

Psychosocial Factors Associated with the Self-efficacy of Managing HIV/AIDS

Chelsea Moss & Mark Vosvick, Ph.D.
Center for Psychosocial Health
University of North Texas
P.O. Box 311280
Denton, TX 76203-1280

Many people living with HIV/AIDS (PLH) choose to use complementary and alternative medicines (CAM) alone or in addition to traditional medication. A dearth of research has examined psychosocial variables in CAM users who are HIV+. This study explores the role of self-efficacy in managing HIV/AIDS for CAM users and its association with three correlates of mental health: depression, stress and quality of sleep.

Research has demonstrated that self-efficacy plays a role in a wide range of life situations, ranging from success in the workplace, to parenting skills to living with HIV. However, little research has examined factors associated with self-efficacy of managing HIV/AIDS. Attention to such factors may provide insight into how to improve self-efficacy in this population and contribute to improved adherence rates.

Depression, stress, and poor sleep quality are reported to be implicated in decreased immune functioning in healthy individuals. Additionally, these three factors are partially responsible for poor immune functioning in many chronic illnesses, including cancer. Only a few studies have examined the roles these factors play in self-efficacy and no studies exist that examine these dynamics in an HIV+ population. This study explores the relationship of depression, stress, and sleep quality with self-efficacy in CAM users living with HIV/AIDS (instruments used: CES-D (Radloff, 1977), Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983), Pittsburg Sleep Quality Index (Buysse, Reynolds, Monk, Berman & Kupfer, 1989), & Self Efficacy of Managing a Chronic Disease.

Participants (N=40, 65% African American, 30% Caucasian, and 5% Latino) were recruited from AIDS service organizations in the Dallas/Fort Worth area. The sample was gender balanced (50% females) with ages ranging from 31 to 61 years of age. Educational levels ranged from 2 to 18 years, and the majority of the sample (67.5%) reported household incomes of less than \$10,000.

Five exploratory hierarchical multiple regression models were developed to evaluate factors associated with the total variance in self-efficacy for managing a chronic disease. Due to our small sample size and power constraints, we were limited to examining these variables in small models that only included 3-4 predictor variables. However, each model did find that depression, stress and sleep quality significantly predicted variance in self-efficacy.

Our two models that examined sleep quality found poor sleep to be significantly negatively associated with self-efficacy. The first model explained 37% of variance in self-efficacy (Adjusted R Square = .37, $F(3,36)=8.86$, $p<.001$),

with sleep ($t=-4.48$, $p<.001$) and being African-American ($t=2.11$, $p<.05$) both being significant predictors, albeit in different directions. The second model explained 39% of the variance in self-efficacy (Adjusted R Square = .39, $F(2,37)=13.57$, $p<.001$) with sleep ($t=-4.27$, $p<.001$) and substance use ($t=-2.54$, $p<.05$) both significantly negatively associated with self-efficacy. Clearly sleep quality is a strong predictor of variance in self-efficacy and intuitively makes sense, since self-efficacy decreases with less sleep.

Our two models that examined stress also found significant inverse relationships between stress and self-efficacy. Stress ($t=-2.46$, $p<.05$) together with household income ($t=2.29$, $p<.05$) explained 20% of the variance in self-efficacy (Adjusted R Square = .20, $F(2,37)=5.92$, $p<.05$) in one model and in the second model stress ($t=-2.12$, $p<.05$) and substance use ($t=-2.16$, $p<.05$) explained 19% of the variance (Adjusted R Square = .19, $F(2,37)=5.59$, $P<.05$). Again, these results confirm our hypothesis and make intuitive sense that as stress levels increase, HIV+ adults report less self-efficacy in the management of their disease.

Our final model found that depression ($t=-4.09$, $p<.001$) alone accounted for a substantial portion of the 33% of the variance in self-efficacy (Adjusted R Square = .33, $F(3,36)=7.62$, $p<.001$). Although depression is clinically known to be associated with poor performance, this analysis provides empirical evidence that depression is involved with poor self-efficacy in the management of HIV.

These findings support our hypotheses that depression, stress and poor sleep quality are inversely related to self-efficacy in managing HIV/AIDS. This is important for clinicians who work with PLH in improving adherence to HAART. Bandura has demonstrated that as self-reported self-efficacy increases so does the likelihood of performance of the targeted behavior. Therefore if clinicians can improve self-efficacy in managing HIV/AIDS, they may also be successful in improving adherence rates, critical to combating the replication of the virus in the blood. Our findings are limited by the cross-sectional correlational design of our study in that we cannot suggest direction of causality. Future research must examine the relationship between depression, stress and sleep quality in studies designed to identify causality.