

UC Irvine

UC Irvine Previously Published Works

Title

Psychosocial predictors of current drug use, drug problems, and physical drug dependence in homeless women

Permalink

<https://escholarship.org/uc/item/1d32q33t>

Journal

Addictive Behaviors, 24(6)

ISSN

0306-4603

Authors

Galaif, Elisha R
Nyamathi, Adeline M
Stein, Judith A

Publication Date

1999-11-01

DOI

10.1016/s0306-4603(99)00038-6

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at

<https://creativecommons.org/licenses/by/4.0/>

Peer reviewed



PSYCHOSOCIAL PREDICTORS OF CURRENT DRUG USE, DRUG PROBLEMS, AND PHYSICAL DRUG DEPENDENCE IN HOMELESS WOMEN

ELISHA R. GALAIF, ADELIN M. NYAMATHI, and JUDITH A. STEIN

University of California, Los Angeles

Abstract — We examined risk and protective factors associated with three qualitatively different drug use constructs describing a continuum of drug use among a sample of 1,179 homeless women. Relationships among positive and negative sources of social support, positive and negative coping strategies, depression, and the drug constructs of current drug use, drug problems, and physical drug dependence were assessed using structural equation models with latent variables. Current drug use was predicted by more negative social support (from drug-using family/friends), depression, and less positive coping. Drug Problems were predicted by more negative coping, depression, and less positive coping. Physical Drug Dependence was predicted by more negative social support and depression, and less positive social support. Results highlighted the importance of investigating both the positive and negative dimensions of psychosocial functioning, while suggesting that empowering homeless women and offering tangible resources for coping with the stress of being homeless may be beneficial to them.
© 1999 Elsevier Science Ltd

Key Words. Drug use, Homeless, Women.

Homelessness continues to be a pervasive and persistent problem in the United States. Estimates of the numbers of homeless people are both staggering and unreliable (e.g., Jackson & McSwane, 1992) due to the transient nature of this population.

INTRODUCTION

Homelessness among women

It has been estimated that approximately one-fifth to one-half of the homeless adults in America are women (Bachrach, 1987; Burt & Cohen, 1989), and at least one-third of the homeless population consists of families with children, headed predominantly by a female parent (see Buckner, Bassuk, & Zima, 1993). Although women constitute one of the fastest growing segments of the homeless population in the United States (Hodnicki, Horner, & Boyle, 1992; Merves, 1992), relatively little research has been concerned exclusively with homeless women (e.g., Thrasher & Mowbray, 1995) and their plight.

Drug use problems among homeless women

Prevalence estimates among homeless women range between 10% and 23% for drug related problems, and between 25% to 50% for drug abuse (Breakey et al., 1989; Fischer, 1991; Koegel, Burnam, & Farr, 1988; North, Thompson, Pollio, Ricci, & Smith, 1997; Smith, North, & Spitznagel, 1993). Smith et al. (1993) found that 61% of

This study was supported by Grants DA05565-05, DA06719, and DA01070 from the National Institute on Drug Abuse.

Requests for reprints should be sent to Elisha R. Galaif, Ph.D., University of California at Los Angeles, Department of Psychology, 1282A Franz Hall, Box 951563, Los Angeles, CA 90095-1563; E-mail: egalaif@ucla.edu

those with a lifetime alcohol problem also had a history of drug abuse, and 42% of the drug abusers also had an alcohol problem. Collectively, these results indicate that drug use disorders (e.g., drug abuse), drug problems, and pervasive drug use are prevalent among homeless women. Not only is drug abuse the most common health problem among the homeless, it is also assumed that drug abuse contributes to homelessness by exacerbating its adverse consequences (Gelberg, 1993; Levine & Huebner, 1991; Stein & Gelberg, 1995; Weinreb & Bassuk, 1990), especially for women and their families.

Psychosocial problems related to homelessness

Homeless women are considered an extremely vulnerable population with numerous risk factors associated with an impoverished lifestyle, such as limited education, gender discrimination, inadequate financial resources, unemployment, fragmented social support, ineffective coping, dependent children, health and mental problems (including psychological distress, depression) and barriers to services (Buckner et al., 1993; Flynn, 1997; Ingram, Corning, & Schmidt, 1996; Merves, 1992; Nyamathi, Bennett, Leake, & Chen, 1995; Stein & Gelberg, 1995, 1997). For example, homeless women have weaker and more frequently disrupted social networks (Bassuk & Rosenberg, 1988; Wood, Valdez, Hayashi, & Shen, 1990). Significant others (e.g., friends/family or partners) can have either a positive or negative effect on drug use behaviors (e.g., Neaigus et al., 1994; Nyamathi, Flaskerud, & Leake, 1997; Ross, Wodak, & Gold, 1992; Stowe, Ross, Wodak, Thomas, & Larson, 1993). Friedman, Des Jarlais, and Sotheran (1986) suggest that because impoverished women often lack positive social support, they are more likely to combat stress by using nonsocial, dysfunctional strategies, or by associating with a deviant social network that encourages drug use. Therefore, in studying the potential buffering effects of social support for homeless women, it is also important to assess the negative or unsupportive aspects of their social support networks (Ingram et al., 1996; Tucker, 1982).

Due to the paucity of research, the coping strategies used by homeless women remain elusive (Buckner et al., 1993). However, several empirical studies (El-Bassel et al., 1996; Rhoads, 1983) have demonstrated significant findings regarding coping strategies used by either drug abusing or incarcerated women. One relevant study was conducted by Nyamathi, Stein, and Brecht (1995), who found that homeless women tend to utilize avoidant vs. active coping strategies, and that drug use was predicted by avoidant coping strategies.

Homeless women cope with multiple psychosocial stressors that are often complicated by untreated medical and mental health needs, including treatment for psychological distress and substance abuse (Buckner et al., 1993; Stein & Gelberg, 1997). Reports of the prevalence of depressive disorders (e.g., major affective disorder, major depressive episode, major unipolar depression) among homeless women range from 18% to 37% (Breakey et al., 1989; Koegel et al., 1988; North et al., 1997; Smith et al., 1993). In addition, Nyamathi et al. (1997) found that 84% of homeless and drug-addicted women reported emotional disturbance (e.g., depression, lack of emotional well-being). Despite the consistency in the high prevalence rates of depression, few empirical investigations have focused on the comorbidity of substance abuse and depression among homeless women (e.g., Breakey et al., 1989; Nyamathi et al., 1997; Smith et al., 1993).

Theoretical position

The theoretical basis for our proposed hypothetical model includes key elements of the social support-stress-coping paradigm (e.g., Lazarus & Folkman, 1984). This para-

digm has been previously used as a conceptual framework used to investigate social support, coping, and drug abuse among impoverished women (e.g., Nyamathi, Stein, & Brecht, 1995). The social support–stress–coping model implies that addicted women, under great strain, have reason to abuse substances and a greater need for social resources (Tucker, 1982). Therefore, there is utility in using the social support–stress–coping paradigm for understanding substance abuse and other problems in impoverished women.

Purpose of the study

The purpose of this study was to elucidate the relationships between important psychosocial predictors and three different forms of drug use varying in degree of pathology (e.g., current drug use, drug related problems, and physical drug dependence) among a sample of homeless women. Current Drug Use represents the three most common drugs used by this homeless population of women: alcohol, marijuana, and crack/cocaine. Drug Problems represent typical problems related to continued drug use (e.g., health, family relations, work, legal trouble). Physical Drug Dependence represents the most severe form of drug use: drug dependence defined by tolerance and withdrawal symptoms. The drug use constructs were formulated separately to determine whether there were specific relationships related to a hierarchical level of drug use, based on a continuum from current drug use to drug related problems to physical dependence.

M E T H O D

Participants

Data were gathered from a sample of 1,311 homeless women in Los Angeles from 1994 to 1996. They were 48% African-American, 22% Latina, 29% Caucasian, 55% were never married, and 14% married, separated (14%), or divorced (14%). Mean age was 33.2 years, and they averaged 11 years of education. Although the majority (55%) had never been married, 73% had children. More than 70% were currently unemployed, and nearly 70% reported living in a mission or shelter in the past month. We deleted from the analytic sample those who stated that they had never used alcohol or any illicit drugs, since any drug-related questions would have been irrelevant and their responses ambiguous. The final analytic sample included 1,179 participants (90% of the original sample).

Procedure

Subjects were recruited through directors of homeless shelters. A homeless woman was defined as one who had spent the previous night in a shelter, and was uncertain as to her residence in the next 60 days or stated she did not have a home or house of her own in which to reside (Gelberg & Linn, 1989). Overall, 96% of those approached agreed to participate in this study.

Informed consent was obtained for everyone by the approved Human Subjects Protection Committee consent form. All those under the age of 18 were emancipated minors. After informed consent was obtained, data were collected with a 45–60 minute questionnaire which was administered face-to-face by ethnically matched African-American, Latina, and Caucasian nurses and outreach workers well trained in research methods (Nyamathi, Stein, & Bayley, 1999). Respondents were paid \$5 for their participation in this study.

Measures

Multiple-indicator latent factors were based on multi-item instruments within the survey that were hypothesized *a priori* to reflect and represent the constructs of the theoretical models. Items within instruments were initially factor analyzed using the SAS statistical program (SAS Institute, 1988). Those items that loaded significantly together and explicitly represented their hypothesized factors were used in the latent model analyses.

Positive Social Support. This construct was designed to represent the amount of social support received from nondrug using friends/family or nondrinking partners in the woman's life. It was represented by three items (loadings from .81 to .91) based on a 5-point scale (*none of the time to all of the time*). The items included how much they: (1) listen to you talk about yourself or your problems, (2) accompany you to an appointment to provide moral support, and (3) show that they love or care for you.

Negative Social Support. This construct represented the amount of social support received from drug-using family/friends or drinking partners in the woman's life. It was indicated by five items (loadings from .76 to .83) based on a 5-point scale (*none of the time to all of the time*). The items included how much they: (1) have a good time with, (2) provide you with food or a place to stay, (3) listen to you talk about yourself or your problems, (4) accompany you to an appointment to provide moral support, and (5) show that they love or care for you.

Positive and Negative Coping. A version of the Jalowiec Coping Scale (Jalowiec, Murphy, & Powers, 1984) assessed coping strategies used by the participants to address their most stressful problems in the last 6 months. The items were rated on a 5-point Likert scale (*never to very often*). Factor analysis indicated two major factors that were hypothesized to reflect *active* (or positive) coping ($\alpha = .73$) and *avoidant* (or negative) coping ($\alpha = .61$). The construct of Positive Coping was represented by four indicators (loadings from .64 to .75). The items included: (1) becoming more informed about your problem, (2) tried to take it easy, (3) thought about what you need to do for your problem, and (4) made a plan of action and followed it. The Negative Coping construct was represented by four indicators (loadings from .51 to .78). These items were: (1) withdrew from other people, (2) took it out on other people, (3) decided to spend more time alone, and (4) slept more than usual.

Depression. This construct reflected the symptoms of the depression dimension of the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983) designed to represent the indications of clinical depression. The BSI is an abbreviated version of the Symptoms Checklist-90 (Derogatis, Lipman, & Covi, 1973). The depression scale has an internal consistency of .85 and test-retest reliability of .84. It was represented by six indicators (loadings from .56 to .90) based on a 5-points scale (*not at all to extremely*). Items representing the depression factor of this scale included: (1) thoughts of ending your life, (2) feeling lonely, (3) feeling blue, (4) feeling no interest in things, (5) feeling hopeless about the future, and (6) feelings of worthlessness.

Current Drug Use. This construct was represented by three indicators: alcohol, marijuana, and crack/cocaine use in the past 6 months (loadings from .67 to .88), on a scale ranging from *never/not used to about 4 or more times per day*.

Drug Problems. This construct was represented by seven indicators (loadings from .74 to .83) based on a 5-point scale (*never to almost always*). Items included how often in the past 6 months has your use of alcohol or drugs affected: (1) your medical or physical health, (2) your relations with family or friends, (3) your attention and concentration, (4) going to work or finding a job, (5) money and finances, (6) fights or arguments, and (7) police or legal trouble.

Physical Drug Dependence. This construct was represented by three indicators (loadings from .90 to .92) based on a dichotomous scale. The items were based on *DSM-IV* (American Psychiatric Association, 1994) criteria for a diagnosis of drug dependence (e.g., tolerance, withdrawal, and compulsive drug-taking behavior). We use the term dependence to represent physiological dependence upon drugs. They included: (1) had a period of 1 month or more when you spent a great deal of time using alcohol/drugs or getting over any of their effects, (2) often used much larger amounts of alcohol/drugs than you really intended or wanted to, and (3) found that you had to use more alcohol/drugs than usual to get the same effect or that the same amount had less effect on you than before, during the past 6 months.

Analytic procedure

Latent variable models were analyzed using structural equation modeling (SEM) procedures. The EQS structural equations program (Bentler, 1995) was used for all SEM procedures, using maximum likelihood estimation. The closeness of the hypothetical model to the empirical data is evaluated statistically through two goodness-of-fit indexes: the chi-square/degrees of freedom ratio, and the Comparative Fit Index (CFI) statistic (Bentler, 1990, 1995). A chi-square value no more than twice the degrees of freedom in the model typically indicates a plausible, well-fitting model since with large sample sizes it is difficult to obtain a nonsignificant chi-square value. In addition, a CFI of .90 or higher was used as a criterion to indicate an adequate fit, as 90% or more of the covariation in the data is able to be reproduced by the hypothesized model (Bentler & Stein, 1992).

For cross-validation purposes and to avoid capitalizing on chance relationships, two samples were created by selecting every other case from the entire data set. One sample was used to develop the measurement model (development sample), and the other was used to evaluate the final measurement model (validation sample).

An initial confirmatory factor analysis (CFA) was performed with each latent construct predicting its manifest indicators and all latent constructs intercorrelating freely without any imputation of causality among them. A CFA evaluates the measurement model, that was specified *a priori*, to determine that the observed variables represented their respective latent constructs in a statistically significant manner. Once the CFA model adequately fit the data, an initial structural model was developed replacing the correlations in the final CFA model with directional paths from the predictors to the drug outcomes. This was a saturated model in which all of the risk and protective influences were used to predict each of the three drug outcome constructs. Specifically, the structural (STR), or path, model examined the predictive paths from the risk (e.g., negative social support, negative coping, depression) and protective (e.g., positive social support, positive coping) influences to the drug use outcomes (e.g., current drug use, drug problems, drug dependence). All possible predictive paths were included in the original fully saturated STR model and nonsignificant paths and covariances among predictors were gradually dropped until only significant paths and covariances remained.

R E S U L T S

Confirmatory factor analysis

Table 1 presents the means, standard deviations, and factor loadings of the measured variables in the final CFA model. The initial fit statistics for the CFA model approached the acceptable level but did not fully meet the standards of a well-fitting model for the development sample. Based on suggestions from the LaGrange Multiplier (LM) test we added six covariances between error residuals to the development sample for the final CFA model. The added correlated error residuals were between the following variables: (1) feeling blue and feeling lonely; (2) drug problems related

Table 1. Means, standard deviations, and standardized factor loadings of the CFA model

Latent Construct and measured variables	Mean (<i>SD</i>)	Factor loading
Positive Social Support		
Listen to you talk	2.70 (1.67)	.98
Accompany you for moral support	2.54 (1.66)	.93
Show love or care for you	2.80 (1.73)	.96
Negative Social Support		
Have a good time	1.73 (1.27)	.75
Provide you with food/shelter	1.61 (1.17)	.79
Listen to you talk	1.70 (1.24)	.91
Accompany you for moral support	1.54 (1.12)	.84
Show love or care for you	1.70 (1.26)	.85
Positive Coping		
Became more informed about your problem	2.71 (1.50)	.64
Tried to take it easy	3.21 (1.23)	.62
Thought about your problem	3.68 (1.32)	.75
Made a plan of action and followed it	2.94 (1.40)	.57
Negative Coping		
Withdrew from others	3.31 (1.28)	.69
Took it out on others	2.76 (1.32)	.40
Decided to spend more time alone	3.30 (1.33)	.67
Slept more than usual	2.75 (1.44)	.45
Depression		
Thoughts of ending your life	1.32 (0.76)	.51
Feeling lonely	2.54 (1.35)	.75
Feeling blue	2.41 (1.34)	.81
No interest in things	2.14 (1.32)	.92
Hopeless about the future	2.27 (1.45)	.79
Feeling worthless	2.10 (1.39)	.80
Current Drug Use		
Alcohol	3.84 (3.36)	.51
Marijuana	2.74 (2.90)	.49
Crack/cocaine	5.50 (4.78)	.61
Drug Problems		
Medical/physical health	1.73 (1.54)	.79
Relations with family/friends	2.16 (1.59)	.91
Attention and concentration	2.19 (1.58)	.92
Going to work	2.03 (1.69)	.83
Money and finances	2.20 (1.66)	.90
Fights/arguments	2.02 (1.63)	.84
Police/legal trouble	1.50 (1.62)	.68
Physical Drug Dependence		
Spend a great deal of time using or getting over drug effects	1.42 (0.49)	.88
Use much larger amounts than intended	1.39 (0.49)	.88
Had to use more to get same effect	1.40 (0.49)	.91

All factor loadings significant, $p < .001$.

to going to work and drug problems related to money and finances; (3) feeling worthless and feeling hopeless; (4) getting moral support and love or care from drug using friends/family; (5) drug problems related to legal trouble and health; and (6) drug problems related to legal trouble and fights or arguments. These supplementary relationships appear reasonable, and the fit indexes improved considering the small amount of model modification (χ^2 526, $N = 589$) = 1023.81; CFI = .97; $\chi^2/df = 1.95$). All manifest variables loaded significantly ($p < .001$), indicating that the measured variables were reliable indicators of their respective latent factors. We then tested this modified CFA model on the validation sample. It fit that sample slightly better, (χ^2 526, $N = 590$) = 916.99; CFI = .98; $\chi^2/df = 1.74$). All supplementary correlated errors were significant in this sample as well. The constructs were also significantly correlated in the expected directions. Table 2 presents the intercorrelations among the latent factors. For example, the construct of Current Drug Use was positively correlated with Negative Social Support, Negative Coping, Depression, Drug Problems, and Physical Drug Dependence, and negatively correlated with Positive Social Support and Positive Coping. Drug Problems were positively related to Negative Coping, Depression, and Physical Drug Dependence, and negatively related to Positive Coping. Physical Drug Dependence was positively related to Negative Coping and Depression, and negatively related to Positive Social Support and Positive Coping. These results provide evidence that the three hierarchical drug outcomes, although conceptually distinct, were highly related to one another.

Structural model

The initial STR model had the same fit statistics as the final CFA model. A final STR model was obtained by adding nonstandard or specific paths between predictors and measured variables to the initial STR model, using the LM test and then removing all nonsignificant parameters using the Wald test (Bentler, 1995). Nonstandard or specific paths were added to the initial structural model (Newcomb, 1994) to reflect three types of relationships: (1) measured variables (or their residuals) of the predictors to drug outcome constructs, (2) measured variables (or their residuals) of the predictors to measured variables (or their residuals) of drug outcome constructs, and (3) predictor constructs to measured variables of drug use outcomes. The fit indexes of the final model are acceptable (χ^2 521, $N = 590$) = 800.66; CFI = .98; $\chi^2/df = 1.54$).

Significant factor intercorrelations. Positive Social Support was positively associated with Negative Social Support ($p < .001$) and Positive Coping ($p < .001$), and nega-

Table 2. Factor intercorrelations for the CFA measurement model

Factor	1	2	3	4	5	6	7	8
1. Positive Social Support	–							
2. Negative Social Support	.35***	–						
3. Positive Coping	.27***	–.03	–					
4. Negative Coping	–.09	–.00	–.10	–				
5. Depression	–.31***	–.08*	–.38***	.43***	–			
6. Current Drug Use	–.16**	.13*	–.20**	.32***	.43***	–		
7. Drug Problems	–.05	.01	–.11*	.23***	.32***	.64***	–	
8. Physical Drug Dependence	–.22***	.03	–.28***	.32***	.46***	.78***	.43***	–

Note. All correlations are significant (***) $p < .001$.
* $p < .05$; ** $p < .01$; *** $p < .001$.

tively associated with Depression ($p < .001$). Depression was negatively associated with Positive Coping ($p < .001$) and positively associated with Negative Coping ($p < .001$). Current Drug Use was positively associated with Drug Problems and Physical Drug Dependence ($p < .001$). Drug Problems were positively associated with Physical Drug Dependence ($p < .001$).

Significant paths and specific effects. Only significant paths among the latent factors are displayed graphically in Figure 1 for reasons of clarity. Current Drug Use was significantly predicted by more Negative Social Support and Depression, and less Positive Coping strategies. Drug Problems were predicted by more Negative Coping and Depression, and less Positive Coping. Physical Drug Dependence was predicted by more Negative Social Support and Depression, and less Positive Social Support. There was one specific effect of predictor constructs to measured drug use outcomes; namely, Negative Coping predicted more crack/cocaine use ($p < .01$). In addition, there were five specific effects from the residual of measured variables of predictors to measured variables of drug use outcomes. Getting food/shelter from drug using friends/family ($p < .01$) and taking it out on others ($p < .001$) predicted more fights/arguments from drug problems. Taking it out on others ($p < .001$) and feeling lonely ($p < .05$) predicted more legal trouble. Having a good time ($p < .01$) with drug using friends/family predicted using more drugs than intended. Finally, there were two specific effects from measured variables to Drug Problems. Whereas taking it easy ($p < .05$) predicted less Drug Problems, crack/cocaine use ($p < .001$), predicted more Drug Problems.

DISCUSSION

The focus of this study was to examine the relationships between psychosocial predictors and three forms of drug use and related problems. Although much of the research thus far has focused on homeless persons in general or on homeless men, the present study furthers our understanding of how drug use, drug problems, and physical drug dependence are related to social support, coping, and depression among severely impoverished adult women. As hypothesized, the impoverished women in our study were vulnerable to numerous risk factors (e.g., less education, unemployment, minority status, mental illness, dependent children) that were associated with drug use and drug related problems which are known to be pervasive throughout the homeless population (Buckner et al., 1993; Flynn, 1997; Ingram et al., 1996; Nyamathi et al., 1995; Stein & Gelberg, 1995, 1997).

Theoretical implications

Our theoretical model, based on the social support–stress–coping paradigm (Lazarus & Folkman, 1984), was effective in predicting hierarchical forms of drug use in a sample of homeless women. As the lifestyle of a homeless woman diminishes her ability to form or sustain supportive prosocial networks, she may experience disrupted or maladaptive social support from individuals in the drug subculture (e.g., Bassuk & Rosenberg, 1988; Wood et al., 1990). These deficient, yet supportive peer relationships in which the women are embedded, may increase drug using behaviors. Our study documents how social support from drug-using individuals and negative coping strategies has deleterious effects on the health status of homeless women. Consistent with previous findings, our results indicated that negative social support directly pre-

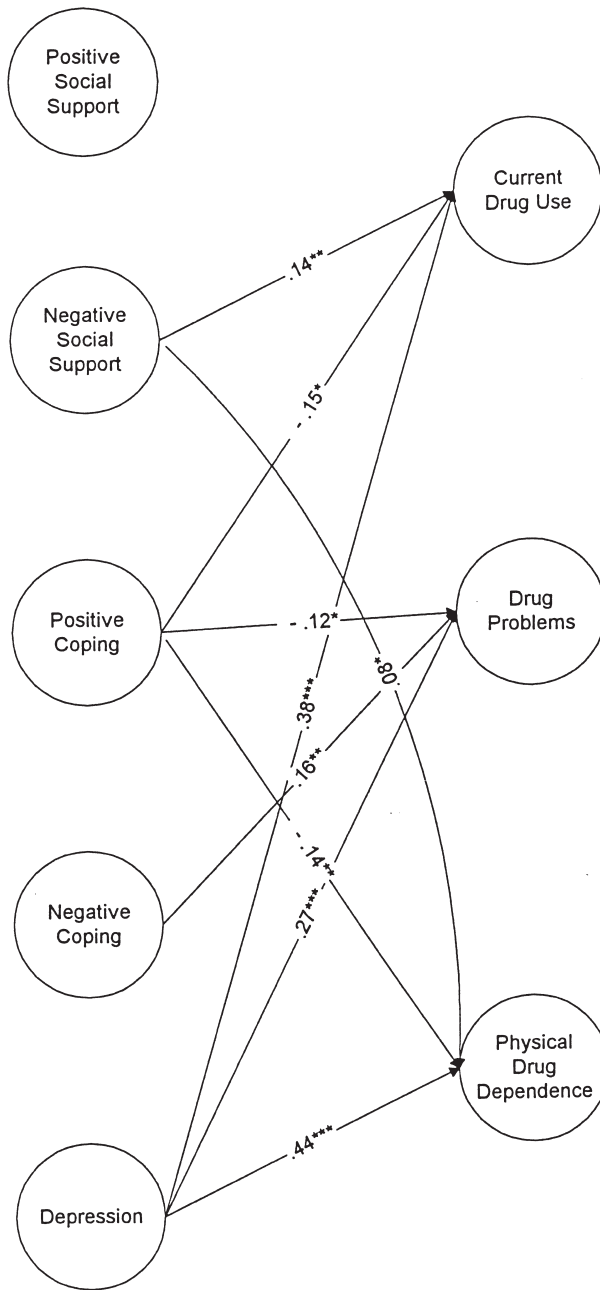


Fig. 1. Final structural model. Large circles represent latent constructs. For clarity, only significant paths are depicted from factors. Parameter estimates are standardized and significance levels were determined by critical ratios on unstandardized coefficients; $*p < .05$; $**p < .01$; $***p < .001$.

dicted more drug use and physical drug dependence, whereas positive social relationships did not encourage less drug use and other drug related behaviors (e.g., Belle, 1983; Friedman et al., 1986; Neaigus et al., 1994; Nyamathi et al., 1997). The implication of this finding is that social support from drug using friends or family does have

detrimental effects on homeless women by encouraging them to continue their maladaptive drug using habits. However, receiving support from drug using peers or family members did not significantly predict more drug related problems. These results exemplify the need to find differential predictors of distinct drug use behaviors. Since these data are cross-sectional, we also recognize that women who are drug users and abusers may be especially prone to seek out social networks and individuals who use drugs as well.

Although Positive Social Support was negatively correlated with depression and the three drug constructs, it did not significantly predict any of the drug use constructs in the path model. Evidently, positive social support from nondrug using friends or family did not protect a homeless woman from more drug use, drug related problems, or physical drug dependence. Perhaps because their prosocial support networks are already fragmented, strained, or deficient, homeless women may require more potent tangible remedies, such as financial aid, housing, substance abuse treatment, or medical care, rather than someone who just listens to them, while providing moral and emotional support. It was useful to evaluate the differential or separate effects of positive and negative social support, even though they were highly correlated in this study. Notably, we found social support from a deviant subculture to be counterproductive. Thus, the source of one's support is vital in determining whether it is worthwhile or dysfunctional.

In accordance with the social support–stress–coping theory, it was predicted that homeless women, under significant stress and hardship related to their lack of housing and medical care, would utilize dysfunctional coping strategies, which would be associated with drug use and dependence (Tucker, 1982). As expected, negative, or avoidant, coping styles were related to each of the distinct drug use constructs. This result was similar to the findings of Nyamathi et al. (1995), who found that drug use among homeless women was predicted by avoidant coping strategies. However, in this study, utilizing avoidant coping strategies only significantly predicted increased drug related problems, which were related the most to psychosocial behaviors and situations. Negative Coping was not significantly predictive of Current Drug Use or Physical Drug Dependence. An implication of this result is that defensive coping styles (e.g., withdrawing from others, taking it out on others, spending time alone, or sleeping more than usual) did not further influence greater drug use or dependence. Perhaps, these women were already so entrenched in their drug use behavior (all were currently using drugs or had used drugs at least once) that negative coping no longer had an additional effect. Rather, they were already daily drug users or dependent upon drugs. Interestingly, positive coping strategies such as being more informed about the problem, taking it easy, thinking about the problem, and making a plan of action and following it had a direct effect on all three drug use constructs. Positive Coping significantly influenced less drug use, less drug related problems, and less physical drug dependence. Therefore, utilizing active coping strategies significantly protected these homeless women from drug use, drug related problems, and physical drug dependence. The implication is that even though these homeless women are vulnerable to risk factors associated with their living situation, actively coping with the situation helped to decrease drug use behaviors. Arguably, becoming empowered was a potent buffer against all three drug use behaviors for these homeless women. This finding has important implications for outreach to homeless women.

It is well recognized that homeless women suffer from affective disorders (North et al., 1997; Nyamathi et al., 1997; Smith et al., 1993). Specifically, depression has been

consistently associated with drug use and dependence among homeless women (Nyamathi et al., 1997; Smith et al., 1993). In our study, greater depression directly predicted the three distinct drug use outcomes. Notably, the largest path in the model was from Depression to Physical Drug Dependence. Those women suffering from mental illness were more at risk for drug use, drug related problems, and most at risk for physical drug dependence. The synergistic relationship between depression and drug use behaviors can be cause for serious concern as impoverished homeless women may be more unstable and a threat to themselves, their children, and society. The comorbidity further complicates their condition and their ability to return eventually to mainstream society and lead healthy, balanced lives. Despite the plethora of research documenting the relationship between depression and drug use, it remains unclear whether depression is antecedent or subsequent to the development of drug use problems. Future prospective research is therefore needed to elucidate this relationship, especially among homeless women.

Limitations

The present study has some limitations in terms of measurement and interpretation. First, the use of self-report measures may limit the reliability of the data. For instance, there may have been underreporting of substance use. However, since the data were confidential and obtained in situations designed to maximize rapport (not to assess effectiveness of treatment outcome), the self-reports were probably reliable. It is not appropriate to state if the data are valid or invalid (see Babor, Stephens, & Marlatt, 1987). Second, our model does not include other possibly important factors, such as chronicity or major depression. Furthermore, causal implications are restricted due to the cross-sectional nature of the data and possible bidirectional influences. Our model, however, was acceptable in terms of fit and provides new insights into homeless women surviving on the streets in our community.

Practical implications and future research

Homeless women are a large and diverse population who are in dire need of special services and attention as they attempt to cope with multiple psychosocial stressors often complicated by untreated medical and mental health needs. Consistent with the literature, it is not surprising that a significant proportion of homeless women suffer from symptoms of depression and substance abuse (e.g., Buckner et al., 1993). Because impoverished, often transient, women do not belong to mainstream society, they are often overlooked for service utilization and have become a grossly underserved population. It is clear that more effective approaches to the treatment and management of homeless women, especially those who are dually diagnosed, need to be developed and implemented (McCarty, Argeriou, Huebner, & Lubran, 1991). In sum, results of the current study document the need for more comprehensive, community-based prospective investigations into the unique lifestyle of homeless women by elucidating their specific mental and physical needs.

The distinction that emerged between drug use, drug problems, and physical drug dependence in this sample of homeless women has practical implications for future research and treatment. First, although the three drug use outcomes were strongly related to one another, we demonstrated that they were also conceptually distinct concepts that provide valid support for the social support–stress–coping paradigm. Therefore, future research should continue to separate out the effects of different degrees of drug use outcomes among impoverished samples. Second, our results offered

insight into treatment strategies as the women in our study may need more extensive services if they are dealing with multiple drug using behaviors. We can no longer assume that drug use is the same as drug problems or drug dependence. Rather, these outcomes should be identified and treated appropriately among high risk groups, especially among homeless women.

Our findings, consistent with earlier studies, suggest that interventions should address the complex mental health needs evident in this impoverished population within the context of all the other social and economic hardships that homeless women endure (North et al., 1997). For example, mental health programs for homeless women should attempt to improve identification of drug dependence and depressive disorders as these disorders may complicate treatment and are notoriously difficult to manage (North, 1997). In addition, discouraging relationships with deviant peers and/or creating new service-oriented relationships may facilitate the re-entry of homeless women into mainstream society by increasing their ability to utilize resources for housing, child care, transportation, medical services, and financial support. For homeless women, having adequate social support networks that offer tangible resources may provide the means necessary to restore their connectedness with society as they become domiciled (Solarz & Bogat, 1990).

A topic for future longitudinal research is the elucidation of the temporal relationship between drug use and lack of adequate resources or adaptive coping strategies in the often chaotic and unpredictable lives of homeless women. In addition, investigators might examine the independent contributions of deficient coping skills, lack of emotional social support, and psychological pathology on drug use behaviors. Collectively, our findings underscore the importance of assessing environmental, interpersonal, and intrapersonal factors in tailoring efficacious treatment strategies for homeless women, characterized with physical drug dependence and psychological trauma (e.g., El-Bassel et al., 1996). Studying homeless women with mental health and/or drug disorders prospectively will provide much needed information on the life events that precede episodes of homelessness, as well as data on the circumstances that facilitate the successful transition to becoming domiciled (Levine & Huebner, 1991).

R E F E R E N C E S

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders, Fourth edition*. Washington, DC: American Psychiatric Association.
- Babor, T. F., Stephens, R. S., & Marlatt, G. A. (1987). Verbal report methods in clinical research on alcoholism: Response bias and its minimization. *Journal of Studies on Alcohol*, **48**, 410–424.
- Bachrach, L. L. (1987). Homeless women: A context for health planning. *Millbank Quarterly*, **65**, 371–396.
- Bassuk, E. L., & Rosenberg, L. (1988). Why does family homelessness occur? A case-control study. *American Journal of Public Health*, **78**, 783–788.
- Belle, D. (1983). The impact of poverty on social networks and supports. *Marriage and Family Review*, **5**, 89–103.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, **107**, 238–246.
- Bentler, P. M. (1995). *EQS structural equations program manual*. Encino, CA: Multivariate Software, Inc.
- Bentler, P. M., & Stein, J. A. (1992). Structural equation models in medical research. *Statistical Methods in Medical Research*, **1**, 159–181.
- Breakey, W. R., Fischer, P. J., Kramer, M., Nestadt, G., Romanoski, A. J., Ross, A. J., Royall, R. M., & Stine, O. (1989). Health and mental health problems of homeless men and women in Baltimore. *Journal of the American Medical Association*, **262**, 1352–1357.
- Buckner, J. C., Bassuk, E. L., & Zima, B. T. (1993). Mental health issues affecting homeless women: Implications for intervention. *American Journal of Orthopsychiatry*, **67**, 385–399.
- Burt, M. R., & Cohen, B. E. (1989). Differences among homeless single women, women with children, and single men. *Social Problems*, **36**, 508–524.

- Derogatis, L. R., Lipman, R. S., & Covi, L. (1973). SCL-90: An outpatient psychiatric rating scale: Preliminary report. *Psychopharmacology Bulletin*, *9*, 13–27.
- Derogatis, L. R., & Melisaratos, N. (1983). The brief symptom inventory: An introductory report. *Psychological Medicine*, *13*, 595–605.
- El-Bassel, N., Gilbert, L., Schilling, R. F., Ivanoff, A., Borne, D., & Safyer, S. F. (1996). Correlates of crack abuse among drug-using incarcerated women: Psychological trauma, social support, and coping behavior. *American Journal of Drug and Alcohol Abuse*, *22*, 41–56.
- Fischer, P. J. (1991). *Alcohol, drug abuse, and mental health problems among homeless persons: A review of the literature, 1980–1990*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.
- Flynn, L. (1997). The health practices of homeless women: A causal model. *Nursing Research*, *46*, 72–77.
- Friedman, S., Des Jarlais, D., & Sotheran, J. (1986). AIDS health education for intravenous drug users. *Health Education Quarterly*, *13*, 383–393.
- Gelberg, L. (1993). Conducting research on the health of homeless persons. In M. J. Bass, E. V. Dunn, P. G. Norton, & S. M. Tudiver (Eds.), *Conducting research in the practice setting* (pp. 197–209). Newbury Park, CA: Sage.
- Gelberg, L., & Linn, L. S. (1989). Psychological distress among homeless adults. *Journal of Nervous & Mental Disease*, *177*, 291–295.
- Hodnicki, D. R., Horner, S. D., & Boyle, J. S. (1992). Women's perspectives on homelessness. *Public Health Nursing*, *9*, 257–262.
- Ingram, K. M., Corning, A. F., & Schmidt, L. D. (1996). The relationship of victimization experiences to psychological well-being among homeless women and low-income housed women. *Journal of Counseling Psychology*, *43*, 218–227.
- Jackson, M. P., & McSwane, D. Z. (1992). Homelessness as a determination of health. *Public Health Nursing*, *9*, 185–192.
- Jalowiec, A., Murphy, S. P., & Powers, M. J. (1984). Psychometric assessment of the Jalowiec coping scale. *Nursing Research*, *33*, 157–161.
- Koegel, P., Burnam, M. A., & Farr, R. K. (1988). The prevalence of specific psychiatric disorders among homeless individuals in the inner city of Los Angeles. *Archives of General Psychiatry*, *45*, 1085–1092.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Levine, I. S., & Huebner, R. B. (1991). Homeless persons with alcohol, drug, and mental disorders. *American Psychologist*, *46*, 1113–1114.
- McCarty, D., Argeriou, M., Huebner, R. B., & Lubran, B. (1991). Alcoholism, drug abuse, and the homeless. Special issue: Homelessness. *American Psychologist*, *46*, 1139–1148.
- Merves, E. S. (1992). Homeless women: Beyond the bag lady myth. In M. J. Robertson & M. Greenblatt (Eds.), *Homelessness: A national perspective. Topics in social psychiatry* (pp. 229–244). New York: Plenum Press.
- Neaigus, A., Friedman, S., Curtis, R., Des Jarlais, D., Furst, R., Jose, B., Mota, P., Stephenson, B., Sufian, M., & Ward, T. (1994). The relevance of drug injectors sexual and risk networks for understanding and preventing HIV infection. *Social Science and Medicine*, *38*, 67–78.
- Newcomb, M. D. (1994). Drug use and intimate relationships among women and men: Separating specific from general effects in prospective data using structural equation models. *Journal of Consulting and Clinical Psychology*, *62*, 463–476.
- North, C. S., Thompson, S. J., Pollio, D. E., Ricci, D. A., & Smith, E. M. (1997). A diagnostic comparison of homeless and nonhomeless patients in an urban mental health clinic. *Social Psychiatry & Psychiatric Epidemiology*, *32*, 236–240.
- Nyamathi, A., Bennett, C., Leake, B., & Chen, S. (1995). Social support among impoverished women. *Nursing Research*, *44*, 376–378.
- Nyamathi, A., Flaskerud, J., & Leake, B. (1997). HIV-risk behaviors and mental health characteristics among homeless or drug-recovering women and their closest sources of social support. *Nursing Research*, *46*, 133–137.
- Nyamathi, A., Stein, J. A., & Bayley, L. J. (1999). *Predictors of mental distress and poor physical health among women*. Manuscript submitted for publication.
- Nyamathi, A., Stein, J. A., & Brecht, M. L. (1995). Psychosocial predictors of AIDS risk behavior and drug use behavior in homeless and drug addicted women of color. *Health Psychology*, *14*, 1–9.
- Rhoads, D. L. (1983). A longitudinal study of life stress and social support among drug abusers. *The International Journal of the Addictions*, *18*, 195–222.
- Ross, M. W., Wodak, A., & Gold, J. (1992). Sexual behavior in injecting drug users. *Journal of Psychology and Human Sexuality*, *5*, 89–104.
- SAS Institute. (1988). *SAS procedures guide, release 6.03 edition*. Cary, NC: SAS Institute Inc.
- Smith, E. M., North, C. S., & Spitznagel, E. L. (1993). Alcohol, drugs, and psychiatric comorbidity among homeless women: An epidemiologic study. *Journal of Clinical Psychiatry*, *54*, 82–87.
- Solarz, A., & Bogat, G. A. (1990). When social support fails: The homeless. *Journal of Community Psychology*, *18*, 79–95.
- Stein, J. A., & Gelberg, L. (1995). Homeless men and women: Differential associations among substance abuse, psychosocial factors, and severity of homelessness. *Experimental and Clinical Psychopharmacology*, *3*, 75–86.

- Stein, J. A., & Gelberg, L. (1997). Comparability and representativeness of clinical homeless, community homeless, and domiciled clinic samples: Physical and mental health, substance use, and health services utilization. *Health Psychology, 16*, 155–162.
- Stowe, A., Ross, M., Wodak, A., Thomas, G., & Larson, S. (1993). Significant relationships and social supports of injecting drug users and their implications for HIV/AIDS services. *AIDS Care, 5*, 23–33.
- Thrasher, S. P., & Mowbray, C. T. (1995). A strengths perspective: An ethnographic study of homeless women with children. *Health & Social Work, 20*, 93–101.
- Tucker, M. B. (1982). Social support and coping: Applications for the study of female drug addicts. *Journal of Social Issues, 38*, 117–137.
- Weinreb, L. F., & Bassuk, E. L. (1990). Substance abuse: A growing problem among homeless families. *Family Community Health, 13*, 55–64.
- Wood, D., Valdez, B., Hayashi, T., & Shen, A. (1990). Homeless and housed families in Los Angeles: A study comparing demographic, economic, and family function characteristics. *American Journal of Public Health, 80*, 1049–1052.