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Coping, Goal Adjustment, and Psychological Well-Being in HIV-Infected Men Who Have Sex with Men

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ABSTRACT

The relationships between coping strategies, goal adjustment, and symptoms of depression and anxiety were studied in 104 HIV-positive men who have sex with men, in December 2006. The mean age of the respondents was 50 years, and almost were of Dutch nationality. On average people had known about their HIV-positive status for 10 years and the majority was on HIV-medication. The Cognitive Emotion Regulation Questionnaire, COPE, the Goal Obstruction Questionnaire, and the Hospital Anxiety and Depression Scale were filled out at home. Pearson correlations and Hierarchical Regression Analyses were performed. The findings suggested that cognitive coping strategies had a stronger influence on well-being than the behavioral coping strategies: positive refocusing, positive reappraisal, putting into perspective, catastrophizing, and other-blame were all significantly related to symptoms of depression and anxiety. In addition, withdrawing effort and commitment from unattainable goals, and reengaging in alternative meaningful goals, in case that preexisting goals can no longer be reached, seemed to be a fruitful way to cope with being HIV positive. These findings suggest that intervention programs for people with HIV should pay attention to both cognitive coping strategies and goal adjustment.

INTRODUCTION

SINCE THE INTRODUCTION OF highly active antiretroviral therapy (HAART) people infected with HIV no longer face death necessarily, but must deal with their infection as a chronic disease. However, HIV-positive individuals continue to experience psychological distress from symptoms (such as pain and fatigue) and are also subject to various (HIV-re-

lated) life stressors (such as losses and family crises).¹ HIV-positive individuals may be at an increased risk of developing psychological disorders. Mood disturbances are often viewed as one of the most common psychiatric symptoms reported by HIV-positive individuals.^{2,3} A meta-analysis revealed that the frequency of major depressive disorder was nearly two times higher in HIV-positive subjects than in HIV-negative comparison subjects.⁴ Any chronic

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disorder accompanied by depression can worsen their associated health outcome.⁵ This has also been found to be the case for people infect with HIV. HIV-positive individuals with psychiatric disorders have been found to be at greater risk for poor adherence to antiretroviral therapy and at higher risk for HIV-related morbidity.^{1,3,6-8} Given the high prevalence of psychological disorders among people living with HIV, it is essential that improvement of well-being becomes a major treatment goal. The current study focuses on how HIV-positive individuals adjust to their chronic disease in order to find relevant factors for intervention programs.

Several studies have been performed on the way people cope with being HIV-infected. Coping strategies such as avoidance,⁹⁻¹² withdrawal,^{13,14} and emotion-focused coping¹⁵ have been found to be related to more psychological distress in HIV-positive people. Active coping,⁹ problem-focused coping¹⁵, and positive reappraisal¹⁶ have been found to be related to less psychological distress in this group. Various coping strategies remain unstudied. In the present study we will focus on specific cognitive and behavioral coping strategies and their relationship with well-being, as they fit well within the well-established cognitive and behavioral therapies.

Another way to cope with being HIV-positive is through goal adjustment. Goals can be defined as internal representations of desired outcomes.¹⁷ Goals provide the structure that define people's life and imbue life with purpose. Confronting unattainable goals may result in reduced well-being and enhanced psychological distress. Well-being and quality of life might be facilitated both by the ability to disengage from goals that are no longer attainable, as well as by the pursuit of goals that are attainable.^{18,19} Several studies have shown that goal disengagement and goal reengagement can be associated with high subjective well-being.¹⁸⁻²¹ To our knowledge, no studies have been performed on goal adjustment for people living with HIV. In the present study we will examine whether people's capacity to disengage from goals obstructed by being HIV-positive is related to well-being. In addition, we will also study the influence of one's capacity

to look for new, different goals when goals are obstructed by being HIV positive.

First, we examined the bivariate relationships between cognitive coping strategies, behavioral coping strategies, goal disengagement and goal reengagement on the one hand and depressive and anxious symptoms on the other hand. Next, the multivariate relationship was studied, controlling for HIV characteristics.

METHODS

Sample

A total of 104 HIV-positive men participated in the present study, 92% of them reported being homosexual and 8% bisexual. The mean age of the respondents was 50 years (standard deviation [SD] = 10.3; range, 21-71 years). Almost all (97%) were of Dutch nationality. Half of the men had a partner, of whom 32% was also HIV positive. The majority (54%) reported to be never married, 30% was married or living together (except for 2 persons all men were married or living together with a men; in The Netherlands same-sex marriage is legal), the remaining was either divorced (11%) or widowed (5%). Twelve percent reported to have children. Half of the group had higher education and half had either a full-time or part-time job. The majority (87%) was living in a city.

On average people had known about their HIV-positive status for 10 years (SD = 9.4; range, 1-23 years). The majority (91%) thought they were infected by having had unsafe sex. Most of the men (67%) had an undetectable viral load, and 89% had a CD4 cell count of 200 or more. The majority (88%) reported to be on HIV-medication. Except for one person, all had good medication adherence. Ten men reported to use antidepressants.

Procedure

All 1450 members of the Dutch national organization for people living with HIV (HIV Vereniging Nederland) received the bimonthly magazine of the organization with information about the study and a call for participation in November 2006. This same call was also posted at the Web page of the organization. People

who were willing to participate could contact the organization by e-mail, telephone, or regular mail. To guarantee privacy, the organization mailed the questionnaire, informed consent form and prepaid return envelope to those interested, in December 2006. Respondents returned the completed questionnaires to the researchers. Reminder and letter of thanks were sent again by the HIV organization.

Measures

Depressive and anxious symptoms. Depressive and anxious symptoms were measured by the Hospital Anxiety and Depression Scale (HADS^{22,23}). This 14-item scale was originally designed to assess the presence of anxiety and depressive states in the setting of a medical outpatient clinic. All items have a four-point scale. High scores on the anxiety and depression subscales (made up of seven items each) reflect increased levels of anxiety and depression. The HADS is a reliable self-report instrument with sufficient internal validity.²³ In the present study α reliabilities were found of 0.88 for anxiety and 0.85 for depression.

Cognitive coping strategies. Cognitive coping strategies were measured by the Cognitive Emotion Regulation Questionnaire (CERQ^{24,25}). The CERQ assesses what people think at the time of or after the experience of threatening or stressful life events. The CERQ can be used to measure either a more general coping style (referring to a "trait"), or a more specific response to a specific event (referring to a "state"). In the present study respondents were asked which specific cognitive coping strategies they used in relation to being HIV positive. The CERQ consists of 36 items and 9 conceptually different subscales. Each subscale consists of four items. Each of the items has a 5-point Likert scale ("never" to "always"). Subscale scores are obtained by adding up the 4 items, indicating the extent to which a certain cognitive coping strategy is used. The CERQ subscales are: self-blame, which refers to thoughts of blaming yourself for being HIV positive (e.g., "I think about the mistakes I have made in this matter"), acceptance, which refers to thoughts of accepting being HIV positive and resigning

yourself to this (e.g., "I think that I have to accept being HIV positive"), rumination, which refers to thinking about the feelings and thoughts associated with being HIV positive (e.g., "I am preoccupied with what I think and feel about being HIV positive"), positive refocusing, which refers to thinking about joyful and pleasant issues instead of thinking about being HIV positive (e.g., "I think of something nice instead of being HIV positive"), refocus on planning, which refers to thinking about what steps to take and how to handle being HIV positive (e.g., "I think of what I can do best"), positive reappraisal, which refers to thoughts of attaching a positive meaning to being HIV-positive in terms of personal growth (e.g., "I think I can learn something from being HIV positive"), putting into perspective, which refers to thoughts of playing down the seriousness of being HIV positive or emphasizing its relativity when compared to other events (e.g., "I think that it all could have been much worse"), catastrophizing, which refers to thoughts of explicitly emphasizing the terror of being HIV positive (e.g., "I continually think how horrible being HIV positive is"), and other-blame, which refers to thoughts of putting the blame of being HIV positive on others (e.g., "I think about the mistakes others have made in this matter"). The psychometric properties of the CERQ, both used as a more general coping style and as a more specific response to a specific event, have been proven to be good^{24,26-29}, with Cronbach α coefficients in most cases well over 0.70 and in many cases even over 0.80. Furthermore, the CERQ has been shown to have good factorial validity, good discriminative properties and good construct validity.^{24,29,30} In the present study the alpha-reliabilities of the subscales also appeared to be good, with alphas ranging from 0.73 to 0.87.

Behavioral coping strategies. To measure behavioral coping strategies three subscales of the COPE were used,³¹ reflecting pure behavioral strategies: active coping, use of emotional social support and substance use. In the scale "use of emotional social support" two items were slightly rephrased to emphasize the behavior: "I try to get emotional support from

friends or relatives" was changed into "I ask for emotional support from friends or relatives," and "I get sympathy and understanding from someone" was changed into "I look for sympathy and understanding from someone." In the present study respondents were asked which specific coping strategies they used to deal with being HIV positive. Each subscale consists of four items. Each of the items has a four-point Likert scale. A subscale score can be obtained by adding up the four items, indicating the extent to which a certain behavioral coping strategy is used. Good psychometric properties have been found in the past.³¹ In the present study the α reliabilities of the subscales also appeared to be good, with α ranging from 0.80 to 0.91.

Goal adjustment. Goal disengagement and goal reengagement were measured by the Goal Obstruction Questionnaire (GOQ; V. Kraaij, N. Garnefski, internal publication). The GOQ measures what people do when important life goals (on various domains) are no longer reachable due to a stressor, in this case being HIV positive. The goal disengagement subscale measures the extent to which one considers oneself able to withdraw effort and commitment from unattainable goals, while the goal reengagement subscale measures the extent to which one considers oneself able to reengage in alternative meaningful goals, in case that preexisting goals can no longer be reached. Both subscales consist of four items asking for disengagement and reengagement on four specific domains: (1) work, (2) domestic or caring tasks, (3) social relationships, and (4) leisure activities. The items have a 5-point Likert scale. Subscale scores can be obtained by adding up the four items, where higher scores indicate more goal disengagement and more reengagement, respectively. Good α reliabilities have been found in a former study with cardiac patients (N. Garnefski, V. Kraaij, M. Schroevers et al., unpublished data). In the present study α reliabilities were found of 0.73 for goal disengagement and 0.82 for goal reengagement.

HIV characteristics. Time since diagnosis, CD4 cell count, and viral load were measured by means of self-report.

Statistical analyses

To study the relationship between coping, goal adjustment, and well-being, Pearson correlations and hierarchical regression analyses were used. Two separate hierarchical regression analyses were performed: one for depression and one for anxiety. In order to control for the influence of HIV characteristics, these variables were entered in the first step (method Enter). Because the sample size was not large enough to enter all predictor variables into the regression analyses, only the variables that had a significant Pearson correlation with depression and/or anxiety were included in the second step (method Stepwise).

RESULTS

Bivariate relationships of coping strategies and goal adjustment with symptoms of depression and anxiety

To study the relationships between coping strategies and goal adjustment at the one hand and symptoms of depression and anxiety on the other hand, Pearson correlations were calculated (Table 1). Positive refocusing, positive reappraisal, goal disengagement, and goal reengagement were negatively associated with

TABLE 1. RELATIONSHIPS BETWEEN COPING STRATEGIES, GOAL ADJUSTMENT, AND WELL-BEING: PEARSON CORRELATIONS

	Depression r	Anxiety r
Self-blame	0.09	0.07
Acceptance	0.10	0.04
Rumination	0.11	0.09
Positive refocusing	-0.51***	-0.37***
Refocus on planning	0.08	0.02
Positive reappraisal	-0.37***	-0.28**
Putting into perspective	-0.24*	-0.13
Catastrophizing	0.34***	0.29**
Other-blame	0.37***	0.19
Active coping	0.10	-0.04
Emotional support	0.04	0.12
Substance use	0.10	0.13
Goal disengagement	-0.39***	-0.38***
Goal reengagement	-0.50***	-0.40***

* $p < 0.005$. ** $p < 0.01$. *** $p < 0.001$.

symptoms of depression and anxiety. Putting into perspective also had a negative relationship with depression. Catastrophizing was positively associated with levels of depression and anxiety, and other-blame correlated positively with depression.

Multivariate relationship of coping strategies and goal adjustment with symptoms of depression and anxiety

To study the multivariate relationships between the coping strategies and goal adjustment at the one hand and symptoms of depression and anxiety on the other hand, two separate Hierarchical Regression Analyses were performed (Table 2). In order to control for the influence of HIV characteristics, these variables were entered in the first step (method Enter). The variables that had a significant Pearson correlation with depression and/or anxiety were included in the second step (method Stepwise). These were: positive refocusing, positive reappraisal, putting into perspective, catastrophizing, other-blame, goal disengagement, and goal reengagement.

Time since diagnosis, positive refocusing, catastrophizing, goal disengagement, and goal reengagement came into the final models for depression and anxiety (in the model for anxiety goal reengagement was excluded with a β of -0.17 , $p = 0.08$). Except for catastrophizing,

all significant variables had a negative relationship with depression and anxiety.

DISCUSSION

The present study focused on how HIV-positive individuals adjust to their chronic disease. In a sample of 104 HIV-positive men the relationship between coping strategies, goal adjustment and symptoms of depression and anxiety were studied.

First, the bivariate relationships between cognitive coping strategies, behavioral coping strategies, goal disengagement and goal reengagement on the one hand and symptoms of depression and anxiety on the other hand were studied. Less use of positive refocusing, positive reappraisal, putting into perspective, goal disengagement and goal reengagement, and more use of catastrophizing and other-blame, was related to more symptoms of depression and anxiety. This is partly in line with earlier research findings focusing on HIV-positive men, where positive reappraisal was also related to psychological distress.¹⁶ The finding that active and problem-focused coping strategies were related to psychological distress in response to being HIV-infected,^{9,15,32} could not be confirmed by the present study. The findings concerning goal adjustment are in line with studies focusing on different samples, suggesting that a good quality of life might be facilitated both by the ability to disengage from goals that are no longer obtainable and the pursuit of goals that are attainable.¹⁸⁻²¹

Next, the multivariate relationships were studied. When controlling for HIV characteristics, positive refocusing, catastrophizing, goal disengagement, and goal reengagement came into the final models for depression and anxiety. People with HIV who think more about joyful and pleasant issues instead of being HIV positive, who have fewer thoughts of explicitly emphasizing the terror of being HIV positive, who are better able to withdraw effort and commitment from unattainable goals and better able to reengage in alternative meaningful goals, reported fewer symptoms of depression and anxiety.

It is interesting to see that only cognitive coping strategies were related to symptoms of de-

TABLE 2. RELATIONSHIP BETWEEN COPING STRATEGIES, GOAL ADJUSTMENT, AND WELL-BEING, CONTROLLING FOR HIV CHARACTERISTICS: HIERARCHICAL REGRESSION ANALYSES

	Depression β	Anxiety β
Time since diagnosis	-0.18*	-0.22*
CD4 level	0.00	-0.08
Viral load	-0.03	0.00
Positive refocusing	-0.34***	-0.22*
Catastrophizing	0.17*	0.19*
Goal disengagement	-0.19*	-0.34**
Goal reengagement	-0.25**	
R^2	0.47	0.35
F	10.92***	8.21***
(df)	(7, 86)	(6, 87)

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

pression and anxiety. None of the behavioral coping strategies were related to depression and anxious symptoms. Further research is needed to test the hypothesis that cognitive strategies have a stronger influence on symptoms of depression and anxiety in HIV-positive men than behavioral coping strategies. If this hypothesis holds to be true, this would have strong clinical implications, suggesting that interventions should focus on cognitive techniques. The findings on goal adjustment indicate that treatment programs should also pay attention to goal adjustment in men with HIV. In conclusion, the focus of treatment could be the content of thoughts and bringing about effective cognitive change, combined with working on goal adjustment. Various studies showed the positive effects of cognitive-behavioral oriented interventions^{33–36} and coping effectiveness training,³⁷ in improving psychological states in HIV-infected men. Future studies should be undertaken looking at the effectiveness of intervention programs focusing on cognitions and life goals.

Future studies should also focus on other HIV-positive groups. Earlier studies found active coping and avoidant coping to be related to psychological distress in HIV-positive women.^{38–40} Adaptive coping strategies have been found to be related to depression in HIV-positive adolescents.⁴¹ Future studies should examine the relevance of behavioral and cognitive coping strategies and goal adjustment in these HIV-positive groups.

Some methodological considerations have to be taken into account. A first issue of concern is the sample size and generalizability of the group studied. A call for participation in the study was placed in the magazine of the HIV organization and on their website. People were not approached personally. Because of privacy rules we have no information on people who did not contact the organization. However, the mean age of the present sample is comparable to the mean age of the male members of the HIV organization. Compared to the population of men who have sex with men in The Netherlands⁴², the present study represents more men with the Dutch nationality (97% versus 74%), and constitutes of more older men (mean age of 50 years versus median age of 38 years). The fact that

more men of Dutch nationality responded will have to do with the fact that the call for participation and the questionnaire were in Dutch. Whether we can generalize to younger people as well remains to be studied. Next, the study measured coping strategies, goal adjustment, and well-being at the same time. Therefore, no conclusions can be drawn regarding the causality or temporal order of these variables. In order to solve these cause and effect issues, these aspects should be studied longitudinally. Another limitation of the design was that all variables were measured by self-report instruments, which may have caused some bias. It is important for future studies also to use other forms of data collection, such as interviews or expert judgments. Finally, several aspects that could also be related to symptoms of depression and anxiety, such as social support and personality characteristics were not included in the present study. Future studies should try to include these other issues as well.

Despite these shortcomings, cognitive coping strategies and goal adjustment seem to be related to symptoms of depression and anxiety. If these findings can be confirmed, they could contribute to the focus and content of intervention programs for HIV-positive men who have to adjust to living with a chronic disease.

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