

Social Support Among Substance Using Women with Criminal Justice Involvement

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Social support types (abstinence, appraisal, belonging, tangible) were analyzed among a sample of women with criminal justice involvement and substance use disorders (n = 200). Hierarchical linear regression was conducted to examine social support types in relation to changes in abstinence self-efficacy while controlling for incarceration histories. Only abstinence social support and tangible social support predicted significant increases in abstinence self-efficacy, with tangible support accounting for more variance in the analytic model. Findings suggest women with criminal justice involvement who have substance use disorders have basic needs that if met would have an indirect effect on their recovery. Implications for treatment and research are discussed.

Abstinence self-efficacy is a recovery resource that has been conceptualized as the extent one is confident in effectively engaging in behaviors to maintain abstinence, based on Bandura's (1997) cognitive-behavior self-efficacy theory. Studies have shown abstinence self-efficacy is strengthened through social structures such as 12-step involvement in groups such as Alcoholics Anonymous and Narcotics Anonymous (Bogenshutz, Tonigan, & Miller, 2006; Ilgen, McKellar, & Moos, 2007; Majer, Jason, Ferrari, & Miller, 2011;

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Moos & Moos, 2007) where recovering peers typically develop social networks based in support for abstinence (Nealon-Woods, Ferrari, & Jason, 1995). Abstinence self-efficacy is regarded as an important resource for relapse prevention (Marlatt & Gordon, 1985) that has been found to predict abstinence (Chavarria, Stevens, Jason, & Ferrari, 2012; Greenfield et al., 2000; Johnson, Finney, & Moos, 2006; Moos & Moos, 2007).

Abstinence is more likely to occur with high investment in abstinent social support (Havassy, Hall, & Wasserman, 1991; Longabaugh, Wirtz, Beattie, Noel, & Stout, 1995), and ongoing abstinence has been related to increases in abstinent persons within social support networks (Zywiak et al., 2009). Abstinence social support might increase abstinence self-efficacy because persons recovering from substance use disorders acquire effective coping skills modeled by their peers (Annis & Davis, 1991; Finney, Noyes, Coutts, & Moos, 1998; Humphreys & Noke, 1997; Longabaugh, Beattie, Noel, Stout, & Molloy, 1993; Miller, Ross, Emmerson, & Todt, 1989; Rychtarik, Prue, Rapp, & King, 1992). Few investigations have examined the relationship between abstinence social support and abstinence self-efficacy and found these recovery resources to be positively related (Davis & Jason, 2005; Majer, Jason, Ferrari, Venable, & Olson, 2002). However, characteristics of abstinence social support networks and the process of developing abstinence self-efficacy was found to differ between women and men recovering from substance use disorders (Davis & Jason), suggesting that other types of social support might be instrumental in the development of recovery resources.

Other types of social support that promote health and psychological functioning include appraisal, belonging, and tangible support (Cohen, Mermelstein, Kamarck, & Hoberman, 1986).

Tangible support refers to instrumental aid one might receive, appraisal support to the availability of someone to talk to about one's problems, and belonging support to the availability of people one can do things with (Cohen et al., 1986). Research evidence suggests these types of social support are, in part, positively related to health outcomes, whereas a lack of these resources poses greater (subjective) health risk among women (Cohen, Doyle, Turner, Alper, & Skoner, 2003). However, the relationship between these types of social support and abstinence self-efficacy has not been investigated, and there is a need to examine various types of social support concurrently because any one type may not suffice.

Thoits's (1995) theory of social support emphasizes the importance of examining the match between individuals' needs and appropriate sources of support, and it postulates that there are conditions under which stressors are likely to challenge social support. This would suggest that additional types of social support are needed to compensate for a social support type that is compromised or insufficient. For example, specific characteristics of social support network members, such as their similarity to persons' life experience (e.g., being in recovery from substance use), might facilitate

effective abstinence social support through empathetic understanding (Messeri, Silverstein, & Litwak, 1993; Thoits, 1986) on the one hand. On the other hand, stressors associated with incarceration, low socioeconomic status (Freudenberg, Daniels, Crum, Perkins, & Richie, 2005), and trauma histories (Grella, Stein, & Greenwell, 2005) may pose great challenges to well-being and reintegration among women with criminal justice involvement. For instance, Salina, Lesondak, Razzano, and Parenti (2011) found significant negative relationships between social support, and frequencies of various traumatic stressors (trauma symptoms, being forced to have sex, exposure to verbal and physical abuse) among a sample of women with criminal justice involvement who reported many unmet needs (e.g., housing, employment, financial, mental health services). However, an examination of various social supports in relation to recovery resources has yet to be investigated.

Therefore, examining various types of social support might help clarify why support networks consisting of similar others (e.g., abstinence social support networks) alone may not be sufficient (Dakof & Taylor, 1990; Davis & Jason, 2005; Lehman, Ellard, & Wortman, 1986) for understanding predictors of recovery resources such as abstinence self-efficacy; especially among women with criminal justice involvement who typically have high rates of substance use (Scott & Dennis, 2012). Rates of substance use among those with correctional histories are approximately the same as inmates' report of substance use prior to incarceration (Keene, 1997), suggesting that incarceration experiences might threaten the development of self-efficacious behaviors for abstinence. Thus there is a need to also examine whether incarceration histories are related to abstinence self-efficacy among women with criminal justice involvement who have substance use disorders.

Understanding predictors of abstinence self-efficacy among this subset of women with substance use disorders would have important research and treatment implications. Although it is reasonable to expect high levels of abstinence social support would be related to increased abstinence self-efficacy as evidenced by research with clinical and community samples, this relationship might not be significant among women with criminal justice involvement who have substance use disorders because of the tremendous stressors and unmet needs these women experience (Freudenberg et al., 2005; Grella et al., 2005; Salina et al., 2011).

Overall, there is a need to examine whether abstinence social support predicts increased abstinence self-efficacy among women with criminal justice involvement who have substance use disorders. The present study examined several types of social support and incarceration histories in relation to abstinence self-efficacy among a sample of women with criminal justice involvement who have substance use disorders. We hypothesized that high levels of abstinence social support would predict increased abstinence self-efficacy. In addition, we explored whether appraisal, belonging and tangible social support types in addition to incarceration histories would predict abstinence self-efficacy.

METHODS

Participants

Two hundred women were recruited for this study. The majority were African American women (74.5%) with a mean age of 39.94 ($SD=8.58$) who had multiple incarcerations in their lifetime ($M=16.5$ times), generally for nonviolent crimes, and were unemployed at the time of enrollment (66%). Only 22.8% of those reporting received their primary income from legal employment; the next highest primary sources of financial support were selling drugs (17.3%) and sex work/prostitution (14.7%). Of the women who were employed ($n=34$), 26.5% reported their major source of income over the last year as a result of illegal activities, including selling drugs and prostitution/sex work. In addition, 13.2% of those reporting employment reported that their main source of income relied on other, external relationships such as family, current or ex-boyfriend, and welfare or public assistance.

Procedures

Participants recovering from substance use disorders who had involvement in the criminal justice system within the preceding 2 years were recruited from multiple sites in metropolitan Chicago and its suburbs from 2008 to 2011. Recruitment sites included Cook County Jail and multiple substance abuse treatment sites throughout Chicago, the surrounding suburbs, and Northern Illinois. Although recruitment staff actively visited these sites, research staff also posted recruitment flyers that were distributed in places that might provide some form of services to women who were formerly or currently justice-involved. Women who were interested in participating in the study contacted our study recruiters. Participants were also recruited using snowball techniques, which permitted other participants to refer women to the study. Most women agreed to participate in the study, with the exception of a few women who declined. No women were refused participation by study personnel. All women in the study were enrolled using Institutional Review Board-approved informed consent procedures. Participants received transportation passes to travel for their interviews and \$40 in grocery store gift cards as incentive for their participation.

Materials

ABSTINENCE SOCIAL SUPPORT

The Important People Inventory (IP, Clifford, Longabaugh, & Beattie, 1992) is a measure adapted from the Important People and Activities Inventory (Clifford & Longabaugh, 1991) and has been used in previous research to assess abstinence social support from drugs and alcohol among those

recovering from substance use disorders (Longabaugh et al., 1995; Majer et al., 2002). Participants were asked to describe important persons from their social network within the past 6 months. This included specifying the quality of their networks relative to drug and alcohol use in addition to the activities they engaged in during the past 6 months. Participants rated members of their social network on a 5-point Likert scale that distinguished substance users and nonusers. This procedure resulted in computing a percentage of important persons identified by dividing the number of nonusing persons (i.e., those who were identified as abstinent from alcohol and drugs, or in recovery from substance use) by the sum total of all persons identified as important persons, consistent with previous investigations on abstinence social support (Groh, Jason, Ferrari, & Halpert, 2011; Majer et al., 2002; Zywiak, Longabaugh, & Wirtz, 2002; Zywiak et al., 2009). The IP has good internal consistency (Cronbach's $\alpha = .80$, Longabaugh et al., 1993), and the internal consistency of the IP in the present study was acceptable (Cronbach's $\alpha = .67$).

INTERPERSONAL SUPPORT EVALUATION LIST

The 12-item version of the Interpersonal Support Evaluation List (ISEL; Cohen et al., 1986; Cohen & Wills, 1985) was administered to assess three distinct types (tangible, appraisal, belonging) of actual or perceived social support. Tangible support refers to instrumental aid (e.g., monetary assistance) one might receive; appraisal support refers to the availability of someone to talk to about one's problems; belonging support refers to the availability of people one can do things with (Cohen et al.). The 12-item version of the ISEL was designed to measure these three separate functions of social support. Considerable research has been conducted with the ISEL and good internal reliability (.87) has been reported with the 12-item version of the scale (Cohen et al., 2003). The internal reliability of the ISEL in the present study was good (Cronbach's $\alpha = .74$).

ABSTINENCE SELF-EFFICACY

We administered the Drug-Taking Confidence Questionnaire (DTCQ, Annis & Martin, 1985) to assess participants' confidence in resisting the urge to use drugs or alcohol across 50 hypothetical situations. The DTCQ is rooted in Bandura's (1997) cognitive behavioral self-efficacy theory, and it is based on antecedents of substance abuse relapse (Annis & Davis, 1991). The DTCQ has been used among people with different addiction typologies (Sklar, Annis, & Turner, 1999). Because confirmatory factor analyses support the eight-factor model of the DTCQ's highly reliable subscales (.79 to .95; Sklar, Annis, & Turner, 1997), we used a total confidence score in the present study by collapsing the subscale scores and averaging these scores on a scale that

ranges from 0% (*not at all confident*) to 100% (*very confident*). This total score approach to calculating self-efficacy for abstinence has been effectively used in previous studies (Greenfield et al., 2000; Majer, Droege, & Jason, 2012; Majer, Jason, & Olson, 2004; Miller, Ross, Emmerson, & Todt, 1989). The DTCQ had excellent reliability with the present sample (Cronbach's $\alpha = .98$).

DEMOGRAPHIC CHARACTERISTICS AND INCARCERATION HISTORIES

The Addiction Severity Index-Lite (ASI-Lite; McLellan, Cacciola, & Zanis, 1997), a briefer version of the Addiction Severity Index (ASI; McLellan et al., 1992), was used to assess demographic characteristics and incarceration histories. The ASI has good internal consistency, excellent predictive and concurrent validity (McLellan et al., 1992), and the ASI-Lite has been demonstrated as being quite comparable to the ASI with good validity and reliability (Cacciola, Alterman, McLellan, Lin, & Lynch, 2007). The internal consistency for legal status items from which we collected incarceration histories was very good (Cronbach's $\alpha = .81$).

SOURCES OF INCOME

We asked participants to identify their major sources of income for the past 12 months. This provided us a contextual understanding of employment status (e.g., part-time, full-time, unemployed).

Data Analysis

Preliminary analyses were conducted to describe the sample in terms of sociodemographic characteristics (previously discussed) in addition to describing rates of incarceration histories, levels of abstinence social support, general (appraisal, belonging, tangible) social support and abstinence self-efficacy.

A hierarchical linear regression was used to examine the influence of predictors on levels of abstinence self-efficacy, entering predictors sequentially in a manner that approximated their temporal relationship to abstinence self-efficacy in the absence of any theory to guide us. This approach enabled us to examine the incremental validity of predictors and how much they individually contributed to the model in terms of variance. Sociodemographic variables (age, race) and lifetime incarceration histories (in months) were included in the first and second steps to control for their variance. Abstinence social support was entered in the third step. The other three general social support types (appraisal, belonging, tangible) were entered in separate subsequent steps (4–6) to understand their influence on abstinence self-efficacy apart from abstinence social support. These general types of

social support were entered separately because they bore significant and positive moderate relationships to each other, thus justifying our use of hierarchical linear regression.

To better understand the effects of this model, we ran the regression model by varying the order of general social support types entered into it and discovered only one type (tangible) was a significant predictor in each combination of entry whereas the other two (appraisal and belonging) were not. In addition, the results were statistically similar when we entered these three general social support types in the same step (Step 4), therefore the results of this model are presented. Testing these additional models confirmed tangible support was a significant predictor beyond abstinence social support and not a statistical artifact of any one model.

MISSING DATA

A listwise deletion approach was used to evaluate data and calculate analyses. Participants with missing data (approximately 4% of all available cases) were excluded from analyses. A missing values analysis of all the independent and dependent variables indicated that the data were missing completely at random, Little's MCAR test, $\chi^2(31) = 39.54, p = .14$.

RESULTS

Preliminary Analyses

Participants reported an average score of 80.48% ($SD = 18.49$) for abstinence self-efficacy and an average score of 80.2% ($SD = .18$) for abstinence social support. In terms of general social support, they reported average scores of 3.41 ($SD = .66$), 3.29 ($SD = .69$) and 3.24 ($SD = .71$) for appraisal, belonging, and tangible types, respectively, with an average of 46.48 ($SD = 69.82$) months of lifetime incarceration histories (ranging from 0 to 432 months). There were proportionately more African American women than those from other racial groupings, $\chi^2(3, N = 200) = 284.92, p < .001$, in the sample.

Primary Analyses

A hierarchical regression model was employed to test our hypotheses, and results of this model are presented in Table 1. Sociodemographic characteristics in the first step and incarceration histories in the second step were not significant. The inclusion of abstinence social support accounted for 2.8% of the variance in the third step, predicting significant increases in levels of abstinence self-efficacy. The inclusion of general social supports types in the fourth step accounted for an addition 7.7% of the variance, with only tangible support significantly predicting levels of abstinence self-efficacy. We

TABLE 1 Hierarchical regression analyses for variables predicting abstinence self-efficacy among substance using women with criminal justice involvement

Predictor	ΔR^2	<i>B</i>	SE <i>B</i>	β
Step 1	.004			
Age		.05	.17	.02
Race		-.92	1.33	-.05
Step 2	.000			
Incarceration histories		.00	.02	.00
Step 3	.028*			
Abstinence social support		17.95	7.67	.18*
Step 4	.077**			
Belonging support		3.87	2.46	.13
Appraisal support		-1.88	2.71	-.07
Tangible support		6.06	2.65	.23*
Total R^2	.141*			
<i>N</i>	192			

Note. * $p < .05$. ** $p < .005$.

ran this model with the inclusion of interaction terms based on main factors (Abstinence Social Support \times Each General Social Support Type), and these three interaction terms were not significant predictors of abstinence self-efficacy.

DISCUSSION

The significant positive relationship between abstinence social support and abstinence self-efficacy suggests that social networks comprised of recovering peers might help women with criminal justice involvement who have substance use disorders develop important recovery skills to support abstinence. This finding extends previous research that examined these recovery resources in community samples that found a significant pathway between social support and self-efficacy (Davis & Jason, 2005; Majer et al., 2002). However, tangible social support was also significantly and positively related to increases in abstinence self-efficacy and accounted for more variance in our regression model, suggesting that social support types that are not abstinence-specific may have indirect effects that foster recovery resources among women with criminal justice involvement who have substance use disorders.

Tangible social support was the only type of (general) social support significantly related to (increased) abstinence self-efficacy in the present study. This finding is somewhat consistent with one investigation that found tangible support related to abstinence in a sample of persons with co-occurring substance use disorders (Peirce, Frone, Russell, & Cooper, 1996). The need for tangible social support might be more pressing than abstinence social support among women with criminal justice involvement

who are disproportionately impacted by social and interpersonal oppressions. These include poverty, lack of stable housing, victimization from abusive relationships, and untreated co-occurring substance use disorders (Freudenberg et al., 2005; Raj, Silverman, Wingood, & DiClemente, 1999; Salina, Lesondak, Razzano, & Weilbaecher, 2007).

Access to tangible resources is sorely needed among women with criminal justice involvement who are typically single parents, living in poverty, undereducated, unskilled, unemployed, marginally housed, and victims of childhood and adult physical and/or sexual trauma (Richie & Johnsen, 1996; Salina et al., 2011). In light of these stressors, results in the present study are aligned with Thoits' (1995) theory of social support either in that tangible support complements abstinence social support or that the needs of women with criminal justice involvement who have substance use disorders outweigh the potential benefits of abstinence social support. Although such claims can only be verified through additional research, findings in the present study are consistent with the conceptual framework of naturally occurring social support among women with criminal justice involvement (Pettus-Davis, Howard, Roberts-Lewis, & Scheyett, 2011). In addition, there was no significant relationship between incarceration histories and abstinence self-efficacy in the present study, suggesting that women's involvement with criminal justice systems do not impede their ability to develop this important recovery resource.

Limitations

Although predictors of abstinence self-efficacy might be better understood when accounting for various types of social support, there are some limitations in the present study. For instance, participants' stressors and needs probably had an impact on their levels of social support and abstinence self-efficacy, but these were not directly examined in the present study. Comparison groups (e.g., women who have substance use disorders but no criminal justice involvement, men who have substance use disorders with criminal justice involvement) would help us better understand the role of various social support types in relation to recovery resources such as abstinence self-efficacy, and findings in the present investigation certainly have implications for research with noncorrectional samples. It is possible that abstinence rates and treatment duration had an impact on levels of abstinence social support and abstinence self-efficacy in the present study, and future investigations should account for these potential influences. Finally, the use of self-reported data at one time-point and chain-referral sampling techniques are other limitations of the present study. A repeated-measures design might have provided more information in relation to changes in social support types and abstinence self-efficacy over time whereas snowball techniques have the potential of negatively affecting sample representation. Although

results in the present study have implications for future research, social workers should closely examine the need for various types of social support beyond abstinence-specific networks when working with women who have substance use disorders, especially those who have criminal justice involvement.

Implications for Research and Practice

Most research on abstinence self-efficacy has examined this recovery resource as a predictor, and the present study adds to the growing body of research that is examining abstinence self-efficacy as an outcome variable. More importantly, our findings point to the limitations of abstinence social support among one of the most vulnerable populations of persons with substance use disorders; women who have criminal justice involvement. Findings in the present study emphasize the need for researchers to examine social support types (beyond abstinence social support that is typically emphasized in treatment and research for substance use disorders) which are specific to the needs of women who have criminal justice involvement. Findings in the present study support the need for social workers to consider context-specific factors such as social capital when assessing and targeting substance use recovery resources.

The present study examined predictors of abstinence self-efficacy that have not been examined in previous investigations involving persons with substance use disorders. Our investigation is innovative in that it examined several types of social support in relation to this important substance use recovery resource and found a general type of social support (tangible) to be a better predictor than abstinence social support among women with criminal justice involvement and substance use disorders. Social workers should assess various social resources among women in criminal justice settings who have substance use disorders. In addition, social workers should examine whether various social resources might be instrumental in meeting these women's diverse needs including substance use recovery resources such as abstinence self-efficacy.

Findings in the present study strongly support the assumption that women exiting the criminal justice system need to be linked not only to self-help programming where they will receive peer-based abstinence specific support but also linked to community agencies to get their basic needs met. Social workers should examine how this strategy may increase or potentiate the effects of abstinence social support on recovery efforts and increase the probability that justice involved women will remain abstinent. Overall, findings in the present investigation suggest various types of social support are necessary when providing relapse prevention programs or strategies, particularly among women with substance use disorders who have criminal justice involvement.

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