Special article

Program use of effective drug abuse treatment practices for juvenile offenders

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Abstract

This study examined the extent to which organizational context predicted use of consensus-based elements of effective substance abuse treatment practices with juvenile offenders. Participants were either directors of substance abuse treatment programs located in residential facilities (institutional sample) or directors of community-based treatment agencies providing services to adolescents in their home communities (community sample). The two settings differed significantly in the number and types of effective practices they were using. Community programs were more likely to have staff qualified to deliver substance abuse treatment, involve families in treatment, and assess their treatment outcomes. In contrast, institutional programs were more likely to provide comprehensive services. Resources dedicated to training, internal support for new programming, and network connectedness with non-criminal-justice facilities were associated with greater use of effective practices. These findings highlight the importance of establishing corrections–community partnerships designed to promote continuity of care for juvenile offenders. © 2007 Elsevier Inc. All rights reserved.

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1. Introduction

Although the rates of adolescent substance use have declined in recent years (Johnston, O’Malley, Bachman, & Schulenberg, 2005), substance abuse and associated problems (e.g., delinquent activity, mental health issues, risky sexual behavior) among justice-involved youths continue to be among the nation’s most urgent public health priorities (National Center for Juvenile Justice, 2001). It has been estimated that over 60% of youths involved with the juvenile justice system need treatment for substance abuse problems (Aarons, Brown, Hough, Garland, & Wood, 2001; Farabee, Shen, Hser, Grella, & Anglin, 2001; McClelland, Elkington, Teplin, & Abram, 2004). Complicating their service needs, many substance-using youths in the justice system have comorbid, often multiple, psychiatric disorders (McClelland et al., 2004; Teplin, Abram, McClelland, Dulcan, & Mericle, 2002), not to mention problems such as school failure and legal difficulties (Hser et al., 2001; Horton, 1997; Lyons, Baerger, Quigley, Erlich, & Griffin, 2001). Treatments available for these youth often do not provide the comprehensive, multifaceted services that these youth need (Brannigan, Schackman, Falco, & Millman, 2004; Etheridge, Smith, Rounds-Bryant, & Hubbard, 2001; Mark et al., 2006). Left untreated, substance-using adolescents often show increasingly severe substance use and criminal activity over time (CASA, 2002; Lipsey & Derzon, 1998; Sealock,
Gottfredson, & Gallagher, 1997), perpetuating a lifelong cycle of school failure, lack of economic opportunities, and more extensive involvement in the criminal justice system (McCord, 1979; Ridenour et al., 2002).

Given the multiple needs of justice-involved youths and the general lack of resources across multiple systems of care (Garland, Hough, Landsverk, & Brown, 2001), it is not surprising that the juvenile justice system has become the primary point of access for many youths in need of treatment services (Nissen, Butts, Merrigan, & Kraft, 2006; Office of Applied Studies, 2001). However, the services provided by juvenile justice and drug treatment systems are often fragmented. Justice-involved youths are typically involved in multiple systems of care (e.g., juvenile justice, foster care, mental health treatment, and substance use treatment) involving multiple treatment providers and other concerned professionals that are often unable to collaborate effectively to engage and retain juvenile offenders in treatment (Dennis, Dawud-Noursi, Muck, & McDermeit, 2003; Nissen et al., 2006). These systems of care generally lack resources to adopt and implement evidence-based practices (Garland et al., 2001). As a result, research supported substance abuse interventions are infrequently implemented (Brannigan et al., 2004), with no particular model serving as a basis for generating consensus for collaboration among systems or making effective treatment practices available on a wide scale (Nissen & Kraft, in press). Although the “research–practice disconnect” stems in part from poor coordination between juvenile justice and community-based mental health systems and the lack of resources available to redesign existing programming (Nissen, Hunt, Bullman, Marmo, & Smith, 2004), there is also a need to focus attention on how effective treatment practices can be implemented within the parameters that guide service delivery in real-life settings. For example, community-based therapists typically handle large caseloads, lack incentives and/or opportunities for additional training, and may lack the necessary professional background to prepare them to learn new therapies (Institute of Medicine, 1998; Liberman & Corrigan, 1994). Furthermore, as discussed more fully below, the resources needed to implement comprehensive treatments are rarely in place in most community-based programs (Pringle, Emptage, & Hubbard, 2006).

1.1. Research-supported treatment practices for juvenile offenders

Although the adoption of research-supported treatment practices for justice-involved youth has been slow, a number of recent treatments, most notably family-based, multiple-system-oriented treatments, have been developed and demonstrated success (Dennis et al., 2004; Henggeler et al., 1991; Rowe & Liddle, 2003; Schaeffer & Borduin, 2005). Furthermore, studies have shown that these empirically supported treatments are potentially transportable (Henggeler, Schoenwald, & Pickrel, 1995; Henggeler, Melton, Brondino, Scherer, & Hanley, 1997; Liddle et al., 2002). Successful transportation studies have also coincided with large-scale efforts to disseminate these research-supported interventions to typical community-based treatment agencies, many of whom serve juvenile offenders (Chamberlain, 2003; Henggeler, Schoenwald, Liao, Letourneau, & Edwards, 2002; Santisteban, Suarez-Morales, Robbins & Szapocznik, 2006; Sexton & Alexander, 2003; Substance Abuse and Mental Health Services Association, 2003). However, despite these successes, developers of empirically supported treatments have noted that transporting these comprehensive, multifaceted treatments to community settings involves much more than addressing those active features of the interventions presumed to lead to improved outcomes. The translation must also include understanding and addressing the complex interplay between the characteristics of interventions, providers, and organizational and service delivery settings in which the interventions occur (Backer, 2000; Henderson, McKay, & Peterson-Badali, 2006; Liddle et al., 2002; Schoenwald & Hoagwood, 2001). Recently, researchers have begun to think of broader systemic characteristics as effective practices in and of themselves (e.g., juvenile justice–community drug treatment systems integration; Brannigan et al., 2004; Drug Strategies, 2005) as well as considering the organizational frameworks necessary for adopting effective treatment practices (Stirman, Crits-Christoph, & DeRubeis, 2004).

Issues related to the context or setting in which the services are delivered place very different demands on the provider as well as the recipient of the treatment (Hoagwood, Burns, Kiser, Rigeisen, & Schoenwald, 2001). Applied to substance-abusing juvenile offenders, those effective practices adopted and implemented in community settings may vary considerably from those implemented in residential settings (e.g., detention, residential facilities). As noted by Hoagwood et al. (2001), “A presupposition of the evidence base is that its development has taken into account the fit between the treatment and the context of delivery. In fact, this fit has been attended to only rarely” (p. 1185). It should be noted that the literature on empirically supported treatments for juvenile offenders has focused almost exclusively on their implementation in community-based treatment agencies, with much less emphasis on residential correctional settings (Belenko, 2000).

1.2. Organizational characteristics associated with the adoption of effective treatment practices

Recent research has highlighted the importance that organizational characteristics play in the adoption, implementation, and potential sustainability of effective treatment practices (Henggeler, 2004; Roman & Johnson, 2002; Simpson, 2002). There has been evidence from two lines of research, diffusion of innovations in organizational
settings (Glisson, 2002; Wejnert, 2002) and the implementation of EBPs in representative mental health settings (Drake et al., 2001; Roman & Johnson, 2002; Stirman et al., 2004), which has fairly consistently identified the organizational characteristics most conducive to adopting new (and presumed to be improved) treatment technologies. Everett Rogers’s (1995) diffusion of innovations theory often is the underlying theory guiding both bodies of literature, which suggests that the spread of practices within a social system flows from a source to an adopter through communication and social influence.

Factors that have been shown to be related to the adoption of effective treatment practices include (a) organizational structure (Backer, Liberman, & Kuehnel, 1986; Knudsen, Ducharme, & Roman, 2006; Roman & Johnson, 2002), (b) organizational climate (Aarons & Sawitzky, 2006; Glisson, 2002; Glisson & Hemmelgarn, 1998; Lehman, Greener, & Simpson, 2002), (c) training opportunities (Brown & Flynn, 2002; Knudsen, Ducharme, Roman, & Link, 2005), (d) resource adequacy (Lehman et al., 2002; Simpson, 2002; Stirman et al., 2004), (e) network connectedness (Knudsen & Roman, 2004), and (f) administrator and staff attitudes (Knudsen et al., 2005; Liddle et al., 2002; Schmidt & Taylor, 2002). However, previous investigations have not focused on the organizational predictors of the use of effective treatment practices among organizations serving juvenile offenders, either living in the community or in institutional settings. Furthermore, it is quite probable that effective treatment practices that have been implemented in community treatment agencies may not be seamlessly adopted into residential facilities. For instance, family-based substance abuse treatments have received some of the most consistent empirical evidence supporting their effectiveness with juvenile justice-involved youth (Austin, Maegowan, & Wagner, 2005; Brannigan et al., 2004; Vaughn & Howard, 2004; Williams & Chang, 2000). However, institutional barriers inherent in institutional facilities often preclude or make the implementation of family-based treatments extremely challenging, as youth are often incarcerated in facilities located long distances from their home communities. Punitive philosophies adopted by many institutional facilities may also mitigate against providing strong, quality services for their young inhabitants.

1.3. Current study

The National Criminal Justice Treatment Practices Survey (NCJTPS) is a multilevel survey designed to assess all levels of the adult and juvenile justice systems in the United States (Taxman, Wiersema, Rhodes, Young, & Mitchell, 2007). The primary goals of the survey are to describe the substance abuse treatment practices currently available to offenders and to examine organizational factors that affect substance abuse treatment practices in correctional settings. This article examines the impact of local organizational characteristics on the use of consensus elements of effective treatment practices among juvenile justice administered institutional facilities and community agencies providing substance abuse treatment for juvenile offenders. As such, the current study extends the work of Young, Dembo, and Henderson (2007), which examines the availability of services for juvenile offenders as well as offenders’ access to them by focusing on organizational predictors of effective treatment practices. Furthermore, it will examine the extent to which the two settings differ in the practices that are used.

Our operationalization of effective treatment practices is guided by a policy/research report concerning the status of drug abuse treatment in the juvenile justice system issued by a nonprofit organization devoted to improving substance abuse treatment practice and advancing research–practice connections: “Bridging the Gap: A Guide to Treatment in the Juvenile Justice System” (Drug Strategies, 2005). This report highlights key elements of effective substance abuse treatment practices for juvenile offenders based on a consensus panel of researchers, practitioners, policy makers, and criminal justice administrators specializing in substance abuse treatment for justice-involved youth. These experts comprehensively reviewed the existing literature and considered the sociopolitical environments that provide services. The group identified 11 key elements of effective treatment practices. The elements articulated in this report provide the structure for the current study’s analyses and are discussed in more detail in the Materials and methods section.

Based on previous research on diffusion of innovations and organizational predictors of adoption of research-supported treatment practices (e.g., Aarons & Sawitzky, 2006; Glisson, 2002; Knudsen et al., 2005, 2006; Stirman et al., 2004) we hypothesize that organizational structure and climate, training opportunities, resource adequacy, network connectedness, and administrator attitudes will predict the extent to which the facilities are using the elements of effective treatment practice identified in the Drug Strategies report. Furthermore, we hypothesize that the effective treatment practices used in correctional facilities differ from those used in community treatment agencies.

In this article we distinguish between elements of effective treatment practices and EBPs. EBPs necessitate a foundation of rigorous empirical research for each component of the practice. The notion of EBPs is that there are at a minimum several studies that reach the same conclusion, and these studies of sufficient scientific rigor to be conclusive that a certain practice in a certain setting has scientific evidence. The looser term, “effective treatment practices,” is based on a consensus of experts in the current study. The concept of effective treatment practices is that they can be informed by research (as were many of the consensus elements in the Drug Strategies [2005] report) but not all of the elements have been firmly established by agreed-upon scientific standards, or additional studies may be needed to draw firmer conclusions. Because our dependent measure in
this article rests on the conclusions of a consensus (but research-informed) report, we have opted to use the term effective treatment practices through the remainder of this article because in our view this terminology captures the consensus driven nature of the treatment practices we examine.1

2. Materials and methods

Survey data used in this article were drawn from a multilevel national survey designed to describe and assess substance abuse treatment and other services throughout the adult and juvenile justice systems. The National Criminal Justice Treatment Practices (NCJTP) survey solicited information from diverse sources ranging from executives of state criminal justice and substance abuse agencies to staff working in correctional facilities and drug treatment programs. Details of the various study samples and survey methodology are provided in an introductory article to this volume (Taxman et al., 2007). The present study focused on survey results from directors of substance abuse treatment programs serving juvenile offenders in both institutional and community settings.

2.1. Sample

Stratified by geographical region and bed capacity, the juvenile institutions were randomly selected proportionate to their size from an original sampling frame of juvenile residential facilities listed in the 2003 American Correctional Association (ACA) national directory. The NCJTP Treatment Program Directors Survey targeted the subset of juvenile institutions that were identified as providing some type of substance abuse treatment service based on the ACA directory, other state directories, Web sites, or through direct telephone inquiries. To survey directors of community-based programs, a target sample was drawn using a two-stage strategy that initially involved selecting a stratified random sample of 72 counties from the 3,141 counties listed in the 2000 U.S. Census. The national data file of substance abuse treatment programs maintained by the Department of Health and Human Services’ Office of Applied Studies (Office of Applied Studies, 2004) was then used to identify the three largest drug-free outpatient programs serving adolescent criminal justice clients in each county. Web sites, state agency directories, and direct telephone inquiries were also used to identify and sample any adolescent treatment programs that were located in local probation, parole, or other community corrections offices in the sample counties.

A total of 217 criminal justice and community-based facilities providing substance abuse treatment to adult and adolescent offenders were included in the final respondent sample of treatment program directors. One hundred twenty-two of the 217 facilities provided services either to juveniles only or to juveniles and adults. Thirty-four of these 122 facilities were in secure juvenile institutions housing incarcerated youth. The remaining 88 facilities were programs providing services for youth living free in their home communities. The majority of these 88 facilities (78%) were community-based treatment programs; the other 22% included probation/parole facilities, Treatment Alternatives to Street Crimes agencies, and other community correction facilities.

2.2. Procedure

Names and addresses of respondents targeted for the Treatment Program Directors survey were obtained from the federal Inventory of Substance Abuse Treatment Services (through an arrangement with the Office of Applied Studies), agency Web sites, and phone inquiries. Survey participants were mailed a package that included informed consent documents, the 27-page survey questionnaire, a stamped return envelope, and a cover letter explaining the study and procedures for completing and returning the survey. Participants provided informed consent in accordance with the procedures of the institutional review boards at each of the 11 research centers that compose the Criminal Justice–Drug Abuse Treatment Studies network (see Taxman et al., 2007, for additional information on human subjects procedures). Follow-up efforts with nonrespondents included reminder postcards and faxes, multiple phone calls, and replacement surveys when needed. Response rate was 57% for institution-based treatment programs and 40% for community-based programs. This rate meets or exceeds that typically found for mailed, self-administered organizational surveys (Baruch, 1999). An analysis of response bias using available organizational data indicated no systematic differences between responders and nonresponders (Taxman et al., 2007).

2.3. Measures

The dependent variable in the current study—extensiveness of use of effective treatment practices—indicates the number of key elements identified in the Drug Strategies (2005) report currently used at the facility (see also Mark et al., 2006, for a similar operationalization). These key elements consisted of (1) systems integration, (2) assessment and treatment matching, (3) recognition of co-occurring disorders, (4) comprehensive treatment approach, (5) qualified staff, (6) developmentally appropriate program, (7) family involvement in treatment, (8) engage and retain teens in treatment, (9) continuing care, and (10) assessment of treatment outcomes. We did not include gender and

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1 We thank the anonymous reviewer for requiring us to consider these deeper terminological distinctions, and the current state of the science in this area.
cultural competence, which was identified in the Drug Strategies report, because the NCJTP did not adequately address this element. Possible responses ranged from 0 to 10. Following Knudsen and Roman (2004), we adopted this inventory approach because it allows for easier comparability across organizations (Delaney, Jarley, & Fiorito, 1996) and provides more consistent findings (Damanpour, 1991) than focusing on individual practices.

The effective treatment practices were measured by specific survey items dichotomized to allow for easier calculation of the continuous dependent measure. Systems integration was measured by a list of activities in which the respondents participated with judiciary, community corrections, and community-based treatment (Fletcher & Lehman, 2006). Analyses conducted by Fletcher and Lehman (2006) indicated that a threshold of eight joint activities was indicative of more extensive levels of networking according to Konrad’s (1996) model of human service integration and Taxman and Bouffard’s (2000) model of boundary spanning. Programs receiving scores of eight and above were considered to meet the criterion for systems integration. Screening and treatment matching drew on work by Taxman, Cropsey, Young, and Wexler (2007), which categorized assessment practices according to use of standardized screening tools, use of tools developed by the organization, and no use of assessment tools. Programs using standardized assessment tools met the criterion for this effective practice.

The presence or absence of treatment services that were developmentally appropriate, addressed comorbid disorders, and involved families were operationalized by items in which respondents indicated whether they had specific programming for adolescent clients, clients with co-occurring disorders, and families, respectively. Determination of qualified staff was made from an item that indicated the proportion of staff that had specialized training or specific credentials in substance abuse treatment. Programs were considered to meet this criterion if 75% or more of their staff had either specialized training or credentials in substance abuse treatment.

Comprehensive treatment was calculated from an inventory of medical, mental health/substance abuse, and case management services provided by the facilities. Respondents met the criterion for comprehensive treatment services when they provided medical, mental health/substance abuse, and case management services. Engagement in treatment was assessed by an item that queried the extent to which the programs used specific engagement techniques such as motivational interviewing, with the criterion being using those techniques “often” or “always.” Two items served as the basis for quantifying continuing care, one assessing the number of offenders that are provided a referral to a substance abuse treatment program and another assessing the number of offenders that had a prearranged appointment with a treatment program. Respondents working in institutions reported on the number of offenders that received the services when they were released; respondents working in treatment programs reported on the number of offenders that appeared to have received the services prior to their admission to the community-based facility. Programs meeting this criterion reported that all of the offenders received referrals and most or all of them had prearranged appointments. Finally, assessment of treatment outcomes was operationalized by an item that assessed the extent to which the respondents were regularly kept informed about the effectiveness of their substance abuse treatment programs.

In terms of the organizational predictors, the NCJTP survey incorporates items/scales from existing, psychometrically sound measures (Taxman et al., 2007). We included five sets of independent variables: (1) organizational structure, (2) organizational climate, (3) training and resources (funding, staff, physical plant, etc.), (4) network connectedness, and (5) administrator attitudes. Organizational structure measures included a dichotomous item indicating whether the facility is a substance abuse treatment facility and an item indicating whether the facility served offenders exclusively or offenders and general population clients. Two organizational climate measures were included in the survey. Based on concepts and instruments developed to assess service climate in private industry (Schneider, White, & Paul, 1998), these included subscales that assessed perceptions of management emphasis on treatment quality and improvement and correctional staff support for treatment.

Training and facility resources were operationalized by scales adapted from the resources and staff attributes subscales of the Survey of Organizational Functioning for correctional institutions (Lehman et al., 2002). Scales assessed respondents’ views about the adequacy of funding, the physical plant, staffing, resources for training and development, and internal support for new programming. Network connectedness refers to the extent to which the facility had formal and informal working relationships with various justice agencies (courts, law enforcement, corrections, etc.), mental health programs, health clinics and hospitals, housing services, vocational support agencies, and victim and faith-based organizations. Respondents indicated the degree to which their facility was involved with these other entities on a 5-point Likert scale.

Measures of administrators’ attitudes about various organizational and treatment-related issues were included in a final block of predictor variables. Subscales that assessed beliefs about the value of different responses to crime and drug crime (rehabilitation, punishment, deterrence) were adapted from previous similar surveys of public opinion and justice system stakeholders (Cullen, Fisher, & Applegate, 2000). Other attitude scales in the survey were not specific to treatment and focused more generally on the organization. These included scales adapted from standardized measures of organizational commitment (Balfour & Wechsler, 1996) and cynicism for change (Tesluk, Farr, Mathieu, & Vance, 1995).
2.4. Data analysis

We first examined the number and types of effective treatment practices used in institutional and community facilities. An independent samples t test was used to compare the number of effective practices used in the two settings, and chi-square tests were used to compare the proportion of facilities using the different practices. Next we examined a total of six ordinary least squares regression models (one for each of the blocks of variables described above, along with a multivariate model composed of significant predictors from those models). Extent of use of the effective treatment practices (0–10) served as the criterion variable and the five sets of variables listed above (organizational structure, organizational climate, training/resources, network connectedness, and administrator attitudes) served as predictor variables. The final model includes significant predictors from the previous analyses and examines the relative influence of these organizational predictors. Knudsen et al. (2006) have used a similar modeling approach with organizational predictors of buprenorphine adoption due to restrictions on the number of variables that can appropriately be examined in a single regression model (Tabachnick & Fidell, 2007). These blocks of variables were assessed in hierarchical regression models, which we first adjusted for region of the country in which the facility was located to control for any effects of the sampling design in which region was used as a stratum in sample selection.

3. Results

3.1. Descriptive statistics

Descriptive statistics for all variables are presented in Table 1. On average facilities reported that they were using 5.5 (SD = 1.9) of the effective treatment practices, with community settings using significantly more (M = 5.8, SD = 1.8) than institutions (M = 4.9, SD = 2.1; t(120) = −2.33, p = .022). There were also several differences between the settings in the proportion of facilities that were using specific practices. Community programs were more likely to have staff qualified to deliver substance abuse treatment, χ²(1) = 14.93, p < .001; and assess their treatment outcomes, χ²(1) = 8.42, p = .004. In contrast, institutional programs were more likely to provide comprehensive services, χ²(1) = 3.84, p = .050.
Table 2
Multiple regression analyses of organizational variables (IVs) and use of EBPs (DV)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unadjusted coefficient</th>
<th>Adjusted coefficient for setting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
</tr>
<tr>
<td>Organizational structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution vs. community setting</td>
<td>1.23</td>
<td>0.65</td>
</tr>
<tr>
<td>Substance abuse treatment facility</td>
<td>0.69</td>
<td>0.35</td>
</tr>
<tr>
<td>Offenders vs. offenders and nonoffenders</td>
<td>-0.59</td>
<td>0.67</td>
</tr>
<tr>
<td>Organizational climate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management emphasis on quality treatment</td>
<td>1.06</td>
<td>0.27</td>
</tr>
<tr>
<td>Correctional staff respect for treatment</td>
<td>0.12</td>
<td>0.25</td>
</tr>
<tr>
<td>Training and resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding</td>
<td>-0.46</td>
<td>0.23</td>
</tr>
<tr>
<td>Physical plant</td>
<td>0.10</td>
<td>0.21</td>
</tr>
<tr>
<td>Staffing</td>
<td>0.02</td>
<td>0.22</td>
</tr>
<tr>
<td>Training development</td>
<td>0.61</td>
<td>0.30</td>
</tr>
<tr>
<td>Internal support</td>
<td>0.45</td>
<td>0.21</td>
</tr>
<tr>
<td>Network connectedness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-criminal-justice facilities</td>
<td>0.82</td>
<td>0.27</td>
</tr>
<tr>
<td>Criminal justice facilities</td>
<td>0.33</td>
<td>0.21</td>
</tr>
<tr>
<td>Administrator attitudes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Punishment/deterrence</td>
<td>-0.35</td>
<td>0.28</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>0.23</td>
<td>0.36</td>
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<tr>
<td>Organizational commitment</td>
<td>0.82</td>
<td>0.39</td>
</tr>
<tr>
<td>Cynicism for change</td>
<td>0.14</td>
<td>0.35</td>
</tr>
</tbody>
</table>

Note. B = unstandardized regression coefficient; SE B = standard error; β = standardized regression coefficient; N/A = not applicable.

* * p < .05.
*** p < .01.
**** p < .001.

3.2. Multiple regression models predicting use of effective treatment practices

Table 2 shows results regarding the number of specific treatment practices used, with the first column showing the results for the combined sample (adjusted for region of the country) and the second column also adjusting for setting (institution vs. community). As mentioned previously, we adjusted for region to control for potential sample selection effects; we adjusted for setting due to the differences in types and numbers of effective practices the programs were using as detailed above. The set of organizational structure variables as a group significantly predicted the extent of use of the effective treatment practices, \( F(4, 116) = 3.20, p = .016, R^2 = .10 \), adjusted \( R^2 = .07, \Delta R^2 = .08 \). In terms of individual predictors, substance abuse treatment facilities were using more of the practices (\( \beta = .18, t = 1.96, p = .053 \)). The treatment climate variables as a group also predicted use of the effective practices, \( F(4, 98) = 5.03, p = .001, R^2 = .17, \) adjusted \( R^2 = .13, \Delta R^2 = .09 \). Management emphasis on the quality of treatment was significantly related to the number of practices programs were using (\( \beta = .31, t = 3.15, p = .002 \)). The set of training and resource variables also predicted use of the effective practices, \( F(7, 112) = 3.76, p = .001, R^2 = .13, \) adjusted \( R^2 = .09, \Delta R^2 = .12 \), with internal support (\( \beta = .25, t = 2.67, p = .009 \)) and training (\( \beta = .20, t = 2.07, p = .041 \)) significantly predicting use among the individual predictors. Network connectedness as a group showed the strongest relationship with the use of effective practices, \( F(4, 113) = 8.23, p < .001, R^2 = .21, \) adjusted \( R^2 = .19, \Delta R^2 = .20 \). In terms of individual variables, connections with non-criminal justice agencies was a significant predictor of use (\( \beta = .33, t = 3.14, p = .002 \)). Finally, administrator attitudes as a group was significantly associated with use of effective practices, \( F(6, 108) = 2.68, p = .018, R^2 = .11, \) adjusted \( R^2 = .06, \Delta R^2 = .09, \) with commitment to the organization related to more use (\( \beta = .26, t = 2.11, p = .038 \)). When combined in a multivariate model including marginal and statistically significant predictors of use of the effective practices (i.e., network connectedness, training, internal support for new programs, management emphasis on the quality of treatment, administrator commitment to the organization, and whether the facility was a substance abuse treatment agency), despite accounting for a large proportion of the variance in use of treatment practices as a group (\( R^2 = .28, \) adjusted \( R^2 = .24, \Delta R^2 = .20 \), the only significant individual predictor was network connectedness (\( \beta = .23, t = 2.86, p < .005 \)), with internal support being marginally associated with use (\( \beta = .15, t = 1.68, p = .096 \)).

4. Discussion

These data suggest that facilities providing substance abuse treatment services to substance-abusing juvenile offenders are adopting some of the consensus elements
of effective treatment practices highlighted in the Drug Strategies (2005) report. On average, programs were using over 5 of the 10 key elements highlighted in that report. However, the facilities showed considerable variability in terms of the specific practices, as well as the setting in which they were delivered. The reader should keep in mind that the specific treatment practices we discuss more fully below are based on consensus review, with some practices having stronger empirical support than others.

The majority of programs reported hiring staff qualified to conduct substance abuse treatment, using standardized screening and assessment tools, involving families in treatment, providing services geared toward youth with co-occurring substance abuse and mental health disorders, and using specific techniques to engage the youth in treatment. Substantially fewer programs reported having integrated corrections and community-based treatment systems, treatment addressing the developmental needs of adolescents, comprehensive services, and continuing care.

These findings are for the most part consistent with a study conducted by Mark et al. (2006) who also examined the proportion of programs using key elements of effective treatment practices recommended by a similar Drug Strategies (2005) report. The primary difference between the current study and the Mark et al. study is that we examined the use of effective practices among programs providing treatment to juvenile offenders in institutional and community settings, whereas Mark et al. did not limit their sample to programs that served juvenile justice clients (although 93% of the National Survey of Substance Abuse Treatment Services sample used in their study reported serving justice-involved youth). Like the current study, Mark et al. also found high levels of family involvement in treatment and low levels of developmentally appropriate treatment and comprehensive services. Unlike Mark et al., we found that a larger proportion of programs reported providing services for clients with both substance abuse and mental health disorders (71% vs. 50%), but a lower proportion in the current study reported providing continuing care (operationalized in Mark et al. as aftercare services, 25% vs. 82%). As we discuss more fully below, in addition to differences in how continuing care services are defined, this discrepancy may be due to the fact that continuing care involving the justice system necessarily requires cross-agency collaboration, whereas aftercare in general community settings may be provided by the programs themselves.

Few respondents reported that their programs were designed to meet adolescents’ unique developmental needs, which is counter to the literature that emphasizes the importance of treatment being developmentally appropriate to adolescents (Dennis et al., 2003; Sells & Simpson, 1979). Given the broad nature of the survey question on which this finding is based, more research is needed to determine to what extent institutions and community programs are attempting to structure their treatment in such a way as to address adolescents’ developmental needs (e.g., assessing and intervening with families, schools, peers, etc.).

The lack of continuing care services is somewhat concerning given the high incidence of substance use disorders in adolescent offender populations (Aarons et al., 2001; McClelland et al., 2004) and the substantial increase in arrests for drug-related offenses that have occurred over the last decade (Office of Juvenile Justice and Delinquency Prevention, 2004a, 2004b). When released to the community, these youth unfortunately often return to their substance use problems and recidivate at high rates, indicating a need for innovative treatments providing a continuum of services across institutional and community treatment systems (Inciardi, Martin, & Butzín, 2004; Prendergast, Hall, Wexler, Melnick, & Cao, 2004; Solomon & Meyerson, 1994). A pattern emerging from these findings is that agencies are relatively successful in using effective treatment practices that they can implement in their specific settings; however, they struggle in implementing practices that require forming relationships and coordinating practices outside their realm of control (Altschuler, 2005). Indeed, as articulated more fully below, programs that are able to establish these relationships are consequently adopting more consensus elements of effective practice.

One of the main findings of the current study is that setting matters in both the number and types of effective treatment practices used. Community settings on average were using a higher number of practices than institutional settings and were more likely to employ qualified staff, involve families in treatment, and assess treatment outcomes. Institutional settings conversely were more likely to provide comprehensive services. These findings are what expected given the connection between accreditation (which often considers factors such as staff qualifications and outcome assessment) and third-party reimbursement particularly for community settings. Likewise, given the logistical complications in involving families in treatments located in institutional facilities, and the need for such facilities to monitor youths’ medical needs and provide educational services, it is not surprising that institutional settings were less likely to involve families in treatment but more likely to provide comprehensive services.

In terms of the organizational predictors of effective treatment practices, setting again made a difference in that it significantly predicted the extent to which the programs reported using them, along with several organizational characteristics. Greater use of effective treatment practices was associated with the extent to which the facilities carried out joint activities, particularly with non-criminal justice focused organizations, internal support for new programs, training opportunities, management emphasis on the quality of treatment, and administrator commitment to the organization. As such, these findings are consistent with organizational and health services research on diffusion of innovations (Glisson, 2002; Knudsen & Roman, 2004; Wejnert, 2002). However, to our knowledge, this is the first study that has examined predictors of the use of effective treatment practices within institutional facilities.
Of note, the network connectedness with non-criminal-justice organizations, but not the connectedness with criminal justice organizations, predicted extensiveness of use of effective treatment practices. This finding may indicate that factors shaping the health services marketplace such as managed care, with its emphasis on accountability and outcome assessment may be impinging to a greater degree on non-criminal-justice-related service organizations (Roman & Johnson, 2002). Furthermore, the leaders of non-criminal-justice organizations may be more optimistic about the effectiveness of consensus elements of effective practice in changing adolescent offenders’ behavior and thus have more enthusiasm for adopting them. They may also have more access to and resources for training in effective treatment practices. Alternatively, this finding may be explained by shared variance between networking with community organizations and the greater use of effective treatment practices in these facilities (relative to institutions).

4.1. Limitations

The study has considerable strengths and advances the state of knowledge in the field of substance abuse treatment for juvenile offenders. However, there are several limitations. First, the data are cross sectional, limiting the ability to draw causal inferences. For instance, although we have examined network connectedness as a predictor of the use of effective treatment practices, it is also conceivable that the resources involved in effectively implementing these practices require a greater degree of networking. It is therefore difficult to determine if one is the cause or the consequence of the other. Second, although the response rates are comparable to those reported by other mail surveys, the proportion of program administrators declining to participate is substantial, limiting the generalizability of the findings. Third, the data are limited to self-reports of program administrators. Fourth, the questions themselves were limited in the level of information that was obtained about the specific treatment practices we assessed. It is likely that there is considerable variability in how practices are defined and implemented across settings. For instance, a high proportion of facilities reported family involvement in treatment; however, due to the nature of the survey items, we do not know to what extent facilities were implementing empirically supported family-based therapies designed to impact multiple risk factors affecting adolescent offenders’ levels of substance use (e.g., Liddle, 2004). Furthermore, because we included facilities that provided services for both adults and adolescents, the proportion of adolescents served by the facilities is also likely to vary.

4.2. Conclusion

In conclusion, however, the NCJTPS is the first national survey to assess substance abuse treatment at all levels of the adult and juvenile justice systems. The data are representative of the state of substance abuse treatment of the entire adult and juvenile justice systems in the United States (see Taxman et al., 2007). Furthermore, the current study is the first to examine the use of effective treatment practices in juvenile institutions. As such, the present findings may have important implications for the implementation of effective substance abuse treatment practices for juvenile offenders. The findings suggest that institutional facilities are lagging behind community settings in their use of the effective treatment practices examined in this study and that network connectedness specifically with non-criminal-justice facilities is associated with more use. In addition, they suggest that programs should make continuity of care a priority, particularly the development of facilitative relationships with agencies equipped to transition juvenile offenders from secure facilities to their home communities. Future research should examine the impact that adopting these effective treatment practices has on juvenile offenders’ treatment outcomes as well as study different models of disseminating and implementing research-supported treatment practices (National Institute on Drug Abuse, 2005; Taxman, 2005). Such research is sorely needed to bridge the oft lamented disconnect between research findings and their implementation in treatment practice.

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