



Gender Differences in Coping Methods of People Living with HIV: Predicting Perceived Stress

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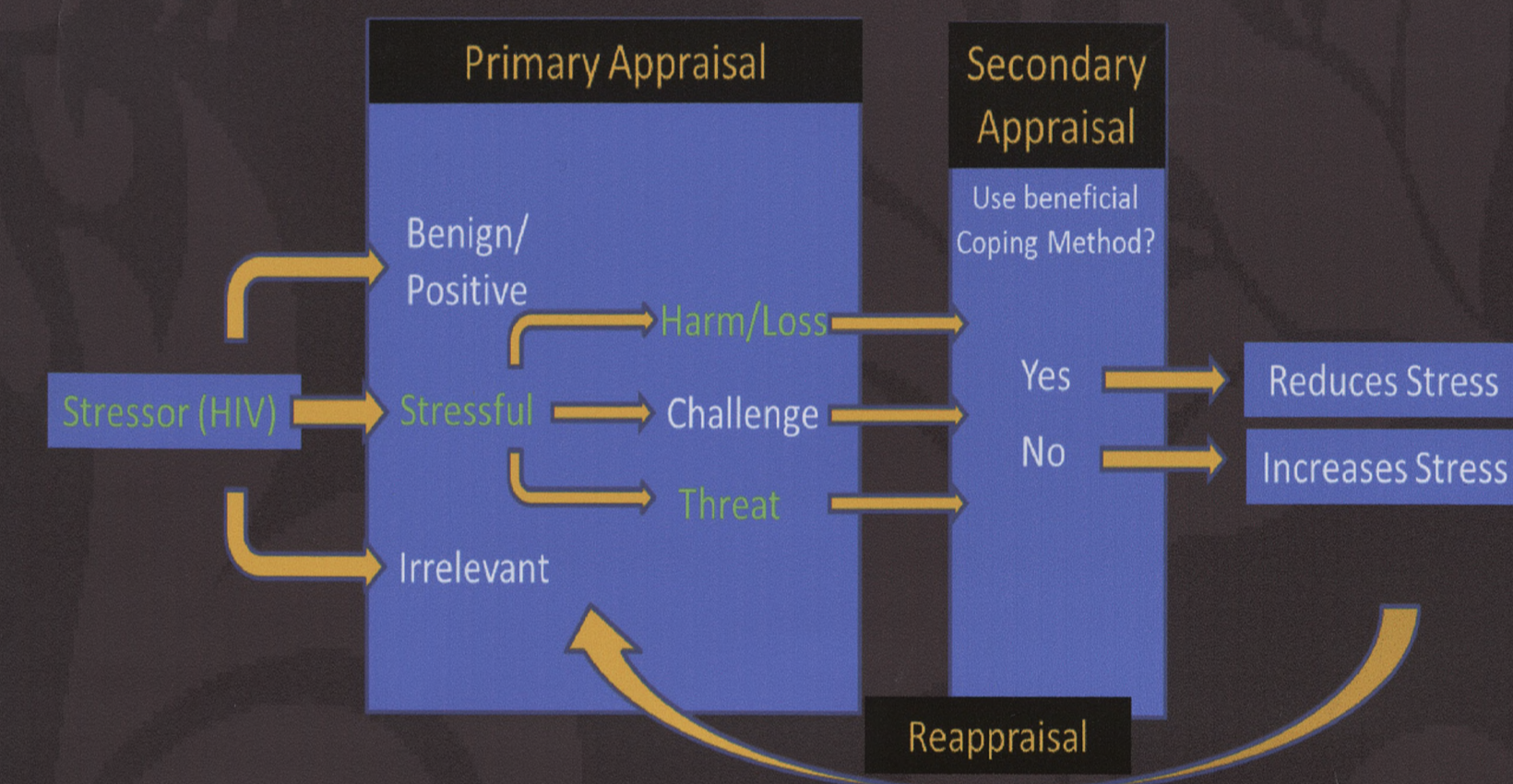
Introduction

Living with HIV can be a chronic stress. Stress negatively affects immune systems, increasing the chance of physical ailments (Cohen & Herbert, 1996). With People living with HIV (PLH), stress predicts disease progression (Ironson et al., 1994; Leserman et al., 2000). PLH use diverse coping strategies to manage the daily stress of HIV (Schmitz & Crystal, 2000). Investigating the different coping methods PLH use is important because some coping methods predict reduced disease progression while others predict enlarged disease progression (Ironson et al., 2005; Leserman et al., 2000).

Some of the variation in coping usage is associated with gender (Tarakeshwar, Pearce, & Sikkema, 2005). For example, women are more likely than men to use social support, spirituality and distraction as coping mechanisms (Tarakeshwar et al., 2005; Vosvick, Martin, & Smith, 2010). Although a growing body of literature examines the differences between women and men's health outcomes (Anastos et al., 2000; Denton & Walters, 1999), no study directly compares HIV-positive women and men's coping in relation to stress. Some gender differences involving stress, such as women are more likely to have more stress than men (Kennedy, Skurnick, Foley, & Louria, 1995), have been discovered. However, traditional analytics that examine women and men as a gender variable often hide gender differences (Vosvick, et al., 2010).

Theoretical Model

Transaction Model of Stress and Coping (Lazarus & Folkman, 1984)



Hypotheses

- Hypothesis 1:** Women and men differ in how they cope with the stress of the HIV diagnoses.
- Hypothesis 2:** Women are more likely than men to use social support, self-distraction and spiritual coping.
- Hypothesis 3:** Women report more stress than men.
- Hypothesis 4:** Our model accounts for a significant proportion of variance in stress.

Methods

Participants were recruited from the Dallas/Fort Worth Metroplex. Participants were required to be 18 years of age or older, HIV-positive, English speaking and exhibit no obvious signs of intoxication from substances. Institutional Review Board (IRB) approval was obtained and participants signed informed consent. Participants received a \$15 incentive for participating

Measures

Perceived Stress Scale

(Golden-Kreutz, Browne, Frierson, & Andersen, 2004; $\alpha = .86 - .92$)

- 10 item measure on a 5 point likert-type scale.
- 0 (*Never*) to 4 (*Very Often*).
- "In the last month how often have you felt nervous and 'stressed'?" or "In the last month how often have you felt difficulties were piling up so high that you could not handle them?"
- Higher scores indicate higher stress.
- Demonstrates concurrent and predictive validity (Cohen, Kamarck & Mermelstein, 1983).

Brief COPE Scale

(Carver, 1997; $\alpha = .50 - .90$)

- 28 item measure with 4 point likert-type scales.
- 1 (*I have not done this at all*) to 4 (*I have been doing this a lot*).
- 14 subscales, 2 items each.
- Demonstrates convergent and divergent validity (Carver, Scheirer, & Weintraub, 1989).

Acceptance:

- "I've been accepting the reality of the fact that it has happened." and "I've been learning to deal with it."
- Higher scores indicate more acceptance of problem.

Denial:

- "I've been saying to myself, 'this isn't real.'" and "I've been refusing to believe that it has happened."
- Higher scores indicate more denial.

Emotional Support:

- "I've been getting emotional support from others." and "I've been getting comfort and understanding from someone."
- Higher scores indicate more emotional support.

Planning:

- "I've been trying to come up with a strategy about what to do." and "I've been thinking hard about what steps to take."
- Higher scores indicate more planning.

Religion:

- "I've been trying to find comfort in my religion or spiritual beliefs." and "I've been praying or meditating."
- Higher scores indicate more religious coping.

Self-Distraction:

- "I've been turning to work or other activities to take my mind off things." and "I've been doing something to think less about it, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping."
- Higher scores indicate more self-distraction.

Venting:

- "I've been saying things to let my unpleasant feelings escape." and "I've been expressing my negative feelings."
- Higher scores indicate more venting.

N = 241

| | Males (N=120) | Females (N=121) | |
|-------------------|---------------|-----------------|--------------|
| | Mean (SD) | Mean (SD) | Range (Both) |
| Age | 43 (8) | 41 (9) | 19 - 68 |
| Education | 13 (3) | 12 (2) | 6 - 22 |
| Symptom Load | 7 (6) | 8 (6) | 0 - 20 |
| | N (%) | N (%) | |
| African American | 60 (50.0) | 67 (55.4) | |
| European American | 42 (35.0) | 32 (26.4) | |
| Latino/a | 13 (10.8) | 15 (12.4) | |
| Other | 5 (4.2) | 7 (5.8) | |

Results

Univariate Statistics

| | Males | | | Females | | |
|-------------------|------------|----------------|--------------|------------|----------------|--------------|
| | Mean (SD) | Possible Range | Actual Range | Mean (SD) | Possible Range | Actual Range |
| Stress | 19.0 (6.6) | 0 - 40 | 1 - 36 | 20.7 (5.8) | 0 - 40 | 8 - 40 |
| Acceptance | 5.8 (1.8) | 2 - 8 | 2 - 8 | 5.9 (1.9) | 2 - 8 | 2 - 8 |
| Denial | 3.6 (1.9) | 2 - 8 | 2 - 8 | 3.8 (1.9) | 2 - 8 | 2 - 8 |
| Emotional Support | 4.8 (1.7) | 2 - 8 | 2 - 8 | 5.2 (1.9) | 2 - 8 | 2 - 8 |
| Planning | 5.4 (1.8) | 2 - 8 | 2 - 8 | 5.5 (1.8) | 2 - 8 | 2 - 8 |
| Religion | 5.3 (2.1) | 2 - 8 | 2 - 8 | 6.1 (2.0) | 2 - 8 | 2 - 8 |
| Self-Distraction | 4.8 (1.8) | 2 - 8 | 2 - 8 | 5.0 (1.8) | 2 - 8 | 2 - 8 |
| Venting | 4.1 (1.6) | 2 - 8 | 2 - 8 | 4.5 (1.7) | 2 - 8 | 2 - 8 |

*The coping variables are 2 item measures and, therefore, have low reliability. The larger COPE Inventory they were derived from demonstrates adequate reliability (Carver et al., 1989). Cronbach's α for stress of combined genders is .64.

Bivariate Statistics

* = $p < .05$, ** = $p < .01$

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. |
|----------------------|-------|--------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| 1. Age | - | | | | | | | | | | | | |
| 2. African-American | .14* | - | | | | | | | | | | | |
| 3. Latino/a | -.07 | -.38** | - | | | | | | | | | | |
| 4. Education | .16* | .01 | -.12 | - | | | | | | | | | |
| 5. Female | -.10 | .05 | .02 | -.24** | - | | | | | | | | |
| 6. Acceptance | .12 | .05 | .02 | .02 | .05 | - | | | | | | | |
| 7. Denial | -.01 | .03 | .06 | -.11 | .03 | .01 | - | | | | | | |
| 8. Emotional Support | -.09 | -.06 | .03 | -.01 | .10 | .28** | .23** | - | | | | | |
| 9. Planning | .04 | .02 | .01 | .08 | .04 | .61** | .18** | .42** | - | | | | |
| 10. Religion | .17** | .18** | -.03 | .06 | .19** | .61** | .10 | .35** | .52** | - | | | |
| 11. Self-Distraction | -.05 | -.01 | .00 | -.03 | .04 | .33** | .36** | .28** | .49** | .27** | - | | |
| 12. Venting | .02 | -.02 | -.02 | -.04 | .11 | .22** | .53** | .39** | .43** | .25** | .39** | - | |
| 13. Stress | -.13* | -.05 | -.05 | -.03 | .13* | -.04 | .24** | -.04 | .13 | -.01 | .26** | .24** | - |

An Independent Samples t-test revealed that women reported significantly more stress than men ($t(239) = -2.01, p < .05$).

Multivariate Analysis of Variance

There was a statistically significant difference between males and females on the combined coping variables ($F(7, 239) = 2.06, p < .05$; Wilk's $\lambda = 0.94$, partial $\eta^2 = .06$).

| | F | p | Partial η^2 |
|-------------------|------|------|------------------|
| Religion | 9.39 | <.05 | .04 |
| Venting | 3.15 | .08 | .01 |
| Emotional Support | 2.46 | .12 | .01 |

*All other coping variables had p values greater than .4

Hierarchical Regression Analysis

| DV: Stress | Both Genders | | | | | |
|---|--------------------------------|-------|------|------|------|--|
| | B | t | p | Tol | VIF | |
| Block 1 | $R^2 = .04; F(4, 240) = 2.32$ | | | | | |
| Age | -.13 | -2.03 | <.05 | .90 | 1.11 | |
| African-American | -.09 | -1.29 | .20 | .79 | 1.27 | |
| Latino/a | -.08 | -1.30 | .19 | .83 | 1.20 | |
| Gender | .11 | 1.84 | .07 | .92 | 1.10 | |
| Block 2 | $R^2 = .11; F(5, 240) = 5.86$ | | | | | |
| Symptom Load | .20 | 3.08 | <.01 | .84 | 1.19 | |
| Block 3 | $R^2 = .22; F(12, 240) = 5.27$ | | | | | |
| Acceptance | -.17 | -2.04 | <.05 | .49 | 2.06 | |
| Denial | .11 | 1.51 | .13 | .64 | 1.57 | |
| Emotional Support | -.20 | -2.83 | <.01 | .71 | 1.40 | |
| Planning | .14 | 1.61 | .11 | .46 | 2.19 | |
| Religion | .01 | .09 | .93 | .51 | 1.97 | |
| Self-Distraction | .18 | 2.49 | <.05 | .66 | 1.51 | |
| Venting | 1.05 | .30 | .53 | 1.89 | .08 | |
| Adjusted, $R^2 = .18; F(12, 240) = 5.27, p < .01$ | | | | | | |

| DV: Stress | Males | | | | | Females | | | | |
|---|--------------------------------|-------|------|-----|---|--------------------------------|-------|------|-----|------|
| | B | t | p | Tol | VIF | B | t | p | Tol | VIF |
| Block 1 | $R^2 = .03; F(3, 119) = 1.23$ | | | | | $R^2 = .01; F(3, 120) = .50$ | | | | |
| Age | -.11 | -1.11 | .27 | .81 | 1.24 | -.11 | -1.29 | .20 | .92 | 1.09 |
| African-American | -.07 | -.67 | .50 | .75 | 1.33 | -.09 | -.90 | .37 | .74 | 1.36 |
| Latino/a | -.09 | -.99 | .32 | .85 | 1.17 | -.07 | -.72 | .47 | .79 | 1.27 |
| Block 2 | $R^2 = .09; F(4, 119) = 2.69$ | | | | | $R^2 = .11; F(4, 120) = 3.71$ | | | | |
| Symptom Load | .14 | 1.59 | .11 | .89 | 1.12 | .25 | 2.66 | <.01 | .74 | 1.36 |
| Block 3 | $R^2 = .23; F(11, 119) = 2.84$ | | | | | $R^2 = .28; F(11, 120) = 3.81$ | | | | |
| Acceptance | -.02 | -.12 | .91 | .49 | 2.04 | -.34 | -2.73 | <.01 | .44 | 2.29 |
| Denial | .31 | 2.91 | <.01 | .64 | 1.56 | -.10 | -.96 | .34 | .58 | 1.73 |
| Emotional Support | -.14 | -1.22 | .23 | .59 | 1.68 | -.28 | -2.99 | <.01 | .74 | 1.35 |
| Planning | .15 | 1.15 | .25 | .43 | 2.31 | .09 | .74 | .46 | .43 | 2.33 |
| Religion | -.18 | -1.47 | .15 | .49 | 2.05 | .15 | 1.34 | .18 | .52 | 1.93 |
| Self-Distraction | .11 | 1.03 | .30 | .64 | 1.57 | .30 | 3.01 | <.01 | .65 | 1.54 |
| Venting | .01 | .08 | .94 | .56 | 1.78 | .19 | 1.58 | .12 | .47 | 2.12 |
| Adjusted, $R^2 = .15; F(11, 108) = 2.84, p < .01$ | | | | | Adjusted, $R^2 = .21; F(11, 109) = 3.81, p < .01$ | | | | | |

Discussion

Our findings highlight the importance of careful analysis of constructs with respect to gender. With the combined gender group, emotional support, acceptance and self-distraction were significant predictors of stress. However, when the analysis was separated by gender, emotional support, acceptance and self-distraction were only significant predictors for women, while denial reached significance for men. If the model was not separated by gender, the importance of denial on stress for men would be hidden and emotional support, acceptance and self-distraction would be falsely assumed to predict stress for men. Denial, a maladaptive coping method, is important in PLH because use of denial predicts disease progression (Ironson et al., 1994; Leserman et al., 2000).

We found that women were more likely to use religious coping than men while venting was trending significance. Women's preference over men for religious coping is supported by the literature (Tarakeshwar et al., 2005), but we found no article supporting a gender difference with PLH in Venting.

Women reported significantly more stress than men, which is supported in the literature (Kennedy et al., 1995). This may be caused by women, as the traditional family caregivers, being overwhelmed by the responsibility of rearing children, working and maintaining self-care.

Our model accounted for a significant proportion of variance in stress only within the female cluster. The importance of coping on stress for women may be explained by women's coping habits. Ptacek, Smith and Zanas (2004) found that women use more coping methods per stressor than men. Women's liberal use of coping methods may contribute to the significant variance accounted for in stress.

When looking at the combined genders, symptom load predicted stress. However, when divided by genders, symptom load was only a significant predictor of stress for women.

Clinical Implications:

Clinicians working with HIV-positive men may want to look for signs of denial and, if discovered, focus on helping the male clients develop adaptive coping methods to replace denial. Clinicians working with HIV-positive females may want to look for signs of self-distraction and promote the development of coping via acceptance and emotional support. Clinicians may want to pay particular attention to the symptoms of HIV-positive females and treat the symptoms promptly.

Limitations:

Some responses may be influenced by self-report bias and may not be completely accurate. Our convenience sample is not representative of the entire HIV-positive population in areas such as location, ethnicity, income, etc. and therefore may have limited generalizability. Due to cross-sectional correlational design, causation can not be inferred.

Future Research:

Future research should further explore why women report more stress than men and why symptom load contributes to more stress in women than men.

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*Please see handout for references.

