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IMPACT OF COPING STRATEGIES ON INTERNALIZING PROBLEMS IN PEOPLE LIVING WITH HIV/AIDS

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ABSTRACT

The current study purports to investigate the predictive association of coping strategies (i.e. Active avoidance, Problem-focused, Positive coping, and Religious/denial) with internalizing problems (i.e., depression, anxiety, and stress) in People Living with HIV/AIDS. The hundred HIV positive people registered under Sindh AIDS Control Program, Karachi were taken as a sample with mean age of 33.13 (± SD= 9.38). They were administered: HIV/AIDS Surveillance Reporting Form, Urdu Translated Version of Brief COPE (Akhtar, 2005) and Depression, Anxiety, Stress Scale-21 (DASS-21; Aslam & Tariq, 2007). Linear Regression Analyses were as such: Active Avoidance coping strategies significantly predicted Depression, Anxiety and Stress; Problem-focused coping strategies and Positive coping strategies are seen to be insignificant predictors of all three types of internalizing problems: Depression, Anxiety and Stress; and Religious/ Denial Coping Strategies significantly predicted Depression, Anxiety, and Stress. The implications for clinical interventions in HIV/AIDS treatment and avenues for future research are suggested.

Keywords: Coping in People Living with HIV/ AID, Depression, Anxiety, Stress

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INTRODUCTION

Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome (HIV/AIDS) is irrefutably a fatal, unpredictable, terminal medical illness. Living with such a disease is psychologically harrowing and distressing and can trigger a number of internalizing problems including depression (Clifford, 2008), anxiety (Nel & Kagee, 2011), stress (McIntosh & Rosselli, 2012), etc. Though, in real life receiving a diagnosis of and living with any life threatening illness is devastating but the associated emotional, social and financial consequences of HIV/AIDS tend to make coping with this disease more difficult eventually intensifying the vulnerability to psychological problems. Hence, the present study mainly involves the significance of internalizing problems (i.e. depression, anxiety, and stress) and coping strategies as its interrelated variables in people living with HIV/AIDS. More precisely, it examines whether there is predictive association between various types of coping strategies (i.e. Active avoidance, Problem-focused, Positive coping, and Religious/denial) and internalizing problems (i.e. Depression, Anxiety, and Stress) in people living with HIV/AIDS.

According to World Health Organization (2014), Human Immunodeficiency Virus (HIV) is a virus transmitted from one person to another which infects, destroys and impairs the function of the white blood cells in the immune system. With time this virus makes the immune system weak and hence more vulnerable to infections. HIV can be transferred from one person to another by various means which includes having anal or vaginal sex without any protection, contaminated blood transfusion, sharing of needles which are contaminated with HIV or from a mother to her child during pregnancy, delivery or breastfeeding. The most advanced stage of HIV infection is Acquired Immunodeficiency Syndrome (AIDS). An HIV-infected person can take 10-15 years to reach the last stage of the disease called AIDS and Antiretroviral drugs can help in slowing down the progression of the person to AIDS even further.

Till now, almost 71 million people have been infected with HIV globally, about 34 million people have died and 36.9 million people are living with HIV (World Health Organization, 2014). In Pakistan, the projected population living with the disease is 94,000 with 2,800 approximate numbers of deaths each year. Pakistan is currently a low-prevalence country for HIV/AIDS but is also at a high risk because of the presence of several conditions such as poverty, lack of education, unemployment and temporary migration to higher-

prevalence countries that are resulting in the spread of the disease (National AIDS Control Program, 2015). Hence, this alarming risk has led to the growing research attention on HIV/AIDS in Pakistan and the present study is also an attempt in this regard.

Advances in treatment, like Highly Active Antiviral Therapy (HAART; the primary treatment procedure for HIV), have transformed HIV/AIDS from a "chronic disease" to a "terminal disease" (Beaudin & Chambre, 1996). Now the people are enabled to live longer with the disease. Despite the fact, living with such a fatal disease however is not without consequences. Living with HIV Positive can result in variety of psychological responses and problems including feeling hopeless, helpless, anxious, worthless, sad or depressed and having suicide behaviors (Meel & Leenaars, 2005; Schlebusch, 2005).

Depression is documented to be most prevalent psychological distress in people diagnosed with a disease like HIV/AIDS (Polsky et al., 2005). The prevalence of depression has been identified to be double in people who are infected with HIV than in people who are not infected with HIV (Antakly & Malbergier, 2006). A person with HIV/AIDS can experience depressive symptoms because they find it very difficult to accept and adjust to their conditions (Escott-Stump, 2002).

Anxiety is also documented to be a universal problem for person with HIV/AIDS since the disease produces ambiguity and disturbance in every part of their lives (Phillips & Morrow, 1998). In a report published by World Health Organization and World Organization of Family Doctors (2008), it is posited that HIV/AIDS patients suffer from anxiety and depression because they face difficulty in accepting the diagnosis and later in living with the post-diagnosis conditions. The postulation of WHO's is similar to Escott-Stump (2002) notion on how people living with HIV/AIDS experiences depression. Post-diagnosis conditions which are found to be linked to anxiety and depression include stigmatization, loss of social support, family or friends, decreased life expectancy, and complex therapeutic procedures. Some common reactions of people with HIV-positive include feelings shocked initially, followed traumatization and disbelief, and later, feeling anxious and outrage (Cartwright, 2006).

Stress has also shown to become a part of the lives for people who have HIV/AIDS. After, receiving diagnosis of HIV/AIDS they face unique stresses,

such as issues related to disclosure of disease, stigma, discrimination, medical fatigue, etc. (Canadian AIDS Society, 2014). Furthermore, evidences demonstrate that physical stressors and psychological problems which are associated with HIV/AIDS can change biological processes and destabilize well-being (Tosevski & Milovancevic, 2006). Indeed, increased stress appears to accelerate immune impairment leading to faster advancement to AIDS (Evans et al., 1997).

All encompassing, HIV/AIDS constitute a major risk for developing internalizing problems. To date most of the researches have focused on the medical, physiological and social factors that lead to depression, anxiety, stress, and other psychological problems in people living with the disease and gave little importance to the resources and mechanisms that may contribute positively or negatively to such outcomes. One psychological resource or mechanism through which traumatic experiences can be transformed is through the coping. In psychological terms, Lazarus and Folkman (1984) described coping as making cognitive and behavioral efforts that constantly keep on changing with the purpose of managing specific external and/or internal demands that are judged as challenging.

The adaptive role of coping strategies with regard to internalizing problems, i.e. anxiety, depression, and stress on diverse populations is well-established (e.g. Heppner et al., 1995; McPherson, Hale, Richardson, & Obholzer, 2003). There seems to be an emerging consensus that coping strategies also plays a key role in adjustment to extremely threatening and traumatic events. Adaptive coping is recognized as a major contributing factor to health prognosis and quality of life and to reduce psychological distress in people living with HIV/AIDS (Coetzee & Spangenberg, 2003). Some researchers have demonstrated problem-focused and active coping styles better in reducing psychological distress and depression in people with HIV/AIDS (e.g., Coetzee & Spangenberg, 2003; Moskowitz, Hult, Bussolari, & Acree, 2009; Pakenham & Rinaldis, 2001;). Others have documented confrontation the most frequently used coping style and acceptance-resignation and avoidance coping styles to be related with high distress (e.g., Sun, Zhang, & Fu, 2007). Thus, it could be conjectured that coping strategies have important repercussions for psychological health of people living with HIV/AIDS.

The existing literature clearly demonstrated that HIV/AIDS inflicts a substantial psychological burden on people living with the disease. Developing

psychological problems during the course of disease have significant repercussions for prognosis and quality of lives of people living with HIV/AIDS. Since, advances in treatment have enabled these individuals to lead a full life span with effective management of their disease. The psychological problem may impose challenges with treatment (i.e. receiving optimal medical care, interaction with clinicians, and compliance with medical procedures (e.g., Treisman, Angelino, & Hutton, 2001). Eventually leading to faster disease progression and contributing to decreased health consequences, poor quality of life and other maladaptive behaviors. Hence, there is a dire need to identify the resources and mechanism which can reduce the psychological burden in people living with HIV/AIDS. Nonetheless, the existing literature very clearly demonstrated that how people handle the traumatic experience of living with HIV/AIDS, may impact their psychological health. Yet, compared to West, studies on psychological aspects of living with HIV/AIDS and role of coping strategies in this regard in Pakistan are in real dearth; in particular little or no effort has been made in exploring the role of coping strategies. Hence, how individual cope with psychological burden of living with HIV/AIDS is an important dimension to explore in Pakistani culture.

In this regard, the present study is an endeavor to explore the predictive association of coping strategies (i.e. Active avoidance, Problem-focused, Positive coping, and Religious/denial) with internalizing problems (i.e., depression, anxiety, stress and suicide behaviors) in people living with HIV/AIDS. The findings gained from this study have importance especially for clinicians deriving effective coping intervention aimed at mitigating overall psychological distress and will widen information on the variables under consideration (i.e. coping strategies and internalizing problems) and will open avenues for future researches in this area.

Contemplating the existing literature, following hypotheses are framed:

1. There will be predictive association between Active-Avoidance Coping Strategies and Internalizing Problems (i.e. Depression, Anxiety and Stress) in people living with HIV/AIDS.

2. There will be predictive association between Problem-Focused Coping Strategies and Internalizing Problems (i.e. Depression, Anxiety and Stress) in people living with HIV/AIDS.

3. There will be predictive association between Positive Coping Strategies and Internalizing Problems (i.e. Depression, Anxiety and Stress) in people living with HIV/AIDS.

4. There will be predictive association between Religious/Denial Coping Strategies and Internalizing Problems in people living with HIV/AIDS.

METHOD

Participants

The sample of the study comprised of 100 people diagnosed as being HIV positive (83 men and 17 women) was drawn from Sindh AIDS Control Program which is an organization that works with people living with HIV/AIDS providing them with healthcare and counseling services in Sindh (a province of Pakistan). Purposive sampling technique was used as the sample comprised of special and restricted population. The participants belonged to different ages from 24 years to 65 years with the mean age of 33.13 (± *SD* = 9.377) for the overall sample; 32.82 (± *SD* = 9.746) for men; and 34.65 (± *SD* = 7.373) for women (Table 1). Only those people were included who have received a diagnosis of either HIV positive or AIDS and are registered under the organization. Participants with history psychological problems either in them or in family and neurological problems were excluded because of the potential impact of theses on mental health. The demographic characteristics of the sample are presented in Table 2.

Table 1
Descriptive Statistics for the Age of the Participants

Variables	Men-LWH *N* = 83		Women-LWH *N* = 17		PLWH *N* = 100	
	M	***SD***	***M***	***SD***	***M***	***SD***
Age	32.82	9.75	34.65	7.37	33.13	9.38

Note: Living with HIV/AIDS= LWH; People Living with HIV/AIDS= PLWH (i.e. Total Sample)

Table 2
Demographic Characteristics of the Participants (N =110)

Variables	***N***	***%***
Gender		
Male	83	83
Female	17	17
Marital Status		
Single	45	45
Married	48	48
Divorced	1	1
Widow	3	3
Separation	3	3
Duration of Illness		
Less than one year	23	23
More than 1 to 3 years	31	31
More than 3 to 6 years	16	16
More than 6 to 9 years	20	20
More than 9 years	10	10
Duration of HIV treatment		
Less than one year	8	8
More than 1 to 3 years	17	17
More than 3 to 6 years	12	12
More than 6 to 9 years	6	6
More than 9 years	3	3
Not on treatment	54	54

Measures

The HIV/AIDS Surveillance Reporting Form (SRF)

The HIV/AIDS Surveillance Reporting Form originally developed by Sindh AIDS Control Program was used in the present study with few changes. This form consisted of information related to participant's personal characteristics, family history, presence of psychological problem and specific questions related to HIV/AIDs.

Brief COPE Inventory

Brief COPE Inventory (Carver, 1997) is a short version of the original COPE inventory (Carver, Scheier, & Weintraub, 1989). The Urdu translated version of Brief COPE by Akhtar (2005) is used to explore a wide range of coping strategies among people with HIV/AIDS consisting of 28 items categorized into 4 sub-scales namely; Active Avoidance Coping, Problem Focused Coping, Positive Coping, and Religion/Denial Coping. Each item is marked by the participants on a 4 point Likert-type scale (1=*never*, 2=*very less*, 3=*sometimes* and 4=*a lot*). Akhtar (2005) reported good alpha reliability coefficient i.e. Active-Avoidance Coping Strategies (α=.81), Problem-Focused Coping Strategies (α= .78), Positive Coping Strategies (α=.75) and Religious/Denial Coping Strategies (α= .82).

Depression, Anxiety and Stress Scale (DASS-21)

The Depression, Anxiety Stress Scale (DASS-21) is a short version of DASS-42 (Lovibond & Lovibond, 1995). It quantitatively measures distress along the axes of depression, anxiety and stress with 7 items in each subscale. Each item is rated on a 4-point Likert-type scale ranging from 0 *(Did not apply to me at all)* to 3 *(applied to me very much or most of the time).* A total score is computed by aggregating all items and then multiplying it by 2 as the original DASS had 42 items. In the present study Urdu adapted version of DASS-21 (Aslam & Tariq, 2007) was employed. The Cronbach's alphas reported by Aslam and Tariq were .88 for Depression, .82 for Anxiety and .90 for Stress.

Procedure

The authorities of Sindh AIDS Control Program were contacted to inform them about the present study and find out their willingness to cooperate and let the people with HIV/AIDS under treatment in their organization to participate in the study. After completing all official procedures and seeking permission data was collected individually in an environment which ensured privacy. After taking formal consent using consent form, The HIV/AIDS Surveillance Reporting Form was filled in by the researcher. Followed by this, Urdu Translated Version of Brief Cope Inventory and Depression, Anxiety and Stress Scale-21 were administered. In the end, the participants who took part in the study and the concerned authorities were obliged for their assistance and time.

Scoring and Statistical Analysis

After data collection, scoring of the administered questionnaire was done. Followed by, statistical analysis was employed on the data using Statistical Package for Social Sciences (SPSS, V-20.0). Linear Regression Analyses were computed to test the hypotheses of the study. Descriptive statistic was also computed.

RESULTS

Table 3
Descriptive Statistics for the Vari ables of Coping Strategies and Internalizing Problems in People Living with HIV/AIDS

Variables	Men-LWH N = 83		Women-LWH N = 17		PLWH N = 100	
	M	***SD***	***M***	***SD***	***M***	***SD***
Coping Strategies						
Active Avoidance	28.49	4.27	23.41	4.21	27.63	4.65
Problem-Focused	20.76	3.23	21.29	2.91	20.85	3.17
Positive Coping	19.48	3.37	18.82	2.74	19.37	3.27
Religious/Denial	12.02	2.63	13.18	2.16	12.22	2.58
Internalizing Problems						
Depression	22.94	10.13	22.92	10.47	22.92	10.36
Anxiety	20.47	9.18	20	9.72	20.08	9.59
Stress	27.53	10.04	26.41	9.52	26.60	9.57

Note: Living with HIV/AIDS= LWH; People Living with HIV/AIDS= PLWH (i.e. Total Sample)

Table 4
Summary of Linear Regression Analysis with Active Avoidance Coping Strategies as predictor of Depression, Anxiety and Stress in People Living with HIV/AIDS

Predictors	Dependents	*R*	*R²*	*B*	*df*	*F*	*Sig.*
Active Avoidance Coping Strategies	**Depression**	.27	.07	.27	1, 98	8.32	.005*
	Anxiety	.34	.12	.34	1, 98	13.36	.000*
	Stress	.24	.06	.24	1, 98	6.14	.015*

*p<.05

Table 5

Summary of Linear Regression Analysis with Problem-Focused Coping Strategies as predictor of Depression, Anxiety and Stress in People Living with HIV/AIDS

Predictors	Dependents	*R*	R^2	*B*	*df*	*F*	*Sig.*
Problem-Focused Coping Strategies	**Depression**	.15	.02	-.15	1, 98	2.32	.131*
	Anxiety	.02	.00	-.02	1, 98	.03	.873*
	Stress	.01	.00	-.01	1, 98	.02	.893*/

*p>.05

Table 6

Summary of Linear Regression Analysis with Positive Coping Strategies as predictor of Depression, Anxiety and Stress in People Living with HIV/AIDS

Predictors	Dependents	*R*	R^2	*B*	*df*	*F*	*Sig.*
Positive Coping Strategies	**Depression**	.07	.00	.28	1, 98	.42	.520*
	Anxiety	.09	.01	.35	1, 98	.83	.365*
	Stress	.03	.00	.24	1, 98	.06	.803*

*p>.05

Table 7
Summary of Linear Regression Analysis with Religious/Denial Coping Strategies as predictor of Depression, Anxiety and Stress in People Living with HIV/AIDS

Predictors	Dependents	*R*	R^2	*B*	*df*	*F*	*Sig.*
Religious/Denial Coping Strategies	**Depression**	.39	.15	.39	1, 98	17.20	.000*
	Anxiety	.14	.13	.38	1, 98	16.10	.000*
	Stress	.38	.14	.38	1, 98	16.47	.000*

*p<.05

DISCUSSION

The analyses have shown some interesting trends regarding association of various coping strategies with internalizing problems in people living with HIV/AIDS within Pakistani cultural context. The key findings are as followed. Regarding hypothesis # 1, the analyses show that Active Avoidance Coping Strategies are significant predictors of all three internalizing problems i.e. Depression, Anxiety and Stress (Table 4).

These findings are similar with former studies which revealed an association between Active Avoidance Coping Strategies and Internalizing Problems (e.g., Gonzalez, Solomon, Zvolensky, & Miller, 2010; Heckman et al., 2004). Several reasons can be considered for these findings. Firstly, as human beings we live in an environment which has its own defined set of norms, values and behaviors for its members to follow. When an individual or a group fails to meet the expected norms then their behavior is taken as a deviation and as a result they are isolated, labeled or discriminated in various domains of life. Alike, people suffering from HIV/AIDS are often disparaged and isolated by the society since the ways through which HIV virus is contracted has a great deal of stigma attached to it. It is generally believed that it can only be contracted through immoral sexual means and these behaviors are regarded in most cultures, including Pakistan, morally, ethically and religiously wrong.

Secondly, as Pakistan is an Islamic country with 97% Muslim population. Islam gives Muslims a moral code for sexual relationships and approves sex only after marriage and strongly condemns sex outside marriage. Hence, contracting HIV/AIDS is considered by society in general a consequence of violation of societal and religious principles and HIV/AIDS status is subjected to a lot of stigmatization and these people face rejection from the society in general. Hence, this stigma averts these people to talk about their problems and to seek support and use Avoidance as a Coping Strategy. Previous researches have also advocated that using disengagement Coping Strategies in the form of Denial, Avoidance and Wishful Thinking assist people living with HIV/AIDS in guarding themselves from the stressors caused by stigma (Major, Quinton, & McCoy, 2002). They prefer to stay away from situations that could lead to their stigmatization (Pinel, 1999). They fear that they will be blamed for their risky behaviors and will be disparaged hence they do not seek for help from others and tend to cope by escaping (Ironson & Hayward, 2008). However, Moneyham et al. (1998) conjectured that Avoidant Coping Strategies maybe effective in the initial stages of HIV infection where AIDS-related symptoms are not prominent and hence the patient is uncertain about how to deal with the illness. Using Avoidance as a mean of coping with their life circumstances is an unhealthy way of coping as supported by existing evidences as well. In long run these have been linked with symptoms of depression, anxiety, feeling emotionally distressed and reducing the positivity (Gonzalez, Solomon, Zvolensky, & Miller, 2010; Heckman et al., 2004).

Further, analysis regarding hypothesis 2 and 3 indicates Problem-Focused Coping Strategies (Table 5) and Positive Coping Strategies as insignificant predictors of Internalizing Problems i.e. Depression, Anxiety and Stress in people living with HIV/AIDS (Table 6). These findings are similar to finding of Ball and colleagues (2002) where they also failed to demonstrate such an association. The reason for this lack of association could be the stagnant nature of the stressors and challenges associated with the disease. Though generally, it is seen that the Problem-Focused Coping and Positive Coping Strategies enhance psychological health and prevent a person from psychological problems, the use of such Coping Strategies may not always be effective. HIV/AIDS is an ongoing disease which impedes the individual's being by drastically shattering meaning of his life and taking away his sense of mastery and productivity. Living with the disease can often cause the individual to question his existence in the world: the past, the present and the future (Canadian AIDS Society, 2014). In such an event obtaining information to solve the

problem, restructuring thoughts to lessen the danger and look for alternate solutions to the problem, goal setting (Fraser, Burd, Liebson, Lipschik, & Peterson, 2008) may not be relevant and hence these strategies fail to predict change.

Lastly, with regard to hypothesis 4, the findings indicate the significant predictive association between Religious/ Denial Coping Strategies and Internalizing Problems i.e. Depression, Anxiety and Stress (Table 7). These findings support previous research findings (e.g. Kraaji et al., 2008). Denial has been considered to be an efficient way of coping in non-HIV situations, but in HIV situations it is seen to be ineffective (Fleishman et al., 2000). As Lazarus (1999) postulated that denial may be highly adaptive immediately after a stressor appears, but tends to become maladaptive as time passes by but the stressor remains. Initially, denial may help in blocking, blunting and not accepting stressful situations and its consequences (Hackl, Somlai, Kelly, & Kalichman, 1997) but in long run denial has been closely related to low self-esteem, depression and other problems in HIV patients. The sufferer finds it difficult to face the reality of the terminal illness, feel uncertain and lack of control over situation and eventually experiences increased stress, anxiety, helplessness, anger, or depression (Fleishman et al., 2000). Thus, the continuous use of denial is maladaptive and increases psychological distress, depression and anxiety.

Moreover, Religion as a coping mechanism involves looking for comfort through religious or spiritual beliefs often by praying or meditation (Carver, 1997). The religion has important repercussions for people suffering from chronic illnesses as it serves many purposes in their lives i.e. helping them to redefine their lives, motivating and managing themselves (Harvey & Silverman, 2007). People with HIV/AIDS disease differ from patients with other chronic illnesses because of modes of transmission involving HIV virus and they tend to use Religion as a Coping Strategy because they want to restructure the cause of their illness. However, instead of making them feel better, this restructuring may also prove to be negative and destructive leading to various psychological problems. This is because HIV/AID status is disregarded in many cultures and religious communities (Beckley & Koch, 2002) including Pakistan. These people may face stigma in social and religious communities when they turn towards religion as a means of coping (Somlai, Heckman, Kelly, Mulry, & Multhauf, 1997). It has been conjectured that some components of religion and the moral system these people reflect (for example: HIV is a punishment from God) may increase feelings of guilt and other negative emotions instead of facilitating

coping with the distress of HIV. Thus, Religious Coping Strategies may eventually results in more psychological symptoms.

To conclude, the results of the current study in a Pakistani context are reflective of the significance of Coping Strategies in relationship with Internalizing Problems in people who are living with the disease of HIV/AIDS. The Internalizing Problems are seen to be predicted by Active-Avoidance Coping Strategies and Religious/Denial Coping Strategies. Hence the more the people who are living with the disease employ such Coping Mechanisms, the more Internalizing Problems they experience. In contrast, Problem-Focused Coping and Positive Coping Strategies failed to predict change in Internalizing Problems. Contemplating the prevailing evidences, it is conjectured that such strategies may have indirect effect on Internalizing Problems, i.e. these may interact with stage of disease to influence Internalizing Problems─ a dimension that needs to be explored in studies conducted in the future. These findings have implications for mental health interventions in treatment of the disease and it is suggested to address the coping strategies employed by people living with this disease during their treatment process to guard them against developing psychological problems.

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