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The Adoption of Wraparound Services among Substance Abuse Treatment Organizations Serving Criminal Offenders: The Role of a Women-Specific Program

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Abstract

Women's substance abuse treatment outcomes are improved when women-specific needs are addressed through wraparound services, such as the provision of child care, employment assistance, or mental health counseling. Despite a higher prevalence of pre-incarceration drug use, women in prison report receiving fewer services than their male counterparts, suggesting they likely have greater service needs upon release. It is unknown whether community-based treatment organizations with a women-specific program offer more wraparound services than programs without a focus on women. This study uses data from the Criminal Justice Drug Abuse Treatment Studies (CJ-DATS) research cooperative's National Criminal Justice Treatment Practices Survey (NCJTPS), a nationally representative sample of community-based treatment programs serving predominantly criminal offenders ($n = 217$). First, bivariate analyses identified differences between organizations with and without a women-specific program on the number of wraparound services adopted as well as organizational-level characteristics (i.e., *organizational structure, personnel characteristics, culture, sources of information, and systems integration*) related to their adoption. Second, Poisson regression was used to identify the organizational characteristics associated with the number of adopted wraparound services, with having a women-specific program being the primary covariate of interest. Results indicate larger organizations that utilized a greater number of treatment approaches and believed that treatment could reduce crime were more likely to offer a greater assortment of wraparound services. In an effort to improve behavioral treatment outcomes, it is imperative to examine organizational-level contextual factors that shape the availability of wraparound services for female offenders in community-based substance abuse treatment settings.

Keywords

wraparound services; organizations; women-specific programs; criminal offenders

1. Introduction

The examination of wraparound services for criminal offenders is important because individually tailored services may improve the offender's health and increase community public safety by reducing recidivism. According to the U.S. National Treatment Improvement Evaluation Study (Marsh et al., 2004), wraparound services positively impact post-treatment outcomes. The National Institute on Drug Abuse's (NIDA) report entitled "Principles of Drug Abuse Treatment for Criminal Justice Populations" (2006) outlines how a comprehensive treatment approach for criminal offenders should include health-related wraparound services such as the treatment of co-occurring disorders, providing medical services, social support services (e.g., housing or employment assistance) and HIV/AIDS testing, counseling and treatment. Moreover, the NIDA report (2006) emphasizes the need to individually tailor services based upon such factors as criminal history and gender. Yet there are no known studies which examine if organizational-level characteristics, including if the organization offers a women-specific program, impact the adoption of wraparound services in community based organizations serving predominantly criminal offenders. Therefore, this study uses the Criminal Justice Drug Abuse Treatment Studies (CJ-DATS) research cooperative's National Criminal Justice Treatment Practices Survey (NCJTPS) (Taxman et al., 2007) to examine the organizational-level correlates of the adoption of wraparound services across a nationally representative sample of community-based substance abuse treatment programs serving criminal offenders, using the provision of a women-specific program as the primary covariate of interest. Differences in the organizational-level adoption of specific wraparound services among organizations with and without women-specific substance abuse treatment programs are also explored.

1.1. Wraparound Services

Etheridge and Hubbard (2000) define wraparound services as "psychosocial services that treatment programs may provide to facilitate access, improve retention and address clients' co-occurring problems" (p. 1762). Wraparound services provide the opportunity to tailor services to the specific needs of re-entering criminal offenders. For example, re-entering female offenders likely need housing assistance, legal assistance, medical care, and potentially child care if they are reuniting with their families (Greenfield et al., 2007). Research suggests that women-specific programs offer more wraparound services than either male-specific programs or mixed-gender programs (Grella et al., 1999; Greenfield et al., 2007), but it is unclear if this association is present in organizations that primarily serve offenders.

This organizational-level study examines the adoption of these wraparound services by treatment providing organizations because making the decision to make these services available within an organization is a necessary step to be able to provide the service to meet client's need. However, it should be noted that these wraparound services are not needed for all clients. Substance abuse and related criminal, social, health and behavioral consequences need to be assessed to create appropriate treatment plans (Belenko and Peugh, 2005; McLellan et al., 1997) and to provide a subsequent referral to an appropriate level of care.

In this study, we consider wraparound services in terms of comprehensiveness, or the number of services, and the availability of eight specific services which have demonstrated some improvement in women's post-treatment behavioral outcomes: case management, housing assistance, legal assistance, child care, crisis intervention, mental health counseling, medical care, and HIV/AIDS testing or counseling (Brady and Ashley, 2005; Greenfield et al., 2007; Marsh et al., 2004; Morgenstern et al., 2006; Sun, 2006). A more diversified wraparound service portfolio will enable an organization to provide services to address the client's individual-level needs and provide tailored treatment.

1.2. Women Offenders and Substance Abuse Treatment

The existing literature suggests that women involved in the criminal justice system face a variety of risks, including increased health problems and substance abuse (Bloom et al., 2005). For example, according to the Bureau of Justice Statistics (BJS), 60% of all female state inmates meet DSM-IV criteria for drug abuse or dependence (Mumola and Karberg, 2006), but not all women offenders in need of substance abuse treatment are receiving treatment while incarcerated (Belenko and Peugh, 1999; Belenko and Peugh, 2005; Blitz et al., 2006). The actual percentage of women in prison who receive needed substance abuse treatment services across the United States is unknown.

Given that 95% of criminal offenders will re-enter the community (Hughes and Wilson, 2002) and that access to treatment services in prison is low (Belenko and Peugh, 1999; Belenko and Peugh, 2005), women re-entering their communities are likely to have significant needs for substance abuse treatment as well as other services. Therefore, reentering women are at greater risk of experiencing certain barriers to treatment entry including co-occurring psychiatric disorders and trauma histories (Greenfield et al., 2007; Pelissier and Jones, 2005). In addition, studies have shown that between half and two-thirds of incarcerated mothers were the primary caregivers of their children prior to incarceration (Mumola, 2000), so it is likely that the majority of those women will resume parenting roles when they are released. However, while mothers are likely to serve less time in state prison than fathers (average 49 months vs. 82 months) (Mumola, 2000), the length of incarceration often has consequences for reunification with children with the Federal Adoption and Safe Families Act of 1997 (ASFA). ASFA specifically regulates that if a child is in foster care for 15 of the past 22 months, the state will move to have parental rights terminated. Thus, child care issues and/or issues around retaining or resuming custody can also be barriers to community treatment utilization for reentering women offenders.

Women-specific barriers to treatment are less likely to be addressed by mixed-gender substance abuse treatment programs (Grella et al., 1999; Greenfield et al., 2007; Pelissier and Jones, 2005). While studies examining treatment outcomes among women-specific and non-women-specific programs have yielded mixed results, numerous studies suggest that women's substance abuse treatment outcomes are improved when female-specific problems are addressed by providing services to meet their specific needs (for an overview, see Greenfield et al., 2007). Other barriers to successful re-entry include public policies which can be seen as "invisible punishments," or the collateral sanctions of having a criminal record (Pogorzelski et al., 2005). These policies, which vary across States, could have a conditional or temporary restriction on re-entering offender's access to public services such as Temporary Assistance for Needy Families (TANF), food stamps, and public housing benefits (Pogorzelski et al., 2005).

Wraparound services, delivered in the context of community-based treatment, may provide re-entering women with strategies to overcome these exclusionary public policies and offer solutions to these highly pressing concerns (e.g., housing, legal, or child care issues) that otherwise would supersede recovery progress. For example, women receiving treatment in women-specific treatment facilities that provided child care services or mental health services had better behavioral outcomes such as a longer length of stay and the completion of treatment plans (Brady and Ashley, 2005). Therefore, it is important to examine differences between the prevalence of wraparound services provided as well as the organizational-level characteristics of organizations that do and do not offer a women-specific program.

1.3. Organizational-Level Correlates of the Adoption of Wraparound Services

Several organizational-level correlates may influence whether or not a community based treatment center adopts a greater variety of wraparound services. Previous studies in the substance abuse treatment field have drawn on diverse theoretical traditions in order to consider the various facilitators and barriers to processes that have been labeled “innovation adoption,” “technology transfer,” or “organizational change.” Some approaches have been largely focused on internal factors within the context of organizations. Simpson’s (2002; Simpson and Flynn, 2007) model of change in addiction treatment programs is largely focused on internal characteristics such as leadership, perceived need and readiness for change, training, resources, and organizational climate. Others have drawn on the work of Rogers (2003), who framed adoption processes in terms of the fit between the characteristics of a given innovation and the characteristics of organizations. It is a combination of Simpson’s work (2002) and Rogers’ (2003) work on innovation adoption that guides the theoretical framework for this study.

Rogers’ (2003) defines an innovation as a practice that is perceived of as new to an organization. Rogers’ (2003) model suggests that treatment providers would perceive a more diverse wraparound service portfolio as an innovation because non-substance abuse related services (e.g., child care or legal assistance) could be viewed as auxiliary to the goals of recovery and thus, novel to the substance abuse treatment organization because they are not universally used in the treatment field. While wraparound services may not be appropriate for all clients, the substance abuse treatment organization must make the decision to make these services available within their organization (i.e., adopt the innovation) in order for any clients to benefit. It should be noted that this study only focuses on adoption, which differs from implementation, or the extent to which wraparound services are routinely used within the substance abuse treatment program.

The existing innovation adoption literature in the substance abuse treatment field has primarily focused on the adoption of medications by substance abuse treatment organizations, particularly by publicly funded programs (Ducharme et al., 2006; Knudsen et al., 2007; Knudsen et al., 2006; Oser and Roman, 2007) although Oser and colleagues (2008, in press) in this special issue examined the adoption of medications in jails and prisons. There are no known organizational-level studies grounded in the innovation adoption literature that focus on variations in the adoption of wraparound services by community-based treatment programs that primarily serve criminal offenders.

The organizational-level correlates to be examined include *women-specific programs*, *organizational structure*, *personnel characteristics*, *culture*, *sources of information*, and *systems integration*. The first dimension of interest, being a *women-specific program*, is the primary variable of interest in this study. It is expected that community-based organizations which have a women-specific program and serve predominantly criminal offenders will offer a greater array of wraparound services than treatment organizations without a women-specific program. This hypothesis is based upon the literature that women have greater service needs (Greenfield et al., 2007; Pelissier and Jones, 2005) and is consistent with other community based research which found similar trends for the provision of wraparound services in women-specific programs (Greenfield et al., 2007; Niv and Hser, 2007). While there is little research on the organizational characteristics of women-specific treatment programs, the studies that do exist suggest that programs treating exclusively or predominantly women have different organizational characteristics (Grella et al., 1999; Grella et al., 2000; Tinney et al., 2004; Uziel-Miller and Lyons, 2001), which provides the rationale for this study.

The second dimension of interest, *organizational structure*, includes the size of the organization and the ability to provide adequate care (e.g., counselor caseloads). Larger

organizations are usually more likely to adopt more services because they have more capital and personnel available (Castle and Banaszak-Holl, 1997; Damanpour, 1991; Kimberly and Evanisko, 1981; Morabito, 2008, in press; Roman and Johnson, 2002).

Third, *personnel characteristics* could impact adoption behavior through a variety of avenues including leadership, experiential knowledge, and education. Community treatment programs must possess both the material and human institutional resources necessary to adopt an initiative, such as a greater number of wraparound services (Backer, 1991; Brown, 1998; Simpson, 2002). Research demonstrates a positive relationship among health care administrator's education level and pro-adoption behaviors (Castle and Banaszak-Holl, 1997; Kimberly and Evanisko, 1981). Also, administrator's with greater lengths of service are more prone to engage in adoption behaviors (Castle and Banaszak-Holl, 1997; Kimberly and Evanisko, 1981; Roman and Johnson, 2002).

Traditionally, the substance abuse field places a great degree of value on the background experiences of its paraprofessional staff, which ultimately shapes the delivery of treatment services (Backer et al., 1994; Brown, 2000). The majority of counselors possess a bachelor degree or less, which may mean that these counselors lack the expertise to deliver a variety of wraparound services (Brown, 2000). Conversely, organizations employing a high percentage of counselors with a Masters degree will be more likely to engage in adoption (Taleff and Swisher, 1997; Roman and Johnson, 2002).

Fourth, substance abuse treatment organizations with a *cultural* ideology compatible with the goals of treating criminal offenders are hypothesized to be more likely to diversify their wraparound services portfolio. Tornatzky and Klein (1982) in a meta-analysis of innovation studies found that compatibility with existing values, norms, and existing practices was the most common predictor of adoption. Klein and Sorra (1996) emphasize the importance of the fit between innovations and the values held by organizational members. Substance abuse treatment organizations which believe that crime is reduced by ensuring that offenders receive needed treatment may have an organizational culture compatible with providing a greater array of wraparound services. A study by Melnick and colleagues (2008, in press) in this special issue examined this topic with prison personnel and found that the mean score on the belief in rehabilitation scale was associated with higher levels of organizational commitment and interdepartmental coordination; however, an HLM analysis found that the rehabilitation consensus index score was associated with a poor organizational climate, which may be the result of the conflicting dual functions of prisons as both custodial institutions and sources of rehabilitation.

The fifth component of interest is *sources of information*. Rogers' (2003) concept of communication channels is key to influencing an organization to adopt more wraparound services for criminal offenders. Communication channels are sources of information exchange in which organizations can learn about new services from the internet, peer-reviewed publications, professional development activities, or other professionals (Backer, 1991; Brown, 1998; Sorensen and Guydish, 1991). It is hypothesized that the more time spent gathering information about treatment services, the more wraparound services that will be adopted. While research findings are intended to improve the treatment field and provide a scientific foundational base for practice, many community practitioners are not aware, do not read, or cannot interpret research findings reported in scholarly journals or on the internet (Brown, 1998; Brown, 2000; Froehle and Rominger, 1993; Simpson, 2002). It has been suggested that interpersonal contacts are a better avenue, rather than written materials or the internet, to use when attempting to adopt new service delivery initiatives (Backer, 1991; Brown, 1998; Sorensen and Guydish, 1991). Greater communication with criminal justice professionals, such as prison based treatment providers, could help identify the unique

treatment and service needs for re-entering criminal offenders. For example, communication between prison-based and community-based treatment providers could ensure that a continuum of care is established for re-entering offenders, which has been shown to improve behavioral outcomes (Knight et al., 1999; Martin et al., 1999).

Finally, another important concept in the literature on organizational adoption is *systems integration*, or the relationships between different organizations (e.g., community, substance abuse treatment, and correctional). In this special issue, Lehman and colleagues (2008, in press) found that different correctional settings (e.g., prisons, jails, and community corrections) significantly differed in terms of their collaborative activities with community based substance abuse treatment organizations. While the degree of collaboration might vary, most organizations are not isolated but share a variety of resources including information and finances (Damanpour and Schneider, 2006). Organizations that are more integrated with other organizations may experience pressure from these organizations to adopt a variety of wraparound services in order to “legitimate” themselves by providing “best treatment practices” to meet all of the clients service needs. The provision of services in substance abuse treatment organizations may also be influenced by legislative and federal priorities because they may provide funding for specific innovative initiatives (i.e., wraparound services such as child care or HIV services). Therefore, a positive association is expected between the influence of both legislative and federal government priorities and the adoption of more wraparound services in substance abuse treatment organizations primarily serving criminal offenders.

This study contributes to literature on the relevance of organizational-level characteristics on the adoption of wraparound services for criminal offenders. Specifically, the purpose of this organizational-level study is two-fold. First, we consider whether there are differences in the number of wraparound services adopted as well as differences in organizational characteristics (i.e., *organizational structure, personnel characteristics, organizational culture, sources of information, and systems integration*) between organizations with and without a women-specific treatment program. Second, this study examines organizational-level characteristics as potential correlates of the number of adopted wraparound services in treatment organizations serving predominantly criminal offenders in order to test whether these correlates explain the difference between organizations with and without a women-specific program.

2. Methods

2.1. Sample

Data from the National Institute on Drug Abuse (NIDA) funded Criminal Justice Drug Abuse Treatment Studies’ (CJ-DATS) National Criminal Justice Treatment Practices Survey (NCJTPS) was used for these analyses. The NCJTPS is a nationally representative multi-level survey which collected data from State Criminal Justice Executives (Survey 1), Correctional Clinical Directors and State Alcohol and Drug Agency Directors (Survey 2), Correctional Administrators, Prison-Based Treatment Directors, and Community-Based Treatment Directors (Survey 3), as well as Correctional and Community-Based Treatment Line Staff (Survey 4). For this study, data from community-based substance abuse treatment directors (Survey 3) was used (n=217). Specifically, this is a purposive sample of treatment programs that serve criminal justice clients which is drawn from the National Survey of Substance Abuse Treatment Services (Office of Applied Statistics, 2003). On average, about 75% of clients within these programs are currently involved with the criminal justice system. Additional details on the NCJTPS methodology are provided by Taxman and colleagues (2007).

A mail-based survey was used to collect data from community-based treatment directors between 2003 and 2005. No incentives were offered for participation. The self-administered survey took approximately 60–90 minutes to complete. Treatment directors served as a proxy

for the organization which is consistent with other organizational-level studies (Knudsen et al., 2007; Oser et al., 2007); therefore, the unit of analysis is the organization. The overall response rate for Survey 3 was 67.4%. This response rate is well-above that found for other self-administered mail-based organizational surveys (Baruch, 1999). In addition, Taxman and colleagues (2007) conducted an analysis of response bias and found no systematic differences between participants and those who did not participate. Institutional Review Board (IRB) approval for the NCJTPS was received by each of the 10 CJ-DATS Research Centers.

2.2. Measures

The dependent variable of interest is the number of wraparound services available within a treatment program. The wraparound services variable ranges from 0 to 8 and includes the following services: case management, housing assistance, legal assistance, child care, crisis intervention, mental health counseling, medical care, and HIV/AIDS testing and/or counseling.

Six categories of independent variables are examined including offering a *women-specific program*, *organizational structure*, *personnel characteristics*, *organizational culture*, *sources of information*, and *systems integration*. The primary independent covariate of interest is if the facility has a *women-specific program*. Administrators were asked if they had a program that was specifically designed to meet the needs of female clients or pregnant women. Organizations offering either of these types of programs were coded as having a woman-specific program (coded 1), while programs offering neither of these programs were coded as zero.

The second category, *organizational structure*, includes two variables. Size of the institution is measured by the number of full-time equivalent employees (FTEs). A natural-log transformation of this indicator is necessary because the distribution of the number of FTEs is positively skewed. The average caseload is measured by the number of clients per counseling staff. Again, a natural log transformation of this indicator is used because of the positively skewed distribution.

The third category, *personnel characteristics*, includes four variables. Two dichotomous variables measure the administrator's gender (1=female; 0=male) and postgraduate education (0=no; 1=yes). The number of years the administrator worked in the substance abuse treatment field is a continuous variable. Also, a categorical variable is included which measures how many primary substance abuse treatment counselors had a four-year college degree where 1=none, 2=some, 3=about half, 4=most, and 5=all.

Three variables were used to assess *organizational culture*. First, four items assessed the extent to which the organization endorsed rehabilitation as the best way to reduce crime (Applegate et al., 1997; Cullen et al., 2000; Cullen et al., 1993). This mean scale has good internal reliability ($\alpha=.75$), with greater values indicating a stronger endorsement of rehabilitation as the best way to reduce crime. Second, nine items were used to create a mean scale of the organizational support for effective treatment, modified from Schneider, White, and Paul's (1998) scale. This scale measures staffs' perceptions of the degree to which organizational policies, practices, routines, and rewards emphasize providing effective substance abuse treatment. The mean scale ranges from 1 (climate is not supportive of treatment) to 5 (climate is extremely supportive of treatment) and has an excellent internal reliability ($\alpha=.90$). Third, twelve treatment approaches were assessed ranging from 12-step meetings to motivational interviewing to confrontation therapy; programs were considered to use an approach if they reported a moderate to very great emphasis on a particular technique (coded as 1); programs were coded zero if they indicated there was no or minimal emphasis on a technique. These twelve dichotomous measures were summed into an additive index of the number of substance abuse-related treatment approaches scale and reflects the breadth of substance abuse approaches or techniques available within an organization.

Three measures focus on the organization's *sources of information* about substance abuse interventions for offender populations. The first scale measures the amount of time spent using the internet, journals, newsletters, or other professional publications ($\alpha=.72$). The professional development scale includes time spent participating in professional development courses, seminars, or workshop as well as at professional or provider association meetings ($\alpha=.71$). The measure of informal communication was a single item about the amount of time spent communicating with inmate prison substance abuse counselors and administrators. All of these measures range from 1 to 4, with greater values indicating more time spent using these sources of information.

The final domain of interest, *systems integration*, is comprised of four measures. First, the community support scale measures support and collaborative relationships with external groups in the community. This two-item mean scale ranges from one to five, with larger values indicating greater community support ($\alpha=.66$). Second, the relationships with other organizations scale targets the extent to which an organization engages in a working relationship (e.g., sharing information on offender needs, joint personnel, joint policy/procedure manuals, pooled funding, etc.) with substance abuse treatment programs, judiciaries, and corrections including prison, jail, and community corrections ($\alpha=.85$). This additive scale had a possible range from 0 to 36, with higher scores signifying greater systems integration and more formalized relationships with these other organizations. The last two measures are single-item indicators of the influence of legislative priorities (e.g., funding new initiatives) and the influence of federal priorities (e.g., funding specific initiatives/target populations) on the treatment organization. Each indicator ranged from 1 to 5, with 1 representing a negative influence and 5 representing a positive influence.

2.3. Analytic Strategy

In order to avoid the problems associated with listwise deletion, we used multiple imputation to handle the issue of missing data for the covariates (Allison, 2002). Nine cases had missing values on the dependent variable; to be conservative, we did not impute values for these nine cases but instead removed them from the dataset. Missing values for the covariates were imputed using "ice" in Stata 10.0 (Royston, 2005a; Royston, 2005b). This multiple imputation by chained equations (MICE) procedure imputes values from the posterior distribution of covariates and the dependent variable. Our use of "ice" yielded ten imputed datasets. Then the "micombine" was used during model estimation in order to produce a single set of results based on pooling the estimates across analyses of each of the ten datasets (Barnard and Rubin, 1999; Royston, 2004; Royston, 2005a).

Descriptive statistics for each variable were first examined prior to imputation. Next, a series of bivariate regression models examining the relationship between women-specific programming and organizational characteristics were examined using either OLS regression (for continuous variables), ordered logit regression (for ordered categorical variables), or logistic regression (for dichotomous variables).

A Poisson regression was used to estimate the correlates of the number of wraparound services provided. Poisson regression is appropriate when the dependent variable is count data and overdispersion is not an issue (Long and Freese, 2006; Long, 1997). These analyses proceeded in two stages. First, a series of bivariate Poisson regression models were estimated so that the significance of each covariate could be ascertained. Variables with p-values of less than .10 (two-tailed) were then included in a multivariate Poisson regression model. Data analyses were conducted using STATA version 10.0 (StataCorp, College Station, TX).

3. Results

3.1. Descriptive Statistics

Table 1 displays the descriptive statistics for the available data prior to imputation. The average treatment program adopted 3.5 wraparound services. The most commonly offered wraparound services included case management (81.3%), mental health counseling (76.9%), and crisis intervention (69.7%). The wraparound services that were least likely to be provided included housing assistance (23.1%), legal assistance (8.7%), and child care (5.3%). About one-fifth of the community-based substance abuse treatment programs offered a women-specific-treatment program. In terms of staffing, the average substance abuse treatment program employed about 15 staff members (FTEs) and a typical counselor caseload was 41 clients. About half of the programs had a female administrator (50.5%) and almost two-thirds (62.4%) employed an administrator with a Master's degree, JD, PhD, or MD. For treatment administrators, the average tenure in the substance abuse treatment field was nearly 17 years. On average, administrators reported that about half of the program's counselors had a four-year college degree.

There was some variability in *organizational culture*. Given that these are treatment organizations, it was not surprising that there was strong endorsement of the rehabilitation scale with the mean approaching the scale's maximum value (mean = 4.60, SD = 0.46). While above the midpoint for the scale, endorsement of the scale measuring organizational support for effective treatment was lower (mean = 3.83, SD = 0.63). On average, treatment programs offered about 7.6 of the 12 substance abuse treatment approaches which include such approaches as peer-led groups, behavioral management approaches, or motivational interviewing.

Notably, use of the three *sources of information* was relatively modest. Means fell below the mid-point for the time spent using the internet or publications, using professional development resources, and informally communicating with prison staff to obtain information about substance abuse treatment interventions for offender populations.

There was also variability in the measures of *systems integration*. The average organization reported a level of community support around the midpoint of the scale. In contrast, there was less evidence of formal relationships with other organizations. The average for this scale, which had a maximum possible value of 35, was only 8.5, suggesting a modest level of formal relationships with other treatment providers, community corrections, and the judiciary. Finally, the averages for the influence of legislative priorities and federal priorities indicated that these influences tended to be somewhat positive.

3.2. Bivariate Analyses of Women-Specific Programming and Organizational Characteristics

Before estimating the models of wraparound services, the measure of having a women-specific program was examined as a correlate for a series of bivariate models of the other organizational characteristics. These analyses were conducted using the ten imputed datasets and the "micombine" command to average the results across the ten datasets. For continuous variables (e.g. organizational size), OLS regression was used. Ordered logit models were used for characteristics that represented ordered categories (e.g. counselors with a four-year degree). When the organizational characteristic was dichotomous, logistic regression was utilized to examine whether women-specific programs were associated with the characteristic. There was only one significant difference at the $p < .05$ level. Women-specific programs were significantly larger organizations as evidenced by the number of staff (FTEs). Two other variables approached significance ($p < .10$, two-tailed). There was a trend for organizations with a women-specific program to be more likely to have a female administrator ($b = .75$, $SE = .40$,

$p = .063$) than organizations without a women-specific program. In addition, organizations with a women-specific program tended to report somewhat greater community support ($b = .25$, $SE = .15$, $p = .089$). There were no other significant differences.

3.3. Bivariate Analyses of Wraparound Services

Using the ten imputed datasets, a series of bivariate Poisson regression models were estimated to identify organizational characteristics associated with the number of adopted wraparound services (Table 2). There was a trend at the bivariate level for organizations with a *women-specific program* to offer a greater number of services ($b = .16$, $SE = .09$, $p = .073$).

Of the *organizational structure* measures, there was a highly significant positive association between the number of FTE employees and the number of services offered ($b = .16$, $SE = .04$, $p < .001$). None of the *personnel characteristics* were associated with the number of adopted wraparound services at the bivariate-level. Two of the three measures of *organizational culture* were statistically significant. Organizations that more strongly endorsed the rehabilitation scale had adopted significantly more wraparound services ($b = .20$, $SE = .09$, $p < .05$). Additionally, programs that reported using a greater number of treatment approaches had adopted a significantly greater number of wraparound services ($b = .06$, $SE = .02$, $p < .001$). The bivariate associations for two of the three measures of *information sources* trended towards significance. Greater use of internet and publications trended towards greater adoption ($b = .13$, $SE = .07$, $p = .061$). A similar positive association was indicated for use of professional development resources ($b = .08$, $SE = .05$, $p = .096$). Finally, three of the four measures of system integration were statistically significant. Stronger endorsement of the relationships with other organizations scale was positively associated with the number of adopted wraparound services ($b = .02$, $SE = .01$, $p < .01$). There were also significant positive associations for the influence of legislative priorities ($b = .07$, $SE = .03$, $p < .05$) and the influence of federal priorities ($b = .09$, $SD = .04$, $p < .05$).

In addition to considering the number of wraparound services, we conducted a series of bivariate logistic regression models to examine the associations between offering a women-specific program and each of the eight wraparound services. There were three statistically significant differences. First, organizations with a women-specific program were significantly more likely to offer housing assistance ($b = 1.102$, $SE = .373$, $p < .01$). The availability of women-specific programming was also positively associated with the odds that organizations offer mental health counseling ($b = 1.430$, $SE = .620$, $p < .05$). Finally, organizations with a women-specific program were significantly more likely to offer legal assistance ($b = 1.296$, $SE = .518$, $p < .05$).

3.4. Multivariate Analyses

Finally, Poisson regression was used to examine the organizational-level correlates of the number of wraparound services offered by organizations which treat predominantly criminal offenders (see Table 3). Organizational characteristics that were significant at $p < .10$ were entered into a Poisson regression model. Controlling for other organizational characteristics rendered the measure of women-specific programming non-significant. Two variables, however, were significant in this multivariate Poisson regression model. Larger organizations, meaning those with more FTEs, had adopted a significantly greater number of wraparound services ($b = .116$, $SD = .037$, $p < .01$). Also, there was a positive association between the number of treatment approaches and the adoption of wraparound services. Treatment organizations reporting use of a larger number of treatment approaches had adopted significantly more wraparound services ($b = .037$, $SE = .018$, $p < .05$). Finally, there was a trend that greater endorsement of the rehabilitation scale was positively associated with wraparound services ($b = .160$, $SE = .089$, $p = .071$).

4. Discussion

To our knowledge, this is the first study to identify the organizational-level correlates, including the provision of a women-specific program, on the adoption of wraparound services for the treatment of criminal offenders. The majority of the existing literature on organizational adoption of wraparound services has focused on community-based programs that treat a variety of clients (Ducharme et al., 2007; Etheridge et al., 1995; Fletcher et al., 1997; Friedmann et al., 1999). Criminal offenders may present with a plethora of treatment needs, as compared to non-offenders due their criminal history (Belenko and Peugh, 2005; Platt, 1995; Pogorzelski et al., 2005; Travis et al., 2001). Wraparound services provided by substance abuse treatment organizations serving predominantly criminal offenders can assist clients in fulfilling these basic re-entry needs so they may become more engaged in the therapeutic process.

Bivariate analyses showed that organizations with a women-specific program were more likely to offer an increased number of wraparound services. When the various types of wraparound services were examined, organizations with a program designed to specifically meet the needs of women were more likely to offer legal assistance, mental health counseling, and housing assistance. Legal issues, such as fear of losing custody of their children or fear of prosecution for using drugs while pregnant, are barriers to treatment entry for women (Greenfield et al., 2007), so the provision of legal assistance may reduce access barriers especially for women who are likely to have parenting issues. Likewise, organizations that provide mental health treatment may decrease barriers for women's treatment entry and improve retention (Greenfield et al., 2007). In addition, Marsh and colleagues (2004) found that organizations providing housing services improved treatment outcomes for both men and women; however women have greater housing needs as compared to men, partially because of sexual and physical abuse histories (Browne and Bassuk, 1997; North et al., 1994; Royce et al., 2000). In addition, re-entering offenders can face certain conditions or bans that impact the securing of both public and private housing (Pogorzelski et al., 2005). These findings suggest that women receiving substance abuse treatment in an organization with a women-specific program are more likely to have access to a greater number of services that will support their recovery than if they enter an organization without a women-specific program.

The next step was to explore what accounts for an organization's adoption of a greater variety of wraparound services. In particular, we were interested in exploring if being a community-based substance abuse treatment organization that has a women-specific program was correlated with the number of adopted wraparound services, above and beyond the effects of other organizational-level characteristics. Despite expectations, at the multivariate level having a women-specific program was not significantly correlated with the number of wraparound services available. However, *organizational structure* and *culture* were important determinants of the number of wraparound services offered by substance abuse treatment organizations. Consistent with previous research (Castle and Banaszak-Holl, 1997; Damanpour, 1991; Kimberly and Evanisko, 1981; Morabito, 2008, in press; Roman and Johnson, 2002), larger organizations have more resources, both financial and personnel, to engage in pro-adoption behaviors. In this case, organizations with more staff (FTEs) have the personnel resources necessary to deliver a greater variety of wraparound services as well as providing services to more clients.

Also, organizations which believed that rehabilitation was the best way to reduce crime were more likely to offer a greater assortment of wraparound services. Treatment centers that offer more substance abuse treatment approaches already have a culture that is conducive to selecting interventions from a diverse set of choices and tailoring the treatment approach to each client's specific needs. In addition, providing a variety of treatment approaches suggests that the

organization has the infrastructure in place to engage in the adoption of a variety of wraparound services.

4.1. Limitations

There are several limitations that need to be noted. First, the NCJTSP uses the administrator as a proxy for the organization; however this is consistent with other organizational-level studies on community-based substance abuse treatment centers (Knudsen et al., 2007; Lehman et al., 2002; Oser and Roman, 2007). Second, there are limitations to the data. The NCJTSP did not collect data on implementation, the specific content of the wraparound services, if the wraparound services were evidence-based, or if wraparound services were both available and accessible to clients outside of the community-based organization but within the local community. Furthermore, additional measures on community services and financial barriers would be useful in order to further elucidate the relevant correlates of the adoption of comprehensive wraparound services. It might be the case that organizations with a women-specific program provide more wraparound services because the federal or state government will pay for more services. Third, the NCJTSP was not a longitudinal study. While this cross-sectional study was a first step in examining this issue, future research should use longitudinal data to identify the organizational-level predictors, rather than correlates, of the provision of various wraparound services in organizations with and without a women-specific substance abuse treatment program.

4.2 Conclusions and Implications

Overall, the average number of wraparound services adopted by substance abuse treatment organizations serving predominantly criminal offenders was low, suggesting that re-entering offenders may be at risk of not receiving needed services. The low rate of adoption was particularly notable for services such as child care, legal assistance, and housing assistance. However, women who are re-entering the community and receive substance abuse treatment in a community-based organization with a women-specific program are likely to have access to more services than if they received treatment in a non-women-specific program. Based on the multivariate model, it appears that the explanation for why organizations with a women-specific treatment program offer more services on average is that these organizations tend to be larger in size, support rehabilitation, and offer a greater number of treatment approaches.

These data from a large sample of community-based treatment programs that serve predominantly criminal offenders have several implications. First, larger organizations may be a prime location for the adoption of wraparound services because of the availability of slack, or extra, resources (i.e., financial resources or staff resources) (Rogers, 2003). Administrator's interested in diversifying their wraparound service portfolio could use slack resources such as a staff member's time for training on new wraparound service provision (e.g., HIV testing). In addition, slack resources could also be used to experiment with writing applications to obtain extramural funding for wraparound services (e.g., to obtain financial support for the provision of on-site child care). Second, administrator's interested in adopting more wraparound services should facilitate the building of an organizational culture which recognizes the dual goals of reducing relapse and recidivism. It is possible that having in-house professional development trainings which cover the drugs/crime nexus as well as the research on the crime-reduction benefits of providing re-entering offenders with needed treatment and wraparound services could foster a culture conducive to envisioning rehabilitation as a vehicle for reducing crime.

Community-based treatment organizations have the potential to be an important site for delivering these needed services to re-entering criminal offenders. Future research could further examine wraparound services by examining the organizational decision-making behind adopting specific wraparound services (e.g., medical or supportive services) as well as the

direct (e.g., onsite at the treatment center) or indirect (e.g., referrals to external organizations) provision of wraparound services. In addition, little is known about the interaction of the number of clients receiving wraparound services and the quality of the services delivered, which are areas for future study. Nonetheless, this study provides the foundation for future studies, including those conducted in the continuation of CJ-DATS into CJ-DATS 2, to examine how to change organizations to meet the realities of re-entry process, including the need for wraparound services.

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Table 1

Descriptive statistics

	% (n) or Mean (S.D.)	Range	Available N
Number of Services	3.47 (1.56)	.00–8.00	208
Case Management	81.25% (169)		208
Housing Assistance	23.08% (48)		208
Legal Assistance	8.65% (18)		208
Child Care	5.29% (11)		208
Crisis Intervention	69.71% (145)		208
Mental Health Counseling	76.92% (160)		208
Medical Care	30.29% (63)		208
HIV/AIDS testing and/or counseling	51.44% (107)		208
Offers a Women-Specific Program Organizational Structure	20.69% (42)		203
Ln FTEs	2.09 (1.08)	.00–5.30	192
Ln Number of Clients per Counselor	3.08 (0.87)	.00–6.91	182
Personnel Characteristics			
Female Administrator	50.49% (103)		204
Administrator's # of Years in Tx Field	16.86 (8.44)	0–36	202
Administrator's Graduate Degree	62.44% (128)		205
Counselor's with a Four-Year Degree	3.26 (1.30)	1.00–5.00	189
Culture			
Rehabilitation Scale	4.60 (0.46)	1.00–5.00	199
Organizational Support for Effective Treatment Scale	3.83 (0.63)	1.00–5.00	191
Number of Treatment Approaches	7.64 (2.27)	.00–12.00	187
Sources of Information			
Internet or Publications Scale	1.68 (0.57)	1.00–4.00	154
Professional Development Scale	1.91 (0.73)	1.00–4.00	176
Informal Communication with Prison Staff	1.64 (0.92)	1.00–4.00	176
Systems Integration			
Community Support Scale	2.99 (0.84)	1.00–5.00	200
Relationships w/Other Organizations Scale	8.53 (5.59)	1.00–36.00	171
Influence of Legislative Priorities	3.34 (1.13)	1.00–5.00	202
Influence of Federal Priorities	3.37 (0.94)	1.00–5.00	199

Table 2**Unadjusted Bivariate Poisson Regression Models of Number of Wraparound Services**

	Unadjusted Unstandardized Coefficient (Standard Error)
<i>Offers a Women-Specific Program Organizational Structure</i>	.158 (.088) ⁺
Ln FTEs	.155 (.034) ^{***}
Ln Number of Clients per Counselor	.063 (.045)
<i>Personnel Characteristics</i>	
Female Administrator	-.024 (.075)
Administrator's # of Years in Tx Field	.000 (.004)
Administrator's Graduate Degree	.035 (.078)
Counselor's with a Four-Year Degree	.015 (.029)
<i>Culture</i>	
Rehabilitation Scale	.203 (.088) [*]
Organizational Support for Effective Treatment Scale	.095 (.062)
Number of Treatment Approaches	.063 (.017) ^{***}
<i>Sources of Information</i>	
Internet or Publications Scale	.134 (.071) ⁺
Professional Development Scale	.085 (.051) ⁺
Informal Communication with Prison Staff	.024 (.041)
<i>Systems Integration</i>	
Community Support Scale	.051 (.045)
Relationships w/Other Organizations Scale	.018 (.007) ^{**}
Influence of Legislative Priorities	.074 (.034) [*]
Influence of Federal Priorities	.094 (.040) [*]

⁺ Note: p<. 10,

^{*} p<.05,

^{**} p<.01,

^{***} p<.001 (two-tailed significance test)

Table 3**Multivariate Poisson Regression Model of Number of Wraparound Services**

	B (s.e.)
Offers a Women-Specific Program	.057 (.092)
Ln FTEs	.116 (.037)**
Rehabilitation Scale	.160 (.089) ⁺
Number of Treatment Approaches	.038 (.018)*
Internet or Publications Scale	.062 (.074)
Relationships w/Other Organizations Scale	.007 (.008)
Influence of Legislative Priorities	.017 (.039)
Influence of Federal Priorities	.042 (.045)
Constant	-.431 (.436)

⁺ Note: p<.10,

*
p<.05,

**
p<.01,

p<.001 (two-tailed significance test)