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# Gender differences in relationships among stress, coping, and health risk behaviors in impoverished, minority populations

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## Abstract

In this study, we examined gender differences among impoverished minority females ( $n = 205$ ; 87% African-American, 13% Latina) and males ( $n = 203$ ; 89% African-American, 11% Latino) in associations among latent variables representing stress, self-esteem, avoidant and active coping strategies, and health outcomes of depression, escapist drug use, and sexual risk behaviors. Among both men and women, drug use and depression were positively related to each other. A large and significant relationship between stress and sexual risk behaviors among women was not evidenced for men. In multiple group latent means comparison models, the women reported significantly more stress, depression, and avoidant coping styles than the men. In predictive path models, an avoidant coping style predicted escapist drug use among men whereas greater stress predicted escapist drug use among women. Greater stress, and lower self-esteem predicted depression in both groups. Greater stress and less active coping predicted more sexual risk behaviors for women. No predictor construct in this model significantly predicted more sexual risk behavior among the men. Gender-specific leverage points for AIDS-risk reduction interventions are discussed. © 1998 Elsevier Science Ltd. All rights reserved.

*Key words:* Stress; Gender differences; Coping styles; AIDS; Risk behaviors

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## 1. Introduction

The Comprehensive Health Seeking and Coping Paradigm (CHSCP) (Nyamathi, 1989) has served as the theoretical framework in our research program which has been developing and testing empowerment strategies designed to improve coping skills and health outcomes of impoverished,

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homeless, and drug-addicted women of color at risk for AIDS. In the CHSCP model, adapted from the Lazarus and Folkman (1984) Stress and Coping paradigm and the Schlotfeldt (1981) Health Seeking Paradigm, the major components are constructs chosen for their pertinence to impoverished women, such as familial worries, coping strategies, drug use and abuse, and self-esteem. Stress and self-esteem are positioned as exogenous factors that influence coping styles. In turn, coping styles are theorized to influence health-related outcomes such as poor mental health, drug use, and various risk behaviors. Thus, it is specifically implied by the CHSCP model that improved coping skills and heightened self-esteem will decrease multiple AIDS risk behaviors such as drug use and risky sexual practices among at-risk individuals.

Prior analyses conducted only among women have provided support for this theory by demonstrating positive relationships among baseline measures of low self-esteem, less active coping, more avoidant coping, emotional distress, and risky drug and sexual activity (e.g. Nyamathi et al., 1993, 1995). This model has also been successfully employed longitudinally to predict lessened AIDS risk behaviors after interventions focused on improved self-esteem and increasing positive coping skills (e.g. Nyamathi and Stein, 1997; Stein et al., 1997). Whether the relationships among the major constructs found earlier (e.g. Nyamathi et al., 1995) are similar for men in similar impoverished circumstances has not been explored. Variations in these relationships would imply that AIDS prevention outreach programs among impoverished minority men would need to address different issues to be relevant for them.

The present study contrasts a community-based sample of impoverished men and women. Some of the men of this sample are intimately involved with the women; others are described as important friends, recent friends, or associates of the women. We examine how relationships differ among psychological constructs such as amount of stress, self-esteem, coping styles, and health outcome among impoverished women and their male counterparts. In this current study, we explore not only gender differences in the relationships among these constructs but also gender differences in the magnitudes of these constructs.

Although the stress and coping literature provides some evidence that gender differences exist in coping responses to stress (Banyard and Graham-Bermann, 1993; Ben-Zur and Zeidner, 1996; Folkman et al., 1986a), others report that research does not support this premise (Baum and Grunberg, 1991). Banyard and Graham-Bermann (1993) cite methodological biases in previous coping research in which stereotyping occurred when men were studied in the context of employment, and women in terms of the home and family. We rectify this possible source of bias in this current study by including men and women who are in equally distressed circumstances and by contrasting them on variables unrelated to a work environment.

Studies that contrast stress and coping strategies among college and employed populations of men and women have reported that in response to stress, men tend to use problem-focused coping strategies whereas women use emotion-focused coping strategies (e.g. Endler and Parker, 1990; Zuckerman, 1989). Ben-Zur and Zeidner (1996) found differing coping reactions among Israeli men and women depending on the sources of stress. During the Gulf War missile crisis, Israeli men reported more emotion-focused coping and women reported more active, problem-focused coping. However, this pattern was reversed for coping with daily stressors after the crisis ended. Whether this possible disparity in behavior extrapolates to impoverished groups is one research question we explore. When Dressler (1985) examined gender differences in coping and distress in rural African-Americans, he found that cultural norms concerning the roles of men and women

contributed to differences in psychological and psychosomatic responses to stress. Active coping buffered stress for the women whereas active coping exacerbated the effects of stressors among the men.

## 2. Major variables in the model

*Stress* is one key variable in the model. In studies of gender differences, women usually report more distress (Baum and Grunberg, 1991; Culbertson, 1997). Whether this gender difference also is manifested among impoverished minority persons who encounter a myriad of incessant and uncontrollable psychological and physical stressors needs further exploration. Among the homeless and drug-addicted, resources are limited, problems are often perceived as uncontrollable, and demands may be high; thus, we expect high stress levels in these populations regardless of gender.

Concerns centered around a stressful environment have been shown to be related to health and psychological well-being (Gentry and Kobasa, 1984; Folkman et al., 1986b; Lazarus and Folkman, 1984). Stress is particularly a risk factor for the development of physical and/or psychological illnesses and depressive symptomatology among impoverished minority populations (Outlaw, 1993). Baum and Grunberg (1991) have highlighted the relationship between heightened stress and weakened immune function which in turn can affect susceptibility to HIV or AIDS.

We also include *self-esteem* in the model. Homeless and drug-abusing individuals often report low self-esteem and emotional distress (Mondanaro, 1987; Wolfsy, 1987). Researchers report that women with higher self-esteem perceive fewer threats in their environment (Gass and Chang, 1989), cope more adaptively (Gutierrez and Reich, 1988) and experience less emotional distress (Hobfoll, 1988; La Gory et al., 1990). Higher self-esteem is associated with positive health practices (Muhlenkamp and Sayles, 1986), and fewer high risk behaviors (Nyamathi, 1991).

*Coping strategies* are defined as the cognitive and behavioral efforts to manage internal or external demands seen as taxing or exceeding one's resources (Lazarus and Folkman, 1984). These responses are active or adaptive coping behaviors that manage problems, or avoidant behaviors that ease the emotional distress experienced. In the stress and coping literature, active coping strategies have also been termed problem-focused coping whereas avoidant coping is also referred to as emotion-focused coping (Carver et al., 1989; Holahan and Moos, 1987). Active, problem-focused coping has been associated with individuals with higher self-esteem (Holahan and Moos, 1987). Avoidant coping is often depicted as a dysfunctional, counter-productive response to life stresses (although it may be moderately functional when the stressor is uncontrollable). Relying on avoidant strategies has been associated with poorer mental health and with situations of low controllability (Terry, 1994). For instance, in comparing planned and unplanned pregnancies, Clinton and Kelber (1993) found that fathers of unplanned newborns also reported more powerlessness and stress. The fathers' coping styles, either problem-oriented or emotional, were assessed with the Jalowiec Coping Scale (Jalowiec and Powers, 1981) which is also used in this current study. Active, problem-focused coping may be used more in controllable situations (Carver et al., 1989; Gulick, 1995; Terry, 1994). However, active and avoidant coping responses are not mutually exclusive; often they co-occur in stressful situations (Carver and Scheier, 1994).

We expect that both strategies will be employed more often among those with higher levels of stress in their lives. However, we also expect there to be a greater relationship between high stress

and avoidant coping strategies among the individuals in our sample due to the uncontrollable nature of many stressors in their lives. The impoverished people in our current study are living in difficult and stressful situations and we expect their appraisals of their situations to be realistic as well.

We represent health outcome by *depression, escapist drug use*, and evidence of *risky sexual practices*. We hypothesize that an active, problem-focused coping style will be associated with less negative affect, less escapist drug use, and fewer maladaptive sexual behaviors whereas more dysfunctional avoidant coping will be associated with poorer outcomes such as greater depression, more drug use and risky sexual behaviors. Poor mental health, depression and emotional distress have been found to be associated with higher rates of risky behavior including behaviors that heighten AIDS risk (Tucker, 1982; Krueger et al., 1990; Nyamathi, 1992). The linkage may be mediated by coping styles. Folkman et al. (1992) have reported a relationship between emotion-focused coping and unprotected anal intercourse among gay and bisexual men.

Drug use is a common coping response for impoverished people who experience a multitude of life stresses and depression (Malow et al., 1994). Drug-dependent women have historically been noted to use drugs and other avoidant responses as a way of coping (Tucker, 1982). Nyamathi et al. (1995) reported greater drug use among more highly stressed impoverished women. Also, the influential males surrounding impoverished women often abuse drugs themselves (Pivnick et al., 1994) and may discourage the women from seeking drug treatment (Beckman and Amaro, 1986). Non-injection drug use has also been associated with AIDS risk behaviors (Stein et al., 1994).

### 3. Current study

Guided by the CHSCP, we test gender differences in relationships among seven latent variables: stress, self-esteem, active and avoidant coping, escapist drug use, risky sexual behavior, and depression. Among both men and women, we expect that escapist drug use, risky sexual behaviors, and depression will be positively related to each other and related to greater stress and avoidant coping strategies. We further expect that these behaviors will be negatively related to higher self-esteem and active coping. We include use of alcohol, cocaine, and marijuana to represent non-injection drug use because they are typically used as an escape or for stress-reduction.

Although we recognize that causality cannot be conclusively determined due to the cross-sectional nature of the data and bi-directional influences among these variables, we test pre-established predictive models for each gender. We position stress and self-esteem as situational and stable influences on active and avoidant coping which in turn are positioned as both predictors and mediators of the health outcome variables. Extrapolating from prior research cited above, we predict that among men, high stress will more strongly predict active coping strategies and among women, high stress will more strongly predict avoidant coping strategies. For both men and women we expect that active coping strategies will predict less drug use, risky sex behaviors, and depression, whereas avoidant coping will predict dysfunctional behaviors and outcomes. We also predict that higher self-esteem and less stress will predict less drug use frequency, less depression and greater mental health.

In addition to contrasting the relative strength of relationships between various constructs for men and women, we also hypothesize that the women will report higher levels of stress and

dysfunctional outcomes such as depression and avoidant coping behaviors than the men. General population studies indicate that women report more depressive symptoms and greater stress (e.g. Baum and Grunberg, 1991; Culbertson, 1997; Newmann, 1986).

## 4. Methods

### 4.1. Participants

Baseline assessments were originally conducted among 486 African-American ( $n = 407$ ), White ( $n = 21$ ), and Latino/a ( $n = 54$ ) women and men recruited to participate in a community-based educational AIDS prevention program in 9 homeless shelters and 11 residential drug recovery programs in Los Angeles. (Four individuals did not report their race.) They ranged in age from 18–65 years (219 men and 267 women). After obtaining voluntary informed consent, baseline data were collected with a 45–60 min questionnaire administered face-to-face in English or Spanish by trained research nurses and outreach workers. Compensation was nominal. Participants were eligible for the study if they were: (1) 18–65 years of age; (2) considered at risk for AIDS as a result of being an injection drug user (IDU), a non-IDU, or a sexual partner of an IDU, being diagnosed with a sexually transmitted disease (STD), or reporting unprotected sex with multiple partners; and (3) if they had an acquaintance, friend, or significant other willing to participate. We have included only the African-American and Latina/o heterosexual pairs between the ages of 18 and 60 which left a total of 408 (203 men and 205 women). (Two men were lost to this sample due to the age restriction.) Demographic characteristics of the sample are reported in Table 1.

### 4.2. Measures

The survey instrument used in the interviews was previously reviewed and approved by a 12-member panel selected for their knowledge and experience in the areas of AIDS and ethnic/racial diversity; items were tested on preliminary samples and developed to be understandable for this particular population (for further details, see Nyamathi et al., 1993). Procedures for developing the various latent variables are summarized below.

*Stress* was indicated by 8 measured variables: 5 items scaled 0–3 (not stressful to very stressful) from the revised Appraisal of Threat Inventory (Folkman et al., 1986a). These included items relating to their homelessness, and their health. The final 3 indicators were the means of 3 subfactors derived from factor analysis of 16 scaled items from the Community-Based Inventory of Current Concerns (Nyamathi and Flaskerud, 1992). These items had 1–5 point Likert scales ranging from ‘not at all’ to ‘extremely’. They were asked “In the past 6 months how worried or upset have you been about . . .” various personal concerns related to such issues as survival, homelessness, and personal problems. The 3 subfactors encompassed items concerning: (1) lifestyle and safety concerns (coefficient  $\alpha = 0.85, 0.88$ , males, females respectively); (2) financial worries ( $\alpha = 0.76, 0.84$ ), and (3) basic subsistence concerns ( $\alpha = 0.91, 0.85$ ).

*Self-esteem* was measured by the Rosenberg Self-Esteem Inventory (Rosenberg, 1965). Factor analysis of responses indicated one major factor ( $\alpha = 0.79, 0.80$ ; males, females). Because we wanted all constructs in the model to be represented as latent factors, items were combined

Table 1  
Sample characteristics

Demographic variables	Men ( <i>n</i> = 203)	Women ( <i>n</i> = 205*)
Mean age in years	36.3	34.2
Range	20–60 years	21–59 years
Ethnicity		
African-American	180 (88.7%)	179 (87.3%)
Latino/a	23 (11.3%)	26 (12.7%)
Education		
0–8 years	6 (3.0%)	3 (1.5%)
9–11 years	55 (27.1%)	69 (33.6%)
12 years	94 (46.3%)	87 (42.4%)
13+ years	48 (23.6%)	46 (22.5%)
Currently employed	34 (16.7%)	22 (10.7%)
Children		
None	51 (25.1%)	21 (10.2%)
1	32 (15.8%)	36 (17.6%)
2	43 (21.2%)	42 (20.5%)
3	26 (12.8%)	44 (21.5%)
4 or more	51 (25.1%)	62 (30.2%)

\*There are 2 more women than men due to age restriction.

randomly and averaged, after reversing negatively worded items, to create 3 composites. These indicators are labelled as *self 1*, *self 2*, and *self 3*. Items were rated on a 5-point scale ranging from ‘agree very much’ to ‘disagree very much’.

#### 4.2.1. Active and avoidant coping

A 42-item version of the Jalowiec Coping Scale (Jalowiec and Powers, 1981) assessed coping strategies used by the participants to address their most stressful problems in the last six months. The items were rated on a 5-point Likert scale (*never to very often*). Factor analysis indicated 2 major factors which were hypothesized to reflect *active coping* and *avoidant coping*. These two independently derived major factors correspond with the dichotomous formulation of the scale reported in Jalowiec et al. (1984). Two items did not load on either factor and were dropped from the analyses. This scale has been used extensively in medically-oriented research (e.g. Clinton and Kelber, 1993; Gulick, 1995).

Items reflecting Active Coping were further factor analyzed separately and 3 separate and meaningful subfactors emerged. One subfactor centered around developing *control* over the problem or their behaviors ( $\alpha = 0.79, 0.82$ ; males, females). For instance, items that loaded on this subfactor included changing or growing as a person, or working harder. The second subfactor was concerned with *purposeful help-seeking* ( $\alpha = 0.78, 0.80$ ). Examples include asking friends or relatives for advice, or talking to someone who can help. The third subfactor involved positive actions such

as *information seeking and planning* ( $\alpha = 0.74, 0.74$ ). Means of the items constituting each subfactor were used as indicators.

Three subfactors for Avoidant Coping were also developed. The first of these indicated a *passive* coping style ( $\alpha = 0.67, 0.74$ ). Sample items included avoiding people, or not thinking about their problem. The second included various *anti-social behaviors* such as engaging in risky behaviors, or taking it out on others ( $\alpha = 0.74, 0.66$ ). The third subfactor involved *fantasizing* by endorsing such statements as wishing it would go away, and hoping for a miracle ( $\alpha = 0.63, 0.71$ ). Means of the items forming each subfactor were used as indicators.

#### 4.2.2. Depression

A latent variable of depression during the previous six months was indicated by 3 indicators that were sums of scores on Likert-style items from the Center for Epidemiological Studies Depression Scale, (CES-D, Radloff, 1977) ( $\alpha = 0.85$  for both males and females). These items were rated from 1 to 4, and ranged from “rarely or none of the time” to “most or all of the time.” Two items were dropped from the original 20-item CES-D that were highly confounded with self-esteem. The depression indicators were combined randomly into 4 composites labelled *cesd 1*, *cesd 2*, *cesd 3*, and *cesd 4*.

#### 4.2.3. Escapist drug use

This latent variable was indicated by 3 items that assessed frequency of use of cocaine, marijuana, and alcohol during a typical week by rating themselves on a 0–7 scale ranging from “never using the substance” through “4 or more times a day, almost every day.” In the case of cocaine, it was the frequency of inhaling cocaine. Injection behaviors were not included for cocaine. These behaviors were reported infrequently and, further, this latent variable was designed to represent escapist drug behaviors without a direct AIDS risk component such as needle use.

#### 4.2.4. Sexual risk behavior

This latent variable was indicated by 3 items that assessed the number of sex partners in the last six months (log transformed), whether they had had sex without a condom in the last 6 months (yes/no), and whether they had a history of sexually transmitted diseases (STDs) such as gonorrhea and syphilis.

### 4.3. Analyses

All latent variable analyses were performed using the EQS structural equations modeling (SEM) program (Bentler, 1995). Goodness of fit was evaluated through chi-square/degrees of freedom ratios, and the Comparative Fit Index (CFI; Bentler, 1995). A chi-square value no more than twice the degrees of freedom in the model generally indicates a plausible, well-fitting model. The CFI ranges from 0 to 1, and is based upon the improvement in fit of the hypothesized model over a model of complete independence or uncorrelatedness among the measured variables. Values of 0.9 and higher are desirable and indicate that 90% or more of the covariation in the data is able to be reproduced by the hypothesized model.



#### 4.4. Models

##### 4.4.1. Preliminary confirmatory factor analyses

Initial separate gender confirmatory factor analyses (CFA) were performed with each latent construct predicting its hypothesized manifest indicators. All latent constructs correlated freely among themselves. This analysis tests the adequacy of the proposed measurement model (factor structure) for both groups and provides correlations among the latent variables. Suggestions from the Lagrange Multiplier (LM) test for possible additional relationships between the variables were considered to improve model fit (Chou and Bentler, 1990).

##### 4.4.2. Multiple group models assessing gender differences in CFA factor structures, correlations among latent variables, and latent means

Multiple group analyses tested the equivalence of the factor structures and covariances in the CFA for the men and women. Constraints on the equality of parameters in the two CFA models were imposed with an increasing degree of stringency (Bentler, 1995). First, the factor loadings of the measured variables on their latent factors were constrained as equal across the groups. This test of factorial invariance indicated whether relations between the manifest and latent variables were similar for the men and women. Next, the factor covariances in each group were constrained to equality; this procedure tested whether the associations among the latent variables were similar for the men and women.

The plausibility of these constrained models was determined with chi-square difference tests in which the chi-square value and the degrees of freedom of an unconstrained model are subtracted from values of the constrained model. The significance of the difference in chi-square and the degrees of freedom determines the plausibility of the constraints. In this context, the LM test reports which particular equality constraints are not reasonable and should be released. Latent mean differences were also assessed in a procedure analogous to a *z*-test to determine whether one gender group had significantly higher scores than the others on their latent means (Bentler, 1995).

##### 4.4.3. Path analysis

Once the measurement model was confirmed, we tested separate path models in which Stress and Self-Esteem were posited as background factors influencing Active and Avoidant Coping styles. In turn, these four constructs predicted Depression, Escapist Drug Use, and Sexual Risk Behavior. Covariances and predictive paths among the constructs were gradually dropped from the path models if they were not significant.

## 5. Results

### 5.1. Confirmatory factor analysis

The initial fit statistics for the CFA models were as follows: (Men,  $\chi^2$  (303,  $n$  = 203) = 559.06; CFI = 0.86; Women,  $\chi^2$  (303,  $n$  = 205) = 584.56; CFI = 0.85). After adding 3 correlated error residuals suggested by the LM test, the fit indexes improved. The same correlated error residuals were added for both groups. These involved supplementary relationships among the indicators of

Stress. The fit indexes (men,  $\chi^2$  (300,  $n = 203$ ) = 470.44; CFI = 0.90; women,  $\chi^2$  (300,  $n = 205$ ) = 494.32; CFI = 0.90) are very acceptable and indicate that the hypothesized factor structure is sound. The chi-square/df ratios are less than the 2:1 criterion and the CFI is 0.90. In addition, all manifest variables loaded significantly ( $P \leq 0.001$ ) on their hypothesized latent factors. Table 2 presents the factor loadings for the CFA models for the men and women. We also report the means, standard deviations, and possible ranges for the measured variables.

Table 3 reports the correlations among the factors for the men and women. Correlations for the men are below the diagonal; those for the women are above the diagonal. Of particular note in Table 3 is the large correlation between Stress and Sexual Risk Behaviors for the women (0.55) and the complete lack of a relationship for the men (0.00). Other large gender differences are also apparent as well and are discussed further below.

### 5.2. Constrained multiple group models

The multiple group comparison in which the factor structures were constrained to equality for the men and women indicated that their factor structures were highly similar. A model with no constraints had fit indexes of  $\chi^2 = 964.32$ , 600 *df*, CFI = 0.90. The fully constrained measurement model produced a  $\chi^2$ -difference of 31.39, 27 *df*, which is not a significant decrement in fit. The CFI of the constrained model was also 0.90. In addition, the LM test reported no constraints that could be released to produce a significant improvement in the  $\chi^2$ -difference between the 2 models.

Since there was no significant difference in the factor structures, we proceeded to the next level of stringency and constrained the covariances between the factors to equality as well as the factor structure. This restricted model yielded a significant decrement in fit ( $\chi^2$ -difference = 85.75, 48 *df*). Three covariances were reported as significantly different between the groups. These included the relationships between Avoidant Coping and Self-Esteem (correlation for men =  $-0.36$ , for women =  $-0.75$ ), Stress and Sexual Risk Behaviors (as noted above, correlation for men = 0.00, for women = 0.55), and Avoidant Behavior and Escapist Drug Use (correlation for men = 0.30, for women = 0.17). Releasing these constraints produced a final  $\chi^2$ -difference between the non-restricted model and the partially constrained model of 49.58, 45 *df*, which was nonsignificant.

### 5.3. Latent mean comparisons

We found several significant differences between the latent means of the men and women. The women reported significantly more Stress ( $z = 2.57$ ;  $P \leq 0.01$ ), more Avoidant Coping ( $z = 2.38$ ;  $P \leq 0.05$ ), and more Depression ( $z = 5.26$ ;  $P \leq 0.001$ ) than the men.

### 5.4. Path models

Figures 1 and 2 depict the final models for the men and women respectively. The fit indexes of the path models are satisfactory (men,  $\chi^2$  (310,  $n = 203$ ) = 458.27; CFI = 0.92; women,  $\chi^2$  (309,  $n = 205$ ) = 450.20; CFI = 0.92). Both similarities and differences between the genders are apparent in these models. Active Coping was predicted by more Stress and greater Self-Esteem for both men and women. More stress predicted Avoidant Coping in both groups, and lower Self-Esteem in women predicted more Avoidant Coping as well. Greater Stress and less Self-Esteem predicted

Table 2  
Descriptive statistics and factor loadings of measured variables on latent variables

Variable (possible range)	Men ( <i>n</i> = 203)		Women ( <i>n</i> = 205)	
	Factor loadings	(Means/standard deviation)	Factor loadings	(Means/standard deviation)
<b>I Stress</b>				
Homelessness (0–3)	0.56 <sup>a</sup>	(1.4/1.3)	0.43	(1.5/1.3)
Addictions (0–3)	0.48	(1.9/1.2)	0.47	(2.0/1.2)
Health (0–3)	0.55	(1.3/1.3)	0.42	(1.6/1.2)
Depressed (0–3)	0.60	(1.4/1.2)	0.55	(1.8/1.2)
Most stressful problem (1–5)	0.59	(3.6/1.2)	0.48	(4.0/1.1)
Lifestyle and safety concerns (1–5)	0.74	(2.7/1.1)	0.83	(2.8/1.2)
Financial worries (1–5)	0.66	(2.9/1.2)	0.52	(3.0/1.3)
Basic subsistence (1–5)	0.44	(1.8/1.2)	0.53	(2.0/1.3)
<b>II Self-Esteem (1–5)</b>				
Self 1	0.83	(3.6/0.8)	0.80	(3.6/0.8)
Self 2	0.74	(3.5/0.7)	0.72	(3.5/0.7)
Self 3	0.71	(3.6/0.8)	0.82	(3.5/0.8)
<b>III Avoidant Coping (1–5)</b>				
Passivity	0.71	(3.0/0.7)	0.61	(3.2/0.8)
Anti-Social behavior	0.72	(2.6/1.0)	0.70	(2.7/1.0)
Fantasizing	0.61	(3.6/0.9)	0.66	(3.9/1.0)
<b>IV Active Coping (1–5)</b>				
Take Control	0.86	(3.5/0.6)	0.84	(3.6/0.7)
Purposeful Help Seeking	0.67	(3.3/0.8)	0.57	(3.3/0.9)
Plan/get information	0.75	(3.7/0.6)	0.78	(3.7/0.6)
<b>V Depression (5–20)</b>				
CES-D 1	0.80	(10.4/2.7)	0.76	(11.9/2.8)
CES-D 2	0.78	(10.3/2.9)	0.80	(11.5/3.0)
CES-D 3	0.66	(10.6/2.7)	0.74	(11.7/3.0)
CES-D 4	0.87	(10.6/3.3)	0.88	(12.1/3.6)
<b>VI Escapist Drug Use (0–7)</b>				
Cocaine	0.57	(4.5/3.0)	0.56	(5.0/2.7)
Marijuana	0.63	(2.9/3.0)	0.44	(2.4/2.7)
Alcohol	0.57	(4.0/3.0)	0.60	(3.9/2.8)
<b>VII Sexual Risk Behaviors</b>				
Number of sex partners last 6 months (log)	0.82	(0.41/0.28)	0.69	(0.45/0.40)
Sex without a condom last 6 months (No = 0, Yes = 1)	0.48	(0.78/0.41)	0.37	(0.80/0.40)
History of STDs	0.27	(0.37/0.49)	0.44	(0.43/0.50)

<sup>a</sup>All factor loadings significant,  $P \leq 0.001$ .

\* (R): Reverse-scored.

greater Depression in both groups. Avoidant Coping also predicted Depression for the men. Escapist Drug Use was predicted by stress in women and Avoidant Coping in men. Sexual Risk Behavior was predicted by Stress and less Active Coping in women. For the men, no latent

Table 3  
Correlations among latent variables for men ( $n = 203$ ) and women ( $n = 205$ )

		I	II	III	IV	V	VI	VII
I	Stress	—	-0.54 <sup>c</sup>	0.72 <sup>c</sup>	0.20 <sup>b</sup>	0.59 <sup>c</sup>	0.38 <sup>c</sup>	0.55 <sup>c</sup>
II	Self-Esteem	-0.38 <sup>c</sup>	—	-0.75 <sup>c</sup>	0.22 <sup>b</sup>	-0.65 <sup>c</sup>	-0.17 <sup>a</sup>	-0.26 <sup>b</sup>
III	Avoidant Coping	0.61 <sup>c</sup>	-0.36 <sup>c</sup>	—	0.17 <sup>a</sup>	0.65 <sup>c</sup>	0.17	0.43 <sup>c</sup>
IV	Active Coping	0.12	0.24 <sup>b</sup>	0.20 <sup>a</sup>	—	0.00	0.16	-0.01
V	Depression	0.64 <sup>c</sup>	-0.49 <sup>c</sup>	0.63 <sup>c</sup>	0.12	—	0.31 <sup>c</sup>	0.29 <sup>c</sup>
VI	Escapist Drug Use	0.20 <sup>a</sup>	-0.13	0.30 <sup>c</sup>	0.12	0.13	—	0.39 <sup>c</sup>
VII	Sexual Risk Behaviors	0.00	0.07	0.17 <sup>a</sup>	0.07	0.01	0.22 <sup>a</sup>	—

Correlations among men below diagonal; women above diagonal.

<sup>a</sup> $P \leq 0.05$ ; <sup>b</sup> $P \leq 0.01$ ; <sup>c</sup> $P \leq 0.001$ .

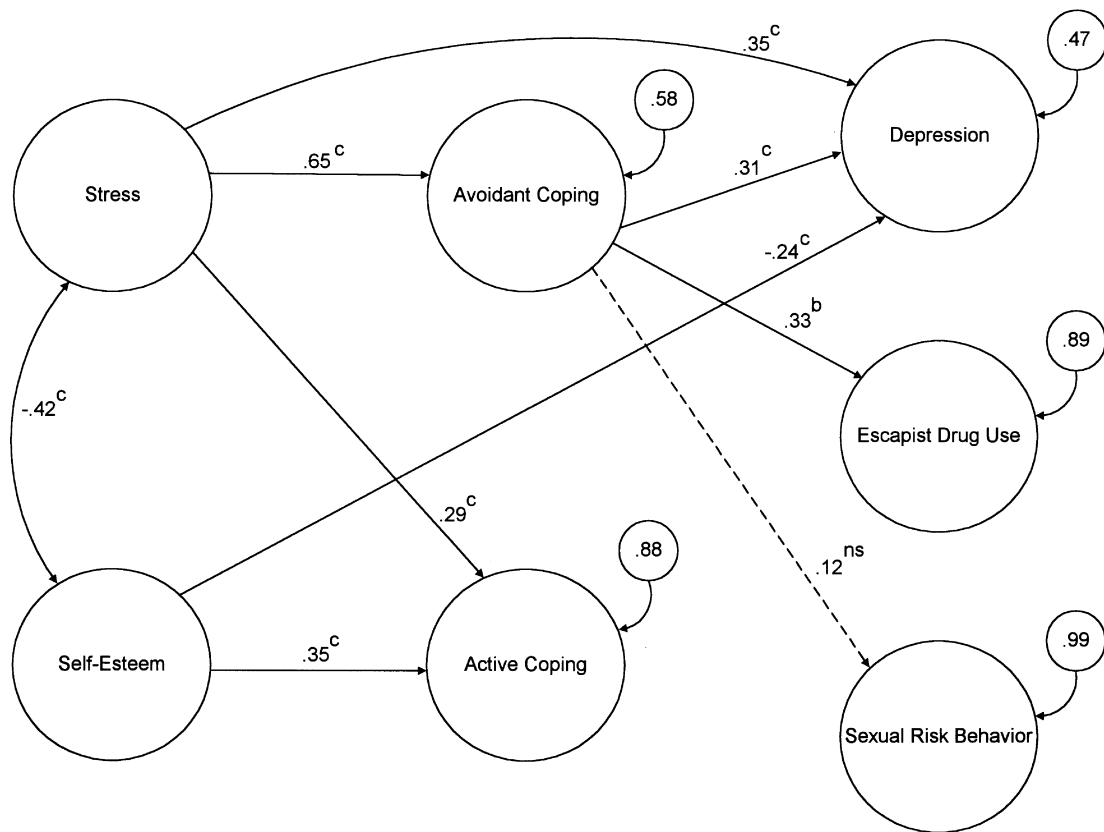


Fig. 1. Path model for men. Latent constructs in circles, 2-headed arrows indicate covariances, 1-headed arrows are regression paths. Regression coefficients and covariances are standardized and residual variances are in circles (<sup>a</sup> =  $P \leq 0.05$ ; <sup>b</sup> =  $P \leq 0.01$ ; <sup>c</sup> =  $P \leq 0.001$ ). Dotted line indicates nonsignificant path.

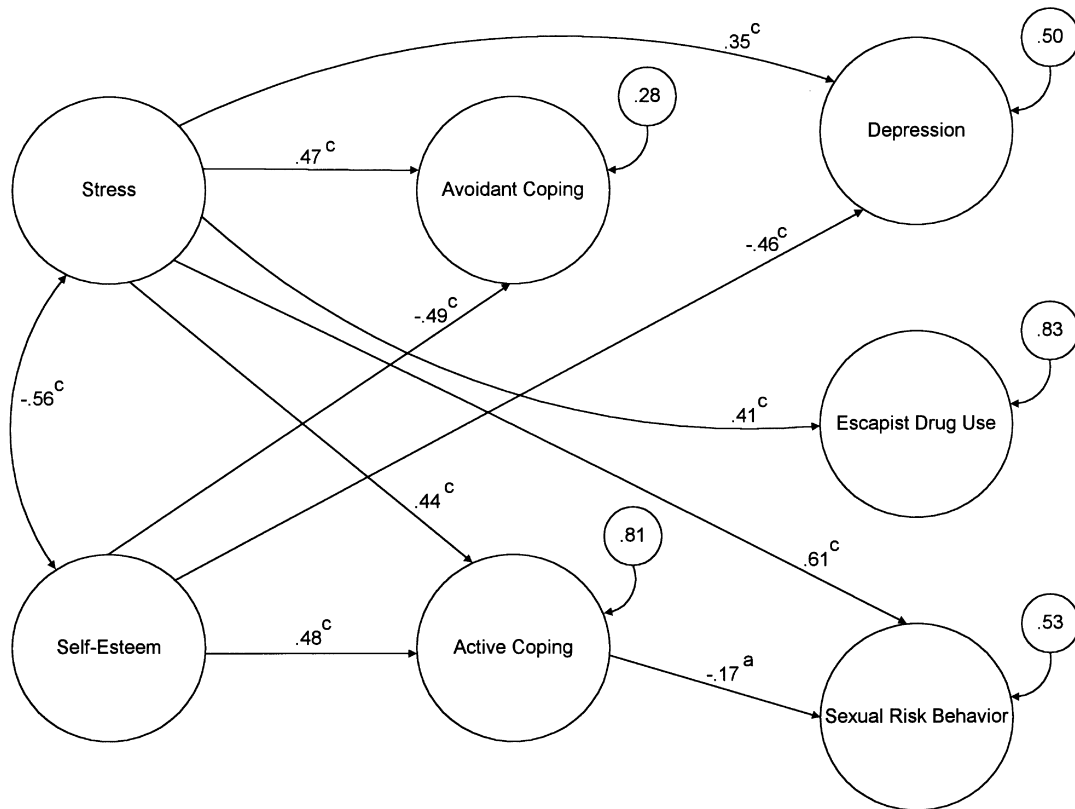


Fig. 2. Path model for women. Latent constructs in circles, 2-headed arrows indicate covariances, 1-headed arrows are regression paths. Regression coefficients and covariances are standardized and residual variances are in circles ( $a = P \leq 0.05$ ;  $b = P \leq 0.01$ ;  $c = P \leq 0.001$ ).

variables in this model significantly predicted Sexual Risk Behavior. The largest yet nonsignificant path between Avoidant Coping and Sexual Risk Behavior was left in the model for the men for statistical reasons to maintain the position of Sexual Risk Behavior as an outcome variable.

## 6. Discussion

In this study, we expected to find not only interesting gender differences, but also similar and significant relationships among several of the constructs. Our results generally support our hypotheses regarding gender differences in levels or magnitudes of constructs, and also in relative strengths and directionality of relationships. However, some specific hypotheses were not demonstrated for both gender groups. These findings are important since knowledge about the strength (or weakness) of certain gender-specific relationships can be used to guide the design of future targeted outreach efforts to reduce AIDS risk behavior. We also can see where more research is needed to find effective leverage points to reduce sexual risk behaviors for men.

We expected among both men and women that escapist drug use, depression, and risky sexual behaviors would be positively related to each other as well as to higher stress and avoidant coping strategies. We also expected that these behaviors were negatively related to high self-esteem and active coping. These hypotheses were only partially confirmed. The correlations among drug use, depression, and risky sexual behaviors were high and significant for the women but much less so for the men. High stress was also highly and directly associated with all of the dysfunctional health behaviors among the women. Only greater depression was highly associated with stress among the men.

Most dramatic was the complete lack of a relationship between stress and sexual risk behaviors for the men while the relationship was exceptionally powerful for the women. Cross-sectional models cannot fully establish whether stress in women leads to stress-reduction attempts by acting out with more maladaptive sexual behaviors, or whether participating in risky sexual behaviors leads to greater stress. Further, this relationship may not be causal in nature at all but rather hinge on another variable not included in our model such as powerlessness and uncontrollability in sexual relationships.

Folkman et al. (1992) also found no relationship between stress and high-risk sexual behaviors among gay and bisexual men. We expand this finding to our sample of heterosexual, minority men. However, Folkman et al. (1992) also reported a relationship between avoidant coping and risky sexual practices among gay and bisexual men. We did not replicate this finding among the men of our study. Therefore, interventions designed to encourage men to decrease their risky sexual practices may not be effective if they emphasize a stress-reduction component or coping skills at the expense of more relevant variables that still need to be determined.

As expected, there were significant negative relationships between self-esteem and stress for both men and women although the correlation was considerably higher for the women. Among the women, lower self-esteem was highly associated with more depression and sexual risk behavior. These relationships were less pronounced among the men. Both groups had a relatively weak relationship between escapist drug use and self-esteem.

Based on findings among middle-class samples (e.g. Ben-Zur and Zeidner, 1996), we predicted that among men, high stress would predict more active coping strategies and among women, high stress would lead to more avoidant coping strategies. This hypothesis was not completely supported in our results. In the confirmatory non-predictive model, the relationship between Stress and Active Coping was not significant for this group of men and was almost equally small (although significant) for the women. There were no gender differences in the relationships between these two constructs. Stresses for this impoverished, minority sample may have been particularly perceived as caused by uncontrollable situations. Carver et al. (1989) indicate that there is a greater relationship between active coping and stress when situations are seen as controllable. Also, the relationship between high stress and avoidant coping was very strong for both the men and the women in contrast with the Ben-Zur and Zeidner (1996) findings; the women, however, had a significantly larger correlation as indicated by the results of the constrained model comparison. These strong relationships may again be connected to the perceived or genuine uncontrollability of stressful life events in this especially impoverished population.

In the path models, stress strongly predicted both active and avoidant coping responses in men and women. This result supports the supposition that active and avoidant coping responses are not mutually exclusive but rather that stress can engender both of them. However, stress was a

somewhat stronger predictor of active coping for women than for men and was almost equally predictive of avoidant coping among both men and women, which did not support our hypothesis of a divergence in coping styles which was based on prior studies among college students and individuals in the workplace.

We hypothesized that active coping would predict less drug use, and depression, and greater mental health and that avoidant coping would predict the opposite. Among men, active coping did not negatively predict any outcome behaviors; among women, active coping only predicted less sexual risk behavior. Avoidant coping was a more salient predictor among the men: it predicted more depression and drug use. It had a modest but nonsignificant impact on sexual risk behavior as well. Avoidant coping did not predict any health outcome among the women although it was highly associated with depression in both samples in the correlational results. In addition, it was more associated with escapist drug use among men, and sexual risk behaviors among the women.

Among women only, drug use and sexual risk behavior were significantly and directly predicted by greater stress. These findings suggest the need to recognize more fully the stressors that impoverished women experience in their lives, especially those associated with their homeless lifestyles. The fact that stress did not directly predict drug use among men suggests that homeless women are more vulnerable to concerns and worries than men who live in similar circumstances and that the women may turn to drugs more readily to escape their problems and distress. This is strengthened by the fact that women reported significantly greater stress than men. Thus, specific community-based interventions which focus on stress reduction through the provision of information on community resources, assistance in finding stable residences, and furnishing medical and psychological services may well result in decreasing drug use frequency among women.

In the college sample of Carver et al. (1989), men reported more drug use as a coping strategy than did the women. We found that in this impoverished sample, an avoidant coping style among the men predicted greater drug use as well. This gender difference in predictors of greater drug use have implications for future treatment and intervention strategies especially in terms of tailoring these interventions to be gender-specific.

The direct impact of greater self-esteem on active coping and less depression in both groups supports the incorporation of self-esteem enhancement strategies in intervention and health promotion programs. This finding may be particularly salient for women since one of the most powerful gender differences that we discovered in this study was the difference in the relationship between low self-esteem and avoidant coping with women reporting a much stronger relationship between these constructs in both the confirmatory and path models.

In terms of magnitudes of the constructs, impoverished women reported greater stress, depression, and more avoidant coping strategies than their male counterparts. These findings support the results of other studies cited earlier and generally support our hypothesis of more distress and a need for empowerment among the women even though women may also be more likely to report distress and depressive symptoms than men (Baum and Grunberg, 1991; Borden and Berlin, 1990; Culbertson, 1997). It may be that the women in this study were more open about admitting their fears and concerns than were the males recruited for the study. Impoverished women may also report more avoidant coping strategies due to limited coping choices and power rather than merely expressing dependent, helpless or passive behavior (Banyard and Graham-Bermann, 1993).

The reason why these women would experience greater stress, worsening of psychological

outlook, and greater avoidant coping than males in highly similar and difficult circumstances remains speculative. Certainly, research has pointed to the subordinate positions of impoverished women where power and sense of control is non-existent; powerlessness often places women at significant risk for physical and emotional distress (Zapka et al., 1993). While lack of personal and social resources such as low self-esteem and inadequate social support have been implicated in contributing to impoverished women's plight (Mondanaro, 1987), assessing the personal perspectives from the women themselves would help health care professionals appreciate their needs. More in-depth understanding of the rationale of why women choose particular coping responses is imperative in intervening among women with major life stressors and problems. Furthermore, gender-specific interventions focused on treatment for depression and other dysfunctional psychological phenomena are clearly indicated since the women reported greater depression and more stress than men in circumstances highly similar to their own.

Keeping in mind the limitations of this study, such as the reliance on self-report measures and the use of a convenience sample of men known to the women, our findings augment our previous studies by describing and contrasting psychosocial and behavioral traits of homeless and drug-addicted men and women. Our findings of significantly greater depression, more stress, and avoidant coping strategies among impoverished women than their male counterparts, along with significantly different and more powerful relationships among key variables in the model, point to the need for gender-specific interventions. This study highlighted some particularly salient leverage points that could be used among impoverished women; equally relevant leverage points among men, especially those associated with sexual risk behaviors, need to be determined. Further research will be necessary to develop appropriate strategies to influence more positive outcomes among all impoverished, drug-addicted populations.

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