. Findings

In table 1, Mean  $\pm$  SD of 3 subscales of nine subscales related to psychological disorders and coping strategies of HIV-positive group and the control group are shown.

When assessed by Kolmogorov-Smirnov test ,both groups showed a normal distribution ( $p>0.05$ ) So the next step was to compare the 9 subscales of mental disorders and coping strategies between patients and control group using multivariate ANOVA.

The results showed that in both groups there was a significant difference on measures of OCD ( $P=0.034$ ,  $T=2.18$ ) and fear ( $P=0.04$ ,  $T=2.11$ ) while they were significantly different.in all three strategies of problem-oriented coping style ( $P=0.00$ ,  $T=4.631$ ), emotional ( $P=0.01$ ,  $T=2.566$ ) and avoidant ( $P=0.02$ ,  $T=-2.358$ )..

Indeed, the mean for problem-oriented coping style in patients ( $26.040\pm 7.144$ ) compared to controls ( $36.125\pm 8.088$ ) and emotional coping style of patients ( $26.240\pm 4.728$ ) was less than those

of healthy subjects. ( $30.041 \pm 5.622$ ). But the average for avoidant coping style of patients ( $32.840 \pm 3.578$ ) was higher than that of the control group ( $26.870 \pm 12.116$ ).

**Table 1. Mean and SD subscales and mental stress in healthy subjects and HIV-infected**

Variable	HIV patients	healthy individuals
Obsession	$1.30 \pm 0.76$	$0.92 \pm 0.41$
Sensitivity between	$1.07 \pm 0.82$	$0.88 \pm 0.34$
Depression	$1.15 \pm 0.87$	$1.07 \pm 0.47$
Anxiety	$0.95 \pm 0.76$	$0.82 \pm 0.37$
Aggression	$0.75 \pm 0.72$	$0.71 \pm 0.44$
Fear	$0.42 \pm 0.42$	$0.22 \pm 0.23$
paranoid thoughts	$1.28 \pm 0.92$	$0.94 \pm 0.46$
Psychosis	$0.71 \pm 0.65$	$0.63 \pm 0.31$
Somatization	$0.92 \pm 0.69$	$0.72 \pm 0.41$
The overall index of symptom	$9.48 \pm 6.42$	$7.53 \pm 2.98$
The Focused coping	$36.125 \pm 8.088$	$26.04 \pm 7.144$
Emotional response	$26.24 \pm 4.72$	$30.04 \pm 5.622$
Avoidance coping	$32.84 \pm 3.57$	$26.87 \pm 12.11$

Pearson's correlation test was used to see the relation between Mental variables and coping styles among patients. (Table 2) The results showed no significant relationship between four subscales of sensitivity relationship, fear, paranoid ideation, psychosis, with coping style.

**Table 2. Correlation coefficients between variables of coping style and mental health subscales in HIV patients**

	CE. Problem-oriented	CE. Emotional	CE avoidance	Obsession	Depression	Anxiety	Aggression	Somatization
CE. Problem-oriented	1							
CE. Emotional	0.594	1						
CE avoidance	-0.128	-0.051	1					
Obsession	-0.502	-0.501	0.175	1				
Depression	-0.285	-0.267	0.442	0.864	1			
Anxiety	-0.493	-0.451	0.344	0.840	0.694	1		
Aggression	-0.212	-0.423	0.323	0.722	0.810	0.740	1	
Somatization	-0.184	-0.413	0.366	0.812	0.887	0.736	0.780	1

Given that this study seeks to predict dysfunctional coping styles of patients with HIV (avoidance coping), the method of stepwise regression analysis was used to determine the effect of this

variable on each of the subscales of mental health practices . Results showed that sensitivity of the relationship, fear, paranoid thoughts, psychosis, anxiety, hostility, and somatization had no significant role in predicting avoidance coping style and thus were excluded from Eq.

Significant F ratios indicate variables associated with depression and obsessive avoidance coping styles in individuals who are HIV-infected (Table 3).Indeed, we can say that depression has a greater role in explaining changes in avoidant coping

**Table 3. Results of regression analysis of avoidant coping style on psychological disorders inpatients with HIV**

	Index	SS	df	MS	F(P)	R	R <sup>2</sup>	SE	B	$\beta$	t(P)
Depression	Regression	660.438	1	660.438	5.439	0.442	0.196	11.11	6.138	0.442	2.313
	The remaining	2716.187	22	123.463	(0.030)	0	0	0	0	0	(0.030)
Obsession	Regression	1231.043	2	615.522	6.024	0.604	0.304	0.11	0.929	0.148	3.322
	The remaining	2145.582	21	102.171	(0.009)	0	0	10	15	1	(0.003)

#### 4. Discussion and conclusion

The mental disorders and coping strategies of HIV patients and healthy controls were studied. Results showed that depression and OCD in subjects with HIV is associated with avoidant coping style. And depression has a greater role in explaining changes in avoidance coping style. Our Finding is consistent with the results of other studies (Cullen, 2003; Aronson, Fletcher, Balbyn and Solomon, 2001; into Sykmba, 2005).in Consistency with these findings, Tasyantys, et al. (1989), Deborah et al (2003) reported the increased levels of confusion and anxiety reactions in patients with HIV infection. The study showed that patients use the avoidance style to cope with the disease, something which is in accordance with views expressed by Felton, Revenson, and Hinrichen.

Cuteis and et al showed that there is a positive relationship between the use of escape or avoidance strategies on one hand and depression and lower psychological well-being on the other. (Quoting Grummon et al, 1990).

HIV infection may have adverse social and psychological consequences for example: opportunistic infections, helplessness and hopelessness, maladapted coping styles, psychological adjustment disorder, depression, OCD, and sometimes suicidal thoughts. In general, the relationship between mental disorders and dysfunctional coping strategies is a two-way relationship. The HIV disease as a chronic health problem that cannot be cured, and there is a lot of physical and psychological stress on the patient and his family, but both patient and physician must deal with it and control it. The results of this study also showed that HIV has led to a general decline in mental disorders and efficient and effective coping styles. Patients with HIV are faced with many physical and mental problems. They require special biological, psychological and social attention different from healthy people. In general, numerous social and psychological factors and difficulties are involved in building and creating the disease. When a person is infected with HIV, his .her personal and social problems will increase. Measures taken to prevent the spread of the disease, as well as medical, psychological and social work to reduce disease progression and greater adaptability can be effective in helping people who are suffering from HIV .

On the other hand, The HIV disease is a chronic health problem that cannot be cured. It puts a lot of physical and psychological stress on the patient and his family. However, both the patient and the physician have to deal with it and control it. The results of this study also showed that HIV has led to more mental disorders and less efficient and effective coping styles. Patients with HIV are faced with numerous problems and psychological needs, as well as biological, psychological and social ones which may be different from other healthy people. In general, numerous social and psychological factors are involved in building and creating the conditions. After person is infected his personal and social problems will increase. Taking Measures to prevent the spread of the disease, as well as medical, psychological and social work to reduce disease progression and to create more adaptability can be effective steps to help these patients. Top of Form

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