TEXAS YOUTH COMMISSION

2006 Review of Agency Treatment Effectiveness

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EXECUTIVE SUMMARY

In the simplest terms, the job of the Texas Youth Commission is to fix broken children. The youth who come to TYC have committed the most serious offenses in the state and they have often already failed at any number of intervention attempts at the local and county levels. Of the more than 85,000 youth in Texas who are referred to the juvenile justice system each year, only about three percent eventually make their way to TYC. But, that small group is comprised of the most violent and chronic young offenders. TYC is the one of the last lines of hope for these troubled youth.

The biggest challenge is to teach the youth how to succeed when they return to what is often the same environment that forged their delinquent behaviors in the first place. To achieve that goal, TYC regularly evaluates its treatment programs to determine what works. There is no quick fix or simple answer, but there are strategies that can be effective. Youth enter the juvenile justice system with a complex array of offense-specific and special treatment needs. Success is influenced by many factors including characteristics of the youth, their families, and the environments to which they will return after TYC. Research shows that the quality and type of treatment they receive during their incarceration is also important for their success.

The title of this report begs the most basic question - is TYC treatment effective at all? The answer is yes. In relatively short time periods, more than half of the youth committed to TYC apply the skills they have learned and remain in society. The average youth entering TYC has had 16 years of time to develop into a delinquent. After completing TYC's competency-based Resocialization© program, half of youth are not reincarcerated in either TYC or adult prison three years after release.

Measuring Results:

A key way to measure long-term success is by achieving a reduction in recidivism among TYC youth. Youth recidivate if they are either rearrested after release, or if their arrests lead to reincarceration. In 2006, the percentage of TYC youth who were reincarcerated within three years of release was 50%.

The fact that half of all TYC youth do not end up locked up again after release is especially remarkable considering the agency starts with youth who, for the most part, are recidivists to begin with. Ninety-five percent of the new commitments to TYC have had two or more previous referrals to the Texas

juvenile justice system before ever entering a TYC facility for the first time. Sometimes, youth who come to TYC have no prior record of criminal behavior because their first offense was serious enough to warrant immediate commitment to TYC, but that is the exception, not the rule.

The Study:

While TYC is successful with many youth, it is important to keep striving for even better results.

The agency must continue to push forward on the front line that separates those youth who change their negative behavior and those who fail. This report, a result of the eleventh annual review of agency effectiveness, as mandated in Section 61.0315 of the Texas Human Resources Code, takes a scientific look at that front line to determine where the agency is gaining ground, focusing on both overall recidivism from TYC youth and the recidivism data for the agency's intensive specialized treatment programs for: capital and serious violent offenders, sex offenders, and youth with chemical dependence or mental health impairment. Importantly, the report looks at which youth benefit more from the specialized treatment. In addition, the report touches on the larger picture, reviewing many of the other factors that affect success, things both in and out of the agency's control.

The study tested three hypotheses: 1) that TYC programs are improving over time, 2) that intensified treatment is more effective for youth with specialized needs, and 3) that intensified treatment is more effective for some groups of youth than for other groups.

The results show that the change in overall recidivism rates was negligible during the last five years. However, most intensive specialized treatment programs showed reductions in repeat criminal behavior. In addition, youth with certain characteristics receiving the intensified treatment were more amenable to treatment, an important finding for future planning.

The data spotlights the enormous challenges in treating young offenders and the need for a comprehensive, full-spectrum approach to solving the problem of juvenile delinquency. That is because participation in treatment is just one factor that influences whether youth will commit future offenses.

Results for hypothesis one:

Agency recidivism rates showed negligible changes for the five-year period.

- One-year rearrest rate for a violent offense increased from 7.8% in 2002 to 8.6% in 2006, a normal fluctuation rather than a significant trend;
- One-year rearrest rate for any offense increased from 53.7% in 2002 to 56.1% in 2006, a significant increase due to an increase in technical or parole violations, but not in law violations;
- One-year reincarceration rate for any offense decreased from 26.6% in 2002 to 26.2% in 2006, not a significant change; and
- Three-year reincarceration rate for any offense decreased from 51.0% in 2002 to 50.1% in 2006, a significant but minor trend.

TYC recidivism rates compare favorably to rates reported by other states measuring recidivism in a similar way.

Results for hypothesis two:

The study found that youth receiving intensive specialized treatment had significantly lower recidivism rates than youth with a high need but not receiving treatment for two programs: capital and serious violent offenders and youth with mental health problems. Youth receiving specialized treatment in the capital and serious violent offender program were 57.3% less likely to be rearrested for a violent offense. Youth receiving mental health treatment were 20.7% less likely to be rearrested or reincarcerated for a felony offense. In addition sex offenders receiving specialized treatment were 35.1% less likely to be rearrested for a felony sex offense. This did not reach statistical significance because of the small sample size. Youth receiving specialized chemical dependency treatment were 6.5% more likely to be rearrested or reincarcerated for a felony or a drug offense. This program has always been a challenge for TYC in hiring and retaining qualified clinical professionals.

TYC provides offense-specific treatment to all youth and more intensive treatment for some youth with specialized needs. These youth require more intensive services to progress through the Resocialization© program. The difference in recidivism rates between youth who have received intensive specialized treatment and those with high needs but who did not receive it indicates that intensive specialized treatment programs can reduce recidivism even more than the TYC Resocialization© program that is provided to all TYC youth.

Program and youth characteristics associated with success or nonsuccess are discussed in the body of the study. In specialized treatment, youth typically benefit from the guidance of clinical providers with more expertise. There are often better staff-to-youth ratios. And, there is greater oversight when youth transition back into communities.

Results for hypothesis three:

TYC youth do not share many of the characteristics that positively affect treatment. Youth come to and leave programs with characteristics that continue to place them at greater risk for repeat delinquent behavior. However, identifying amenability to treatment can increase the potential for further reduction in recidivism.

Youth receiving specialized treatment and having lower recidivism rates had certain characteristics that suggested they were more likely to benefit from treatment. In all of the specialized treatments certain groups were more amenable to treatment than others, including youth in the chemical dependency treatment program, which was not found to be effective overall.

This suggests that TYC should strongly consider using amenability indices as part of its specialized treatment selection criteria, in order to maximize its treatment effects. Youth with mental health problems must receive treatment regardless of amenability, and amenability characteristics could guide programming.

Challenges:

While TYC has control over some factors that contribute to lasting success for youth who complete the agency's treatment programs, there are many powerful variables that are beyond the scope of the agency's control. In fact, the agency has no control over what are possibly the strongest individual youth risk factors for recidivism: younger age at a first commitment and younger age at first contact with the law.

TYC can potentially impact some of the other significant risk factors involving educational achievement scores, substance abuse, and clinical factors, but sustaining the effect is difficult once youth return to the environment that forged earlier delinquent behaviors. Many Texas communities do not have the resources to provide additional follow up treatment, much less adequate prevention and early intervention programs that might have prevented youth from ever getting in trouble with the law in the first place.

TYC also has had serious problems in recruiting and retaining adequate staff: juvenile correctional staff for youth and staff security, case managers to meet case management standards, and qualified clinical professionals to deliver specialized treatment services.

Conclusion:

TYC is working to further identify the variables it can potentially impact that are most likely to make a difference for youth committed to its care. Some of the variables showing promising results include: youth receiving vocational training, youth having mentors, offenders who receive independent living subsidies after release, and youth who participate in constructive activities such as school or work.

Also, in addition to treatment program characteristics like the skill level of the treatment provider and the youth-to-staff ratio; type of treatment and duration are potential factors that can improve recidivism. It may be that longer lengths of stay for youth allow them to complete more educational and job training opportunities available to them at TYC.

The agency's goal remains to target available resources to have the greatest impact possible on reducing recidivism. Sadly, there will always be a certain percentage of youth who will never benefit from treatment and who are already too far gone to change their ways. Currently, there is no formula or accurate measuring tool to identify these youth. Until that is possible, TYC will continue to give each youth the opportunity to change course, salvage their lives, and become good citizens. It is not only the ethical thing to do, but it is a powerful investment in a safer future for the state. Even a one or two percent further reduction in recidivism can have enormous benefits, not only in terms of dollars, but also in the quality of life for all Texans.

I. Introduction

Determining if and why interventions are effective in reducing recidivism is an important responsibility of any juvenile justice system. Because youth enter the justice system with a complex array of offense-specific and special treatment needs, success is influenced by both youth and program characteristics. The biggest challenge for juvenile programs is to provide youth, upon release, with the tools to succeed in what is often the same environment that contributed to their delinquent behaviors in the first place. The Texas Youth Commission (TYC) is the agency responsible for this task.

Of the more than 85,000 youth in Texas who are referred to the juvenile justice system each year, only about 3% eventually make their way to TYC. The vast majority of these delinquents are repeat offenders. Approximately 95% have two or more referrals to juvenile probation and have failed at community-based interventions (approximately 75% were on probation when committed to TYC, and nearly 60% had been in a prior residential placement before commitment). First offenders that come to TYC typically have committed very serious crimes such as homicide or aggravated sexual assault.

The purpose of this report is to examine the effectiveness of TYC programs in accomplishing the rehabilitation component of its mission by reducing recidivism. This is the eleventh annual review of agency effectiveness, as mandated in Section 61.0315 of the Texas Human Resources Code. It focuses on both TYC recidivism overall, and recidivism in the intensive specialized treatment programs for capital and serious violent offenders, sex offenders, and youth with chemical dependence or mental health impairment.

II. Texas Youth Commission Overview

The Texas Youth Commission (TYC) is the juvenile corrections agency responsible for serving violent and seriously delinquent youth committed to the state's custody. TYC operates secure institutions and community-based residential halfway house programs, and provides parole supervision for the youth upon their release to the community. TYC also contracts with private sector providers and local governments for secure and community-based residential and non-residential services.

A. Agency Mission

The mission of TYC is based on Title 3 of the Texas Family Code and Chapter 61 of the Texas Human Resources Code. The TYC mission:

1) ***Protection*** - To protect the public, and control the commission of unlawful acts by youth committed to the agency by confining them under conditions that ensure their basic healthcare and emphasize their positive development, accountability for their conduct and discipline training (Family Code, Section 51.01(1), (2) and (4) and Human Resources Code, Section 61.101(c));

2) ***Productivity*** - To habilitate youth committed to the agency to become productive and responsible citizens who are prepared for honorable employment through ongoing education and workforce development programs (Human Resources Code, Section 61.034(b) and 61.076(a)(1));

3) ***Rehabilitation*** - To rehabilitate youth committed to the agency and re-establish them in society through a competency-based program of Resocialization (Human Resources Code, Section 61.002, 61.047, 61.071, 61.072, 61.076(a)(1)(2) and 61.0761); and

4) ***Prevention*** - To study problems of juvenile delinquency, focus public attention on special solutions for problems, and assist in developing, strengthening, and coordinating programs aimed at preventing delinquency (Human Resources Code, Section 61.031, 61.036, and 61.081(c)).

B. TYC Rehabilitation Programs

TYC provides offense-specific treatment to all youth in the system and intensive treatment for some youth with specialized needs. TYC utilizes proven evidence-based treatment concepts, including cognitive-behavioral interventions that teach youth how to interrupt delinquent behavior patterns and avoid relapse in the future.

Treatment at TYC

- *All youth receive offense-specific comprehensive treatment through the Resocialization© program.*
- *Some youth with specialized needs receive treatment at a more intensive level.*

III. Literature Review

The recidivism rates of an agency are determined by two factors: the effectiveness of the treatment program, both residential and post-release, and the characteristics of the youth receiving treatment.

A. Characteristics of Effective Programs

1. Treatment Program

In determining best practices for treating juvenile offenders and reducing recidivism, the nationwide trend has been to use research evidence to inform public policy makers of available program choices. "Blueprint programs," or research-based programs that have met strict scientific standards and have sufficient documentation as to permit duplication, are those that have been proven to work in the "real world" in lessening juvenile recidivism (Barnoski, 2004). These programs identify the characteristics necessary for effective treatment with the most important being the appropriate and consistent application of program concepts in a competent manner (Gornik, 2001).

"Blueprint programs" demonstrate the characteristics of effective programs in reducing recidivism:

- *Intensive*
- *Highly structured*
- *Assess risk and need factors*
- *Cognitive-behavioral approach*
- *Target dynamic criminogenic characteristics*
- *Small caseloads*
- *Individualized services*
- *Quality assurance*
- *Highly educated staff*
- *Well-trained staff*
- *Interagency collaboration*
- *Prevention*
- *Aftercare when returned to the community*
- *Family involvement*

Effective programs are intensive, highly structured, and geared toward changing behaviors, improving pro-social skills, and focusing on problem solving with a juvenile and his or her family (Kurlycheck, Torbet, & Bozynski, 1999). To be successful, programs must assess risk and need factors to identify the appropriate assignment for the offender, target dynamic[1] criminogenic characteristics, and be implemented by well-trained staff that understand the program objectives and present the program as designed. Crucial to this is consistent modeling by staff that practice and believe in the principles they are espousing (Barnoski, 2005; Gornik, 2001). No program is worth anything if quality assurance methods are not in place to ensure programming is delivered as assigned (Barnoski, 2005).

Successful programs utilize an effective balance between cognitive and behavioral approaches that are grounded in meaningful research and evaluation combined with social-learning practices (Gornik, 2001). They are structured, involve small caseloads and individualized services, and offer frequent and qualitative interaction between staff and the offender. At the outset, effective programs make an assessment of the

[1] Youth characteristics are generally classified as static if they cannot be changed by the treatment intervention or dynamic if they can be changed.

offender's needs and criminogenic risk to determine who needs treatment, what should be treated, and how the treatment should be delivered. The evaluation starts during probation with an assessment of a youth's strengths and weaknesses to ensure appropriate program assignment.

In addition, other goals include helping to engage and motivate the youth and family, supporting and helping to generalize what is learned, deflecting enabling and undesirable behaviors, and monitoring changes in risk and protective factors. This does not make treatment easier but may make things more effective (Barnoski, 2005). Targeting and reducing the dynamic characteristics linked to continued criminal activity is a key objective and includes changing antisocial attitudes and feelings; promoting identification and association with positive, law-abiding role models; increasing self-control (management and problem solving skills); and replacing antisocial with pro-social skills, to name a few. The offender realizes, with regard to rewards and costs, non-criminal activities elicit favorable outcomes (Addiction Technology Transfer Center, 2005; Gornik, 2001).

Treatment begins prior to leaving the community, progresses through incarceration, and continues with the offender's return to the community. Gies (2003) notes the requirements of multimodal, interagency collaboration from prevention and education to transition and aftercare, each area intensive and appropriately managed. Once paroled, youth are faced with making decisions in a less structured environment and have difficulty adjusting.

Few empirical studies document the reentry process for youth released from incarceration and how to best increase the likelihood for successful transition back into the community (Mears & Travis, 2004). The results of the Intensive Aftercare Program (IAP), a promising 5-year multi-site reentry initiative sponsored by the Office of Juvenile Justice and Delinquency Prevention, showed no statistically significant results in reducing recidivism (Weibush, Wagner, McNulty, Wang, & Le, 2005). The evaluators indicated that the program is a complex intervention that warrants further testing with larger samples. One recommendation from this and other research is the contribution of the community in assisting youth with reentry (Mears & Travis, 2004; Weibush, Wagner, McNulty, Wang, & Le, 2005). Further

research is needed to identify model aftercare programs.

Staff characteristics are also essential to effective treatment. Understanding criminal thinking (logic and rewards) and having the skills necessary to deal with it is indispensable (Gornik, 2001). Staff members should possess good communication skills and be competent and well-supervised to ensure accountability and therapeutic integrity. They must believe in and practice the same principles and values of the specific program provided for the offender (Barnoski, 2005). Several "blueprint programs" maintain highly educated staff (Gies, 2004), but most imperative is the training and continual development of staff in the particular program. Input from now grown, ex-juvenile offenders who broke free of their offending behaviors revealed that the most effective treatment they received came through protection from stigmatization, individualized attention from someone who cared, and positive reinforcement (Juvenile Court Centennial Initiative, 2000).

Can interventions reduce recidivism rates among serious juvenile offenders? This question was addressed by meta-analysis of 83 experimental or quasi-experimental studies on interventions for serious juvenile offenders (Lipsey & Wilson, 1998; Lipsey, Wilson, & Cothern, 2000). The sample populations were primarily Anglo or of mixed ethnicity males aged 14 to 17 years who had prior offenses. Treatments were generally 1 to 30 weeks and involved continuous contact or sessions once or twice a week or daily, and required a half hour to 10 hours per week. Police contact or arrest data were used as the recidivism outcome when available.

The four clusters of variables associated with half of the variation among effect sizes were, in decreasing order: 1) general program characteristics, e.g., program organization, staffing, and administration; 2) treatment types, e.g., counseling, skills-oriented programming, and community residential programs; 3) treatment amount delivered, e.g., weeks and frequency of treatment; and 4) juvenile offender characteristics. Compared to an estimated recidivism of 50% without treatment, the most effective treatments would reduce recidivism by 30 to 35%. The overall mean effect size was smaller at 10%, a 5 percentage point reduction from 50 to 45%, but positive and statistically significant.

Well-established programs, two years or older, had the largest treatment effects.

> The program characteristic most strongly related to effect size was administration of the program by mental health personnel, in contrast to juvenile justice personnel (Lipsey, et al., 2000).

The two types of treatment with relatively large, statistically significant mean effect sizes were interpersonal skills programs (involving training in social skills and anger control) and teaching family homes (community-based, family-style group homes). For treatment amount delivered, two important variables were monitoring to ensure that all youth received the intended treatment, and an increased treatment time.

The finding that community-based, family-style group homes had a strong effect on recidivism raises the question of the effectiveness of large correctional facility size vs. small, community-based programs. There is growing support in the literature for smaller facilities (Howell, 1995, p. 135, 2003, p. 134; Mendel, 2000, p. 51) and the American Correctional Association has revised its standards to include facility size for renovations and new construction (American Correctional Association, 2006). Training schools should operate living units of no more than 16 juveniles and not exceed a bed capacity of 150 juveniles. Currently, Missouri is the state most recognized for closing its training schools and establishing regional correctional centers and non-residential programs and services. Their recidivism rates are very encouraging, however, success cannot be attributed to small facility size alone (Mendel, 2003).

What size treatment effect can we expect? It's not surprising that "demonstration projects", such as those described above that are set up for research purposes, are likely to show effect sizes that are, on average, about twice those found in programs in the everyday practice setting. Meta-analysis showed that, on average, "demonstration projects" had a 12% decrease in recidivism (a drop from a baseline of 50% in control groups to 44% in program groups) vs. a 6% decrease in recidivism for "practical programs" (a drop from a baseline of 50% for youth without the program to 47% for youth in the programs). This does not mean that practical programs cannot be effective. They are

capable of producing larger effect sizes if they exhibit characteristics of successful programs (Lipsey, 1999). Herein lies the challenge for everyday, ongoing programs.

2. Specialized Treatment

In recent years, more and more juvenile delinquents are identified as chemically dependent, sex offenders, or as having significant mental health problems. The question of whether specialized treatment helps reduce recidivism comes to the forefront for those working with these youth. Research generally supports positive outcomes for offenders who receive specialized treatment when compared with those who have the same type needs but do not receive specialized services. Specialized treatment programs can be effective at reducing recidivism and encompass many similar aspects that contribute to their success (Kumpfer, 1999).

Effective specialized treatment programs share these similar characteristics:

- *Smaller caseloads*
- *Strong focus on family dynamics*
- *Considerable resources devoted to staff training*
- *Emphasis on maintaining treatment integrity*
- *Frequent quality assurance reviews*

Effective sex offender programs are offense-specific. They use a cognitive-behavioral approach in group and individual counseling with a focus on empathy, and include family therapy counseling, adjunct treatment (psycho-social education, deviant sexual arousal, anger management, trauma resolution, etc.), and milieu treatment. Sexual recidivism rates for sex offenders who receive proper treatment do decrease 7-13% and show a 7% recidivism rate after 5 years, depending on program components. Non-sexual recidivism rates are generally higher at 25 to 50% (Center for Sex Offender Management, 1999). Community-based programs show an encouraging 72% reduction in sexual recidivism, a 41% reduction in non-sexual recidivism and a 51% reduction in non-violent reoffending for participants who received 12 months of treatment (Association for the Treatment of Sexual Abusers, 2003; Council on Sex

Offender Treatment, 2005).

Chemical dependency treatment programs emphasize the importance of genetic, environmental, and psychosocial factors, placing high emphasis on the role of family (communication, parenting skills, conflict management, discipline methods, etc.). The most important family protective factors are identified as supervision, attachment, and consistency of discipline (Kumpfer, 1999).

Effective mental health programs are theoretically-based, highly structured, target multiple domains, integrate social skills training, and promote social and emotional competence. They are individualized to the offenders' and the families' needs and address risk and protective factors (Weist, Schaeffer, Goldstein, Hoover, & Bruns, 2001).

B. Characteristics of Successful Youth

Specialized programming, however, is not a panacea for effective treatment. Research has shown that a number of factors – individual, family, peer, school, and community – affect whether or not a juvenile will engage in delinquent or criminal activity (Office of Juvenile Justice and Delinquency Prevention, 1999). Youth bring to and leave programs with a variety of factors that influence treatment success. Therefore, it is important to look at the differences between youth who are likely to be successful with treatment and those who are not.

Offender characteristics positively affecting treatment:

- *Socially competent*
- *Do well in school*
- *Participate in extra-curricular activities*
- *Have positive relationships with adults*
- *Feel safe in home and neighborhood*

Individual offender characteristics contribute at least as much to treatment success as do family dynamics and community factors. The literature on resilient youth identifies individual characteristics that enable them to be successful in adverse situations (Benard as

cited in ACT for Youth Upstate Center of Excellence, 2001): 1) social competence - strong relationship skills, flexibility, cross-cultural competence, empathy and caring for others, strong communication skills, good sense of humor; 2) problem-solving skills - ability to plan, insight, critical thinking, resourcefulness; 3) autonomy - sense of identity, internal locus of control, self-awareness, resistance skills; and 4) sense of purpose and belief in a bright future - goal-directedness, motivation, educational aspirations.

These individual characteristics interact with environmental factors to contribute to resilience (Benard as cited in ACT for Youth Upstate Center of Excellence, 2001): 1) opportunities for participation - meaningful involvement and responsibility, power to make decisions, opportunities for reflection and dialogue; 2) caring relationships - supportive caring relationship with an adult, whether in or outside the family; and 3) high expectations - belief in the youth's ability to achieve, being respectful, recognizing and building on youth's strengths. Supportive parent-child relations, parental responsiveness, positive discipline methods, and established routines and rituals play a part in a youth's success in treatment.

Research suggests the cumulative effect of these characteristics or protective factors is substantially greater than the individual effects. A longitudinal study of high-risk youth found a threshold of three out of eight factors[2] for self-reported delinquency and drug use. In other words, youth with at least three protective factors were significantly more likely to be resilient than youth with less protective factors (Turner, 2001).

Thus, offenders who demonstrate social competence, read for pleasure, exhibit an internal locus of control, possess an average or higher level of intellectual functioning, attend good schools, carry a B grade-point average or better, and participate in extra-curricular activities show higher rates of succeeding in treatment. Also, positive relationships with other adults and feelings of safety and security in the home and in the neighborhood increase the probability that a youth will successfully complete treatment and retain treatment gains (Benson, 1996; Kumpfer, 1999; Weist,

[2] The eight factors studied were self-esteem, religiosity, positive school environment, self-perceived scholastic competence, self-perceived global self-worth, cognitive stimulation, emotional support, and academic competence.

Schaeffer, Goldstein, Hoover, & Bruns, 2001).

Recognizing the importance of youth characteristics in treatment outcomes, researchers have identified a number of risk factors associated with reoffending in juveniles. In a meta-analysis of research conducted between 1983 and 2000, Cottle, Lee, and Heilbrun (2001) examined 23 published studies, representing 15,265 juveniles and 30 predictors of recidivism. Of the top three strongest individual predictors, two were static factors related to offense history - younger age at first commitment and younger age at first contact with the law, and the other was a dynamic clinical factor - a history of non-severe pathology.

Significant Static Factors as Predictors

Static factors that were significant predictors of recidivism were, grouped by domain: 1) demographic information - male gender and lower socioeconomic status; 2) offense history – earlier age of onset of offending, more arrests and commitments, longer incarcerations, and more serious types of offenses; 3) family and social factors – history of physical or sexual abuse, raised in a single-parent home, and a greater number of out-of-home placements; 4) education factors – history of being in special education classes, and lower standardized achievement and IQ scores (both full and verbal).

Significant Dynamic Factors as Predictors

Significant dynamic factors predictive of recidivism included family instability and problematic interactions, association with delinquent peers, poor use of leisure time (family and social factors); achievement test scores; substance abuse; and conduct problems and non-severe pathologies (clinical factors).

An important but less empirically studied impact on recidivism is the specific responsivity of a youth to treatment. In addition to demographics, the personality, motivation, and ability of youth impact the treatment results (Andrews, Bonta, & Wormith, 2006).

As evidenced from the above discussion, many factors influence youth success during and after treatment as well as the likelihood he or she will reoffend. Research shows that both the treatment program and youth characteristics must be considered when aiming for success with delinquent youth.

Treatment programs have the potential to reduce recidivism, however their success is dependent on the ability to incorporate the characteristics of successful programs and address the needs of difficult populations that have not been able to function well socially.

This is a difficult task for ongoing, everyday programs and most do not have a large effect on recidivism. The research guides programs in their quest for improvement, and the need for additional studies continues.

IV. How TYC Compares to National Research

It is important to set the context of this report by describing the characteristics of TYC treatment programs and youth, especially as they relate to those identified in the national research as affecting recidivism.

A. Program Characteristics

1. Treatment Program

The core element of the TYC treatment program is a comprehensive rehabilitation program called Resocialization©. The program is aimed at helping delinquent youth to understand the developmental and social experiences that contributed to their delinquent self-identity and criminal behavior and to accept personal responsibility for change.

Resocialization© includes components of successful programs:

- *Well-established program of 10 years*
- *Highly structured environment*
- *Risk and need assessment at the reception center*
- *Cognitive-behavioral approach*
- *Focus on interpersonal and pro-social skills*
- *Aftercare*
- *Family involvement*
- *Training and continual development of staff statewide through the Professional Development Academy*

Resocialization© is phase-progressive and competency-based: the youth must complete their required minimum lengths of stay and demonstrate mastery of objectives in each of three components: Academics/Workforce, Behavior, and Correctional Therapy. The youth are taught to recognize the thoughts and feelings that are used to excuse or justify their offending behaviors and to develop methods to interrupt negative behavior patterns. It is in Correctional Therapy that the youth learn to replace criminal values and behaviors with socially-acceptable values and behaviors by understanding themselves, recognizing and changing negative behavior patterns, and developing goals and plans for their future.

Other critical components of Resocialization© include empathy, self-discipline, vocational skills development, and opportunities for community service. Youth are phase-assessed each month by a multidisciplinary team on their progress in each of the three components of the Resocialization© program.

Resocialization© is an ongoing, everyday program at TYC and effective implementation depends on quality staff to provide treatment, monitor dorms, and supervise youth. The biggest challenge for TYC is maintaining adequate staff resources in sometimes remote locations.

TYC faces challenges to effective programming:

- *Adequate juvenile correctional staff for youth and staff safety*
- *Adequate case managers to meet case management standards*
- *Treatment by mental health providers*

Juvenile Correctional Officers (JCOs) provide two critical functions: 1) facility security and control and 2) youth supervision and management. In addition to direct care, JCOs are trained in Resocialization© and are responsible for conducting Behavior Groups in which youth discuss behaviors and provide feedback to each other. Currently, TYC can only provide 1 JCO to every 15 youth during waking hours and every 18 youth during non-waking hours. An audit report (Internal Audit Department, 2006) found that generally accepted staff-to-youth ratios could not be achieved with the available number of JCOs. TYC is currently

asking the Texas Legislature for funding to improve youth and staff safety in high security facilities to 1 JCO to every 15 youth during non-waking hours and a continuous staff-to-youth ratio of 2 JCOs for every group of 24 youth during waking hours.

Case manager job duties include conducting daily therapy groups, monthly individual counseling, family contacts, and case management duties. They are responsible for daily, essential elements of Resocialization©. Currently, case manager-to-youth ratios average 1:19 for non-specialized programs and are over 1:30 at one location. These high case manager-to-youth ratios contribute to turnover and dilute the quality of treatment and case management services to youth. An audit report (Internal Audit Department, 2005) found that in order to meet TYC case management standards, caseload ratios could not exceed a case manager-to-youth ratio of 1:17. Therefore, TYC is seeking funding for a case manager-to-youth ratio of 1:16.

Research also indicates the importance of treatment by mental health providers. Given the difficulties recruiting and retaining case management and clinical staff, it is unlikely this will ever be realistic for TYC. However, in addition to constant recruiting efforts for clinical and correctional staff, TYC is implementing a statewide Professional Development Academy for training and continual development of staff. The extent to which these efforts are successful will also affect youth outcomes.

In summary, the most successful programs are implemented by well-trained, clinical professionals with small caseloads - characteristics that TYC at present can only partially achieve. The current high staff-to-youth ratios greatly diminish the level of care and treatment provided to each youth. Staff with large caseloads have less time to devote to individual youth and the result may be an increased chance for youth recidivism.

2. Specialized Treatment

Some youth require more intensive services in order to progress through the Resocialization© program due to serious and violent offenses, chemical dependency issues, sexual behavior problems, mental health impairment, or combinations of these categories.

Specialized treatment programs incorporate the same cognitive-behavioral concepts as the general Resocialization© program to better serve the rehabilitative needs of this group of youth. A primary difference is program intensity.

Consistent with the national literature, TYC specialized treatment programs have:

- *Admission based on risk and offense-specific or diagnostic need assessment at the reception center*
- *Increased intensity*
- *Lower caseloads*
- *Additional staff training and expertise*
- *Program review for quality assurance*

TYC's specialized treatment programs have been cited as effective programs in a national study to identify treatment programs that reduce recidivism (Roberts, 2004, pp. 546-551).

However, as with Resocialization©, the biggest challenge to providing effective specialized treatment is an adequate number of qualified staff. Staff vacancies take even longer to fill for specialized programs that require higher qualifications. The private sector competes with TYC for qualified staff, yet often offers higher salaries and employment in more attractive, metropolitan areas than the rural locations where TYC institutions are located. Thus, turnover and long vacancies threaten program integrity critical for effectiveness.

a. Capital and Serious Violent Offender Treatment

The Giddings State School operates a program for capital and serious violent offenders, serving an average daily population of 32 youth in FY 2006. Initially this program was exclusively for youth who had committed homicide, but was expanded in fiscal year 1999 to include some youth committed for other violent offenses, such as aggravated assault and aggravated robbery. The program is designed to help these juveniles understand and self-correct the cognitive distortions that trigger violent aggression. The program helps them identify their emotional unmet needs and

developmental traumas that resulted in empathic detachment and serious aggression. Youth are required to re-enact their crimes through role-playing as both the perpetrator and the victim. Youth learn to interrupt and self-correct thoughts and feelings that contribute to victimization.

The Giddings Capital and Serious Violent Offender Treatment Program is described through the experiences of two offenders in John Hubner's (2005) acclaimed book, *Last Chance in Texas: The Redemption of Criminal Youth*. Hubner wrote, "Texas puts kids through intense treatment programs, and those programs produce results" (p. xxiii).

b. Sexual Behavior Treatment

Specialized treatment for sexual behavior is provided at four facilities within TYC. The facilities and number of Sexual Behavior Treatment beds are Giddings State School: 72 beds, Ron Jackson State Juvenile Correctional Facility: 40 beds, John Shero State Juvenile Correctional Facility: 44 beds, and McLennan County State Juvenile Correctional Facility: 32 beds. Prior to fiscal year 2004, treatment was also provided at a private, contract care program. The Sexual Behavior Treatment Program (SBTP) served an average daily population of 183 youth in fiscal year 2006.

The SBTP is built on TYC's Resocialization© Program, yet has a more intensive, offense-specific focus due to an increased number of hours of group and individual counseling provided by staff who have received a minimum of 40 hours of specialized sex offender training. The program enables youth with similar offense needs to disclose sensitive family and offense-related issues. SBTP also provides adjunct treatment of psycho-social education, anger management, trauma resolution, empathy development through victim impact panels and deviant sexual arousal reduction skills. The program utilizes treatment techniques to teach youth to self-monitor and interrupt thoughts, emotions, and stressors that result in inappropriate fantasies and behaviors. Replacement behaviors are taught including coping, social, problem solving, and relaxation skills.

Four times a year, the families of the youth within SBTP are

invited to what TYC calls a "Multi-Family Conference" where educational topics and peer support are offered. This aspect of the program is designed to engage families in treatment. The program works with the families to prepare home safety plans for transition that address risk management and supervision strategies. All youth receiving sexual behavior treatment are eligible to receive six months of specialized sex offender aftercare to ensure the continuity of services. Currently, only half of the youth receive the specialized aftercare, largely due to a lack of local providers. The SBTP continues to upgrade the services provided as new research reveals what is effective in treating juvenile sex offenders.

c. Treatment for Chemical Dependency

Chemical Dependency Treatment Programs (CDTP) operate at eight state schools and one non-secure facility. These facilities are Giddings State School: 36 beds for males and 16 beds for females, Ron Jackson State Juvenile Correctional Facility: 20 beds for females, John Shero State Juvenile Correctional Facility: 44 beds for males, Evins Regional Juvenile Center: 24 beds for males, Al Price State Juvenile Correctional Facility: 72 beds for males, Gainesville State School: 36 beds for males, and McLennan County State Juvenile Correctional Facility: 96 beds for males. At the McFadden Ranch Treatment Facility in Roanoke, Texas there are 48 beds for males. The programs served an average daily population of 337 youth in the fiscal year 2006.

All youth are assessed at the Marlin Orientation and Assessment Unit where they are given the Adolescent Substance Abuse Subtle Screening & Assessment Inventory. This instrument suggests the severity of the youth's substance abuse problem. Those youth whose scores reflect a high probability of substance dependence, have a substance-dependence diagnosis, and are marked as high risk for violent recidivism are placed into specialized treatment. In tandem with the Resocialization© Program, the CDTP includes an educational component that emphasizes the genetic, environmental, and psychosocial factors that lead to addiction; communication styles; parenting skills; social skills; and conflict management. The youth receive chemical dependency specific group (5 hours per week), individual counseling (1 hour per week), and Substance Abuse

Education (5 hours per week), and are involved in weekly self help recovery meetings.

The largest challenge faced by the Texas Youth Commission in providing chemical dependency treatment for the youth is in recruiting and retaining credentialed staff. Hiring and retaining credentialed staff directly impacts the quality of treatment and the stability of the program. Another challenge faced by TYC is limited aftercare funds available for follow-up CD treatment when youth are transitioned to communities.

d. Treatment for Mental Health Problems

Youth who are clinically diagnosed with severe mental health problems and/or illnesses receive specialized treatment at the Corsicana Residential Treatment Center: 183 beds and the Crockett State School: 144 beds. A few youth receive treatment through private providers. TYC's Mental Health Treatment Programs (MHTP) provide additional psychiatric services through increased availability of clinical services, smaller primary service worker caseloads, increased individual psychological and casework interventions, and more specially trained staff. Direct care staff receive additional training in working with the special needs of this population. The dormitory environments and expectations are modified to address the unique needs of youth with mental health problems. The MHTP served an average daily population of 342 youth in fiscal year 2006.

e. Treatment for Youth with Mental Retardation

In May 1995, the 74th Legislature specifically authorized TYC to serve offenders with mental retardation. TYC contracted with a private program to treat these youth until fiscal year 2003, at which point the youth started receiving treatment at the Corsicana Residential Treatment Center in a self-contained unit. Beginning in calendar year 2006, programming modifications for mentally retarded youth were no longer limited to a self-contained unit. Those with a high priority need are placed at Corsicana but mainstreamed into the rest of the campus in accordance with additional treatment needs they may have. The Program for Offenders

with Mental Retardation served an average daily population of 11 youth in fiscal year 2006.

f. Specialized Parole

Youth who have received treatment for identified special needs while in a residential program are eligible for specialized parole services. TYC contracts with local providers, if available in a particular area, to offer specialized parole services for youth who need sexual behavior treatment, chemical dependency treatment, or treatment for mental health problems. Youth attend one to two individual or group sessions per week for a minimum of three hours. While most providers are private therapists, some are outpatient services provided at residential facilities, and others are offered by community organizations. The average daily population of youth in specialized aftercare for fiscal year 2006 was 298.

B. Youth Characteristics

TYC youth do not share many of the characteristics that positively affect treatment. The majority have few to none of the resilient traits that enable them to overcome adversity. TYC treatment programs strive to address criminal values and behaviors, however, youth come to and leave programs with characteristics that continue to place them at greater risk for repeat delinquent behavior.

Rather than functioning well socially, youth committed to TYC generally did not demonstrate good problem-solving skills, associations with prosocial peers, or commitment to school. Most have had previous referrals for felony offenses and were already on probation when committed to TYC. More than half were unsuccessful in prior community placements. Many did not attend school regularly and function below their peers academically. They come from unstable families with histories of criminal behavior and neighborhoods with gang activity. Many return to the same families and neighborhoods without supportive relationships with adults.

It is no surprise that TYC youth share many of the common characteristics that are highly correlated with a probability of reoffending. Thus, the likelihood of recidivism is present from Day 1 of their entry into TYC programs.

TYC youth do not share many of the characteristics that positively affect treatment. *For youth committed to TYC for FY 2006:*

- *91% had prior felony referrals*
- *83% had IQs below the score of 100*
- *80% committed for felony offenses*
- *76% with unmarried, divorced, or separated parents*
- *75% on probation at the time of commitment*
- *57% had prior out of home placements*
- *52% had families with a history of criminal behavior*
- *46% were chemically dependent*
- *41% with serious mental health problems*
- *40% were eligible for special education services*
- *36% with documented history of abuse or neglect*
- *34% were known gang members*
- *Median reading and math was 4-5 years behind peers*

In addition to the general characteristics of TYC youth, at least two-thirds of the youth enter with a high need for specialized treatment.

TYC has no control over changing the majority of these characteristics. Some of the social and educational characteristics can be influenced in preparation for a youth's return to the community; however, the recidivism rates are likely to be higher for TYC youth than for youth who do not have similar characteristics.

In summary, TYC's Resocialization© program is an ongoing, everyday program that includes many of the components of successful programs. However, the difficulties in maintaining qualified staff, including mental health professionals, are significant barriers to effective programming for a youth population already lacking many of the individual characteristics associated with successful treatment. Most youth have already recidivated when they get to TYC and lack positive relationships with others and commitment to school. TYC's challenge is to help "build capacity" (ACT for Youth Upstate Center of Excellence, 2001, p. 3) in these youth so they can be successful when they return to the community.

V. Hypotheses

The current study was designed to address the following questions: 1) are TYC's programs improving over time; and 2) do specialized treatment programs reduce recidivism above and beyond that of the agency's Resocialization© program for youth with specialized needs? In order to answer these questions, three research hypotheses were tested.

Hypothesis 1: TYC programs are improving. It is hypothesized that there will be a statistically significant trend of lower recidivism from youth in the 2002 cohort through youth in the 2006 cohort, on four designated recidivism measures.

Hypothesis 2: Specialized treatment is more effective. It is hypothesized that after statistically controlling for differences among youth, youth with specialized needs that received specialized treatment will have lower rates on the designated recidivism measures than youth with comparable needs but who did not receive specialized treatment.

Hypothesis 3: Specialized treatment is more effective for some groups of youth than for others. It is hypothesized that after statistically controlling for differences among youth, youth with certain characteristics are more likely to benefit from specialized treatment than are youth with other characteristics.

VI. Methodology

A. Measures

This review examined recidivism by tracking subsequent involvement in the juvenile justice and adult criminal justice systems. While many people think of recidivism as solely rearrest or reincarceration, many different definitions exist nationwide. As outlined here, TYC tracks recidivism in more than one way.

1. Overall Agency Rates

TYC has the following four key rehabilitation outcome performance measures:

- one-year rearrest rate for a violent offense;
- one-year rearrest rate (for any offense);
- one-year reincarceration rate (for any offense); and
- three-year reincarceration rate (for any offense).

This review presents the agency rate for these measures.

2. Specialized Treatment Rates

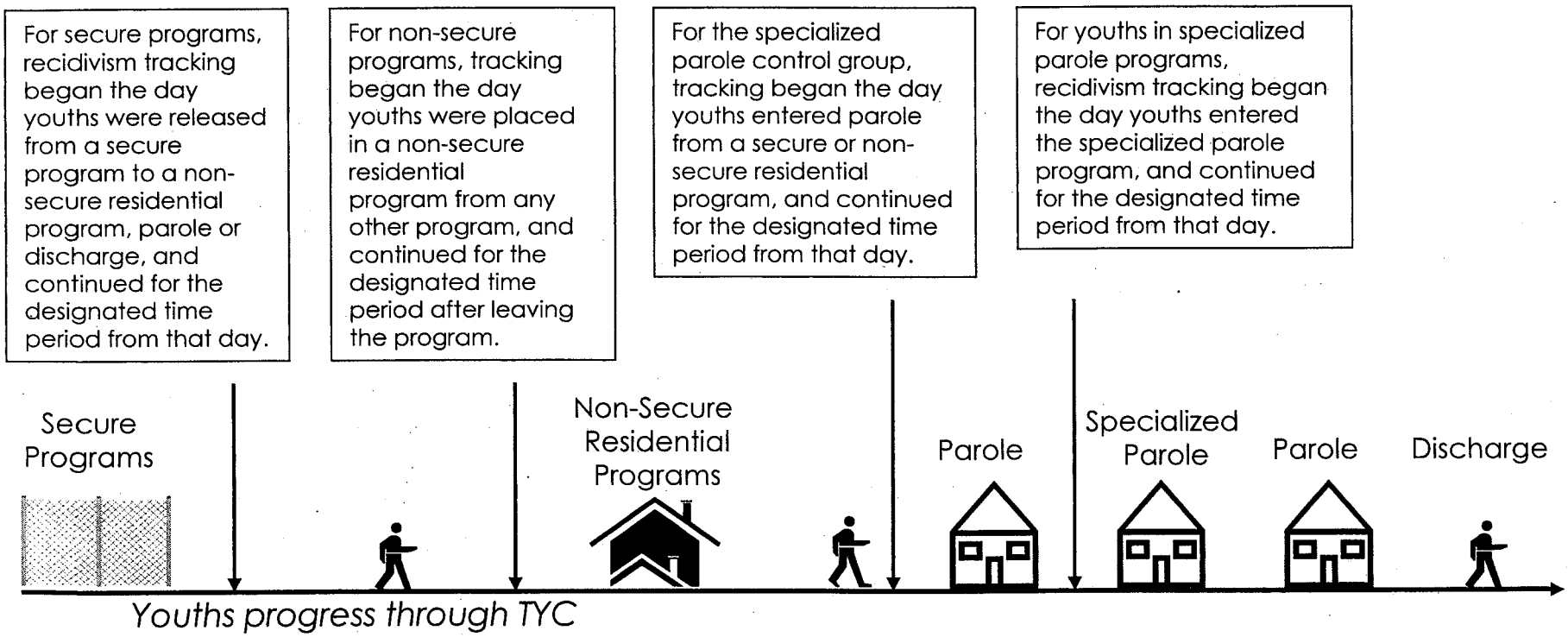
As agency performance measures are tied to one-year budgets, they are necessarily short-term. However, to better determine the total impact of treatment, a longer tracking period is desirable. For the specialized treatment analysis, each youth was tracked for up to 3 years. A different measure was used for each specialized treatment program, matching the measure to the most direct goal of the specific program.

a. Capital and Serious Violent Offender Treatment

As the Capital and Serious Violent Offender Treatment Program (CSVOTP) treats youth who have committed violent offenses, the study measured rearrests for a violent offense, where a violent offense included all felony offenses against persons, as defined in the Texas Penal Code, as well as the felony offenses of aggravated robbery, robbery, arson, burglary with intent to commit a violent offense, intoxication manslaughter, and intoxication assault. Each youth was tracked up to 3 years from the date of release from a secure program to a non-secure program (halfway houses, non-secure contract residential programs or parole) or agency discharge (see Figure 1).

Figure 1

Recidivism Tracking Starting Point



b. Sexual Behavior Treatment

As the Sexual Behavior Treatment Program (SBTP) treats youth who have committed sexual offenses, the study measured rearrests for any felony sex offense other than failure to register as a sex offender. These are generally the offenses for which one would be deemed a sex offender for sex offender registration purposes. Although TYC contracted with one treatment program in the past, youth served by this program were not included either in the treatment or control group, because it was not certain that the model or effectiveness of the program was comparable to the current TYC programs.

c. Chemical Dependency Treatment

The Chemical Dependency Treatment Program (CDTP) treats youth with chemical dependency issues, and the study measured youth either arrested for a drug offense or rearrested or reincarcerated for a felony. Felonies were examined in addition to drug offenses because they are serious offenses often resulting from the dependency. Analysis of the CDTP tracked youth up to 3 years from the date of release. As TYC operates several CD programs, and there is a difference in overall effectiveness among programs, the analysis only included youth released from an institution operating one of the current CD programs. Youth ever placed in a CD program that was contracted or is now closed were excluded both from the treatment and the control group.

d. Mental Health Treatment

The primary goal of the Mental Health Treatment Program (MHTP) is to treat youth's mental health issues. However, since TYC is a correctional agency and data concerning admission to adult mental health facilities were not available, the study measured rearrest or reincarceration for a felony offense. Although TYC currently contracts with one private provider for Mental Health Treatment and contracted with several more in the past, the analysis only looked at youth served by its own programs in Corsicana or Crockett. Youth served in other mental health programs were excluded from both the treatment and the control groups.

B. Sample

1. Agency Rates

Sampling for overall agency rates was the entire population of TYC youth released from a secure program to either a non-secure residential program, such as a halfway house, non-secure contract residential program, or to a parole program, or discharged directly from the agency.[3] Agency one-year rates report youth tracked for a one-year period from their individual date of release.[4] The three-year measures report youth tracked for a three-year period from their individual date of release.[5]

2. Specialized Treatment Rates

Each specialized treatment analysis tracked youth for up to 3 years from the time of release from a secure program. Only youth served in a secure program other than the Marlin Orientation and Assessment Unit were included.

The study used survival analysis by comparing the percentage of youth who had recidivated at several lengths of time since release. Youth were included only if it was their first release from TYC, as some youth received intensive specialized treatment during one stay, but did not receive it in subsequent stays, or vice versa. Including these youth in either the specialized treatment or the control group could lead to problematic interpretations.

C. Statistical Controls

In order to best determine if the TYC rehabilitation programs were effective, each measure had a comparison or control group.

In examining the TYC recidivism rates as a whole, a five-year trend

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[3] Sentenced offenders transferred directly to the Texas Department of Criminal Justice Institutional Division were excluded because they were not at-risk for a new offense, and were transferred for a prior offense.

[4] Although the state fiscal year begins September 1st, TYC tracks groups that are released two months earlier in order to allow for late data entry. For example, the 2006 group were released from July 1, 2004 to June 30, 2005, and tracked to July 1, 2005 - June 30, 2006, depending on their exact date of release. The calculated rates for each year will not change when the next year is calculated, in order to have comparable tracking periods.

[5] Youth in the 2006 group were released from July 1, 2002 to June 30, 2003, and tracked to July 1, 2005 – June 30, 2006.

was examined from fiscal years 2002 to 2006, where each fiscal year was the year of the end of the tracking.

To determine whether TYC specialized treatment programs had been effective, the control group consisted of youth who had the specialized need, but did not receive intensive specialized treatment.

TYC does not randomly assign youth to placement due to ethical and logistical reasons. Programs serve youth with differing probabilities to reoffend and youth characteristics change each year. Differences were accounted for as completely as possible before determining the effects of treatment by creating a probability to recidivate for each youth given their characteristics and history in TYC other than specialized treatment. This probability was used as a control variable in the statistical analyses.

The reason for controlling these differences is illustrated in Table 1. For this hypothetical example, Program A initially appears to be more effective than Program B. However, the difference in program effectiveness is actually due to gender differences between programs rather than treatment received. The probability of recidivism is increased for Program A due to the increased proportion of males who also have a higher likelihood to reoffend.

In TYC, participation in treatment programs is only one factor that can have an impact on lowering the probability of reoffending. In order to understand how much impact treatment has on recidivism, other factors that are known predictors of recidivism must be taken into account. Some of these variables are pre-determined prior to TYC commitment, some are determined while in TYC secure programs, and some are determined after release from TYC secure programs.

Table 1

Program Effectiveness Calculation Example

Program	Males			Females			Total		
		Rearrest			Rearrest			Rearrest	
	Total Released	Violent Offense	Rate	Total Released	Violent Offense	Rate	Total Released	Violent Offense	Rate
A	100	9	9.0%	100	3	3.0%	200	12	6.0%
B	100	9	9.0%	200	6	3.0%	300	15	5.0%

This hypothetical table shows two programs with slightly different rates for rearrest for a violent offense. As can be seen in the far right column, Program A has a 6.0% rate, compared to Program B, which has a rate of 5.0%. Not looking at the characteristics of who is in the program, it could be concluded that the recidivism rate for A is 20% higher than that of B (just like $6 is 20% more than $5).

However, both programs were equally successful with males (9%) and with females (3%). Both programs had the same number of males (100), but Program B had more females than did Program A (200 vs. 100). Therefore Program A was handicapped by having a higher percentage of their releases being high risk youths, namely males.

A statistical program would demonstrate that the treatment effect of Program A as opposed to Program B was 0%, and the effect of initial differences in youth characteristics between the programs was 20%.

While Programs A and B are hypothetical, the difference in recidivating risk between males and females is real. This example demonstrates why the comparative risks of the youths served must be taken into account when evaluating program effectiveness.

Many variables are entered into TYC's computer system and thus available for inclusion in the analysis.[6] For example:

Pre-Determined Variables
Gender
Ethnicity
Number of referrals to probation prior to commitment
County from which committed

Variables Determined in TYC Secure Program
Enrollment in a specialized treatment program
Number of assaultive incidents
Behavior while at the Marlin Orientation and Assessment Unit
Facility placement
Participation in a workforce program
Achievement of a GED or high school diploma
Participation in mentoring program

Variables Determined After Release from Secure Program
Facility type to which released (halfway house, contract program, parole, discharge)
Enrollment in specialized aftercare
Provision of independent living funding while on parole
Participation in mentoring program

There are, however, many other variables which could be equally as important but are not easily available, either because the information is not tracked or there is no way to make a quantitative, non-subjective measurement. These factors were thus not included in any of the analyses. For example:

Pre-Determined Variables Not Included in This Analysis
Quality of family life
Prevention programs in which enrolled
Mother's pre-natal care
Fetal alcohol syndrome
"Crack baby"

Variables in TYC Secure Program Not Analyzed
Staff-youth ratio at programs placed
Staff training at programs placed

[6] TYC has developed a database with 20 years of empirical information regarding those factors that are most closely tied to recidivism.

Management quality at programs placed

Excluded Variables Occurring After Release

Access to positive role models
Family support
Reunification with delinquent friends
Criminogenic characteristics of neighborhood

For the analysis of overall recidivism, almost all of the control variables are pre-determined variables because the other factors are affected in part by TYC and thus contribute to the success of the agency and should not be statistically controlled. Two exceptions to this are included in the analysis: facility type to which a youth is released and youth behavior during the orientation and assessment process. The first control results in a truer measurement of whether TYC is affecting a youth's propensity toward committing future offenses. The second indicator tracks the receptiveness of the youth to treatment before TYC has had time to affect change.

For the specialized treatment analysis, both the pre-determined variables and those determined in a TYC secure program were included, as well as the facility type to which released.[7]

D. Analyses

1. Overall Agency Rates

The current review initially compared agency rates at yearly intervals during the last 5 years (2002 to 2006) using the rates reported at the end of each year. The study reports the actual rates for all 5 years. Where there were differences in results, the study examined the reasons for the differences.

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[7] Among the characteristics included in the empirical calculations were: age at commitment, age of first delinquent referral, classifying offense, country of citizenship, county of commitment, escape history prior to TYC, ethnicity, gender, known gang membership, placements prior to TYC, previous felony adjudications, previous felony referrals, previous referrals for violent offenses, probation prior to TYC, program type to which released, referral for runaway prior to TYC, specialized treatment needs, documented incidents in the first 30 days at TYC, weapon used, educational grade level achieved prior to TYC, strategy of juvenile supervision (SJS), female relative involved in crime, and male relative involved in crime. For the overall TYC rates, where youth other than those in the first release were included, the number of times the youth had previously been released was also included. For the specialized treatment analyses, for which date of release was not an issue, year of release from a facility was added as a control variable. Total and assaultive incidents within the first 180 days in TYC was included for the CSVOTP and the SBTP, as youth are normally not admitted into those programs within the first 180 days.

2. Specialized Treatment Analyses

Youth with a specific high need for specialized services who received at least one day of intensive specialized treatment were compared with youth with the same need who did not receive the treatment. Each youth was tracked from the day of their release until they either recidivated or reached the end of the tracking period without recidivating, using a technique called survival analysis.[8]

For each measure of specialized treatment, the review reports both the magnitude of differences between groups and the probability that such a difference would have occurred by chance if there were in fact no difference between the groups. The smaller the probability, the more likely the difference arose from a real effect and did not occur by chance. Results are also reported after controlling for youth characteristics.

As hypothesis 3 was that specialized treatment would be more effective for some youth than for others, the study searched for types of youth for whom specialized treatment was particularly related to reduced criminality after controlling for differences in baseline probabilities to reoffend.[9] After finding those characteristics, an index was created for each treatment by summing the number of their characteristics possessed by each individual youth. The population was then divided into approximately equal groups of low and high amenability, and the results presented to show the collective effect of these variables in combination with specialized treatment in reducing recidivism.

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[8] Youth were tracked for 1 to 3 years depending on their release date. As youth were tracked for different lengths of time, more youth were tracked for the beginning months of the analysis than the latter. When the survival analyses compared the youth receiving specialized treatment vs. those who had not, it calculated the average difference between the groups at any point in time over the designated number of years.

[9] This was accomplished by creating interaction variables and placing the interaction variable between the specialized treatment and the independent variable. The interaction, specialized treatment, independent, and baseline probability variables were used in a Survival Analysis.

VII. Results

The study examined changes in overall agency recidivism over time and the effectiveness of intensive specialized treatment programs.

A. Change in Agency Outcome Measures

Hypothesis 1 that there will be a statistically significant trend of lower recidivism for the 5 year period was not supported. Agency recidivism rates have remained essentially unchanged since fiscal year 2002.

Recidivism rates by year are shown in Table 2:

- The one-year rearrest rate for a violent offense increased from 7.8% in 2002 to 8.6% in 2006, but there is no statistical evidence for a trend in this measure.

- The one-year rearrest rate for any offense increased from 53.7% in 2002 to 56.1% in 2006, a statistically evident trend attributable to an increased rate of technical violations, but not of law violations, as explained in more detail below.

- The one-year reincarceration rate for any offense decreased from 26.6% in 2002 to 26.2% in 2006, though there is no statistical evidence for a trend in this measure.

- The three-year reincarceration rate for any offense decreased from 51.0% in 2002 to 50.1% in 2006, a minor though statistically significant trend.

Figure 2 illustrates violation types for one-year rearrest for 2002 and 2006. While rates of law violation arrests were virtually identical in beginning and ending years, the rate of technical violations was slightly greater in 2006 (7% vs. 5%). The approximately two percentage point increase in one-year rearrest rate between 2002 and 2006 is attributable to this change in rate of technical violations.

Table 2

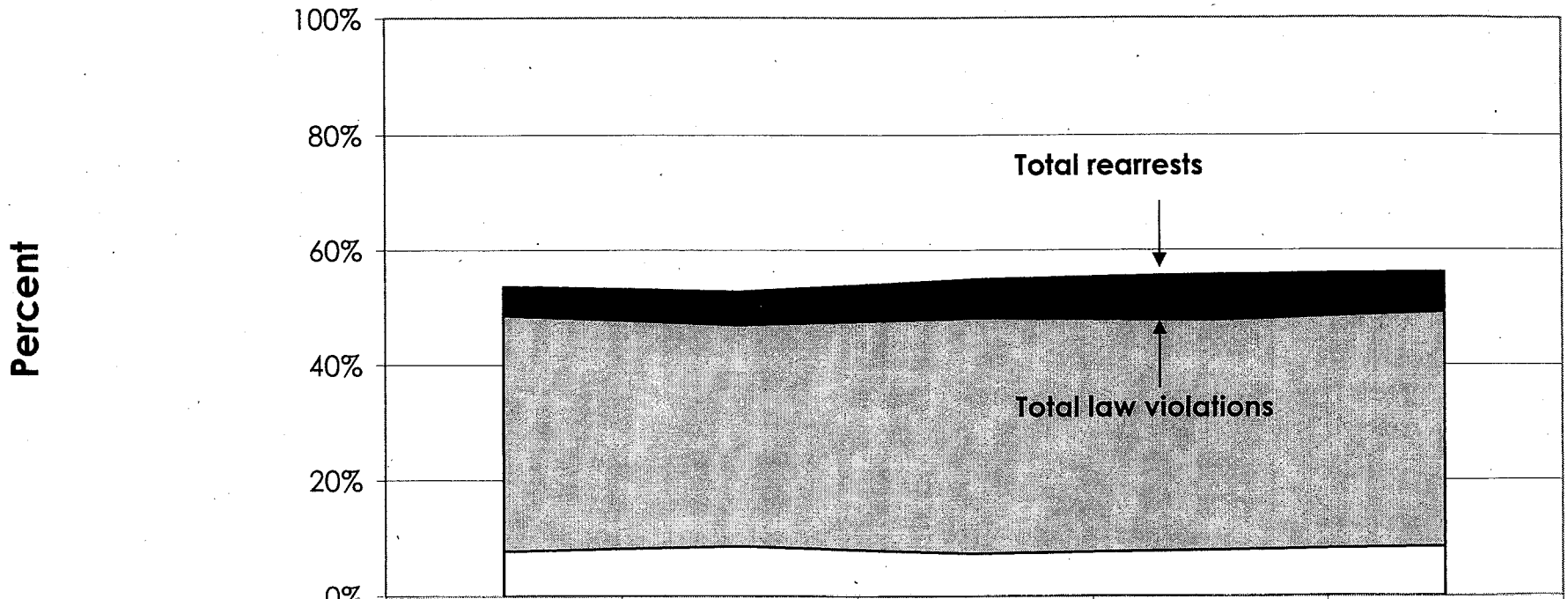
Recidivism Rates Fiscal Years 2002 - 2006

	Rearrest	
	Violent Offense	Any Offense
Fiscal Year	1 Year	1 Year
2002	7.8%	53.7%
2003	8.7%	52.8%
2004	7.4%	54.9%
2005	8.0%	55.8%
2006	8.6%	56.1%

	Reincarceration	
	Any Offense	Any Offense
Fiscal Year	1 Year	3 Years
2002	26.6%	51.0%
2003	24.7%	52.2%
2004	26.9%	47.6%
2005	26.1%	46.7%
2006	26.2%	50.1%

Figure 2

1-Year Rearrest Rates by Type
Fiscal Years 2002-2006



	2002	2003	2004	2005	2006
Technical Violations	5.1%	5.8%	6.7%	7.9%	6.9%
Other Law Violations	40.8%	38.3%	40.8%	39.8%	40.6%
Violent Offenses	7.8%	8.7%	7.4%	8.0%	8.6%

Fiscal Year

B. Specialized Treatment Analyses

For each of the specialized treatment programs, youth with high specialized needs who received intensive specialized treatment were compared to youth who had the same type of needs yet did not receive the intensive specialized treatment in question.

The specialized treatment analysis had one outcome for each specialized treatment program, each tracked for up to 3 years from release:

- *Capital and Serious Violent Offender Program (CSVOTP): rearrest for a violent offense release*
- *Sexual Behavior Treatment Program (SBTP): rearrest for a felony sex offense (except failure to register as a sex offender)*
- *Chemical Dependency Treatment Program (CDTP): rearrest or reincarceration for any felony or any drug offense*
- *Mental Health Treatment Program (MHTP): rearrest or reincarceration for any felony offense*

1. Overall Specialized Treatment Effectiveness

The results showed some support for hypothesis 2 that youth receiving specialized treatment would have lower recidivism rates than youth not receiving the treatment. Youth receiving intensive specialized treatment were less likely to recidivate for the capital and serious violent offender and mental health treatment programs. Sex offenders receiving specialized treatment were less likely to recidivate, but the result was not significant due to the small sample size. Chemically dependent youth were somewhat more likely to recidivate.

Table 3 shows the recidivism differences between youth receiving and not receiving specialized treatment, both before (initial) and after statistically controlling for differences in youth characteristics between the groups.

Table 3
Recidivism Differences

Intensive Treatment Program	Outcome Measure	Analysis	Treatment		
			Difference[1]	Probability by chance[2]	Significance[3]
Capital and Serious Violent Offender	Rearrest for violent offense	Initial	73.6%	2.3%	**
		After Statistical Controls	57.3%	14.8%	*
Sexual Behavior	Rearrest for felony sex offense	Initial	8.3%	81.2%	
		After Statistical Controls	35.1%	24.9%	
Chemical Dependency	Rearrest or reincarceration for felony offense or any drug offense	Initial	-1.9%	65.5%	
		After Statistical Controls	-6.5%	13.1%	*
Mental Health	Rearrest or reincarceration for felony offense	Initial	24.5%	0.01%	***
		After Statistical Controls	20.7%	0.01%	***

[1] Difference is the average difference at any point in time.
Positive number if group receiving specialized treatment has lower rate.
Negative number if group receiving specialized treatment has higher rate.

[2] Probability by chance is % of the time the difference obtained would have occurred by chance if there really were no difference. The smaller the probability the more likely the difference is not due to chance, but due to a real treatment effect.

[3] *** $p < .01$, ** $p < .05$, * $p < .15$.

a. Capital and Serious Violent Offender Treatment Program

- Within 3 years from release, 20% of the capital and serious violent (C&SV) offenders who did not receive specialized treatment were rearrested for a violent offense vs. 5% of the C&SV offenders who did receive specialized treatment (see Figure 3). In other words, only 5 out of 100 youth receiving CSVOT recidivated within 3 years compared to 20 youth--4 times as many-- not receiving the treatment.

- At any given point in time, C&SV offenders receiving specialized treatment were 74% less likely than offenders not receiving specialized treatment to have been rearrested for a violent offense ($p<.05$). When differences in baseline probabilities were considered, C&SV offenders receiving specialized treatment were 57% less likely to have been rearrested for a violent offense at any given point in time ($p<.15$).

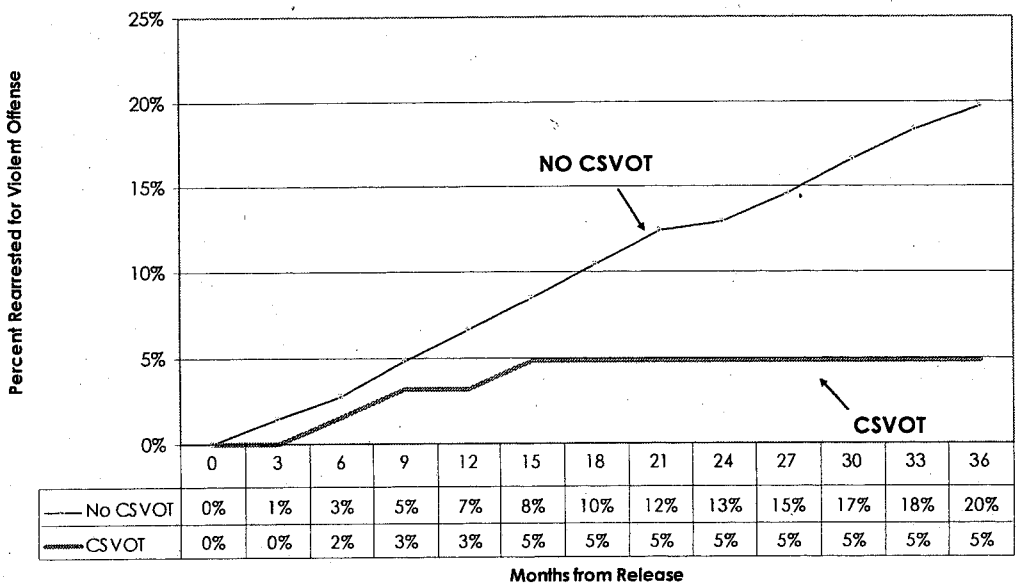
b. Sexual Behavior Treatment Program

- While youth receiving specialized sexual behavior treatment started out better than those who had not, within 3 years from the date of release, 5% of the sex offenders were rearrested for a felony sex offense, both for those who received Sexual Behavior Treatment and those who did not (see Figure 4).

- At any given point in time, sex offenders receiving specialized treatment were 8% less likely than offenders not receiving specialized treatment to have been rearrested for a felony sex offense. When differences in baseline probabilities were considered, sex offenders receiving specialized treatment were 35% less likely to have been rearrested for a sex offense. Neither result was statistically significant due to the small sample size.

Figure 3

Capitol and Serious Violent Offender Rearrest Rates for Violent Offense by Specialized Treatment (CSVOT)

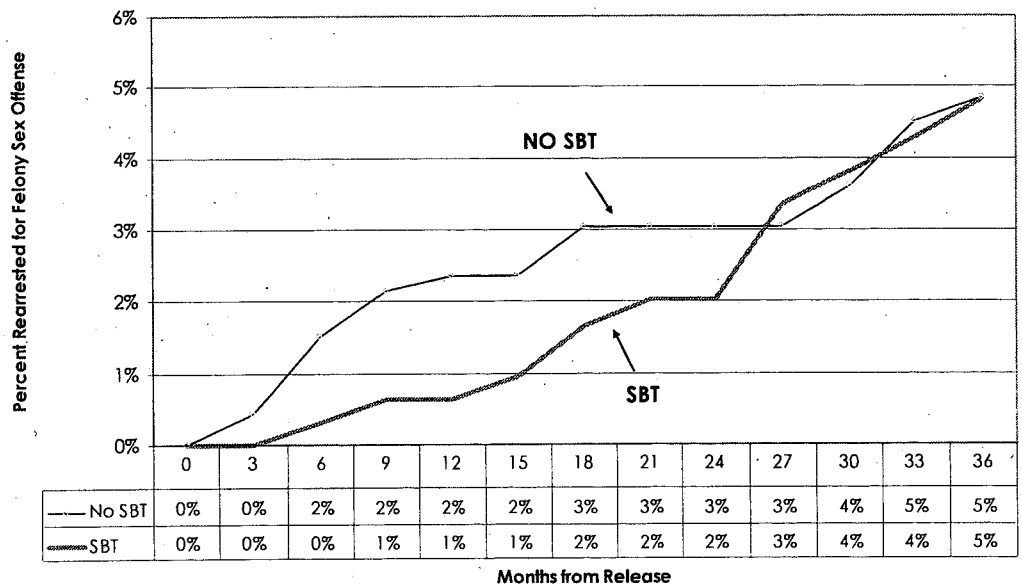


	0	3	6	9	12	15	18	21	24	27	30	33	36
No CSVOT	0%	1%	3%	5%	7%	8%	10%	12%	13%	15%	17%	18%	20%
CSVOT	0%	0%	2%	3%	3%	5%	5%	5%	5%	5%	5%	5%	5%

Months from Release

Figure 4

Sex Offender Rearrest for Felony Sex Offense Rates by Specialized Treatment (SBT)



	0	3	6	9	12	15	18	21	24	27	30	33	36
No SBT	0%	0%	2%	2%	2%	2%	3%	3%	3%	3%	4%	5%	5%
SBT	0%	0%	0%	1%	1%	1%	2%	2%	2%	3%	4%	4%	5%

Months from Release

c. Chemical Dependency Treatment Program

- Chemically dependent youth who received specialized treatment initially recidivated at almost the exact same rate as chemically dependent youth not receiving specialized treatment (see Figure 5).

- At any given point in time, chemically dependent youth receiving specialized treatment were 2% more likely than offenders not receiving specialized treatment to have been rearrested or reincarcerated for a felony offense, or rearrested for any drug offense ($p=ns$). When differences in baseline probabilities were considered, chemically dependent youth receiving specialized treatment were 7% more likely to have been rearrested or reincarcerated for a felony offense, or rearrested for any drug offense at any given point in time ($p<.15$).

d. Mental Health Treatment Program

- For youth with mental health problems, 50% of the youth who received specialized treatment had been rearrested or reincarcerated for a felony within 3 years, compared to 63% of youth with mental health problems who did not receive specialized treatment (see Figure 6).

- At any given point in time, youth receiving Mental Health Treatment were 25% less likely than offenders not receiving specialized treatment to have been rearrested or reincarcerated for a felony offense ($p<.01$). When differences in baseline probabilities were considered, this difference was reduced to 21% ($p<.01$).

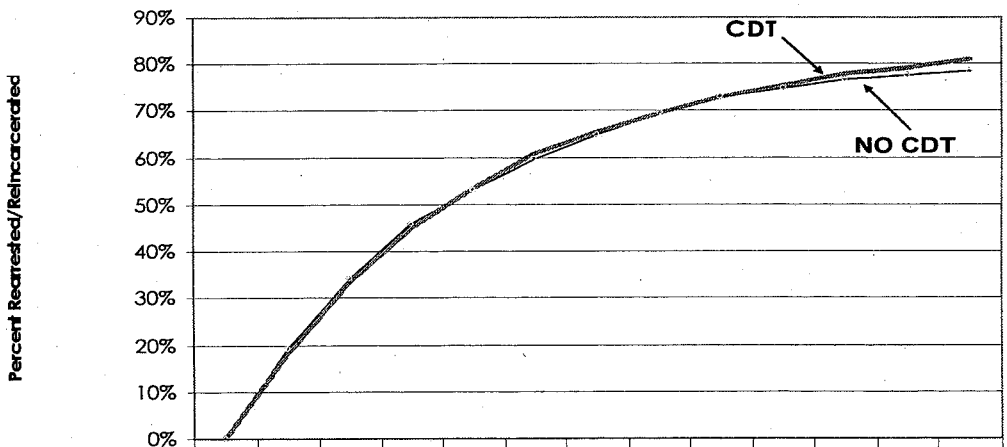
2. Treatment Amenability

Treatment amenability is a difficult concept to understand. The idea is that certain youth are more likely to benefit from the treatment than other youth. What makes it particularly difficult is that certain types of youth are more likely to do well than other youth whether or not they receive the designated treatment.

The study looked first at youth characteristics associated with overall recidivism. Each of the recidivism variables had numerous variables empirically related to recidivism. The strongest five

Figure 5

Chemically Dependent Offender Rearrest/Reincarceration Rates for Felony or Any Drug Offense by Specialized Treatment (CDT)

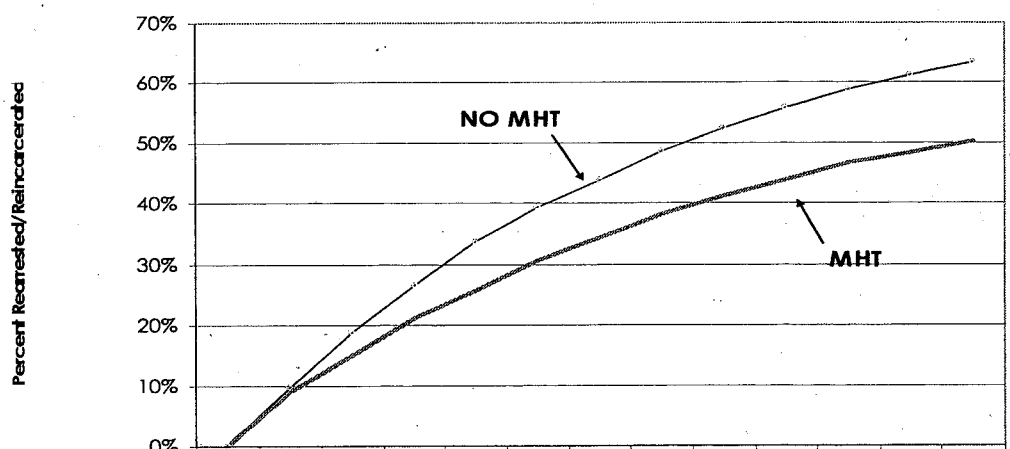


	0	3	6	9	12	15	18	21	24	27	30	33	36
No CDT	0%	19%	34%	46%	53%	60%	65%	70%	73%	75%	77%	78%	79%
CDT	0%	18%	33%	45%	53%	61%	66%	70%	73%	75%	78%	79%	81%

Months from Release

Figure 6

Mental Health Imparied Offender Rearrest/Reincarceration Rates for Felony Offense by Specialized Treatment (MHT)



	0	3	6	9	12	15	18	21	24	27	30	33	36
No MHT	0%	10%	19%	27%	34%	39%	44%	49%	52%	56%	59%	61%	63%
MHT	0%	9%	15%	21%	26%	30%	34%	38%	41%	44%	47%	49%	50%

Months from Release

predictor variables for each one-year recidivism measure are shown in Table 4. Each recidivism measure had at least one strong predictor variable from each of three groupings discussed in the literature review: demographic factors, offense history, and programmatic factors.

- With respect to demographic factors, youth who were male (two measures, see Figure 7), African-American (two measures), and/or from a smaller county (one measure) were, all other things being equal, more likely to recidivate than their counterparts with contrasting characteristics.

- Regarding offense history, youth with more referrals prior to first commitment (three measures, see Figure 8), those released with a nonviolent classifying offense, and/or released at a younger age (one measure) were disproportionately likely to recidivate.

- Youth who were in out-of-home settings prior to commitment were more likely than their in-home counterparts to be reincarcerated within one year of release.

- Regarding programmatic factors, youth displaying more problematic behavior at the assessment center (three measures, see Figure 9), and/or were not placed directly to a nonsecure program (one measure) were more likely to recidivate.

After statistically controlling for the factors that empirically influenced recidivism regardless of whether specialized treatment was provided, hypothesis 3 that youth with certain characteristics are more likely to benefit from specialized treatment was supported. In all of the specialized treatment programs certain groups of youth were more amenable or receptive to treatment than others.

Table 4

Strongest Predictor by Recidivism Measure

Predictor Variable *	Rearrest Violent Offense 1 Year	Rearrest Any Offense 1 Year	Reincarceration Any Offense 1 Year
Demographic Factors			
Sex	2	2	
Ethnicity	4		4
Committing County	5		
Offense History			
Referrals Prior to 1st Commitment	1	1	5
TYC Classification		5	
Age at Release			1
Family and Social Factors			
Youth away from home prior to commitment			2
Programmatic Factors			
Reception Center Behavior	3	4	3
Program Type to which released (Non-secure, parole, discharged from secure)		3	

* These variables most strongly predict recidivism when controlling for all other variables. For example, referrals prior to 1st commitment was the strongest predictor of 1-year rearrest for any offense with increased numbers of referrals with greater probability of rearrest.

Figure 7

Sex-Specific 1-Year Rearrest Rates
First Release Fiscal Years 2002- 2006

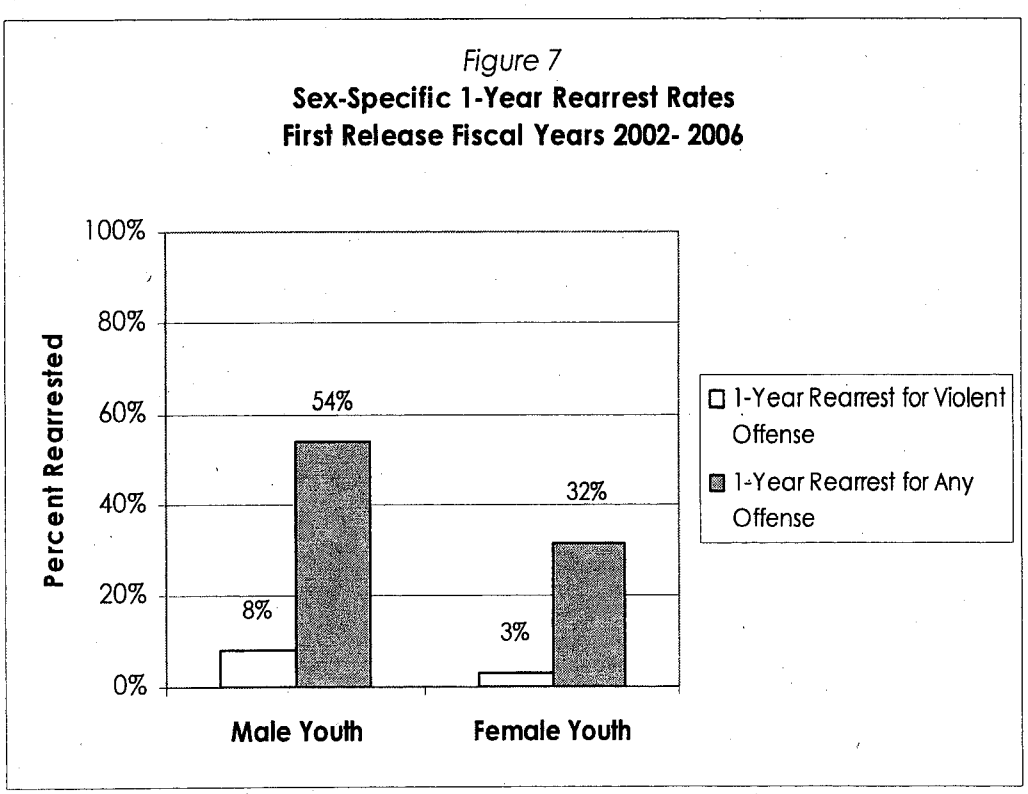


Figure 8

1-Year Recidivism Measures by Prior Referrals
First Release Fiscal Years 2002-2006

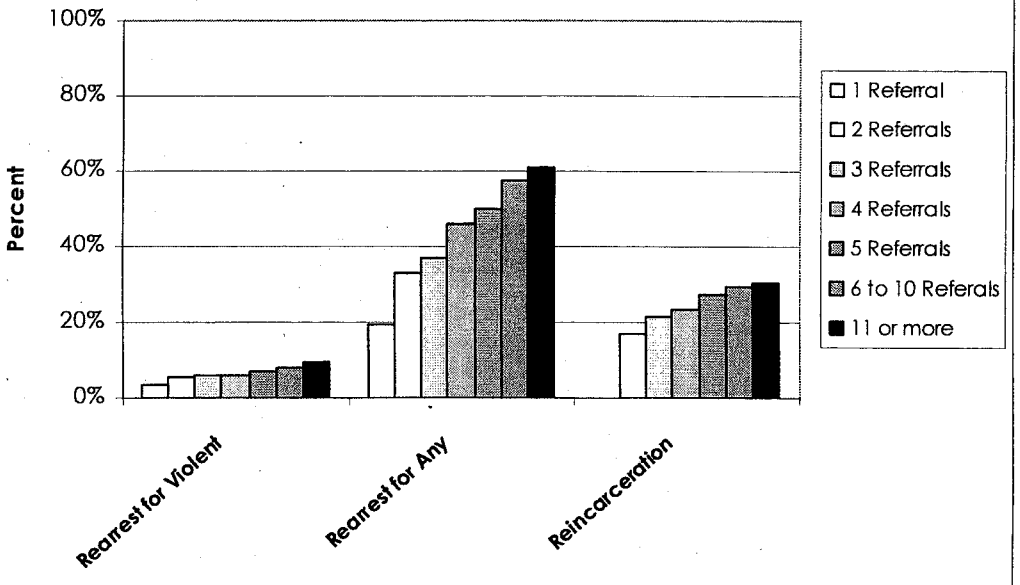
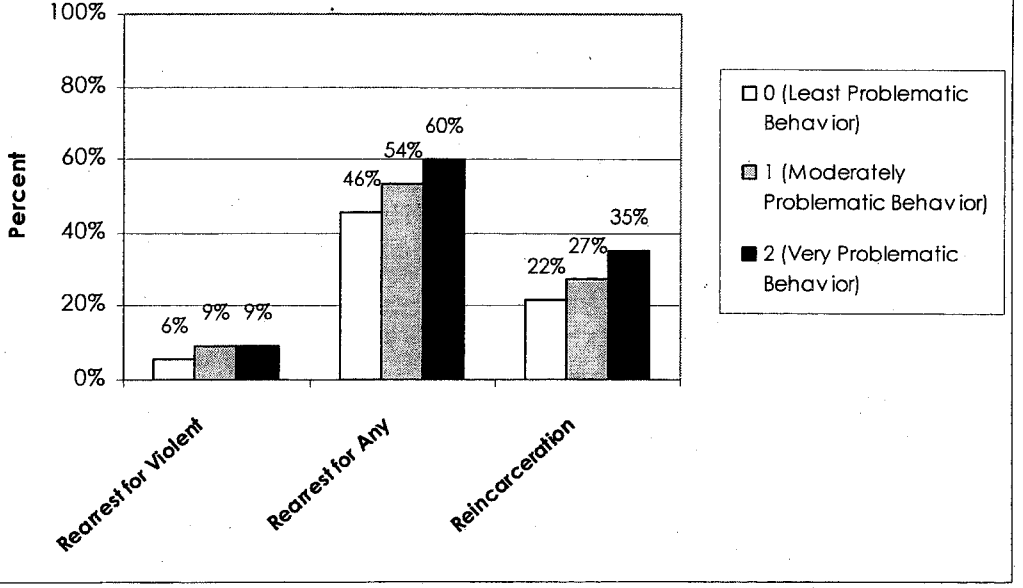


Figure 9

1-Year Measures by Prior Reception Center Behavior Score
First Release Fiscal Years 2002-2006



For each specialized treatment program, certain characteristics were found that were related to treatment success.

a. Capital and Serious Violent Offender Treatment Program

The Capital and Serious Violent Offender Treatment Program was found to be particularly effective in reducing rearrests for violent offenses for C&SV offenders with both of the following characteristics:

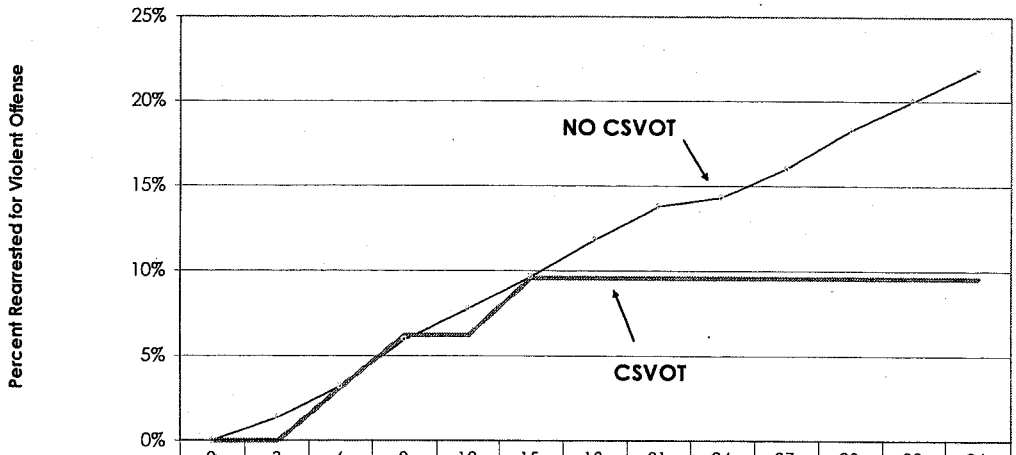
1) no more than four total referrals to juvenile probation prior to commitment to TYC; and
2) no more than one referral to juvenile probation for a felony offense prior to commitment.

To demonstrate the effect of these variables, the chronic and serious violent offenders were divided into two groups: those that had both of the characteristics listed above, and those that had one or none. Thirty-one percent of the youth had both characteristics and 69% had one or none. Each group had either 31 or 32 youth in the cohort that entered the CSVOTP.

Figure 10 shows that youth without both of the amenability characteristics above who received specialized treatment were rearrested for a violent offense at about the same rate as C&SV offenders not receiving this treatment for the first 15 months after release (10%), although no additional youth receiving CSVOT were rearrested for a violent offense after 15 months. However, none of the youth with both of the treatment amenability characteristics were rearrested for a violent offense if they received specialized treatment, compared to 14% of the youth with both of these characteristics who did not receive CSVOT (see Figure 11).

Figure 10

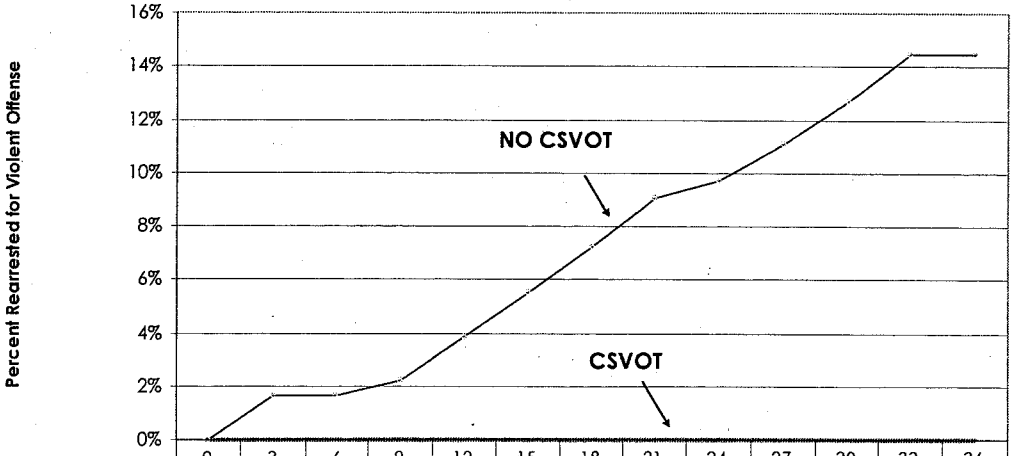
Capitol and Serious Violent Offender Rearrest Rates for Violent Offense by Specialized Treatment (CSVOT): Offenders Not Amenable to Treatment



	0	3	6	9	12	15	18	21	24	27	30	33	36
No CSVOT	0%	1%	3%	6%	8%	10%	12%	14%	14%	16%	18%	20%	22%
CSVOT	0%	0%	3%	6%	6%	10%	10%	10%	10%	10%	10%	10%	10%

Figure 11

Capitol and Serious Violent Offender Rearrest Rates for Violent Offense by Specialized Treatment (CSVOT): Offenders Amenable to Treatment



	0	3	6	9	12	15	18	21	24	27	30	33	36
No CSVOT	0%	2%	2%	2%	4%	6%	7%	9%	10%	11%	13%	14%	14%
CSVOT	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

b. Sexual Behavior Treatment Program

For the Sexual Behavior Treatment Program, sex offenders with the following three characteristics were found to be especially amenable to receiving Sexual Behavior Treatment. These characteristics are:

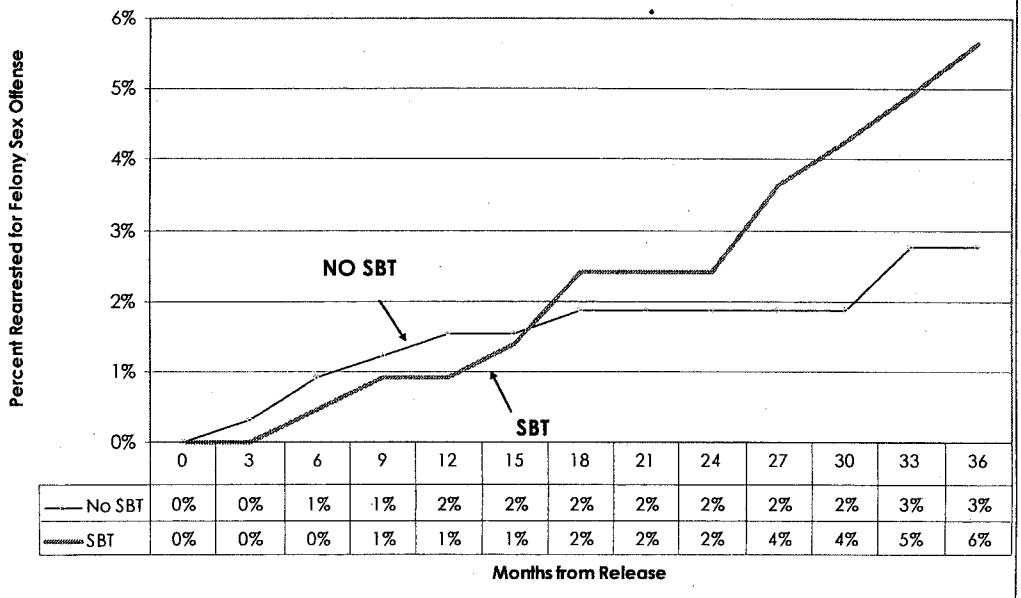
1) high risk on the Texas Juvenile Sex Offender Risk Assessment Instrument;
2) no placement in a residential program prior to commitment to TYC; and
3) a designation that the family had provided neglectful supervision as either legally found by the family court or judged by juvenile probation upon commitment to TYC.

To demonstrate the effect of these three variables, an index was created dividing each of the variables into as close to half of the population as possible, with a score of 0 given to youth without the characteristic and a score of 1 to youth possessing the characteristic. The individual scores were added together for each youth, with a possible total score from 0 to 3. Thirty percent of the youth had scores of 2 or 3, and 70% had a score of 0 or 1.

Figure 12 shows that youth in the lower 70% of the Sexual Behavior Amenability Index who received specialized treatment started out better than youth in this group who did not receive specialized treatment, but after about 15 months actually were more likely to be arrested for a felony sex offense, with 6% of those receiving specialized treatment rearrested within 3 years, compared to 3% of those not receiving specialized sexual behavior treatment. However, youth having two or more of the treatment amenability characteristics (the top 30%), were much less likely to recidivate for a sex offense if they received Sexual Behavior Treatment, with only 3% rearrested for such an offense within 3 years compared to 9% of the youth who did not receive specialized Sexual Behavior Treatment (see Figure 13).

Figure 12

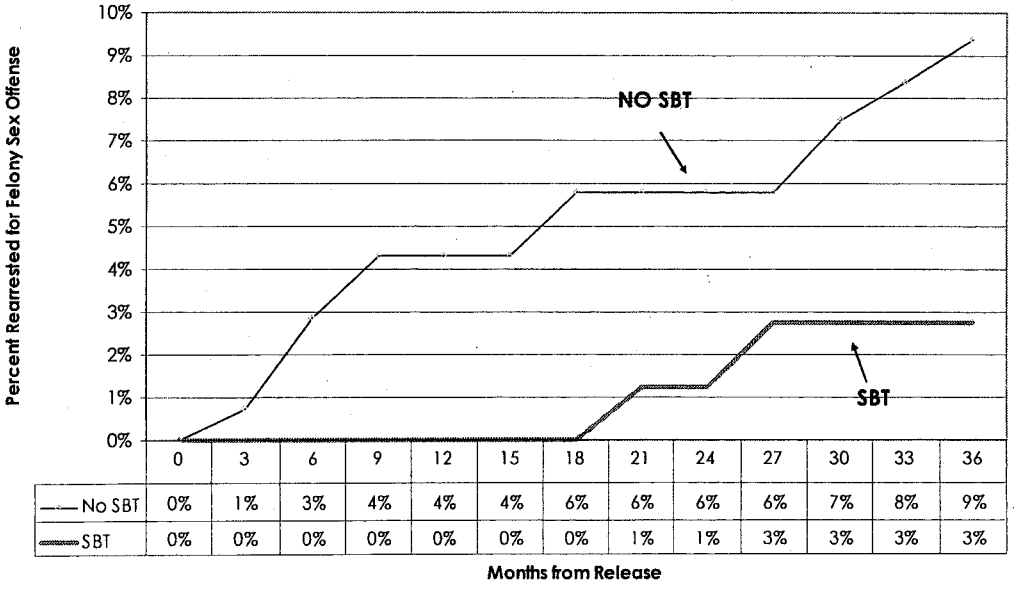
Sex Offender Rearrest for Felony Sex Offense Rates by Specialized Treatment (SBT): Offenders Not Amenable to Treatment



	0	3	6	9	12	15	18	21	24	27	30	33	36
No SBT	0%	0%	1%	1%	2%	2%	2%	2%	2%	2%	2%	3%	3%
SBT	0%	0%	0%	1%	1%	1%	2%	2%	2%	4%	4%	5%	6%

Figure 13

Sex Offender Rearrest for Felony Sex Offense Rates by Specialized Treatment (SBT): Offenders Amenable to Treatment



	0	3	6	9	12	15	18	21	24	27	30	33	36
No SBT	0%	1%	3%	4%	4%	4%	6%	6%	6%	6%	7%	8%	9%
SBT	0%	0%	0%	0%	0%	0%	0%	1%	1%	3%	3%	3%	3%

c. Chemical Dependency Treatment Program

For the Chemical Dependency Treatment Program, chemically dependent youth with a high number of the following 10 characteristics were found to be especially amenable to receiving specialized treatment. These characteristics were:

1) no escape from a residential placement prior to commitment to TYC;
2) not a severe marijuana user as reported by juvenile probation office at time of commitment;
3) initial classifying offense not in Penal Code Chapter 28 (Arson);
4) not a sentenced offender;
5) no documented behavioral incidents during the first 30 days in TYC;
6) a sex offender;
7) a gang member;
8) initial classifying offense in Penal Code Chapter 22 (Assault);
9) not even a mild user of cocaine; and
10) no referrals to juvenile probation for a violent offense.

To demonstrate the effect of these 10 variables, an index was created dividing each of the variables into as close to half of the population as possible, with a score of 0 given to youth without the characteristic and a score of 1 to youth possessing the characteristic. The individual scores were added together for each youth, with a possible total score of from 0 to 10. Forty-six percent of the youth had scores from 6 to 10, and 54% had a score of 0 or 5.

Figure 14 shows that youth in the lower 54% of the Chemical Treatment Amenability Index who received specialized treatment were actually more likely to be rearrested or reincarcerated for a felony or rearrested for a drug offense than chemically dependent youth not receiving this treatment. For example, within 3 years 83% of the youth receiving chemical dependency treatment and amenability scores of 5 or less recidivated for a felony or drug offense, compared to 76% of the chemically dependent youth not receiving this treatment.

However, youth having six or more of the treatment amenability characteristics (the top 46%), were less likely to recidivate for a felony or drug offense if they received Chemical Dependency Treatment (see Figure 15). For example 79% of the chemically dependent youth receiving specialized treatment recidivated within 3 years compared to 81% who did not receive specialized treatment.

d. Mental Health Treatment Program

For the Mental Health Treatment Program, youth with a high number of the following 8 characteristics were found to be especially amenable to receiving Mental Health Treatment. These characteristics were:

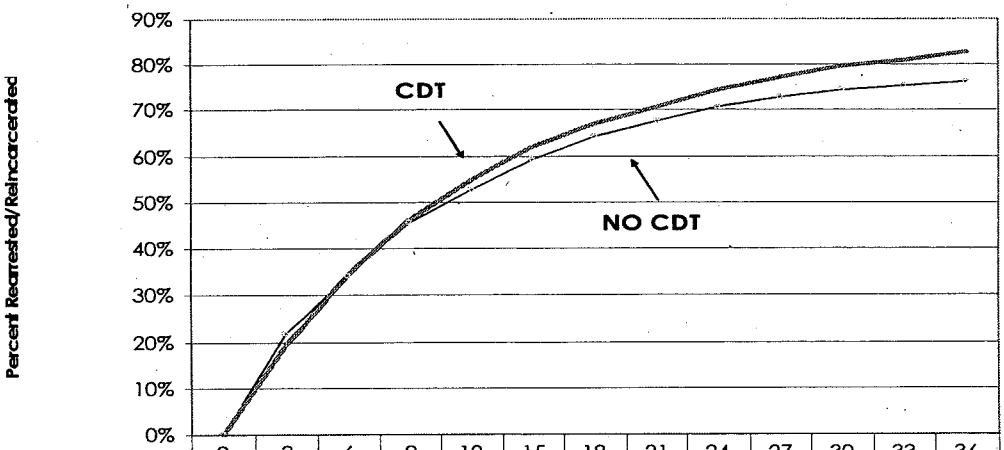
1) a diagnosis on Axis I that was not parent-child relational problem, neglect/physical/sexual abuse of child, or polysubstance dependence;
2) no documented incident of assault on other youth within the first 30 days TYC;
3) first educational assessment at TYC below grade level;
4) referral to juvenile probation at least one time for a non-sexual violent offense;
5) low IQ;
6) not classified in TYC for a drug offense
7) not classified in TYC as any of the following: sentenced offender, chronic serious offender, firearms offender, controlled substances dealer; and
8) classified in TYC as a B violent offender.

To demonstrate the effect of these eight variables, an index was created dividing each of the variables into as close to half of the population as possible, with a score of 0 given to youth without the characteristic and a score of 1 to youth possessing the characteristic. The individual scores were added together for each youth, with a possible total score of from 0 to 8. Ninety percent of the youth had scores from 4 to 8, and 10% had a score of 0 to 3.

Figure 16 shows that youth in the lower 10% of the Mental Health Amenability Index who received specialized treatment were only slightly less likely to be rearrested or reincarcerated for a felony offense than youth with mental health problems

Figure 14

Chemically Dependent Offender Rearrest/Reincarceration Rates for Felony or Any Drug Offense by Specialized Treatment (CDT): Offenders Not Amenable to Treatment

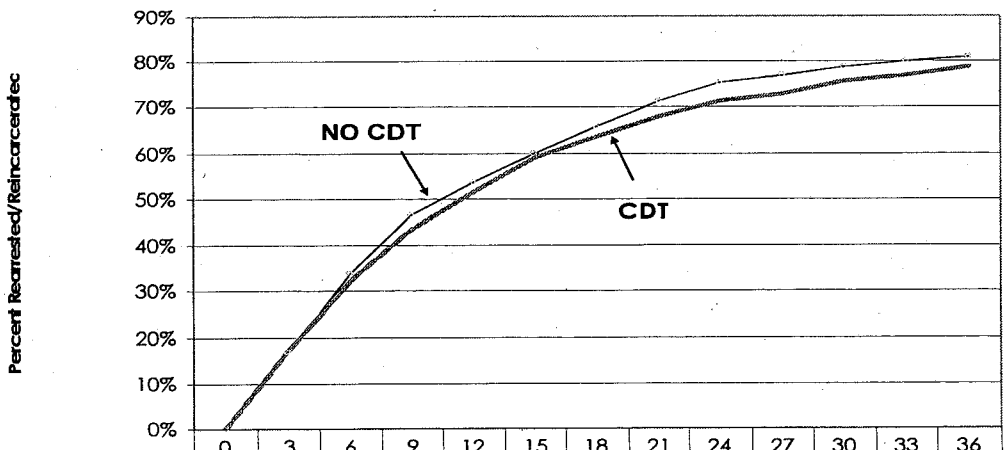


	0	3	6	9	12	15	18	21	24	27	30	33	36
No CDT	0%	22%	34%	45%	53%	59%	64%	68%	71%	73%	74%	75%	76%
CDT	0%	19%	35%	46%	55%	62%	67%	71%	74%	77%	80%	81%	83%

Months from Release

Figure 15

Chemically Dependent Offender Rearrest/Reincarceration Rates for Felony or Any Drug Offense by Specialized Treatment (CDT): Offenders Amenable to Treatment

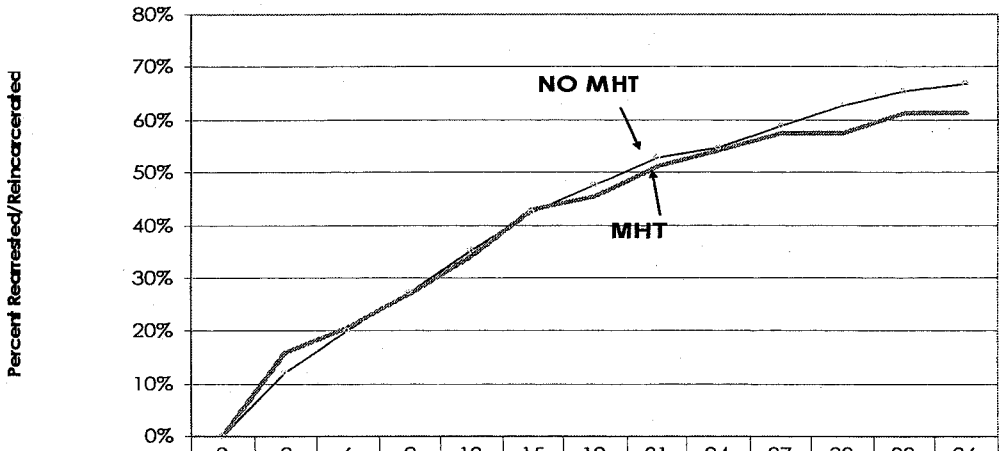


	0	3	6	9	12	15	18	21	24	27	30	33	36
No CDT	0%	17%	34%	47%	54%	60%	66%	72%	75%	77%	79%	80%	81%
CDT	0%	17%	32%	43%	51%	59%	63%	68%	71%	73%	76%	77%	79%

Months from Release

Figure 16

Mental Health Impaired Offender Rearrest/Reincarceration Rates for Felony Offense by Specialized Treatment (MHT): Offenders Not Amenable to Treatment

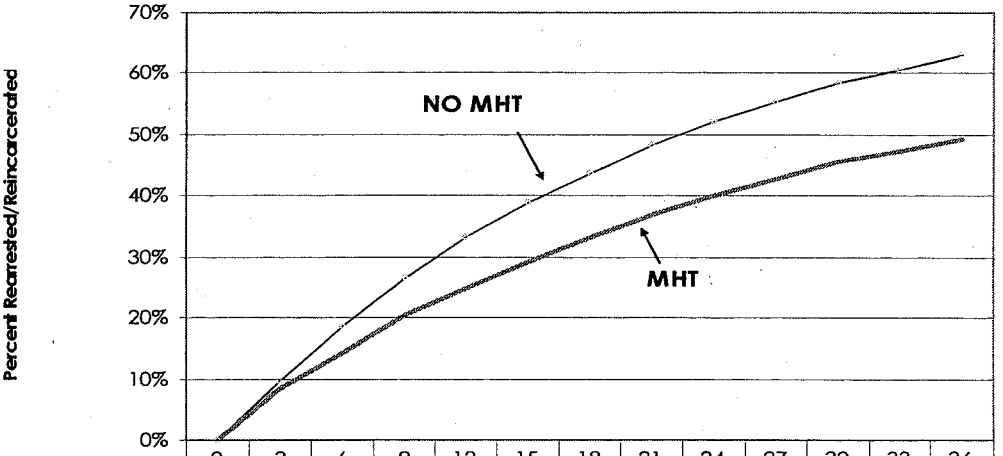


	0	3	6	9	12	15	18	21	24	27	30	33	36
No MHT	0%	12%	20%	27%	35%	42%	48%	53%	55%	59%	63%	65%	67%
MHT	0%	16%	21%	27%	34%	43%	45%	51%	54%	57%	57%	61%	61%

Months from Release

Figure 17

Mental Health Impaired Offender Rearrest/Reincarceration Rates for Felony Offense by Specialized Treatment (MHT): Offenders Amenable to Treatment



	0	3	6	9	12	15	18	21	24	27	30	33	36
No MHT	0%	10%	19%	26%	33%	39%	44%	48%	52%	55%	58%	61%	63%
MHT	0%	8%	14%	20%	25%	29%	33%	37%	40%	43%	46%	47%	49%

Months from Release

not receiving this treatment. For example, within 3 years 61% of the youth receiving Mental Health Treatment and amenability scores of 3 or less recidivated for a felony, compared to 67% of the youth with mental health problems not receiving this treatment.

However, youth having four or more of the treatment amenability characteristics (the top 90%), were much less likely to recidivate for a felony offense if they received Mental Health Treatment (see Figure 17). For example 49% of the youth receiving specialized treatment and with four or more amenability characteristics recidivated within 3 years compared to 63% who did not receive specialized treatment.

VIII. Conclusion and Discussion

The study looked at the results of four agency outcome measures of recidivism over the last 5 years. Results revealed negligible changes in recidivism rates over the five-year period:

- One-year rearrest rate for a violent offense increased from 7.8% in 2002 to 8.6% in 2006, but the rate fluctuated with no discernable pattern within the 5 years, with a low of 7.4% in 2004 and a high of 8.7% in 2003;

- One-year reearrest for any offense increased from 53.7% in 2002 to 56.1% in 2006, rising slightly each year from a rate of 52.8% in 2003, but the increase was largely in rearrests for technical violations;

- One-year reincarceration rate decreased from 26.6% in FY 2002 to 26.2% in FY 2006, fluctuating from a low of 24.7% in FY 2003 to a high of 26.9% in 2004; and

- Three-year reincarceration rate for any offense decreased from 51.0% in 2002 to 50.1% in 2006.

What do these results mean for TYC treatment? The average youth entering TYC has had 16 years of time to develop a delinquent lifestyle. After completing TYC's competency-based Resocialization© program, half of youth have not been reincarcerated into either TYC or adult prison 3 years after release. **To sum, in relatively short time periods, half of the youth committed to TYC benefit from the Resocialization© program and apply the skills they have learned and remain in society**

after their release.

TYC recidivism rates compare favorably to rates reported by other states measuring recidivism in a similar way. The following table shows recidivism rates for youth released from secure programs in states with similar recidivism definitions as TYC uses.

State	Rearrest	Reincarceration	
	1 Year	1 Year	3 Years
Arizona[a]		33.7%	39.1%
Delaware[b]	77%		
Florida[c]	60%		
Ohio[d]		29.5%	49.6%
Texas	56.1%	26.2%	50.1%

[a] Arizona Department of Juvenile Corrections (personal communication, December 22, 2006).
[b] Rodriguez-Labarca, J. & O'Connell, J.P. (2006).
[c] Justice Research Center & DJJ Bureau of Data and Research (2006).
[d] Ohio Department of Youth Services (2006).

While TYC rates compare favorably to these, it is likely that youth characteristics and the juvenile and correctional system processes for other states may not be similar. The fact that the Texas county from which a youth is committed is a very significant predictor of recidivism for TYC youth placed in the same programs is indicative of the extent to which jurisdiction can affect outcomes, making it extremely difficult to compare programs among jurisdictions.

Currently, the Missouri model of juvenile corrections is widely touted as a best practice because of their recidivism outcomes. The recidivism rate for FY 2005 was 7.1%, calculated as the percentage of youth reentering the division during the fiscal year who had been discharged during the current or previous fiscal year (Missouri Department of Social Services, 2006). This definition of recidivism is vastly different from that used by TYC. Using a somewhat closer definition, Mendel (2003) reported a three-year reincarceration rate of 30% for youth released in 1999. While there are differences in calculation (TYC includes technical violations whereas Missouri includes adult probation), these results are impressive and require a closer look at potential reasons for their success.

After statistically controlling for initial differences between groups, TYC youth receiving intensive specialized treatment had significantly lower recidivism rates for two programs: 1) capital and serious violent offenders receiving specialized treatment were 57.3% less likely to be rearrested for a violent offense; and 2) youth receiving mental health

treatment were 20.7% less likely to be rearrested or reincarcerated for a felony offense. Additionally, sex offenders receiving specialized treatment were 35.1% less likely to be rearrested for a felony sex offense. This did not reach significance because of the small sample size. Chemically dependent youth receiving specialized chemical dependency treatment were 6.5% more likely to be rearrested or reincarcerated for a felony or a drug offense. This program has always been a challenge for TYC in hiring and retaining qualified clinical professionals.

This difference in recidivism rates between youth who have received intensive specialized treatment and those with high needs but did not receive it indicates that intensive specialized treatment programs can reduce recidivism even more so than the general TYC Resocialization© program for youth with specialized needs.

Youth receiving specialized treatment and having lower recidivism rates had certain characteristics that suggested they were more likely to benefit from treatment. In all of the specialized treatments certain groups were more amenable to treatment than others, including youth in the chemical dependency treatment program, which was not found to be effective overall. This is consistent with the risk-needs-responsivity (RNR) theory in the literature where the risk and needs of the offender should drive selection of the appropriate program. Service should be matched with several sets of offender characteristics and build on personal strengths (Andrews, Bonta, & Wormith, 2006; Taxman & Thanner, 2006).

What can TYC do now? TYC should strongly consider using amenability indices as part of its specialized treatment selection criteria, in order to maximize its treatment effects. Youth with mental health problems must receive treatment regardless of amenability, and amenability characteristics could guide programming.

A next logical question is, "what is it about the treatment itself that accounts for the results?" Research has shown that it is difficult to demonstrate large decreases in recidivism for ongoing, everyday programs like TYC's Resocialization© program. The meta-analysis mentioned earlier (Lipsey & Wilson, 1998; Lipsey, Wilson, & Cothern, 2000) suggests that general program characteristics have the most influence on the effectiveness of an intervention. This could include factors such as the clinical expertise of providers, better staff-to-youth ratios, more transition facilities, and greater oversight for transition plans and follow-up treatment in the community. The follow-up could

include wraparound services that involve the youth and family with various community resources. Since TYC compares overall recidivism against its rate 5 years ago and all youth at TYC receive treatment through Resocialization©, increasing effectiveness depends on marginal improvement in these factors, a task that TYC can only minimally achieve currently.

How does Missouri do it? In a recent in depth comparison of systems, the Ohio Department of Youth Services identified the organizational culture/philosophy as the most important element of the Missouri model (Korenstein, 2006). While both Missouri and Texas emphasize treatment, Missouri has a social services orientation and considers accreditation by the American Correctional Association contradictory to their philosophy. However, several Missouri-like factors could potentially improve TYC recidivism rates: smaller facilities, better staff-to-youth ratios, better-educated staff, assigning one person to a youth from commitment through release to the community, and a continuum of services available in each region.

Missouri operates 32 small facilities with a total of 726 beds (Missouri Department of Social Services, 2006). In contrast, TYC operates 13 large, typically 200 to 400-bed, secure facilities and nine halfway houses with six times as many beds available for incarcerated youth. Missouri staffs its facilities with primarily college-educated "youth specialists" rather than traditional correctional officers (Mendel, 2003) and there are typically two staff present for each unit of 8-15 youth (Korenstein, 2006). TYC juvenile correctional officers typically have a high school education and may be required to supervise as many as 24 youth at a time. The Professional Development Academy was implemented at TYC last year to provide additional behavior management training for staff to manage the many complexities involved with working in youth correctional environments. TYC is also requesting additional funding to improve the staff to youth ratios.

Even if TYC identifies interventions or decides to implement elements of the Missouri model that could theoretically have the largest impact on reducing recidivism rates, there are barriers to implementation. Establishing smaller, Missouri-like facilities and a continuum of services in every region would require significant legislative support. Public commitment aside, it is difficult to implement programmatic changes with the limited availability of and difficulty in retaining clinical professionals, as well as juvenile correctional staff, in some of the areas where TYC facilities are located. There is also a scarcity of qualified providers for specialized parole or wraparound services in some of the

smaller counties to which youth return. These are issues that TYC continues to struggle with in the current environment.

Regardless of the particular intervention, recidivism is mainly a function of risk, e.g., prior offense history (Lipsey, 2005). Possibly the strongest individual youth risk factors of TYC youth are those that are static and not amenable to change: younger age at a first commitment and younger age at first contact with the law. The number of referrals prior to commitment was a strong predictor for all overall recidivism measures. While TYC may be able to influence some family and social factors, youth being away from home before commitment, which was a strong predictor variable for reincarceration for any offense, is another factor that cannot be changed. TYC can potentially impact some of the other significant risk factors involving educational achievement scores, substance abuse, and clinical factors, but sustaining the effect is difficult once youth return to an environment that contributed to the development of delinquent behaviors. Community characteristics affect a youth's success. TYC works with youth to become productive members of the community, but it has no control over factors such as poverty, education and job opportunities, community resources, and other criminal and law enforcement activity.

What are the practical implications? TYC will need to further identify the areas where it is most likely to make a difference for youth committed to its care – the variables that can potentially be controlled and sustained. An important area is matching services to offender characteristics. This can be done in specialized treatment by considering amenability in deciding which youth should be placed into the more intensive programs. We can also look at youth's post-incarceration as well as residential experiences to see under what circumstances treatment is most likely to be successful when youth return to the community. Recidivism analysis of vocational training (Roberts, 2004, pp. 551-553); mentoring services (Jeffords, 2003, 2004a); independent living subsidy (Jeffords, 2004b); and constructive activity, defined as youth in school and/or employed (Jeffords, 2004c) have shown promising results.

TYC continues to monitor and evaluate its programs in order to refine the quality of its services, increase the accountability of its systems, and improve youth success rates.

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