

Gender differences in Coping and Quality of Life in HIV

Luci A. Martin, Mark Vosvick, & Nathan Grant Smith
University of North Texas

Research suggests that psychosocial factors affect disease progression in individuals living with HIV (i.e. Leserman, 2000; Leserman et al., 2000; Leserman et al., 1999; Ironson et al., 2005). Lazarus and Folkman (1984) describe coping as a process that focuses on what an individual thinks and does during a stressful experience, as well as the individual's appraisal of the experience and his/her resources to manage demands perceived. How HIV+ individuals cope greatly affects physiological (Antoni et al., 1990; Mulder et al., 1995) and psychological functioning (Schneiderman et al., 2001). Interventions designed to address specific styles of coping demonstrate effective outcomes in intervention research (Smith et al., 2006; Inouye et al., 2001). Researchers (Denton & Walters, 1999) are beginning to look at gender differences in health outcomes. Yet, only two studies (Mrus, Williams, Tsevat, Coh, & Wu, 2005; Cederfjall, Langius-Eklof, Lidman, & Wredling, 2001) have examined gender differences in health related quality of life (HRQOL) in an HIV+ sample. Most interventions designed to improve coping and HRQOL in HIV+ individuals only focus on a single gender group. It is important to examine the relationship of HIV-related coping and HRQOL in men and women distinctly.

This study examined the association between HIV-related ways of coping and two HRQOL measures, cognitive functioning and health distress, in a sample of HIV+ adults. We hypothesized that males and females differ in how they cope with HIV. We predict that lower use of maladaptive coping mechanisms will correlate with lower cognitive functioning and higher health distress, while higher use of adaptive coping mechanisms will correlate with higher cognitive functioning and lower health distress. Based on gender related-coping differences found outside of the HIV community (Hammermeister & Burton, 2004; Rollnik et al., 2003; Matheny, Ashby, & Cupp, 2006), we hypothesize that lower use of self-isolation and higher use of optimistic planning will be associated with higher HRQOL in males. Further, we hypothesize that lower use of distancing, negative rumination, anger, while higher use of social support, including HIV community, will lead to higher HRQOL in females.

Participants completed a battery of self-report measures of demographic, medical and psychological information, which included: HIV-related Symptom questionnaire (MACS Instrument, Johns Hopkins Department of Epidemiology, n.d.), Medical Outcomes Study HIV Health Survey (MOS-HIV; Wu et al., 1994), and the Coping with HIV Scale (CHIV; Jenkins & Guarnaccia, 2003).

Participants (n=213) were recruited from AIDS service organizations (ASOs) in the Dallas-Fort Worth metroplex. The sample was gender balanced with 46.8% female and ethnically diverse by self-report: African-American (50.5%), European-American, (33.8%), Latino(a) (12.4%) and other ethnicity (3.3%). The average age of the sample was 41.7 (SD=8.49), ranging from 19 to 68 years. Participant sexual orientation was diverse, with 51.9% heterosexual, 32% homosexual, and 16% bisexual. Most of the

sample (68.3%) reported annual incomes of less than \$10,000. Thirty-two percent of participants reported current employment. Participants reported being HIV positive an average of 7.54 years (SD=5.23). About 73.8% of the sample reported that they were on HIV-related medications. Ninety-three percent of participants endorsed at least one HIV-related symptom, while 50.7% reported an AIDS diagnosis.

Pearson's product moment correlation coefficients of all variables of interest were analyzed to determine significant relationships. Significant correlations were identified between health distress and cognitive functioning, and seven coping mechanisms from the CHIV, ranging from $r = 0.14$, $p < .05$ between optimistic planning and health distress, to $r = -0.35$, $p < .001$ between anger and health distress.

To initially determine whether gender differences existed at a bivariate level in coping strategies and HRQOL, we conducted independent sample t-tests and found no significant difference between males and females in the seven coping strategies. Although males reported slightly higher mean scores than females on cognitive functioning (male mean = 56.8, female mean = 53.6) and health distress (male mean = 52.9, female mean = 51.0), differences were not significant. We used standard multiple regressions with all independent variables of interest (optimistic planning, HIV community, social support, self-isolation, negative rumination, anger and distancing) entered simultaneously to predict cognitive functioning and health distress for each sample (combined, male and female).

In the combined sample, the primary predictors of health distress (adjusted $R^2=.22$, $F(7, 205) = 9.71$, $p<.001$) were optimistic planning ($\beta=0.40$, $t=3.96$, $p<.001$), anger ($\beta=-0.20$, $t=-2.67$, $p<.01$), and negative rumination ($\beta=-0.19$, $t=-2.43$, $p<.05$). The primary predictors of cognitive functioning (adjusted $R^2=.17$, $F(7, 205) = 7.11$, $p<.001$) were optimistic planning ($\beta=0.37$, $t=3.55$, $p<.001$) and anger ($\beta=-0.21$, $t=-2.69$, $p<.01$).

In the male only sample, the primary predictors of health distress (adjusted $R^2=.31$, $F(7, 106) = 8.11$, $p<.001$) were optimistic planning ($\beta=0.59$, $t=4.49$, $p<.001$) and negative rumination ($\beta=-0.39$, $t=-3.36$, $p<.01$). The primary predictor of cognitive functioning (adjusted $R^2=.20$, $F(7, 106) = 5.06$, $p<.001$) was optimistic planning ($\beta=0.43$, $t=3.05$, $p<.01$). In the female only sample, the primary predictor of health distress (adjusted $R^2=.16$, $F(7, 91) = 3.68$, $p<.01$) was anger ($\beta=-0.27$, $t=-2.54$, $p<.05$), while the primary predictor of cognitive functioning (adjusted $R^2=.10$, $F(7, 91) = 2.47$, $p<.05$) was optimistic planning ($\beta=0.35$, $t=2.12$, $p<.05$).

In conclusion, optimistic planning was a substantial coping strategy for both genders in relation to cognitive functioning. Males reported higher use of optimistic planning and lower use of negative rumination in relation to health distress, whereas higher levels of anger related to lower health distress in females. These findings emphasize the importance of segregation of genders when examining coping mechanisms and outcome measures such as health distress and cognitive functioning. Simple t-tests will not detect the complex gender differences in coping strategies. It is important to understand the combination of coping techniques that lead to more positive health outcomes and in what

order they should be addressed in intervention and/or treatment. Future studies should address psychological differences in demographic factors such as ethnicity, level of income and education.