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Goal Disturbance, Cognitive Coping and Psychological Distress in HIV-infected Persons

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Abstract
This study aims to explore the relationships between cognitive coping, goal disturbance and psychological distress in HIV-infected persons. A sample of 43 HIV positive persons completed questionnaires that assessed cognitive coping, goal frustration, depressive symptoms and quality of life. Goal frustration and, to a lesser extent, the cognitive coping strategy ‘positive reappraisal’ were related to psychological distress. Intervention programmes might usefully implement the topics of goal disturbance and positive reappraisal.

Keywords
- cognitive coping
- goal disturbance
- HIV/AIDS
- psychological distress

COMPETING INTERESTS: None declared.

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Introduction

DURING the past decade, HIV infection has increasingly been perceived as a chronic illness, due to the new HAART medication regimen. Although the health and daily functioning of HIV+ patients has improved considerably due to this new medication, they commonly experience chronic stress (Penedo et al., 2001). The literature shows life-time prevalences of depressive disorders of 40 per cent (Fleishman & Vogel, 1994). While high prevalence rates of depressive symptoms is worrisome in nearly every chronic disease, it is even more relevant in HIV-infection, as the literature suggests that a depressive state may affect the immune system and disease progression (e.g. Antoni et al., 1991; Leserman et al., 1999). Understanding what factors contribute to the development of depressive symptomatology in HIV+ people is, therefore, extremely relevant.

A number of studies suggest that cognitive coping might be such a factor. Evidence for the relationship between coping strategies in general and psychological well-being in HIV-infected people has been well established in the past decades (e.g. Antoni et al., 1991; Bower, Kemeny, & Fawzy, 2002; Cruess et al., 2002; Lutgendorf et al., 1998). However, the effects of specific cognitive strategies have been less thoroughly investigated among these patients. Studies among other populations underline the relevance of these strategies. A recent study among multiple samples shows that the strategies ‘positive reappraisal’, ‘rumination or focus on thought’ and ‘catastrophizing’ are among the most important strategies that are significantly related to depressive symptoms in various populations (Garnefski & Kraaij, 2006). Indeed, the beneficial effects of positive reappraisal have previously been identified in studies with HIV-infected persons (Carrico, Antoni, Weaver, Lechner, & Schneiderman, 2005; Cruess et al., 2002; Fleishman et al., 2000; Lutgendorf et al., 1998). However, the well-known effects of catastrophizing and rumination or focus on thought have not yet been investigated as extensively in this population.

Another factor that might be an important contributor to the development of depressive symptoms in people with HIV/AIDS is higher-order goal frustration. Disturbance of daily events which otherwise may have led to achievement of a higher-order goal, can lead to psychological distress (Carver & Scheier, 1990). The inability, therefore, to achieve a goal due to HIV can lead to negative affect or anxiety. Although ample literature describes the more theoretical issues concerned with goals (Austin & Vancouver, 1996), few studies explore goal frustration in clinical populations and these tend to focus on illness-related goals (Echteld, van Elderen, & van der Kamp, 2001; Kuijer & de Ridder, 2003; Orbell, Johnston, Rowley, Davey, & Espley, 2001). The relationship between experiencing more goal disturbance and reporting more psychological distress and a reduced health-related quality of life has been previously established in cardiac patients (Joekes, Maes, Boersma, & van Elderen, 2005; Joekes, Maes, & Warrens, 2004), as well as in HIV+ patients (Rabkin et al., 1994).

In the present study, we focus on goal frustration and cognitive coping, as a link has previously been made between the coping construct, which places particular emphasis on the appraisal processes, and the self-regulatory processes that are involved with goal pursuit (Carver & Scheier, 1999). The addition of a self-regulatory approach aims to broaden our understanding of factors that are related to the quality of life of HIV+ patients. Therefore, we are specifically interested in the effects of goal disturbance on psychological distress, over and above the effects of cognitive emotion regulation in HIV-infected persons.

Method

Sample

Participants were adults, infected with HIV/AIDS, and were members of HIV societies in the Netherlands. In total, there were 43 participants (34 men and nine women). Age ranged from 23 to 63, with a mean age of 44.65 (SD = 10.15). Fourteen participants were in the first phase of the disease, 11 were in the symptomatic phase and 12 were in the AIDS-phase; two did not report on their disease phase. The majority was from the Netherlands (93%). Most participants (62.8%) were single, while 74.4 per cent were childless. Degree of education was normally distributed in this sample. Most people in this sample were either unemployed or received some kind of sickness benefit (60.4%), and half of the sample was engaged in some kind of voluntary work (51.2%). Most of the respondents lived in a city (83.7%).

Procedure

The participants were contacted through organizations for HIV-infected people, which were asked to distribute questionnaires to their members. It was emphasized that the data would be treated anonymously. On completion, questionnaires could be
Goal frustration

Higher-order goal hindrance due to HIV infection was measured using the Goal Facilitation Inventory (GFI) (Ter Doest, Maes, & Gebhardt, in press). This scale was developed from a taxonomy of human goals identified by Ford and Nichols (1987). The questionnaire consists of 28 potential higher-order goals that people may strive towards attaining. Participants were asked to evaluate on a five-point Likert scale, to what extent being infected with HIV has hindered their attainment of these goals. A total sum score of goal hindrance was calculated, with final scores ranging from not at all hindered (0) to totally hindered (112). In the present study, Cronbach’s alpha was .95.

Some of the items were changed to accommodate our population: ‘being healthy’ was changed into ‘being as healthy as possible’, ‘not experiencing bodily discomfort or pain’ was changed into ‘experiencing as little bodily discomfort or pain as possible’ and ‘not being ill’ was changed into ‘being ill as little possible’.

Results

Gender and age differences were explored. T-tests revealed no significant differences in means for gender, nor were significant correlations found for age. Next, multicollinearity was checked by calculating Pearson correlations between the independent variables. As none of the correlations between the independent variables exceeded .80, there was no evidence of multicollinearity (Tabachnick & Fidell, 2001).

To answer the research question, hierarchical Multiple Regression Analyses were performed. Cognitive coping strategies were entered in the first step, and total goal frustration was added in the second step. For depressive symptoms, \( R^2 \) of the total model was .499 \( (F(4, 38) = 9.457; p = .000) \). \( R^2 \) of the first step was .254 \( (F(3, 38) = 4.428; p = .009) \), with positive reappraisal as the only significant predictor (\( \beta = -0.338; p = .031 \)). People using more positive reappraisal reported less depressive symptoms. Rumination almost reached significance (\( \beta = 0.295; p = .090 \)). In the final model, the only significant predictor was goal frustration (\( \beta = 0.568; p = .000 \)). For mental quality of life, \( R^2 \) of the total model was .511 \( (F(4, 38) = 9.936; p = .000) \). The first step almost reached significance, with an \( R^2 \) of .162 \( (F(3, 39) = 2.509; p = .073) \). For rumination, a trend was found (\( \beta = -0.308; p = .095 \)). The only significant predictor of mental quality of life in the
final model was total goal disturbance ($\beta = -0.678$; $p = .000$). Overall, results show that higher scores on goal disturbance were related to reporting more depressive symptoms and a reduced quality of life.

**Discussion**

The present study shows that, in line with previous research (Carrico et al., 2005; Cruess et al., 2002; Fleishman et al., 2000; Garnefski & Kraaij, 2006; Lutgendorf et al., 1998) positive reappraisal was found to be significantly related to psychological distress. For rumination, a non-significant trend was found. Using more positive reappraisal and less rumination was related to less depressive symptoms. However, when goal disturbance was taken into account, the effects of positive reappraisal and rumination were minimized and became non-significant. Participants who reported more higher-order goal hindrance, also reported more depressive symptoms and a reduced quality of life.

What are the possible implications of these findings for intervention? To date, most intervention programmes have focused on a stress-management type of intervention, using—among other elements—some form of coping skills training (e.g. Antoni et al., 1991; Bower et al., 2002; Chesney, Chambers, Taylor, Johnson, & Folkman, 2003; Cruess et al., 2002; Fawzy, Namir, & Wolcott, 1989). When we examine the concept of cognitive coping, the findings from this study indeed seem to suggest that it may be wise to stimulate persons infected with HIV to use positive reappraisal as a coping strategy, and to discourage them from using rumination. This study, however, suggests that there might be an additional, more important mechanism at work, which has not been an explicit topic in intervention programmes to date: higher-order goal disturbance. Intervention programmes may usefully pay attention to disturbance in attainment of higher-order goals, which could result from the illness itself, the medical regimen or related side-effects. Patients might also benefit from support in the process of abandoning unattainable goals and (re)formulating new, realistic goals.

This study suffers from a number of limitations that need to be addressed. First, the use of self-report measures may have caused some bias. Second, this study included a small number of participants, which had implications for the statistical analyses employed. Moreover, because the response rate was low (18%), the results may not be easily generalized to the total population of HIV-infected people. Related to this is the limitation that all participants were members of an HIV society, which may distinguish them from other non-member HIV+ patients. A last limitation of the design is that the data collected are cross-sectional. Further longitudinal research is required, to replicate these findings and further our understanding of the mechanisms behind the present results. For example, what exactly is the nature of the relationship between cognitive coping and goal disturbance? As higher-order goal disturbance decreased the effect of positive reappraisal on depressive symptoms, future research might usefully investigate the mediating role of goal disturbance in the relationship between this type of coping and psychological distress. Furthermore, it stands to reason that cognitive coping strategies could influence cognitive representations of goal-oriented progress. If this is true, interventions that teach cognitive coping (e.g. positive reappraisal) may provide participants with the skills necessary to restructure distorted cognitions regarding goal-oriented progress. Also, future research could usefully investigate the importance of more concrete, lower-level goals, and how realistic goal setting may influence the psychological well-being of HIV-infected persons. A final direction for future research concerning goals might be to investigate if the construct of frustration of goals might not be in fact multidimensional, as our current measure of goal frustration also tapped into various domains of life.

**References**


Author biographies

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KATHERINE JOEKES, PhD, carried out her doctoral research on the quality of life of cardiac partners at the department of Clinical and Health Psychology, Leiden University, The Netherlands.