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FINDINGS FROM A PROCESS EVALUATION OF A STATEWIDE RESIDENTIAL SUBSTANCE ABUSE TREATMENT PROGRAM FOR YOUTHFUL OFFENDERS*

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ABSTRACT

Despite the critical importance of process evaluations to enhancing the efficiency and long-term effectiveness of chemical dependency treatment programs, attention to process-related dimensions of treatment programming has been largely neglected. Using data collected on youthful offenders with chemical dependency treatment needs in the Texas Youth Commission (TYC), this paper provides a systematic and empirical process evaluation of factors associated with successful program progress in TYC's Chemical Dependency Treatment Program (CDTP). Analyses focus on appropriate program placement and whether and to what extent risk, dynamic/criminogenic need, behavioral, and treatment amenability factors are related to several key measures of program progress, including completion/expulsion, days to completion/expulsion, and performance, as well as to variation among these outcomes across treatment sites. Policy and research implications of these analyses and of process evaluations then are discussed.

FINDINGS FROM A PROCESS EVALUATION OF A STATEWIDE RESIDENTIAL SUBSTANCE ABUSE TREATMENT PROGRAM FOR YOUTHFUL OFFENDERS

When discussing criminal and juvenile justice programs and policies, citizens and policymakers frequently are interested in a bottom-line issue: "Does this program or policy reduce crime?" Although without doubt central to any evaluation, such a focus neglects the fact that for programs or policies to be effective they must successfully reach and affect a target population. Put differently, for a program or policy to "work," it must effectively select appropriate participants and then successfully "treat" and "graduate" them. Process evaluations, which include a focus on program and policy delivery, are uniquely suited to provide this kind of information (Cullen & Gendreau, 2000; Harachi, Abbott, Catalano, Haggerty, & Fleming, 1999; Rossi, Freeman, & Lipsey, 1999; Wholey, Hatry, & Newcomer, 1994).

Unfortunately, in the context of chemical dependency treatment programs, we have few systematic empirical or statistical analyses of factors associated with successful program progress. This situation is unfortunate both because of well-established links between substance use/abuse and offending (e.g., Crowe, 1998; Tonry & Wilson, 1990; Weekes, Moser, & Langevin, 1999) and because of the cost and scarcity of chemical dependency treatment resources. Indeed, if illicit drug use by juveniles continues to increase in the U.S. (Snyder & Sickmund, 1999), there will be a corresponding increase in the demand for effective drug treatment initiatives. A compelling need thus has emerged for evaluating the efficiency and effectiveness of the ever-growing array of chemical dependency treatment programs aimed at youthful offenders (Anglin & Hser, 1990; Coordinating Council on Juvenile Justice and Delinquency Prevention, 1996; Crowe, 1998; Hester & Reid, 1995; Howell, 1995; McBride, VanderWaal, Terry, & VanBuren, 1999; Wilson, 1990).

Taking these observations as a point of departure, the primary goal of this paper is to provide a process evaluation illuminating the "black box" of chemical dependency treatment programs for youths (Harachi et al., 1999; Rossi et al., 1999). Specifically, this evaluation systematically

and empirically examines appropriate program placement and whether and to what extent key risk, dynamic/criminogenic need, behavioral, and amenability factors are related to several key measures of program progress, including completion and expulsion, days to completion and expulsion, and performance (e.g., level and extent of participation, level of understanding of addiction). Given the potential importance of program implementation and organizational characteristics (Farabee, Prendergast, Cartier, Wexler, Knight, & Anglin, 1999), systematic attention also is given to variation across treatment sites.

Data for these analyses were obtained from the Texas Youth Commission (TYC), the correctional agency responsible for incarcerating serious and violent youth committed to the custody of the state. TYC operates secure institutions, community-based residential half-way house programs, secure community-based residential and non-residential treatment services, and supervises parolees. Underlying all of these programs and services is the Resocialization Program, which is TYC's primary strategy of correctional treatment; its four cornerstones are correctional therapy, disciplinary training, education, and work. Specific components include emphasizing the relationship between low self-esteem and criminal offending, identifying the special needs of youths through the use of life stories, focusing on victim empathy, enhancing family and significant other relations, and developing cognitive skills and appropriate modes of expression.

TYC also focuses on the specialized psychological and emotional needs of youths. Chemical dependency in particular constitutes a core area of concern to TYC, which is reflected in the substantial investment it has made to treatment. Specifically, TYC administers a Chemical Dependency Treatment Program (CDTP), operative at five sites in 1998 and at three more sites in 1999. The CDTP incorporates some principles of responsivity (Gendreau, 1996; Howell, 1995; Lauen, 1997; Simourd & Andrews, 1994), focusing on high-need youths and emphasizing the role of drugs and alcohol in the lives of the youths and of others, including family members and society at large. Youths are selected for treatment, contingent on bed availability, based on a diagnosis by a licensed Chemical Dependency Counselor and the use of the Substance Abuse

Subtle Screening Inventory (Lazowski, Miller, Boye, & Miller, 1998). A psychologist and/or psychiatrist then reviews this diagnosis, along with other criteria (prior referrals, adjudications, and commitments, amenability to treatment, etc.), to determine eligibility for treatment. The treatment program itself is grounded in a cognitive, social learning-based approach that incorporates the treatment modalities researchers have identified as effective for the treatment of substance abuse/chemical dependency (see, e.g., Andrews & Bonta, 1994; Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990; Bonta, 1996; Fabiano, Robinson, & Porporino, 1991; Farabee et al., 1999; Gendreau, 1996; Harland, 1996; Hawkins, Catalano, & Miller, 1992; Inciardi, Martin, Butzin, Hooper, & Harrison, 1997; Lauen, 1997). Some of the program characteristics include having a caseworker-to-youth ratio of 1:8 to 1:10, focusing on the relationship between chemical dependency and delinquency (five hours per week), incorporating group counseling and peer accountability, developing individualized relapse prevention and community re-integration plans, and providing treatment for six months.

By examining the relationship between risk, need, behavioral, and amenability factors and key measures of program progress, the present study aims to provide several benefits. First, it will determine whether and to what extent the youths placed in treatment at TYC are appropriate for chemical dependency services. Second, it will assess the predictive utility of TYC's classification and assessment strategies. Third, it will identify offender and site characteristics that are related to successful program progress. Finally, and most importantly, it will illuminate the critical role that process evaluations can play in assessing chemical dependency programs and policies.

Substance Abuse Treatment in the Juvenile Justice System

Substance abuse has emerged in recent years as one of the most prominent and critical issues the juvenile justice system has had to address (Crowe, 1998). Researchers have demonstrated strong, if frequently complex, links between substance abuse and delinquency (Andrews and

Bonta, 1994; Andrews et al., 1990; Bonta, 1996; Clements, 1996; Fabiano et al., 1991; Farabee et al., 1999; Gendreau, 1996; Harland, 1996; Hawkins et al., 1992; Inciardi et al., 1997; Lauen, 1997; McBride et al., 1999; Tonry & Wilson, 1990; Weekes et al., 1999). Research indicates that substance abuse can impair youth development along many dimensions, including not only prosocial versus delinquent activity but also academic performance, physical and mental health, peer involvement, and family relations (Crowe, 1998, pp. 1-8). Given recent increases in illicit drug use by juveniles (Snyder & Sickmund, 1999, pp. 74-76), as well as the juvenile justice system's historical mandate to rehabilitate juveniles (Feld, 1999), these wide-ranging impacts reinforce the importance of taking a broad view of program effectiveness (Singer, 1996). Indeed, substance abuse programs arguably should be evaluated on the basis of their ability to impact outcomes in each of the aforementioned domains, not simply delinquency. This view in turn suggests the importance of identifying which youths successfully complete programs and why.

The Importance of Process Evaluations in Assessing Treatment Programs

One critical means of achieving long-term treatment success -- in the sense of achieving various outcomes -- involves illuminating the "black box" of program or policy operations (Harachi et al., 1999; Rossi et al., 1999; Scheirer, 1994; Wholey et al., 1994). Unfortunately, attention rarely is focused on this issue and instead is given to a narrowly construed bottom-line focus on outcomes. The consequence is that a circumscribed understanding of success, and how that success is achieved, is encouraged (Harachi et al., 1999; Scheirer, 1994; Singer, 1996). In addition, even with successful programs there may be little understanding about whether that success could be improved through relatively little marginal effort or cost. For example, it may be that certain youths could more easily complete substance abuse treatment through minor changes to program operations, resulting in an increased probability that treatment will have the desired effects.

As highlighted above, substance abuse treatment increasingly is a pressing need that juvenile

justice agencies are being called on to address (McBride et al., 1999). As the pressure has built, efforts have been made to implement established or new instruments or criteria for classifying who should receive treatment. Nonetheless, it remains the case that limited criteria frequently are used, or, alternatively, that more comprehensive, and potentially better validated instruments are used but without clear understanding about how they should be interpreted or utilized (Farabee et al., 1999; Griffith, Hiller, Knight, & Simpson, 1999; Howell, 1995). Even assuming accurate classification of high needs youths, relatively little is known about which youths do better in treatment or what program characteristics are linked to program success (Pearson & Lipton, 1999). Tonry (1990) has written: "Next to nothing is known about criteria for matching drug abusers to the treatment programs most likely to benefit them, and only a little is known about the program characteristics that make one drug-treatment program more successful than another of the same type" (p. 3). Addressing such concerns directly, Farabee et al. (1999) recently identified several critical issues that can severely impact correctional drug treatment outcomes, including: effective client identification, assessment, and referral; recruitment and training of treatment staff; and staff turnover. As critical as such issues may be, they are but part of a range of process-related issues that can affect any program (Rossi et al., 1999; Wholey et al., 1994). Other types of issues can include how a program is implemented, how it is operated on a day-to-day basis, as well as how exactly various factors impede or facilitate program delivery and longer-term success.

Clearly, one of the most critical aspects of successful programming involves determining whether participants are appropriate for treatment (Hiller, Knight, & Simpson, 1999). For substance abuse treatment in the juvenile justice system, there currently are a wide variety of instruments that have been created to identify youths who need treatment (see, e.g., Cocozza, 1997; Howell, 1995; Inciardi et al., 1997). There remains, however, a need for more research on risk classification and appropriateness or readiness for treatment. As importantly, there is a considerable need for understanding factors associated with successful program progress and impact. For example, upon entering treatment, which youths are likely to complete treatment or

complete it quickly? Conversely, which youths are more likely to drop out, be expelled, or to complete the program only after an extended period of time? In addition, which youths evidence the most behavioral problems during treatment? Which youths not only complete treatment but also evidence the most change or benefit and why? Which youths appear to most benefit from treatment in the sense of fulfilling specific treatment objectives (e.g., understanding the treatment curriculum, acknowledging the impacts of addiction)? Is fulfillment of specific program objectives linked to successful program completion? And, not least, to what extent do programming or organizational differences across treatment sites affect program progress and impact?

Answers to such questions provide an ability to better tailor programs not only to those who might most benefit from them but to those who are most likely to successfully complete them. They provide the opportunity for a broader, and potentially more appropriate, basis for assessing the impact of a program. And they also generate greater understanding into how a program ultimately is linked to longer-term outcomes such as post-release recidivism. It is for these reasons that the present study, which focuses on residential substance abuse treatment in the Texas juvenile correctional system, was undertaken.

Data

The current process evaluation of the TYC-CDTP focuses on youths who received chemical dependency treatment at any of TYC's five treatment sites during 1998-99, what are termed here as "Site 1," "Site 2," etc. The analyses draw on demographic, risk, needs, amenability, and program behavior and performance data for 406 juveniles who entered treatment from January through October 1998, and who were discharged by April 1, 1999. In addition, site-specific data, compiled from interviews with TYC administrators, also are examined. All analyses involve youths who invariably evidenced a high need for chemical dependency treatment, as assessed through use of the Substance Abuse Subtle Screening Inventory (SASSI) and clinical diagnoses.

The SASSI is TYC's primary substance abuse screening instrument and is used to classify youths into three groups: dependency (high need), abuse, or non-abuse. The Diagnostic Statistical Manual IV also is used to obtain clinical assessments, which are ordered in terms of severity: dependency disorder (high need), diagnosis of chemical abuse, or history of chemical use.

The dependent variables in the following analyses consist of program completion/expulsion, days to completion or expulsion, and program performance. Exit assessments were completed by staff for each youth, and provided the basis for assessing youth performance in treatment (see Appendix).[1] The primary goals of this assessment were to provide a measure of success while in treatment as well as a tool for identifying factors associated with completion of or expulsion from treatment. Questions focused broadly on issues pertaining to successful program performance, including participation, understanding of the curriculum, acknowledgment of addiction, etc. A principal components analysis (PCA) of the Exit Assessment's nine closed-ended questions yielded one factor -- termed here a "performance index" -- for which each of the nine items loaded highly (eigenvalue 6.80). The resulting PCA scores were standardized with a mean of zero.[2]

The independent variables include demographic, risk, needs, behavioral, and amenability measures, as well as organizational/site-specific differences. Demographic factors include race/ethnicity (white, black, Hispanic), age (ranging from age 10 to 21), and parent's marital status (never married, married, divorced/separated, and other).[3] Risk factors include TYC's classifying offense typology (violent, controlled substance dealer, chronic serious offender, firearms offender, general offender, and determinately sentenced offender[4]), offender class (non-violent, violent, or chronic serious offender), risk level (a composite measure created by TYC, which is equal to a youth's number of previous referrals, with a maximum of four, and previous adjudications, with scores of 0-2 coded as "low," 3-4 as "medium," and 5+ as "high"), and number of previous felony referrals, adjudications, TYC commitments, and parole revocations.

The TYC categorization of treatment amenability into low, medium, and high amenability is based on combined scores from six areas (prior placements, frequency of delinquent behavior

related to specialized need, duration of delinquent behavior pattern related to specialized need, motivation, intellectual and cognitive functioning, and general functioning). For each area, the scoring possibilities range from zero, which corresponds to evidence of a potential lack of amenability, to two, which corresponds to evidence of a potential amenability to treatment. While the amenability index is not a standardized assessment instrument, it is based on counselor/therapist experience in treating youthful offenders. Treatment amenability also is assessed using the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES, version 8), which is a readiness/motivation instrument specific to alcohol and drug abuse. It yields scale scores that correspond to the conceptual stages of change developed and described by Prochaska and DiClemente (1982); and its internal consistency and test/re-test reliability have been established (Miller, Tonigan, & Montgomery, 1990).[5] There are three factorially-derived scales for both alcohol and drug abuse: recognition, ambivalence, and taking steps. Guidelines for interpretation of SOCRATES-8 scores come from Miller (1994). Scores provide information about whether a client's readiness or motivation is "low, average, or high relative to people already seeking treatment for alcohol problems." For recognition, a score of 7-26 is very low, 27-30 is low, 31-33 is medium, and 34-35 is high. For ambivalence, a score of 4-8 is very low, 9-13 is low, 14-15 is medium, 16-17 is high, and 18-20 is very high. For taking steps, a score of 8-25 is very low, 26-30 is low, 31-33 is medium, 34-36 is high, and 37-40 is very high.

Finally, for the period of this study, the TYC-CDTP was administered through five sites; it bears emphasizing that each of the sites implemented the same treatment program, although, as discussed below, there were differences both in implementation and organizational context. To examine variation in select outcomes across these sites, several sources of data were used. These included statistical profiles of compositional differences across sites, organizational data about staffing, and interviews with knowledgeable administrators concerning issues and challenges faced by each site during the period of study. Specific issues included management differences across sites, leadership and staff turnover, major transitions, and differences in program implementation.

Methods

Several sets of analyses are presented that address the substantive questions posed by this research. First, we begin by providing descriptive statistics of the overall sample. We next introduce univariate logistic regression models of program completion/expulsion. (As noted below, because of the distribution of missing values, the analytic sample size for the univariate analyses varies considerably.) This approach is appropriate given that the outcome variable is dichotomous (Agresti, 1996; Menard, 1995). Qualitative observations from TYC program staff and administrators about unique circumstances or factors affecting youth progress in treatment are briefly described. We then discuss ordinary least squares (OLS) regression analyses examining days to completion and expulsion. Program performance, measured using the multidimensional index described above, also is modeled. Finally, systematic attention is given to site variation by examining descriptive statistics, one-way analysis of variance (ANOVA) tests, and post-hoc Bonferroni pairwise comparisons, for each of the five treatment sites.

It should be noted that a number of variables were omitted from the regression analyses because they provided largely redundant information (e.g., number of felony referrals and number of felony adjudications). In addition, because of problems with small or null cells (e.g., when few if any of a particular group were expelled), multivariate modeling including most predictors was not feasible. The main reason for this was because the data were culled from different sources, and, due to the precise distribution of missing values across variables and cases, the resulting sample sizes in multivariate analyses frequently were too small to provide reliable parameter estimation. Thus, the predictive results presented here are based on univariate regression analyses. However, when multivariate modeling was feasible, systematic comparison of univariate and multivariate results indicated non-significant or substantively unimportant differences.

Findings and Discussion

Inspection of Table 1 reveals that the typical CDTP participant was a Hispanic youth, age 17.5, with parents who were divorced/separated or never married. The vast majority (75 percent) of youths completed the program. Almost two-thirds were classified as non-violent offenders and one-third as violent offenders. Most youths were assessed as being either of medium (45 percent) or high (39 percent) risk, reflected in part by the fact that the average number of prior felony referrals among youths (8.7) was considerable. The vast majority of youths overwhelming were classified as having a drug dependency problem or disorder, with an equal proportion having either a medium or high amenability to treatment. Most youths evidenced little recognition of having a problem but were relatively unambivalent about receiving treatment, even though few had as yet taken steps to address their problem. Staff evaluations were generally positive, with the exception of level of family involvement and commitment to remaining drug free, which received relatively lower scores. And, finally, youths were unevenly distributed across treatment sites, with a low of 5 percent (Site 5) and a high of 36 percent (Site 3).

Insert Table 1 about here

Program Completion/Expulsion and Performance

We focus next on univariate analyses of factors associated with program completion/expulsion.[6] As inspection of Table 2 shows, treatment need and amenability were, surprisingly, unrelated to program completion. However, other factors emerged as both statistically and substantively significant. For example, youths whose parents were married were more likely to complete treatment. By contrast, violent offenders were 60 percent less likely than non-violent offenders to complete treatment, and for every additional behavior infraction committed by a youth, the likelihood of program completion was decreased by 19 percent.

Similarly, for every one-unit increase in the performance index (i.e., for a one standard deviation increase), there was a 179 percent increase in the likelihood of completion. Both behavior infractions and program performance contributed significantly more than most other variables to the explained variance, suggesting the potentially critical role of a youth's behavior in treatment to his or her completion of treatment.[7] Compared with youths at Site 4, youths at other sites were much more likely to complete treatment. Of particular note is the fact that site differences explained 22 percent of the variation in the outcome, which raises questions about the importance of site variation generally in chemical dependency programming for youths at TYC, an issue that will be addressed in detail below.[8] Finally, when program staff were asked about what they viewed as key barriers to successful program completion, they identified gang affiliation, family issues, and learning disabilities as the most prominent factors. Although these issues were not quantified here, the fact that many staff viewed them as critical speaks to the idea that responsivity to youth-specific needs may be directly relevant to successful treatment and to program completion.

Insert Table 2 about here

Apart from identifying who completes treatment, another critical issue for any program is identifying who completes treatment in a timely manner. As with the findings above, most risk, need, and amenability factors were not associated with time to completion, whereas site placement emerged as statistically and substantively the strongest factor associated with time to completion and expulsion (results not shown here). OLS analyses showed, for example, that site differences accounted for considerably more of the explained variance (Adj. R2 = .24) than did the other factors. Substantively, the results showed that youths at sites 1-3 completed treatment one to three months ahead of youths at Site 4 (Site 5 omitted due to small number of cases there and resulting problems with parameter estimation). When time to completion was recoded into a dichotomous outcome (fewer than 180 days vs. 180+ days), to reflect the fact that the TYC-CDTP is designed to last six months, logistic regression analyses yielded relatively little

additional information to that obtained from the analyses of the continuous days to completion measure.

As with the findings above, few risk, need, or amenability measures were associated with another measure of program progress -- performance (results not shown here). The most notable exceptions were behavior infractions and, again, treatment site location. That behavior infractions would be linked to performance should not be surprising. By contrast, the site differences are somewhat surprising until we realize, as will be discussed below, that the composition of youths at Site 4 differs considerably from that of the other sites. Specifically, it is comprised of more serious and violent offenders, thus likely accounting for the poorer performance of youths there.[9]

Variation in Program Progress Across Sites

Turning now to site differences, Table 3 reports descriptive statistics as well as one-way ANOVA comparisons among sites. The discussion here focuses on between-site differences in program progress in relation to the demographic, risk, need, and amenability composition at each site, as well as to organizational/site-specific issues. Where differences between specific sites are discussed, post-hoc Bonferroni pairwise statistical tests of significance have been relied upon.

Insert Table 3 about here

There were prominent differences among the sites with respect to program progress. Rates of completion were much higher at sites 2 and 3 (92 and 84 percent, respectively) and considerably lower at sites 1 and 4 (69 and 35 percent, respectively)[10]. Conversely, expulsion rates were higher at sites 1 and 4 and lower at sites 2 and 3. The average time to completion was considerably higher at sites 4 (235 days) and 5 (302 days), with Site 3 exhibiting the lowest average time to completion (149 days).[11] However, it should be emphasized that there also was marked variability within sites in time to completion (see, e.g., Site 4), suggesting that there were marked differences among youths in their ability to complete treatment in a timely manner or in

their responsiveness to treatment. For other measures of program progress, similar types of between-site differences emerged. For example, youths at Site 4 tended to have higher rates of infractions compared with youths at sites 2 and 5, and performed considerably less well than youths at sites 2 and 3.

In attempting to account for the site differences, there was no one factor that consistently emerged. There were, however, several factors of potential relevance that were identified both by the statistical comparisons and by interviews with TYC administrators. First, demographically, the sites were roughly comparable, except that Site 1 had proportionately many more Hispanic youths than did the other sites. Given that race/ethnicity was not linked to any of the measures of program progress in the earlier analyses and that it explained little variation even when statistically significant, it is unlikely to account for the between-site differences in the program progress outcomes. The fact that more Hispanic youths were at Site 1 reflects attempts by TYC to place youths in facilities near to where they live; Site 1 is situated in the southern part of Texas in the Rio Grande Valley, where a greater concentration of Hispanics reside.

Second, several sites stand out with respect to risk composition: Site 5, and to a similar extent Site 1, were comprised almost entirely of non-violent, general offenders, whereas Site 4 was disproportionately comprised of serious and violent offenders. Comparison of sites 3 and 4 is particularly instructive: as one might expect, given the compositional differences in the risk levels of youths, program progress was considerably better at Site 3 than at Site 4. For example, youths at Site 3 had a higher rate of completion (84 vs. 35 percent), faster mean time to completion (149 vs. 235 days), lower mean number of behavior infractions (4.7 vs. 6.9), and better performance. Note, however, that TYC's risk index, as well as the number of felony referrals, adjudications, commitments, and parole revocations, did not differ (statistically) across these two sites. It appears, then, that it is different types of offenders (i.e., non-violent vs. violent) who experience or progress through treatment differently, and that accounts both for the aggregate-level finding between offense type and program progress (see Table 2) as well as the fact that the youths at Site 4, with mostly serious and violent offenders, consistently

underperformed youths at other sites.

Third, there were few statistically significant differences, and no differences that are especially pronounced, among the sites in the chemical dependency needs or the treatment amenability of the youths. It appears unlikely, therefore, that differences with respect to the needs or amenability composition of youths across sites can account for differences in the program progress measures.

Finally, we turn to organizational/site-specific issues that may account for variation in program progress among the sites. It should be emphasized, however, that the issues discussed here are reviewed to provide possible explanations for the between-site differences in program progress and, more importantly, to illustrate their potential importance to successful program implementation and responsivity (Howell, 1995; Lauen, 1997). One issue is that some facilities are new or have recently expanded, which has led to the hiring of new and sometimes inexperienced staff as well as to the need to temporarily emphasize administrative concerns. For example, Site 3 was reported to have experienced an ongoing need to emphasize population control, a factor that appears to have been aggravated by a relatively high rate of correctional staff and caseworker turnover.

Another issue is that despite the fact that the TYC-CDTP in theory is the same across sites, there is considerable leeway among program directors to modify the program in accordance with their views about what works and about what is best for their particular youths. Although such discretion is consonant with notions of responsivity (Howell, 1995; Lauen, 1997), it also renders comparisons of treatment progress across sites difficult because the intervention (i.e., substance abuse/dependency treatment) may differ in certain ways that are not easily identified or quantified.

A third issue is that in some sites, especially well-established ones, there appears to be more of what was reported to be a “culture” of rehabilitation. For example, Site 4 has several specialized treatment programs, including the CDTP, and by most accounts has adopted a comprehensive approach toward programming. This approach in turn might well contribute to

an emphasis on retaining youths until, in the staffs' view, they are ready to be released. Conversely, the established reputation at Site 4 (i.e., for its "culture" and staff experience) also has contributed to proportionately more of TYC's violent and serious offenders being sent there, in turn contributing to the likelihood that such youths either will fail or will need more time to complete treatment.

Yet another issue is that the composition of youths can affect program progress in non-obvious ways. For example, Site 5 receives only non-violent, general offenders. Presumably, such offenders should complete programming more rapidly than non-violent offenders, yet the mean time to completion at Site 5 is the highest of all the sites (302 days). Why? Youths at this site, like non-violent, general offenders elsewhere in TYC, generally serve a nine to twelve-month sentence. The initial classification period can take up to three months, resulting in a remaining six to nine months of incarceration for youths who are sent to Site 5. In turn, youths generally are retained at this site for their remaining term of incarceration rather than "punish" them by transfer to a secure facility for the remainder of their sentence. The result is that these youths typically are exposed to a longer rather than shorter period of treatment than are violent or serious youthful offenders.

Conclusions and Recommendations

There have been increasing calls to provide and assess rehabilitative programs and policies. However, if we are to avoid simplistic, all-or-nothing assessments, it is critical that these initiatives be evaluated not only with respect to longer-term outcomes (e.g., recidivism) but also to shorter-term measures of success (e.g., program completion, timely completion, achievement of program goals, etc.). Indeed, the latter are critical to providing informed assessments of what it is about programming that contributes to longer-term success (Pearson & Lipton, 1999, p. 407), or whether a lack of success is due to poor program implementation rather than poor program design (Farabee et al., 1999). At a time when substance abuse among youths

increasingly has become a focus of attention (McBride et al., 1999), with links not only to delinquency but to other psycho-social problems (Crowe, 1998), and when programs designed to address this issue have proliferated (Farabee et al., 1999; Hester & Reid, 1995), there is a pressing need for attention to process-related factors that bear on program delivery and progress, and ultimately on future offending.

The present study represents a preliminary attempt both to identify specific findings and issues and to illustrate the importance of process evaluations for short- and longer-term assessments of effectiveness. Its findings can be summarized relatively briefly. First, most youths in TYC's Chemical Dependency Treatment Program "belong" there in the sense both of having a substance abuse or dependency problem/disorder and being amenable to treatment. Still, it is estimated that only about one-third of youths at TYC who need chemical dependency treatment receive it (Criminal Justice Policy Council, 1999, p. 12). Second, it was found that risk, need, and amenability factors did not consistently or strongly predict program progress (measured as program completion/expulsion, time to completion or expulsion, or performance), whereas behavior/performance and site placement did. These findings suggest that the treatment population is relatively homogenous with respect to risk, need, and amenability factors, thus accounting for their lack of predictive utility in assessing program progress. Third, as noted, program behavior and performance and site placement are critical factors associated with treatment progress. That the specific location in which a general treatment program is implemented should strongly affect treatment progress raises particularly important questions. Upon closer investigation, a range of possible factors emerged to explain the impacts of site placement: the newness or recent expansion of a program; differences in program implementation; differences in the "culture" of rehabilitation evident at various sites; and the composition of youths at different sites, including the need both to adapt programming to specific populations as well as to extend it in the case of non-violent, general offenders, who typically serve nine to twelve-month terms of incarceration. The importance of program performance and site differences in treatment implementation is testified to in part by our preliminary outcome

analyses (not shown here) showing reduced levels of offending among offenders who performed better in treatment and among offenders treated at specific sites.

These findings raise several issues of direct relevance to researchers and policymakers. There is, first, the issue of classifying youths who will most benefit from treatment. Clearly, a critical aspect to the success of any program is identifying who needs, and is amenable to, treatment. To this end, a wide range of instruments have been created (Howell, 1995). However, as suggested by some of the results here, an equally critical issue involves the further identification of those who may respond best to treatment (Farabee et al., 1999, p. 153). For example, in both the quantitative and qualitative analyses, there was evidence that youths whose parents are married or whose families are cohesive respond more favorably to treatment, in the sense of completing treatment, completing it quickly, and performing well. By contrast, violent offenders and youths who commit many behavior infractions fare less well along these same dimensions. Although such measures of program progress should not be construed as being necessarily linked to increased or decreased longer-term success (e.g., reduced substance abuse relapses or rearrests), they nonetheless highlight the fact that not all youths will respond equally to treatment (Pearson & Lipton, 1999, p. 407; see also Dowden & Andrews, 1999). In this regard, the findings here echo those that emphasize the importance of treatment responsivity (e.g., Gendreau, 1996; Howell, 1995; Lauen, 1997; Simourd & Andrews, 1994). However, they also raise into question how exactly treatment programming can be individualized within and across sites and how to assess the extent to which it is individualized treatment rather than the "cultural milieu" associated with a particular site in which treatment is administered that impacts youthful offending.

Another critical issue is the role of organizational factors that affect program implementation and delivery. The results of this study suggest that these, rather than individual-level factors, may well be the most important determinants for successful program progress (Cullen & Gendreau, 2000; Farabee et al., 1999; McBride et al., 1999). From a more general standpoint, this raises the following issue: assuming that youths who need substance abuse/dependency

treatment are successfully identified, the most important factor associated with successful program progress may be the organizational characteristics at a treatment site, including staffing, leadership, capacity, and, more generally, consistent and sustained support for rehabilitation (Farabee et al., 1999; Pearson & Lipton, 1999). In so far as this is true, an important avenue of research lies in examining factors that affect these types of organizational factors.

Finally, the results of this study highlight the importance of multi-dimensional and multi-site process evaluations for assessing longer-term impacts and for modifying treatment to be more effective (Cullen & Gendreau, 2000; Harachi et al., 1999; Rossi et al., 1999; Scheirer, 1994; Wholey et al., 1994). On the one hand, if a program is or is not successful in reducing recidivism, it is important to know whether treatment targeted an appropriate population (i.e., with the specific need targeted by treatment) and was successfully delivered, in the sense of program completion and of timely completion and successful responsiveness to treatment modalities. On the other hand, it may be that different aspects of treatment (e.g., achievement of specific cognitive goals, rapid program completion) are more or less related to successful long-term outcomes. Knowledge about such possibilities is critical to informing program and policy changes. In this context, it is notable that relatively little research on recidivism includes more than a standard set of risk and need measures (Myner, Santman, Cappelletty, & Perlmutter, 1998), much less measures of organizational context or program progress and performance. If we are to successfully modify existing programs to target youths who may best respond to treatment as well as to enhance those aspects of treatment that clearly "work," it is precisely such information that is needed.

APPENDIX

Exit Assessment for Chemical Dependency Treatment Program (Revised)

Please circle the rating under each question that best describes _____. Please complete this worksheet for all youths leaving treatment.

(1) What was the student's overall level of participation in the CDTP?

1 = very passive	2 = moderately passive	3 = neither active nor passive	4 = moderately active	5 = very active

(2) Please rate the student's understanding of the CD Education Curriculum materials.

1 = very poor 2 = poor 3 = average 4 = good 5 = very good

(3) To what extent did the student understand that behavior, thinking errors and choices are related to their addiction?

1 = not at all 2 = only slightly 3 = moderately 4 = completely

(4) How actively did the youth seek help? (For example, request individual counseling, attend voluntary support group meetings, express that he or she needs outside help?)

1 = not at all 2 = only slightly 3 = moderately 4 = strongly

(5) Did the student accept that their substance dependence interfered with their goals?

1 = not at all 2 = only slightly 3 = moderately 4 = strongly

(6) To what extent did the student acknowledge that their substance dependence affected others (e.g., that there were victims of their addiction)?

1 = not at all 2 = only slightly 3 = moderately 4 = completely

(7) In terms of overall performance in the treatment program, what grade (equivalent to a letter grade in school) would you give the student?

A B C D F

(8) What is your assessment of the youth's commitment to remaining free of mood-altering chemicals for one year?

1 = not at all likely 2 = somewhat likely 3 = moderately likely 4 = very likely

(9) Does the student have any special circumstances or challenges that affected his/her performance in the CDTP?
_____ Yes _____ No

If yes, please explain as many as apply (e.g., learning disabilities, death in the family, gang involvement, etc.).

(10) How involved was the youth's family (significant others) in the youth's treatment?

1 = not at all 2 = only slightly 3 = moderately 4 = strongly

NOTES

[1]Fully completed assessments were submitted for 76 percent (310/406) of the youths in our study.

[2]Examination of the internal consistency of a manually created index from the composite items yielded a similarly validated index using Cronbach's alpha (.95).

[3]Only five females entered the CDTP during the time period of this study and thus were omitted from the analyses. That few females receive treatment is itself an issue that merits investigation.

[4]Determinate sentencing can be used for offenders who have committed any of a range of serious and violent offenses; it generally involves longer commitments to TYC (Dawson, 1996).

[5]It is important to note that SOCRATES was developed for an adult population; thus, there may be important validation issues concerning its use with a juvenile population.

[6]The category "other" is excluded from these analyses.

[7]This result should be interpreted with caution as the staff evaluations were conducted at the end of treatment and may simply reflect whether a youth completed treatment. There was a modest correlation between behavior infractions and the performance index (-.422, $p < .001$): youths who committed more infractions were less likely to receive staff evaluations that indicated successful participation and performance in treatment. In a multivariate model with both variables included, performance unit increases appeared to be more influential (unstandardized odds ratio = 2.41) than behavior unit increases (unstandardized odds ratio = .87) in affecting program completion.

[8]In a multivariate model including behavior infractions, the performance index, and the sites (excluding Site 5 due to the small number of cases there and resulting problems with parameter estimation), the total variance explained was .74, with the parameter estimates largely similar to those derived from the separate univariate analyses, suggesting independent effects of each factor.

[9]Although it is likely that the staff evaluations reflect actual youth performance, the site differences suggest the possibility that staff at the various sites apply different criteria in assessing youth.

[10]Only the Site 3 vs. Site 1 comparison was not statistically significant.

[11]Only the Site 4 vs. Site 2 comparison was not statistically significant.

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TABLE 1. Descriptive Statistics

	Mean	SD	N
Program Progress			
Completion/expulsion			406
Completion (1 = yes)	.75	.43	304
Expulsion (1 = yes)	.15	.36	64
Other (1 = yes)	.09	.29	38
Days to completion	185.55	62.88	304
Days to expulsion	126.69	95.03	64
Behavior and Performance			
No. behavior infractions	4.46	6.59	406
Overall participation	3.30	1.26	328
Understand curriculum	3.30	1.18	328
Understand addiction	2.89	.95	328
Seek help	2.80	.99	328
Acknowledge addiction	2.87	.99	328
Acknowledge impact	2.83	.99	328
Performance grade	3.26	1.27	327
Commit to be drug-free	2.32	1.00	325
Family involvement	2.26	1.12	313
Performance index	.00	2.61	310
Demographics			
Race			404
Black	.29	.45	-----
Hispanic	.50	.50	-----
White	.21	.41	-----
Age	17.51	1.06	404
Par. marital status			405
Never married	.30	.46	-----
Married	.16	.37	-----
Divorced/separated	.44	.50	-----
Other	.10	.30	-----
Risk Factors			
Classifying offense			406
Violent	.19	.39	-----
Cont. sub. dealer	.03	.18	-----
Chron. ser. off.	.04	.19	-----
Firearm off.	.08	.28	-----
Gen. off.	.51	.50	-----
Det. sent. off.	.14	.35	-----
Offender class			406
Non-violent	.63	.48	-----
Violent	.33	.47	-----
Chronic-serious	.04	.19	-----
Risk level			399
Low	.16	.37	-----
Medium	.45	.50	-----
High	.39	.49	-----
No. felony referrals	8.72	5.57	406
No. felony adjudications	2.50	1.13	401
No. prev. TYC commit.	1.06	.24	398
No. parole revocations	.08	.36	398

TABLE 1. Descriptive Statistics (cont.)

	Mean	SD	N
Need Factors			
SASSI			386
Non-Abuse	.05	.22	-----
Dependency	.88	.33	-----
Abuse	.07	.26	-----
DSM CD-tx need			399
Chem. dep. disorder	.94	.24	-----
Chemical abuse	.05	.22	-----
Hx of chemical use	.01	.09	-----
Amenability Factors			
TYC tx amen. score			291
Low	.01	.12	-----
Medium	.49	.50	-----
High	.49	.50	-----
SOCRATES			
Alc. recog. (pre)	20.62	8.77	288
Alc. ambiv. (pre)	11.22	4.87	288
Alc. steps (pre)	26.54	9.78	288
Drg. recog. (pre)	26.03	8.46	290
Drg. ambiv. (pre)	13.59	4.76	290
Drg. steps (pre)	30.12	8.54	290
Site			406
Site 1	.14	.34	-----
Site 2	.29	.45	-----
Site 3	.36	.48	-----
Site 4	.17	.37	-----
Site 5	.05	.21	-----

TABLE 2. Univariate Logistic Regression Models of Program Completion/Expulsion on Select Predictors[a]

	b	SE(b)	N	Exp(B)	Pseudo R^2
Demographics					
Race (ref = white)			367		.00
Black	.05	.42	-----	1.06	
Hispanic	-.22	.37	-----	.80	
Age	-.15	.13	367	.86	.01
Par. marital status (ref = married)			367		.03
Never married	-1.26*	.57	-----	.28	
Divorced/separated	-1.15*	.56	-----	.32	
Other	-1.42*	.66	-----	.24	
Risk Factors					
Offender class (ref = non-viol.)			368		.05
Violent	-.91***	.28	-----	.40	
Chronic-serious	.84	1.05	-----	2.31	
No. felony referrals	-.01	.02	368	.99	.00
No. behavior infractions	-.21***	.03	368	.81	.32
Need Factors					
SASSI (ref = non-abuse)			350		.01
Dependency	-1.20	1.04	-----	.30	
Abuse	-1.32	1.15	-----	.27	
Amenability Factors					
TYC tx amen. score (ref = med.)					.01
High	.42	.33	268	1.52	
SOCRATES					
Alc. recog. (pre)	-.01	.02	260	.99	.00
Alc. ambiv. (pre)	-.01	.04	260	.99	.00
Alc. steps (pre)	-.00	.02	260	1.00	.00
Drg. recog. (pre)	-.01	.02	260	.99	.00
Drg. ambiv. (pre)	.00	.04	260	1.00	.00
Drg. steps (pre)	.00	.02	260	1.00	.00
Program Performance					
Performance index	1.03***	.14	286	2.79	.63
Site (ref = Site 4)[b]			356		.22
Site 1	1.01**	.42	-----	2.74	
Site 2	2.82***	.48	-----	16.71	
Site 3	2.11***	.39	-----	8.26	

a. Logistic regression coefficients. Exponentiated coefficients are in parentheses. 1 = completion; 0 = expulsion.
a. Site 5 omitted from this univariate analysis because of too few cases (n = 19) for reliable parameter estimation.
† $p < .01$ * $p < .05$ ** $p < .01$ *** $p < .001$