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Afton Jackson
Morehead State University, a.jackson@moreheadstate.edu

Lisa Shannon
Morehead State University

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EXAMINING SOCIAL SUPPORT IN A RURAL HOMELESS POPULATION

AFTON JACKSON* and LISA SHANNON

MOREHEAD STATE UNIVERSITY

ABSTRACT**

The purpose of this study was to examine factors associated with social support in a rural, homeless population. Ninety-six (N= 96) individuals voluntarily agreed to participate in an evaluation examining effectiveness of enhanced substance use and mental health services provided to homeless individuals. The primary variables of interest were: demographics, substance use, mental and physical health, and social support. We used bivariate analyses to examine the sample using two different indicators of past-thirty-day social support: (1) family/friend social support [no support/support] and (2) self-help group social support [no support groups/support groups]. We used two multivariate logistic regressions to examine the relationships between explanatory variables (demographics, substance use, and health) and the dependent variable social supports (i.e., family/friend support and self-help group support). Significant predictors of receiving family/friend social support were education and nonreligious self-help group attendance. Factors significantly associated with self-help group attendance were marital status, education, anxiety, and family/friend support. Although strides have been taken to increase resources among homeless individuals, efforts should continue, including assessments to identify those efforts that are most effective.

Homelessness remains a major problem within the United States today. In 2011, the nation's homeless population consisted of 636,017 people (National Alliance to End Homelessness 2012). Between October 2009 and September 2010, more males (62%) than females (38%) were homeless; 41.6 percent of the homeless population was white, 37.0 percent was black, and 6 percent was Hispanic (Substance Abuse and Mental Health Services Administration (SAMHSA) 2011). "Homelessness is basically caused by the inability of people to pay for housing; thus it is impacted by

*Corresponding Author. 710 W. High St., Lexington, KY 40508, Phone: 859-233-4600 ext. 1253, Fax: 859-244-2219; Email: a.jackson@moreheadstate.edu.

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both income and the affordability of available housing” (National Alliance to End Homelessness 2012: Economic Factors section). Some researchers have considered the determinants of homelessness to be macro- (structural) and/or micro-level (individual vulnerabilities) influences (Lee, Tyler, and Wright 2010). Macro-level influences refer to housing conditions (lack of affordable housing); economics (unemployment, poverty); and programmatic changes (changes in housing, mental health, and welfare program administration) (Lee et al. 2010; National Coalition for the Homeless (NCH) 2007a). Examples of micro-level influences include: childhood exposures to physical, sexual, or substance abuse; childhood neglect; domestic violence; mental illness; and death of a spouse (Lee et al. 2010; NCH 2007a). Point prevalence estimates, which are an assessment of the number of current cases, new and preexisting, of a certain disease/condition at a specified point in time, for January 2010 revealed that 26.2 and 34.7 percent of homeless individuals residing in shelters had mental health and substance use issues, respectively (SAMHSA 2011).

The definition of homelessness varies throughout the literature (Toro et al. 2007). Sometimes, homelessness means those who are literally homeless (e.g., living on the streets or in shelters); it may also mean those who are precariously housed (e.g., living with family or friends) (Toro et al. 2007). Therefore, some individuals who are actually homeless may be unaccounted for depending on what definition is used. Consequently, obtaining a true estimate of homelessness is difficult.

RURAL HOMELESSNESS

Rural homelessness accounts for about 7 percent of total homelessness (National Alliance to End Homelessness 2010). Rural homelessness is a unique problem; and when trying to define rural homelessness, the issue becomes more complex. In comparison to urban areas, rural areas are faced with fewer job opportunities, lower wages, and longer periods of unemployment (Bread for the World Institute 2005). Furthermore, many rural areas lack shelters. More specifically, “there are far fewer shelters in rural areas than in urban areas; therefore, people experiencing homelessness are less likely to live on the street or in a shelter and more likely to live in a car or camper, or with relatives in overcrowded or substandard housing” (NCH 2007b: Definitions and Demographics section). Therefore, to accurately capture and depict rural homelessness, the definition needs to be less restrictive; meaning it should not comprise only those who live in shelters or on the streets, because such a definition would not provide a true representation of rural homelessness (NCH 2007b).

In 2005, the odds of experiencing poverty were much higher (1.2-2.3) for nonmetropolitan dwellers than for their metropolitan counterparts (NCH 2007b). In 2009, nearly eight million rural dwellers lived below the poverty threshold (National Law Center on Homelessness and Poverty 2011). The macro-level factors associated with rural homelessness are similar to those of urban homelessness: poverty and scarcity of affordable homes (NCH 2007b). Other issues that are unique to rural homelessness are: substandard housing, reduction in federal housing funds, increases in rent, lack of public transportation, and extensive distances between affordable housing and employment (Robertson et al. 2007). Some barriers to services for the rural homeless are: limited collaboration among providers, privacy concerns, absence of outreach, and limited number of providers (Knopf-Amelung 2013).

Another factor that makes understanding rural homelessness an important and understudied area is the growing number of returning veterans who live in these areas. Nearly one third (32%) of veterans reside in rural areas (National Coalition for Homeless Veterans n. d.). Between 50 and 70 percent of homeless veterans have severe mental illnesses and substance abuse issues, respectively (National Coalition for Homeless Veterans n. d.). Lack of affordable housing, income, access to healthcare, and social networks all contribute to homelessness among veterans (National Coalition for Homeless Veterans n. d.).

Rural Homelessness in Kentucky

On any given night in January 2010, 6,623 Kentucky residents were homeless (Institute for Children, Poverty, and Homelessness (ICPH) 2011). More than 9,000 residents were precariously housed (ICPH 2011). Problems faced by the homeless in rural Kentucky are a lack of affordable healthcare and transportation and mental illness and/or addiction disorders (Hillman and Nagy 2008). Furthermore, there is extremely limited funding for homeless services in rural Kentucky (Corporation for Supportive Housing 2004). In 2010, the poverty rate for rural Kentucky was 22.9 percent, compared with 16.1 percent for the state's urban areas (Rural Assistance Center 2012).

Homelessness in rural Appalachia is a specific concern for Kentucky given high rates of unemployment and the economic distress associated with this region. Based on information from the Appalachian Regional Commission (ARC 2011), two-thirds of the counties in rural Appalachia have unemployment rates higher than the national average. Further, in 2009, per capita income for residents in rural Appalachia was 25 percent lower than the national average (ARC 2011). Based on

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2013 ARC classifications, 40 of Kentucky's 54 Appalachian counties were categorized as economically distressed based on the three-year unemployment rate, per capita market income, and the poverty rate compared with national averages (ARC 2013).

Often, homelessness co-occurs with several issues related to substance use, health, and social support (Caton, Wilkins, and Anderson 2007; Eberle, Kraus, Serge, and Hulchanski 2001; Portland Rescue Mission 2011; Rog and Buckner 2007). This paper will explore the relationship between homelessness and such issues.

DEFINING SOCIAL SUPPORT

Depending on the study, the definition of social support varies. As noted in Langford et al. (1997), other researchers have defined social support "as the assistance and protection given to others, especially to individuals" (p. 95). Social support has also been defined as "those interactions in which one individual or group directly provides another individual with a sense of connection, resources, and/or affirmation" (Bates and Toro 1999:139).

Social support may be received from family, friends, colleagues, or healthcare personnel (Laakso and Paunonen-Ilmonen 2002). Social support has been described as functional ("offering emotional, tangible, or informational support") or structural ("marital status, size of support network, or frequency of social interaction"; Callaghan and Morrissey 1993:203). Thus, functional support can be viewed as the quality of the support system, while structural support may be viewed as the quantity of the support system. A substantial amount of research suggests that the quality, rather than the quantity, of the social network is more beneficial to health outcomes (Letvak 2002; Uchino 2006; Vandervoot 1999). Furthermore, various studies show that even the perception of available support impacts health (Sarason, Sarason, and Gurung 2001). Support has also been classified by the type (general/specific) and the source (friends/family) (Groh et al. 2007).

Social support may be gained through social capital. Paraphrasing the literature reviewed by Islam et al. (2006), social capital is a type of social organization resulting from mutual exchanges between members in a social network working to attain collective goals. Social capital may be cognitive (attitudes, beliefs, trust) or structural (civic involvement or size of network). Therefore, "social capital is a source of social support because network members' resources are drawn [sic] for various supportive purposes" (Song, Son, and Lin 2011:119). Social capital offers aid in the form of information, influence, social credentials, and reinforced identity (Lin

2001). One environment where the homeless may find support is in a public library. Libraries provide information on job opportunities, public transportation, legal and social services, and educational opportunities; which could potentially lead to housing. In fact, some public libraries offer counseling services provided by social workers, while other libraries partner with community agencies to offer computer and language classes and resume seminars (Anderson, Simpson, and Fisher 2012). Moreover, libraries can help homeless patrons build social capital (Goulding 2004) through interactions with library staff and other patrons and have even provided senses of identity and belonging (Hodgetts et al. 2008). As a result, public libraries can be an important source of informational support for the homeless.

SOCIAL SUPPORT IN SELF-HELP GROUPS

Social support and capital may also be gained through self-help groups. For example, group members may mutually depend on one another for information on substance use moderation/abstinence techniques or trust each other as accountability partners. Self-help groups are “non-professional, peer-operated organizations devoted to helping individuals who have addiction-related problems” (Humphreys et al. 2004:151). Self-help groups, also called mutual support groups, are free of charge (Humphreys et al. 2004). Groups consist of people who share the same problem and also give and receive help for overcoming that problem (Humphreys et al. 2004). Self-help organizations vary in several ways including diversity among membership, philosophy, size, methods, governance, and administrative traditions (Humphreys et al. 2004). Examples include Alcoholics Anonymous (AA), Narcotics Anonymous (NA), Dual Diagnosis Anonymous, Secular Organizations for Sobriety, Self Management and Recovery Training (SMART), and Women for Sobriety. Self-help organizations are not considered formal treatment; however, they can be very beneficial for long-term support for addiction recovery. Meetings may be open to the public or closed to alcoholics/addicts or people with a substance use problem (NA 2008). In fact, weekly self-help group attendance significantly predicted emotional support among a sample of NA members (Toumbourou et al. 2002).

SOCIAL SUPPORT IN RURAL AREAS

“Relationships in traditional rural communities are often perceived as embedded in networks of close personal ties that govern every aspect of an individual’s life” (Hofferth and Iceland 1998:574). Hofferth and Iceland (1998) examined social capital in rural and urban communities and found that individuals living in rural

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areas were more likely to have family-only exchanges than those living in an urban environment. Among those participants with parents residing nearby, individuals living in rural areas were more likely to both provide to and obtain help from parents when compared with those living in an urban area. However, in another study, living in a rural area was not associated with either form of help (Amato 1993). In that same study, there were frequent exchanges (giving and receiving) with both family and friends in urban areas. Thus, given the contradiction among studies, further assessment of the dynamics of and differences in social support in rural and urban areas is needed.

Social support in rural areas may be displayed through giving and receiving food (Garasky, Morton, and Greder 2006). In fact, past research has shown rural dwellers are more inclined to give and receive food; like fish, meat, and produce; to and from family and friends than urban dwellers (Morton et al. 2008). More specifically, urban dwellers were more likely to use redistributive exchanges to obtain food (e.g., use of public services, such as food banks or food stamps), while rural dwellers were more likely to use reciprocal exchanges to get food (e.g., mutual exchanges of goods and services). Mutual exchanges can occur between family, friends, neighbors, coworkers, church members, and others. Therefore, reciprocity may be a way for individuals to build social capital. Older adults residing in rural areas have regarded food sharing as a way to remain active in their families and communities (Quandt et al. 2001). Moreover, food sharing is a means for strengthening social bonds (Quandt et al. 2001). Furthermore, support for the rural homeless may be exhibited through various services. Services have included mobile outreach units, employment and/or educational programs, childcare centers, supportive housing, and treatment (Robertson et al. 2007). Besides providing housing, supportive housing programs like Housing First offer support services such as life skills, case management, recreational activities, and crisis management (Cohen et al. 2004).

SOCIAL SUPPORT AND SUBSTANCE ABUSE

The effect of social support on substance-using behaviors can be beneficial. Groh et al. (2007) found that general support from friends was significantly associated with reduced alcohol consumption among Oxford House residents. A longitudinal study conducted by Kaskutas, Bond, and Humphreys (2002) revealed that participants receiving support through Alcoholics Anonymous averaged fewer alcohol dependence symptoms than those who did not receive support. In an analysis of social support after inpatient substance abuse treatment, participants

with negative social contacts had increased odds of relapsing, while those with positive support had reduced odds of substance use (Broome, Simpson, and Joe 2002; Ellis et al. 2004). A low level of social support has been associated with a higher severity of substance abuse (Dobkin et al. 2001).

SOCIAL SUPPORT AND PHYSICAL/MENTAL HEALTH

Not only does social support impact substance-using behaviors, but it also affects both mental and physical health. The association between social support and various aspects of health has been studied extensively. Research suggests positive effects on mental health associated with receiving social support (Dobkin et al. 2001). A low level of social support has been linked to depression and stress (Dobkin et al. 2001). In Vandervoot's analysis (1999), isolation was associated with both depression and hostility. In that same analysis, dissatisfaction with support systems was associated with major physical health problems such as heart attacks, hypertension, and diabetes; as well as a higher severity and frequency of physical symptoms (e.g., cold, flu, headache, infection). Social support has been shown to decrease depressive and psychiatric symptomatology (Calsyn and Winter 2002). One's physical health may also improve from receiving social support. As mentioned in Uchino (2006), existing literature supports relationships between social support and improvements in cardiovascular and immune functions.

Given the extensive literature related to the influence of social support on physical and mental health as well as substance use, the purpose of this study was to examine the relationship between social support in a rural homeless population with substance use issues, mental and/or physical health issues, or co-occurring issues. While most of the extant research focuses on the impact of social support on factors such as mental/physical health and substance use, an important contribution to the literature may also be to understand how these individual level characteristics influence one's level of social support. Figure 1 (see next page) depicts a conceptual model of the proposed relationship among social/demographic characteristics, contextual factors, and social support. We hypothesized that substance use, as well as mental and/or physical health issues-which are prevalent among individuals struggling with homelessness-might be critical influences on the individual's level of social support.

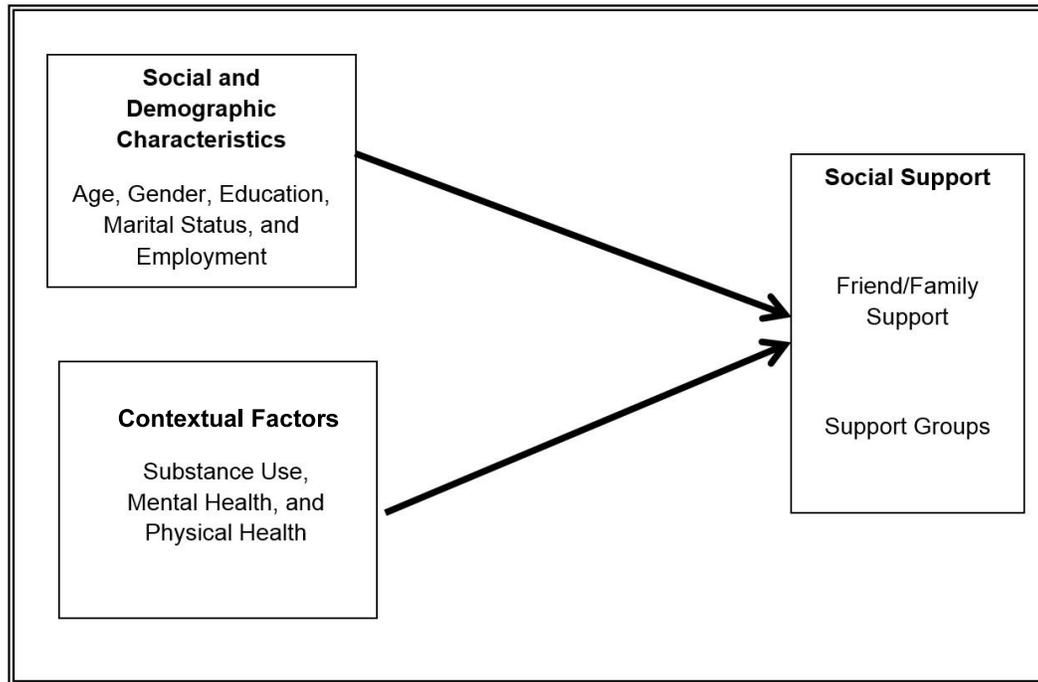


FIGURE 1. CONCEPTUAL FRAMEWORK

METHODS

Participants

Ninety-six (N=96) individuals voluntarily agreed to participate in an evaluation study of the Community Action Council for Lexington-Fayette, Bourbon, Harrison, and Nicholas Counties, Inc. of Kentucky (the Council) program to provide comprehensive treatment services to homeless individuals and families. The Council partners with the Bluegrass Regional Mental Health Mental Retardation Board (Bluegrass) to provide treatment services as part of a Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Treatment (CSAT) project for adults who are homeless (including the chronically homeless) and who also have substance abuse disorders, mental disorders, or co-occurring substance abuse and mental disorders.

Measures

The CSAT Government Performance and Results Act (GPRA) tool was used to measure the primary variables of interest: social support, substance use, mental health, physical health, and demographic characteristics (Mulvey et al. 2005).

GPRA was used as part of the requirement for receiving SAMHSA CSAT funding. The information below details the GPRA questions.

Demographics

Social and demographic information; such as age, gender, and marital status; was collected using questions from the CSAT GPRA data collection tool.

Social Support

Using the CSAT GPRA tool, social support was measured using two indicators. The first indicator of social support was family/friend interaction, namely the question: In the past 30 days, did you have interaction with family and/or friends who are supportive of your recovery? Responses were coded as: 0 = no family/friend support and 1 = yes family/friend support. The second indicator of social support was self-help group attendance, which was measured using the following questions: 1) How many times [in the past 30 days] did you attend any voluntary self-help groups for recovery that were not affiliated with a religious or faith-based organization?; 2) How many times [in the past 30 days] did you attend any religious/faith-affiliated recovery self-help groups?; and 3) How many times [in the past 30 days] did you attend meetings of organizations that support recovery other than the organizations described above? To gain an overall measure of self-help group attendance, the number of self-help groups attended; whether religious, non-religious, or other; was summed for each participant. Overall group attendance was recoded into a nominal variable (0 group attendances in the past 30 days = no self-help group support in past 30 days (coded as 0); 1 or more group attendances in the past 30 days = yes self-help group support in past 30 days (coded as 1)).

Substance Use

Information on substance use was collected via the Addiction Severity Index – 5th edition (ASI) (McLellan et al. 1985; McLellan et al. 1992) and the CSAT GPRA instrument (Mulvey et al. 2005). The ASI has been shown to have good internal consistency and reliability (Leonhard et al. 2000). Collectively, these two instruments provided information on past-six-month and past-thirty-day use of alcohol as well as on illegal/illicit substance use including: marijuana, cocaine, crack cocaine, opiates, benzodiazepines, other tranquilizers, methamphetamine, other amphetamine, inhalants, and hallucinogens. Participants were asked if they had ever used each class of substance and if so, how many days in the past six months they had used each class of substance. Responses ranged from 0-180 days. If the six-

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month question was affirmative, participants were then asked the number of days in the past 30 days they had used each class of substance. Responses ranged from 0-30 days. Past-six-month and past-thirty-day substance use were examined both as continuous and dichotomous variables. Responses were dichotomized for use in the past six months (0 days = no; 1-180 days = yes) and use in the past 30 days (0 days = no; 1-30 days = yes).

Mental Health

To measure mental health, the following questions were used: 1) In the past six months, not due to your use of alcohol or drugs, how many days have you experienced serious depression; and 2) In the past six months, not due to your use of alcohol or drugs, how many days have you experienced anxiety? Responses for both questions ranged from 0 to 180. If the six-month question was affirmative, participants were then asked the number of days in the past 30 days they had experienced depression and/or anxiety. Responses ranged from 0 to 30 days. Depression and anxiety were examined separately.

Physical Health

Physical health was measured with the question: How many days have you experienced medical problems in the past 30 days (i.e., flu, colds, alcohol and/or substance-use related conditions like cirrhosis of liver or boils from needles, etc.)? Responses ranged from 0-30 days. An interview response of 0 days was coded as no medical problems and responses of 1 or more days were coded as a presence of medical problems.

Procedure

The Morehead State University Institutional Review Board reviewed and approved study procedures. Referrals for the SAMHSA CSAT-funded project to provide services for homeless individuals and families came from various sources including the Council's own community centers in each county of service. Other sources of referrals included, but were not limited to: 1) ministerial associations and individual churches, 2) food banks, 3) correctional institutes and jails (although no services were provided here), 4) family and drug courts, and 5) the Veterans Administration Hospital.

Once a client enrolled in the grant-funded project, the Council's Family Development Specialist contacted the Morehead State University Research Assistant (RA; first author) to provide the client's contact information. The RA then

contacted the client about the evaluation study. Clients who agreed to participate in the study consented to: 1) participate in a face-to-face interview (conducted by the first author) and 2) allow researchers to use information in their Council and Bluegrass records to assess the services provided for the period that coincided with their participation in grant-funded services. Before the face-to-face interview, the RA explained the consent form. Participants were allotted ample time to ask questions and/or express any concerns. After the participant signed the consent form, the RA then asked the participant three short questions to ensure he/she understood what was explained in the consent form (capacity to consent). To add special protection for the information participants provided, a Certificate of Confidentiality was obtained from SAMHSA. Each interview lasted about one hour and was completed at a place (e.g., local library, fast food restaurant, or the Council or Bluegrass facilities) and time convenient for participants. Interviews were conducted between March 2009 and September 2012. Participants received no compensation for completing the baseline interview.

Study recruitment yielded a high participation rate; 94 percent of those approached for the study agreed to participate. Only six individuals approached for study participation refused to complete the baseline. The final sample size was 96.

Data Analysis

Bivariate statistics were used to examine social and demographic characteristics, mental and physical health, and substance use, as related to two indicators of social support status: family/friend social support (e.g., no social support vs. social support in the past 30 days) and support group attendance (e.g., no support group attendance vs. support group attendance in the past 30 days). Multivariate statistics (e.g., logistic regression) were used to examine the relationships among social support, health (mental and physical), and substance use in a rural, homeless population. Two logistic regression models were used. The first multivariate model examined social support as supportive interactions with family and friends. The second multivariate model examined social support as attendance in self-help groups. Both models are described below.

The first logistic regression focused on social support via the dependent variable of interaction with family and/or friends supportive of recovery in the past 30 days (0 = no social support in the past 30 days; 1 = social support in past 30 days). The independent variables were selected according to those identified in existing literature (i.e., age, gender, marital status, and education) and those statistically significant according to bivariate analyses (e.g., number of nonreligious self-help

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groups attended in the past 30 days, number of days of opiate use in the past six months, number of days of illegal drug use in the past six months, and number of days of benzodiazepine use in the past 30 days). Age, past-thirty-day nonreligious self-help group attendance, past-six-month opiate use (range 0-180 days), past-six-month illegal drug use (range 0-180 days), and past-thirty-day benzodiazepine use (range 0-30 days) were continuous variables. Categorical variables were: gender (male (reference); female), marital status (married (reference); never married/cohabiting; other), and education (less than high school (reference); high school diploma/GED; some college or more).

The second logistic regression examined social support via self-help group attendance (dependent variable), health, and substance use. The independent variables were selected based on extant evidence linking certain demographics to social support (i.e., age, gender, marital status, and education) and on our bivariate analysis identifying variables significantly associated with group attendance (past-six-month cocaine use, past-six-month depression, past-six-month anxiety, past-thirty-day marijuana use, past-thirty-day opiate use, past-thirty-day depressive symptoms, past-thirty-day anxiety symptoms, and past-thirty-day family/friend interaction). To achieve a parsimonious model, the past-six-month depression and anxiety variables were not included. The dependent variable was measured on a 30-day scale and retaining the past-thirty-day mental health variables instead was more practical for achieving model-fit goals. Age, past-six-month cocaine use (range 0-180 days), past-thirty-day marijuana use (range 0-30 days), past-thirty-day opiate use (range 0-30 days), past-thirty-day depressive symptoms (range 0-30), and past-thirty-day anxiety symptoms (range 0-30 days) were continuous variables. Categorical variables were: gender (male (reference); female), marital status (married (reference); never married/cohabiting; other), and education (less than high school (reference); high school diploma/GED; some college or more).

RESULTS

Social Support: Family and Friend Support

On average, participants were about 36 years old (35.6 years; SD= 11.2). The sample was mostly female (74%). Nearly half the sample reported a marital status of separated, divorced, or widowed (47%). More than three fourths of the sample reported that they were unemployed (80%). There was a significant association between education and family/friend social support status ($\chi^2 = 9.969, p = .007$). More specifically, among those reporting they had received a high school diploma or equivalent, significantly more also reported receiving social support from

family/friends in the past 30 days (social support: 68% vs. no social support: 32%; $z = -3.31, p < .001$). Likewise, among those who reported an education level of some college or more, significantly more also reported receiving social support from family/friends (social support: 80% vs. no social support: 20%; $z = -4.65, p < .001$).

Substance use and mental health in the past six months were examined in relation to family/friend social support status. Over half (54%) of the sample reported using alcohol for an average of 28 days in the past six months. A significant association existed between illegal drug use and family/friend social support. Participants who received family/friend support in the past 30 days used illegal drugs for about 60 days in the past six months in comparison to an average of 24 days among participants who did not receive family/friend social support ($t(25.582) = -2.308; p = .029$). A significant relationship also existed between opiate use and family/friend support. Specifically, among those reporting use of illegal opiates in the past six months, significantly more reported receipt of family/friend social support (84%), while only 16 percent of those reporting no support reported illegal opiate use ($\chi^2 = 3.990; p = .046$). There were no significant differences in proportions reporting use in the past six months or in the number of days used in the past six months for: marijuana, cocaine, crack cocaine, or benzodiazepines.

Past-thirty-day substance use, support group attendance, and health were also examined in relation to family/friend support status. Results showed that slightly more than one-third (34%) of participants reported alcohol use in the past 30 days. There was a significant association between benzodiazepine use in the past 30 days and family/friend social support. Those who received family/friend support averaged more days of benzodiazepine use than those who did not receive support (3 days vs. 1 day; $t(4.000) = -6.532; p = .003$). There were no significant differences in proportions reporting use in the past 30 days or in the number of days of use in the past 30 for: alcohol, illegal drugs, marijuana, cocaine, crack cocaine, or opiates.

A significant association was also found between nonreligious self-help group attendance and support status. Slightly less than one-tenth of participants (9%) reported that they attended religious/faith affiliated self-help groups, and about 19 percent attended other meetings that supported recovery. Among participants who reported attending nonreligious self-help groups in the past 30 days, significantly more also reported receiving social support from family and/or friends (social support: 94% vs. no social support: 6%; $\chi^2 = 16.793; p < .001$).

Of all participants, the majority reported that they had experienced depression (63%) and/or anxiety (72%) in the past 30 days. On average, participants reported experiencing depression and/or anxiety for about 21 days in the 30 days preceding

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the baseline interview. Sixty percent (60%) reported that they had experienced some type of medical problem for about 21 days.

Table 1 displays the Model 1 logistic regression results of factors predicting social support measured by family/friend support. The predictors explained 43 percent of the variance (Nagelkerke $R^2 = .434$). Results revealed significant associations between two predictors and family/friend support. In comparison to participants with less than a high school education, participants with an education level of some college or more had more than four times the odds of receiving social support in the past 30 days (OR = 4.41; 95% CI = 1.05-19.42; $p = .049$). In addition, as the number of nonreligious self-help group attendances increased, there was an associated increase in the odds of receiving social support (OR = 1.96; 95% CI = 1.11-3.47; $p = .021$).

Social Support: Self-help Group Attendance

Demographics were again assessed examining for between-group differences for social support as measured by self-help group attendance (i.e., no support groups vs. support groups). Please see the section above for the overall sample demographics. There was a significant association between education and support group status ($\chi^2 = 9.922$, $p = .007$) when examining social support measured by self-help group attendance. More specifically, among those reporting less than a high school education, significantly more also reported that they had not attended any type of self-help group in the past 30 days (84%) compared with those who attended support groups (16%; $z = 4.81$, $p = .001$). There were no other significant between-group differences on: age, gender, marital status, or employment.

When substance use in the past six months was examined in relation to self-help group status, a significant relationship existed between cocaine use and self-help group status. Examining participants who reported cocaine use in the past six months, those who attended support groups reported significantly more days of cocaine use than did participants who did not attend support groups (134 days vs. 19 days; $t(4) = -3.392$; $p = .027$). There were no other significant differences in proportions reporting use in the past six months or in the number of days used in the past six months for: alcohol, illegal drugs, marijuana, crack cocaine, opiates, or benzodiazepines.

Examining substance use and mental health in the past 30 days in relation to support group status identified a significant association between marijuana and opiate use and support group attendance. Among participants reporting marijuana use, significantly more reported no support group attendance in the past 30 days

(TABLE 1. LOGISTIC REGRESSION MODEL 1 - FACTORS PREDICTING FAMILY/FRIEND SUPPORT ($N = 96$).

PREDICTOR	B	OR	95% CI	<i>p</i>
Age	0.00	0.99	0.95-1.05	.908
Gender				
Male (reference)	-	-	-	
Female	0.64	0.92	0.32-3.58	.917
Marital status				
Married (reference)	-	-	-	
Never married/Cohabiting	-1.37	0.25	0.18-3.66	.314
Other (separated; divorced; widowed)	0.30	1.35	0.40-4.57	.627
Education				
Less than high school graduation (reference)	-	-	-	
GED / HS graduate	0.98	2.67	0.73-9.81	.140
Some college or more	1.49	4.41	1.05-19.42	.049*
Nonreligious self-help groups	0.68	1.96	1.11-3.47	.021*
Past six month illegal opiate use	0.42	1.04	0.99-1.09	.059
Past six month illegal drug use	-0.01	0.99	0.96-1.02	.624
Past thirty day benzodiazapine use	0.32	1.38	0.39-4.81	.618

NOTE: * $p \leq .05$

72%) compared with those who attended support groups (28%; Fisher's exact $p = .05$). A similar trend emerged for opiate use. Among participants reporting opiate use, significantly more reported no support group attendance in the past 30 days (86%) compared with those who attended support groups (14%; Fisher's exact $p = .02$). For the remainder of the substance use variables (alcohol, illegal drugs, cocaine, crack cocaine, and benzodiazepines), there were no significant differences in the proportions reporting use in the past 30 days and number of days used in the past 30 between groups.

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Significant relationships were observed between mental health and self-help group attendance. Among participants reporting depressive symptoms, significantly more reported no self-help group attendance in the past 30 days (70%) compared with those who had attended self-help groups (30%; $\chi^2 = 8.960$; $p = .003$). In addition, participants who reported no self-help groups averaged more days of depressive symptoms (24 days) than did participants who had attended self-help groups (16 days; $t(58) = 2.772$; $p = .007$). Similar findings were observed when anxiety was assessed. Among participants reporting anxiety symptoms, significantly more reported no self-help group attendance in the past 30 days (67% no self-help group attendance vs. 33% self-help group attendance; $\chi^2 = 7.010$; $p = .008$). In comparison to participants who had attended self-help groups in the past 30 days, those who did not attend averaged more days of anxiety symptoms (24 days vs. 14 days; $t(67) = 3.817$; $p < .001$). Significant relationships were also identified between family/friend support and self-help group attendance. Among participants reporting family/friend support, significantly more reported self-help group attendance (56% group attendance vs. 44% no group attendance; $\chi^2 = 15.744$; $p < .001$).

Table 2 displays the Model 2 logistic regression results of factors predicting social support measured by self-help group attendance. The predictors explained 56 percent of the variance in group attendance (Nagelkerke $R^2 = 0.555$). Five relationships were statistically significant. First, those who were separated, divorced, or widowed were associated with reduced odds of attending self-help groups (OR = 0.17; 95% CI = 0.04-0.75; $p = .019$). In comparison to participants with less than a high school education, those with a GED/high school diploma had seven times the odds of attending some type of self-help group (OR = 7.2; $p = .03$), while those with some college education or more were associated with 12 times the odds of attending a self-help group (OR = 12.4; $p = .013$). Anxiety was negatively associated with self-help group attendance; suggesting that reduced odds of attending self-help groups were associated with an increased number of days of anxiety symptoms among participants (OR = 0.92; $p = .005$). Family/friend interaction was positively associated with self-help group attendance. Participants reporting interaction with family/friends demonstrated increased odds of attending self-help support groups (OR = 6.8; $p = .005$).

DISCUSSION

This study sought to examine predictive factors associated with two types of social support (family/friends support and self-help group support) among a

TABLE 2. LOGISTIC REGRESSION MODEL 2 - FACTORS PREDICTING SELF-HELP GROUP ATTENDANCE ($N = 96$).

PREDICTOR	B	OR	95% CI	<i>p</i>
Age	0.03	1.03	0.97-1.09	.366
Gender				
Male (reference)	-	-	-	
Female	-0.14	0.87	0.21-3.53	.843
Marital status				
Married (reference)	-	-	-	
Never married/Cohabiting	-0.49	0.61	0.06-6.11	.675
Other (separated; divorced; widowed)	-1.80	0.17	0.04-0.75	.019*
Education				
Less than high school graduation (reference)	-	-	-	
GED / HS graduate	1.97	7.18	1.27-40.59	.026*
Some college or more	2.52	12.39	1.71-89.64	.013*
Past six month cocaine use	0.01	1.01	0.98-1.04	.471
Past thirty day marijuana use	0.00	1.00	0.85-1.18	.982
Past thirty day illegal opiate use	-0.01	0.99	0.76-1.30	.967
Past thirty day depression	-0.02	0.98	0.93-1.03	.429
Past thirty day anxiety	-0.08	0.92	0.87-0.98	.005**
Family / Friend interaction	1.92	6.80	1.81-25.57	.005**

NOTE: * $p \leq .05$, ** $p \leq .01$

population of homeless individuals receiving substance abuse and mental health services funded as part of a federal grant. Overall, findings from this study suggest that education and nonreligious self-help groups may be important factors in predicting family/friend social support. More specifically, a higher educational level (some college or more) and attending nonreligious self-help groups (e.g., NA/AA)

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were associated with increased odds of receiving family/friend support. The link between education and social support may be due to the notion that a higher level of education better equips an individual to not only seek out supportive relationships, but maintain them as well. It was not surprising that attending self-help groups like NA or AA was linked to increased odds of receiving social support. As covered earlier in the manuscript, self-help groups are one way in which people receive support.

When examining self-help group attendance as an indicator of social support, findings from this study suggest important predictive factors are marital status, education, mental health (anxiety), and family/friend support. Education (GED/HS graduate and some college or more) was associated with increased odds of attending self-help groups while marital status (separated/divorced/widowed) was associated with decreased odds of attending support groups. The support provided by self-help groups may not be the support needed by widowed or divorced participants; and thus, these participants have sought or found support from other means. Homelessness is a pervasive issue. Homeless individuals not only face problems with obtaining stable housing, but they also experience challenges like unemployment, lack of education, broken relationships with family/friends, and diminished health. Therefore, being homeless and without a partner may necessitate an increased level of support that is simply not possible in a self-help group setting. The significant association identified between family/friend support and self-help group attendance suggests that the participants used multiple types of support. This finding may also suggest that different types of social support are interdependent. That is, having one type of social support (e.g., friends/family) can lead to other types (e.g., support groups). These findings are consistent with the literature on social capital, which suggests individuals have mutual exchanges to work toward a common goal. Family/friends may encourage participants to attend self-help support groups; thus, increasing the likelihood of establishing a broad array of social support and social capital for the participant.

This study failed to detect associations between certain demographic characteristics (i.e., age and gender), and either social support dependent variable (henceforth called simply 'social support') which have been shown in the extant literature as important. There was no association between age and social support. Although we did not measure the size of the individual's support network, social networks often decrease in size with age (Tyler 2006). Therefore, older participants may have had fewer social ties and were consequently less likely to receive support. This study also did not identify an association between gender and social support.

Although women may be more likely to receive social support from family and/or friends than men (Umberson et al. 1996), this may not necessarily be the case among homeless women (Anderson and Rayens 2004).

Implications

Although social support alone may not end homelessness, it may be one way of supplying homeless individuals with the motivation and resources needed to secure housing. Extensive policies and social resources are needed to eliminate homelessness. For example, policies that make housing available for individuals and/or families living in poverty is one way homelessness can be reduced (Burt 2001). "Housing is a basic human need that supports a person's inclusion in society and supports their physical, psychological, economic, and social well-being" (Australian Red Cross 2013: first paragraph). Providing affordable housing is particularly important for rural areas plagued by scarce job opportunities and shortages of affordable housing. Increasing financial support in rural communities in areas such as economic development and subsidized housing may offer promising ways to end homelessness. Economic development policies could be geared toward providing transportation, creating new/additional jobs with higher wages, training workers, and/or improving technology. Subsidized housing should not only be available, but should also be safe and livable; as sub par housing could contribute to homelessness.

"Housing often needs to be accompanied by supportive services, at least temporarily, but such services without a housing component cannot end homelessness" (Burt 2001:5). Supportive services could include alcohol/drug treatment, mental health counseling, job training/education, and primary care. Furthermore, not only does ameliorating the lives of homeless individuals help end homelessness, but prevention is crucial to ending homelessness as well. Prevention policies should effectively target individuals/families on the brink of becoming homeless if they do not receive assistance (Burt et al. 2005). Prevention strategies can be primary ("stopping someone from becoming homeless"), secondary ("ending homelessness quickly"), or tertiary (ending chronic homelessness) (Burt et al. 2005:xiii). Policies implemented to prevent homelessness include: "programs that negotiate with landlords and help with bad credit histories," "housing trust funds, rental assistance programs, and access to funds that can solve a household's short-term problems, such as paying back rent, security deposits, and other moving expenses," and "programs that help people develop personal and family financial

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management skills, establish or reestablish good credit and rental histories, and retain housing” (Burt 2001:5).

Social support among the homeless is typically limited, especially among homeless women and veterans (Anderson and Rayens 2004). For those who can access support, they sometimes find it in a service provider. Service providers are sometimes the main support figures and can offer quality support (Carton, Young, and Kelly 2010). However, not all support is satisfying. An unfriendly attitude of service providers has caused some homeless individuals to feel unworthy (Hersberger 2005). Feelings of unworthiness could cause some homeless individuals to forgo seeking needed services. This emphasizes the need for service providers to exhibit a positive and helpful attitude for homeless individuals to retrieve information that could help them get back on their feet.

Limitations

This study has several limitations that warrant discussion. One limitation of this study is that this rural Kentucky sample is not a representative sample of all rural areas. For example, in recent years, some areas of rural southeastern Kentucky have experienced a rise in opiate abuse (Hays 2004). Thus, the factors associated with social support in this study may not be applicable in all rural areas since the areas may not be homogeneous. Second, the participants in this study voluntarily agreed to participate. Thus, they may differ from those who did not participate. Further, we relied heavily on self-report data. While self-report data has been identified as a valid method for obtaining information (Sobell and Sobell 1992), participants may under-report behaviors in an interview setting. This may be particularly applicable given the target population and a fear of losing housing for reporting substance-using behaviors. It is also possible that, due to heavy drug and/or alcohol use as well as mental health issues, responses may be biased by limited memory or ability to recall information. Moreover, there is the issue of unmeasured factors, such as whether the support, particularly family/friend support, was positive or negative, which may be influencing the results. The findings related to more substance use among those receiving social support is a good example of the need to measure whether support is positive or negative, as this finding is inconsistent with past research on social support (Groh et al. 2007; Kaskutas, Bond, and Humphreys 2002). Moreover, negative support, in the form of a drug-using social network, has been linked to continued substance use (Gogineni, Stein, and Friedmann 2001; Schroeder et al 2001). One subpopulation of the rural homeless is veterans. We could not assess influences on social support among this subpopulation because the

present sample included only a small percentage of veterans (6.3%). Furthermore, there is a dearth of literature on rural homelessness (Robertson et al. 2007; Wodahl 2006). With this dearth comes a lack of assessment of the social and economic determinants of homelessness, which made it challenging to dive deeper into rural homelessness. Therefore, some studies referenced in this analysis are dated and may not reflect current rural homeless experiences. Moreover, some literature regarding social support was also dated; however, these studies serve as important background knowledge of the various ways in which social support may be demonstrated. In addition, the multivariate analyses were limited by the sample size ($N = 96$) and the power to detect small effect sizes. Finally, the cross-sectional nature of this study limits the ability to make causal inferences.

CONCLUSIONS

This research identified associations between nonreligious self-help groups, education, marital status, mental health, and social support in a homeless population. Although strides have been taken to increase resources among homeless individuals, these efforts should continue, including assessments to identify those efforts that are most effective.

AUTHOR BIOGRAPHIES

Afton Jackson, MPH, is a research assistant with Morehead State University's Department of Sociology, Social Work, and Criminology. She has been involved with substance use and mental health research for three years. She has published in peer-reviewed journals such as *Maternal and Child Health*, *International Journal of Mental Health and Addiction*, and *Women & Health*. Besides substance use and mental health, her research interests include chronic diseases, infectious diseases, and women's health. (Email: a.jackson@moreheadstate.edu).

Lisa Shannon, PhD, MSW, is an assistant professor in the Department of Sociology, Social Work, and Criminology at Morehead State University. Her research interests are in the areas of substance use/abuse, community-based treatment alternatives, victimization, and treatment-seeking behavior. She has published in peer-reviewed journals including *The American Journal of Drug and Alcohol Abuse* and *The American Journal on Addictions* on topics including: substance use/abuse, intimate partner violence, and pregnancy. (Email: l.shannon@moreheadstate.edu).

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