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HIV-infected individuals with high coping self-efficacy are less likely to report depressive symptoms: a cross-sectional study from Denmark

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SUMMARY

Objectives: Having effective ways to cope helps HIV-infected individuals maintain good psychological and physical well-being. This study investigated the relationship between coping self-efficacy levels, as determined by the Coping Self-Efficacy Scale (CSE), HIV status disclosure, and depression in a Danish cohort.

Methods: In 2008, the CSE was administered to 304 HIV-infected individuals to measure their confidence in their ability to cope with HIV infection. HIV status disclosure was assessed on a three-point scale: living openly with the disease, partly openly, or secretly. The Beck Depression Inventory (BDI) was used to assess depression prevalence and severity.

Results: The CSE score was significantly related to depression (Spearman's rho = −0.71; the test of H_0: BDI and coping, probability > t = 0.0001). There was a significant relationship between higher CSE scores and living openly with HIV. The risk of depression was four times higher in HIV-infected individuals who did not disclose their HIV status (i.e. who lived 'secretly'; odds ratio = 4.1) than in individuals who lived openly.

Conclusion: Those with low CSE scores were more likely to report living secretly with HIV and to be depressed. Disclosing HIV may constitute a social stressor, and a lack of coping self-efficacy may increase the likelihood of non-disclosure and depression. Interventions that enhance self-efficacy may help in managing the demands of daily life with HIV, increase disclosure, and reduce depression.

1. Introduction

HIV has become a chronic disease due to treatments that prolong life and allow a higher quality of life for many people infected with HIV. Nonetheless, HIV remains a stressful and demanding condition. Psychiatric disorders are common among those infected with HIV, and depression is especially prevalent.[1,2] A diagnosis of HIV infection is typically a traumatic event,[3] and depression compounds the physical and emotional stress associated with HIV infection. Depression is associated with poor adherence to highly active antiretroviral treatment (HAART),[4–6] deterioration in psychosocial functioning, reduced immune response, more rapid progression of HIV, and higher mortality rates.[7–13] Studies have also found that depression is associated with unsafe sex and thus with an increased risk of transmitting or contracting HIV.[14,15] With improved treatments for HIV, more HIV-infected people are surviving longer and having to cope with HIV-related stress, such as disclosure of their HIV-positive status.

Disclosure is a recurring challenge,[16] and disclosing one's HIV status is both an acute and recurring stressor. Disclosure can be viewed both as impacting stress and as part of coping with HIV.

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Making the decision to disclose one's status and the act of doing so may be sources of stress for some, while sharing one's positive status may be a coping mechanism for others.

A previous qualitative study investigated Danish individuals infected with HIV with a focus on HIV-related stressors.[17] The study revealed that each HIV-infected individual had to find the right balance in terms of disclosure that best suited his or her current personal situation. Three disclosure strategies were identified: (1) living openly (being open about their HIV status, disclosing their status to others), (2) living partly openly (disclosing their status to more than two people), and (3) living secretly (being closed about their status, disclosing to two people or fewer). Disclosure was an ongoing issue rather than just an issue at the time of diagnosis, and there were turning points or transitions that occurred over the years.[17]

Decisions surrounding disclosure may themselves constitute a form of chronic stress that can have adverse health consequences. Experiencing stressful life events can activate and alter the hypothalamic–pituitary–adrenal axis, resulting in suppression of the immune system.[18] Additionally, physical and psychosocial stress can lead to negative health behaviors such as substance use, overeating, and non-adherence to medical care.[1,18] Stress can be thought of as resulting from an "imbalance between demands and resources", or as occurring when "pressure exceeds one's perceived ability to cope."[19]

Coping has been the focus of research in the social sciences for a long time and is considered a complex multidimensional process that is sensitive to the environment (i.e., to environmental demands and resources) and to personality dispositions that influence the appraisal of stress and coping resources.[19] When people achieve a good 'fit' between stressful events and their coping strategies, they experience fewer psychological symptoms than when there is a lack of fit. Specifically, beliefs of personal efficacy determine the acquisition of knowledge on which skills are founded[20] and also determine the likelihood that knowledge and skills will be translated into adaptive behaviors. Coping is considered one of the core concepts in health psychology and is strongly associated with the regulation of emotions in response to social and environmental stressors. Coping self-efficacy is rooted in the concept that people need to believe that they can perform a coping behavior in order to effectively engage in adaptive coping behaviors.[21] Those who are high in coping self-efficacy should be better able to engage in adaptive coping behaviors; thus, over time, they may be less vulnerable to stress and better equipped to apply coping skills when difficulties arise. In particular, they would be less likely to resort to maladaptive coping behaviors (i.e., coping that fails to regulate distress or manage the underlying problem), such as cognitive escape and avoidance behaviors (including the use of alcohol or drugs, or avoiding addressing problems).[22–25] The purpose of this study was to investigate the relationship between levels of coping self-efficacy, disclosure of HIV status, and depression in a group of Danish HIV-infected individuals. In particular, this study sought to examine whether higher levels of coping self-efficacy are associated with self-disclosure and with lower levels of depression.

2. Methods

2.1. Study design and participants

This cross-sectional study investigated the relationship between coping self-efficacy, disclosure of HIV status, and depression. From May to September 2008, a total of 503 individuals infected with HIV were followed at the Department of Infectious Diseases of Aarhus University Hospital and at Odense University Hospital. These two hospitals provide for approximately 25% of the total HIV-infected population in Denmark.

For inclusion, participants had to be diagnosed with HIV infection, be 18 years of age or older, and be able to read and write in Danish in order to be able to complete the coping self-efficacy scale, disclosure, and HIV-related stress measurements and the Beck Depression Inventory II correctly. Participants who could not read or write Danish ($n = 54$) were excluded. A total of 449 participants were enrolled in the study.

A packet was mailed to each participant that included information about the study, a self-report questionnaire, and a prepaid response envelope. The following information was collected: gender, age, educational level, ethnicity, current job, route of HIV infection (i.e., sexual, drug use, transfusion), HIV exposure group (i.e., homosexual, heterosexual, bisexual), depression, coping self-efficacy, disclosure, and HIV-related stress. The development of the questionnaire has been described previously.[15,16]

Of the 449 participants who were eligible for the study, 350 (70%) responded to the questionnaire; 304 completed the Beck Depression Inventory II (BDI) questionnaire,[26] the Coping Self-Efficacy Scale (CSE),[27] and the HIV disclosure questions correctly. The reasons for not responding included not wanting to participate ($n = 46$) and no specific reason ($n = 53$). A total of 304 individuals were included in the study analysis.

All participants gave written informed consent before participation. The study was approved by the Aarhus Health Human Research Ethics Committee and by the Danish Data Protection Agency.

2.2. Measurement of depression

The BDI[26] was used to assess the prevalence and severity of depressive symptoms. The BDI has high validity and reliability in measuring depressive symptoms and has acceptable test–retest reliability ($r = 0.79$) in a non-clinical population.

A Danish version of the BDI has been validated and used in a Danish setting.[27] Respondents were required to rate 21 items from 0 to 3 according to how they had felt during the preceding 2 weeks. Each question has a set of at least four possible answer choices, ranging in intensity; for example: (0) I do not feel sad, (1) I feel sad, (2) I am sad all the time and I can't snap out of it, (3) I am so sad or unhappy that I can't stand it. The BDI focuses on both the cognitive–affective symptoms of depression, e.g., pessimism and diminished self-esteem, and on the somatic symptoms of depression, e.g., weight loss. A BDI score $\geq$14 is widely accepted as an indication of depression. In this study, the score categories were as follows: 0–13, minimal depression; 14–19, mild depression; 20–28, moderate depression; 29–63, major depression.

2.3. Coping Self-Efficacy Scale (CSE) measurement

The CSE[28] provides a means of measuring adaptive or positive coping. This measure focuses on a person's confidence in his or her ability to cope effectively, which, according to self-efficacy theory, is an important prerequisite for changing coping behavior. Higher scores on the CSE are associated with lower levels of perceived stress[21] and with a lower likelihood of relying on a maladaptive form of coping, especially cognitive escape/avoidance.[4] The CSE assesses a person's confidence with respect to carrying out various effective coping behaviors, such as seeking social support and finding solutions to problems, so that the CSE score reflects the individual's confidence regarding his or her ability to effectively cope with or manage problems. CSE is not concerned with the methods one uses to cope, but instead focuses on the perceived capability to engage in behaviors essential to various forms of adaptive coping. CSE was assessed using a 26-item measure of perceived self-efficacy for coping with challenges and threats.