SEX OFFENDER MANAGEMENT, TREATMENT, AND CIVIL COMMITMENT: AN EVIDENCE BASED ANALYSIS AIMED AT REDUCING SEXUAL VIOLENCE

Research Report Submitted to the National Institute of Justice

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Executive Summary

This study was designed to provide a comprehensive exploratory examination of the program management, treatment, and recidivism of sexual offenders in New Jersey. There were four main objectives of the research: 1) To provide normative data on a large sample of New Jersey sex offenders; 2) To determine which sex offenders get selected for treatment and what criteria are used to make that decision; 3) To examine the effect of treatment on recidivism; and 4) To compare those offenders selected for commitment as a Sexually Violent Predator (SVP) with those offenders not selected for commitment.

Data were gathered from the archival records of 3,168 male sex offenders who were housed at either a prison-based sex offender treatment facility (treatment group) or any of the New Jersey State prisons (no treatment group) and released from custody between the years 1996 and 2007. Additionally, archival data were gathered from all detained or committed SVPs. Federal and state recidivism data were obtained for all released offenders.

Ultimately, three general outcome categories were the focus of the analyses: selection for treatment (determined by whether the offender was housed at the prison-based sex offender treatment facility), recidivism (determined by whether an offender was convicted of an additional offense—sexual or non-sexual—following release), and SVP commitment (determined by whether the offender was released or civilly committed upon completion of the index sentence). After coding the archival file data for offender characteristics, offense characteristics, risk assessment outcomes, and recidivism (and what type of recidivism, if applicable), comparisons were made via chi-square analysis and independent samples *t*-test across these three outcomes; that is, we compared treated and non-treated offenders, recidivists and non-recidivists, and committed and not-committed offenders on these factors. Additionally, a series of classification tree analyses and logistic regressions were conducted to gather insight into what factors were most strongly indicative of selection for treatment, SVP commitment, and recidivism.

The following points highlight the major findings for each objective of the study:

Objective One

- The overwhelming majority of offenders in this sample had female victims (83.9%; n = 2,566), indicating that women and girls continue to be among those most victimized by sexual violence.
- Nearly three-quarters of the index crime events involved molestation of a minor child, and despite a popular notion of "stranger danger" that is prevalent across sexual crimes (an assumption that is arguably an influential factor in sex offender legislation), most offenders knew their victims. Over 44% of the sample perpetrated an offense against someone with whom they were already acquainted (but not related), and an additional one-third of the sample offended against an immediate or extended family member.
- A minority (15%) of the offenses were perpetrated against strangers, suggesting that the "stranger danger" notion of offending (upon which much sex crime legislation is

based) may not reflect the empirical reality that most sex crimes (85%) are committed by individuals known to the victim

- With regard to prior criminal history, nearly 70% of the offenders had been charged with a prior non-sexual offense; however, less than one-third of the sample had a prior history of sexual offenses, providing some support for the notion that sex offenders may be more generalist rather than specialist in their offending patterns.

Objective Two

- The best predictor of placement in the treatment facility was the demonstration of some treatment amenability or readiness for treatment. Choosing offenders based upon their willingness to participate in treatment may, however, exclude those offenders who are at highest risk to recidivate.
- Those placed in the treatment facility had lower risk scores than those in the general population, which may run contrary to the risk-need-responsivity principle of providing the most intensive services to those of highest need.

Objective Three

- In terms of general recidivism (i.e., recidivism of any nature), those offenders who did not receive treatment recidivated (in terms of a new conviction) at twice the rate of those who did receive treatment (51.7% versus 25.0%), and this difference remained even when the groups were matched with regard to actuarial risk scores.
- When looking specifically at sexual recidivism rates, we found that overall 5% of the offenders in our sample were re-convicted of a new sexual offense over an average 6.5 year follow-up period.
- No differences in sexual recidivism were found between the treated and untreated groups,even when these groups were matched in terms of recidivism risk. Though random assignment to treatment conditions is seldom possible in research of this nature, future studies that use random assignment would allow for firmer conclusions regarding treatment effectiveness.
- Sex offenders who offended against strangers were more likely than those who were acquainted with or related to their victim to re-offend after treatment. Likewise, sex offenders who had adult victims were more likely to offend after treatment than those who had minor victims.

Objective Four

- Sex offenders selected for civil commitment were found to be at significantly higher risk of recidivating (based on Static-99 and MnSOST-R actuarial risk scores) than offenders not committed under SVP statutes.
- Sex offense history, MnSOST-R historical scale score, prior history of any contact sexual offense, use of weapon during index offense, age at first sex offense, history of psychiatric problems, age of victim, and age at first non-sexual offense were predictive of SVP commitment.
- Based upon re-conviction data, those considered for civil commitment but ultimately not committed were found to have high rates of any kind of recidivism (67%).

Additionally, rates of sexual recidivism for this group were double (10.5%) that of the rate of sexual recidivism found in the general sample (5%), suggesting that evaluators are likely to be committing those that pose the greatest risk of re-offense to the community.

- Even among this highest risk group (those highly considered for SVP commitment), detected rates of sexual recidivism were still quite low. Given the exceptionally high cost of SVP commitment and the fact that most new sexual offenses are not committed by known offenders, policymakers should be encouraged to better balance estimated crime prevention associated with SVP commitment with that of primary prevention techniques that may cast a wider net in terms of reducing sexual violence in the community. Increased focus on primary prevention relative to SVP commitment would in turn increase focus on the trends and factors known to be behind the extensive majority of sexual abuse cases.

Introduction

This research project, which involves the collaboration of researchers at the John Jay College of Criminal Justice, the New Jersey Department of Corrections (DOC), and the New Jersey Department of Human Services (DHS), as well as two of the foremost experts in sex offender risk assessment and policy, is designed to provide a comprehensive exploratory examination of the program management, treatment, and recidivism of sexual offenders in New Jersey. Given a dearth of large-scale research that comprehensively examines selection criteria and treatment response in systems aimed at reducing sexual recidivism, this type of research is very much needed. Moreover, because New Jersey has been at the forefront with regard to specialized sex offender legislation, these data can serve as a useful tool to other states that are enacting new, or modifying existing, policy. **There were four broad aims of the present study, all of which pertain to sex offender placement and treatment of sexual offenders within the criminal justice and civil commitment systems, and how those placements and treatments relate to subsequent sexual recidivism.**

The first aim of the study was to provide normative, descriptive data on a large U.S. sample of sex offenders. Specifically, we sought to describe a broad sample of sex offenders in terms of demographics, risk, offense and victim characteristics, and sexual and non-sexual recidivism.

The second aim of the study was to examine which offenders get referred for sex offender treatment. Specifically, we sought to examine the placement of sex offenders when they first enter the criminal justice system (and are channeled to either a state prison general population or a prison-based sex offender treatment facility) and whether this placement is related to subsequent recidivism. Specifically, we aimed to (a) examine what criteria are being used to determine if a sex offender is *repetitive and compulsive* and *amenable to treatment,* the statutorily defined criteria for determining placement at the examined treatment facility (and one that is commonly used in other U.S. jurisdictions that provide similar treatment options); (b) determine if there is a difference in static risk scores between sex offenders placed in the treatment facility and those placed in the general population; and (c) explore whether there are differential sexual and non-sexual recidivism rates for sex offenders who were housed in the treatment facility and those who were housed in the general population during their incarceration.

The third aim of the study was to examine the effectiveness of sex offender treatment by comparing sex offenders from the treatment sample to a sample of sexual offenders from the general population who are matched for recidivism risk (as measured by the Static-99). It was our aim to identify groups most responsive to treatment or characteristics most strongly indicative of responsiveness to treatment (as measured by recidivism) so that the system could most efficiently and economically target costly treatment services to those most likely to benefit from them.

The fourth aim of the study was to examine the characteristics of those sex offenders who are determined to be *Sexually Violent Predators* (SVPs)-- presumably the most dangerous subset of sex offenders-- and thus committed indefinitely in the state's civil commitment system at the expiration of their prison sentence. Specifically, we aimed to (a) explore the characteristics of the offenders who are referred for civil commitment; (b) determine which, if any, factors predict which offenders are referred for civil commitment; (c) compare the characteristics and risk factors of sex offenders who are civilly committed to those sex offenders who (i) were referred for civil commitment but ultimately not committed and (ii) were not referred for civil commitment; and (d) determine and compare the recidivism rates of offenders who are referred for civil commitment but not committed relative to the offenders not referred for civil commitment.

Increasing public pressure has driven policymakers to enact an array of legislative schemes aimed at reducing sexual violence. While few would argue against any initiative that veritably reduces sexual violence, given the finite pool of public resources, those that are available should be channeled into efforts demonstrated to reduce sexual offending (Janus, 2003; 2006). Thus, this study sought to examine the efficacy of New Jersey's selection processes for sex offender treatment and civil commitment in order to examine how offenders are being channeled through the system and examine whether this is being done in a way that can most effectively prevent sexual recidivism.

To date, there has been limited research or system-wide evaluation of sex offender placement decisions and its impact on sexual recidivism. The overarching objective of this study was to present a portrait of sex offender risk, placement, and recidivism in New Jersey. Because New Jersey historically has been one of a handful of states that have laid the groundwork in enacting sex offender legislation and the development of specialized sex offender treatment facilities, we considered it an ideal focus for investigation. Many states are currently in the process of evaluating their policies and procedures for handling sexual offenders, and the findings reported below aim to offer critical information to correctional and civil commitment facility decision makers that may allow them to evaluate processing strategies and treatment interventions. The study was designed with intent to produce and disseminate sound research to be used by practitioners and policy makers that will allow for an evidence-based evaluation of a large-scale sex offender management system. This data should assist stakeholders determine whether limited resources are currently being allocated in a way that properly addresses the range of risk among sex offenders in order to reduce the overall amount of sexual violence (Janus, 2003; 2006).

Background

The New Jersey Procedure to Determine Sex Offender Placement

After conviction but prior to sentencing, all adult offenders who have been convicted of a sexual offense in New Jersey undergo a psychological evaluation to determine eligibility for the long-term, comprehensive treatment services offered at the Adult Diagnostic and Treatment Center (ADTC). If, similar to other state statutory language (see e.g., Annotated Laws of Massachusetts ch. 123A, § 2A, 2006), it is determined that the offender's acts were "repetitive and compulsive" in nature and that the offender is "amenable to treatment," then that individual is eligible to be sentenced for an indeterminate term (up until the statutory maximum sentence) at the ADTC.

If, following the psychological evaluation, the State determines that there is insufficient evidence to suggest that the offender meets statutory criteria, the judge has the discretion to sentence the sex offender to community probation or to incarceration in the general population of a state prison. Though as yet not empirically determined, it is believed that with these sentencing options, that those offenders sentenced to the ADTC are at highest risk to re-offend, those sentenced to state prison are at a more moderate risk, and those released on probation are at lowest risk.

The New Jersey Department of Corrections screens all offenders with a history of sexual offenses to determine eligibility for civil commitment. Offenders found to be at high risk of sexual recidivism are referred to the Attorney General's Office, and a petition for temporary civil commitment is filed with the court if it is determined that the offender is "highly likely to reoffend." If, after a full hearing, the court finds that the individual has a mental abnormality or defect that makes sexual re-offending highly likely, the individual is civilly committed to the New Jersey Special Treatment Unit (STU) for an indefinite period, where treatment is provided by the Department of Human Services (DHS). The functioning of the civil commitment scheme is, of course, based on the assumption that evaluators are accurately identifying those offenders who pose the greatest risk of re-offense.

Treatment of Sex Offenders

There has been a great debate in the literature about the efficacy of treatment interventions for sexual offenders and the ability of these treatments to lower sexual offense recidivism rates. This debate was initially fueled by Martinson's "Nothing Works" article (Martinson, 1974); however, more recent research seems to generally support the notion that sex offender treatment reduces recidivism (Duwe & Goldman, 2009; Hall, 1995; Hanson et al., 2002; Looman, Dickie & Abracen, 2005; Losel & Schmucker, 2005).

Hanson and colleagues (2002), who conducted a meta-analysis of 43 sexual offender treatment outcome studies, found that on average, sex offenders who had completed treatment had a 12.3% sex offense recidivism rate compared to the 16.8% recidivism rate seen for offenders who did not complete treatment. When looking solely at more recent interventions based on cognitive-behavioral treatment (CBT) models, differences in the sexual recidivism rates for offenders who completed or did not receive treatment were even more disparate: 9.9% to 17.4%, respectively

(Hanson et al., 2002). More recently, Duwe and Goldman (2009) used propensity score matching to compare recidivism rates of treated and untreated sexual offenders in Minnesota over an average follow-up period of 9.3 years. They found that CBT-based sex offender treatment decreased the hazard ratio for sexual reoffending by 27%, violent recidivism by 18%, and general recidivism by 12%. Similar sexual and non-sexual recidivism reduction rates based on CBT interventions have also been identified by other researchers (e.g., Barbaree & Seto, 1997; Gallagher, Wilson, Hirschfield, Coggeshall, & MacKenzie, 1999; Hall, 1995; Hanson, 2000; Looman, Abracen, & Nicholaichuk, 2000; Marshall, Barbaree, & Eccles, 1991; McGrath, Cumming, Livingston, & Hoke, 2003; McGrath, Hoke, & Vojtisek, 1998; Nicholaichuk, Gordon, Deqiang, & Wong, 2000; Scalora & Garbin, 2003). In addition, while few studies have examined the cost effectiveness of specialized sex offender treatment programs, Prentky and Burgess (1990) propose that if treatment does reduce recidivism, then the costs of treatment may be offset by the costs of incarcerating sex offenders without treatment only to have them reoffend once released.

It has been argued that when evaluating program effectiveness, consideration must be given to risk level, offender needs, and responsivity to treatment (Andrews, Bonta, & Hoge, 1990; Bonta, & Hoge, 1990). Andrews and colleagues argue that effective programs must be based upon a CBT model, target offenders at highest risk to recidivate, and address each offender's crimenogenic needs (Andrews & Bonta, 1998; Andrews et al., 1990; Ward, Vess, & Collie, 2006). Providing evidence for this argument, a meta-analysis of outcome studies by Hanson, Bourgon, Helmus, and Hodgson (2009) suggested that treatment programs that adhered to risk-need-responsivity (RNR) principles showed the largest reductions in both general and sexual recidivism.

Guided by the above principles, treatment at the ADTC follows a CBT model with progressive levels treatment programming that focus on awareness of offending patterns, victim empathy, arousal reconditioning, and the development of relapse prevention plans. (Cornwell, Jacobi & Witt, 1999; Zgoba, Sager, & Witt, 2003). Organized hierarchically, offenders pass from level one (which involves basic treatment orientation) up through levels four (which involves the making of detailed relapse prevention plans) and five (which involves participation in a therapeutic community and maintenance of treatment gains).

Zgoba et al. (2003) conducted a preliminary evaluation of the ADTC program of New Jersey and found that sexual offense recidivism rates were low for both the ADTC (i.e., treated) and the general prison sex offenders, 8.6% and 12.7% respectively. Differences between the programs did not reach a level of statistical significance;however, their evaluationused a comparison group of randomly sampled sex offenders in the general population, which would not account for differing a priori risk levels. In the current study, we aimed to compare sexual and general recidivism rates of treated sex offenders with those of non-treated sex offenders, matching on risk level as measured by the Static-99, an empirically validated measure of risk for recidivism.

Sex Offender Recidivism

Despite widespread belief that all sex offenders inevitably re-offend (Hanson, 2003), the best empirical research on the base rates of sexual re-offending suggests that, in fact, only a minority of sex offenders are known to recidivate. A large scale study following nearly 10,000 sex offenders found that 5.3% of sex offenders were arrested for a new sexual offense within a three-year follow-up period (Buerau of Justice Statistics, 2003). Hanson and Bussière (1998), in a meta-analytic examination of outcome for some 23,393 sex offenders across 61 studies, reported that 13.4% of the offenders in this

aggregate sample recidivated with a new sexual offense, using an average follow-up period of four to five years. Notably, rapists were shown to recidivate at a higher rate (18.9%) than child molesters (12.7%). Hanson and Morton-Bourgon's (2004) meta-analysis reported a similar sexual offense recidivism rate of 13.7% (analyzing outcomes for 31,216 offenders across 95 studies), using an average follow-up period of five to six years. In their most recent meta-analyses (which included sexual recidivism data for 6,746 offenders across 22 studies), Hanson and colleagues (2009) observed a sexual recidivism rate of 10.9% for treated offenders (compared to a sexual recidivism rate of 19.2% for untreated offenders).

General and violent recidivism rates, which account for a wider net of re-offenses (i.e., not just sexual), are considerably higher than rates of sexual recidivism. Indeed, Hanson and Morton-Bourgon (2004), using an average follow-up period of 5-6 years, reported a recidivism rate of 14.0% for violent non-sexual recidivism, 25.0% for violent recidivism (including sexual and nonsexual violence), and a general recidivism rate of 36.9% (including any type of re-offense). Though Hanson and colleagues' work (1998; 2004; 2009) provides the best insight on recidivism rates to date, known recidivism rates should be considered an underestimate, as many sexual offenses go undetected. Indeed, research using longer follow-up periods and including arrests or informal reports (thus not solely officially recorded convictions) when determining recidivism has observed sexual recidivism rates that can approach 40% (Hanson, 2003).

While others have examined recidivism rates across institutional samples, Zgoba and Simon (2005), most applicable to the present study, found differences in non-sexual recidivism rates between a general prison population and a sex offender prison treatment population. No significant differences in sexual recidivism rates of these groups, however, were observed. The current study sought to extend the work of Zgoba and Simon (2005) through use of a larger sample size and a methodology that controlled for a priori risk levels.

Sex Offender Risk Assessment

The commitment of sex offenders typically involves an evaluation of re-offense risk. Because clinical judgment has historically been shown to be inferior to actuarial based approaches to risk assessment (Grove et al., 2000; Hanson and Morton-Bourgon, 2009), adherence to the best practices implies the use of empirically validated risk tools in these high stakes settings. Indeed, the development of these tools has relied upon the work of Hanson and colleagues (1998; 2004) and others in identifying individual factors (e.g., offender age) or offense characteristics (e.g., gender of victim, use of violence) that most strongly correlate with recidivism. Some risk assessment instruments provide overall risk scores based upon the combined weightings of a set number of risk factors, such as the Sex Offender Risk Appraisal Guide (SORAG; Quinsey et al., 1998), Rapid Risk Assessment for Sex Offence Recidivism (RRASOR; Hanson, 1997), MnSOST-R (Epperson, Kaul, Huot, Hesselton, & Alexander, 2000) and the Static-99 (Hanson & Thornton, 2000). Others, such as the Sexual Violence Risk-20 (SVR-20; Boer, Hart, Kropp, & Webster, 1997) and the Risk for Sexual Violence Protocol (RSVP; Hart, et al., 2003) utilize a structured professional judgment approach that provides decision-makers with structured guidelines for considering a list of empirically validated factors but does not provide probabilistic estimates of risk based on the combination of such factors.

Comparative analyses of the utility of specific risk instruments have been undertaken elsewhere (see e.g., Barbaree, Seto, Langton, & Peacock, 2001; Harris et al., 2003) and while a full review of the instruments is beyond the scope of this review, each of the instruments examined have

demonstrated relative strengths. As yet, there appears to be no single instrument widely accepted as having superior predictive capabilities, but each has consistently demonstrated superior reliability and predictive validity to that of clinical judgment. In light of these findings, experts of sexual risk assessment (e.g., Harris, 2003) contend not only that actuarial instruments represent the best available approach to risk assessment of sexual offenders but also that conducting a sexual risk assessment without utilizing actuarial estimates is "an empirically unjustified introduction of error into clinical decision making" (p. 391). While continued refinement of these instruments should enhance our capabilities of accurately relaying risk for sexual offending, actuarial instruments in their present states seem to provide the courts with the best available evidence regarding likelihood of recidivism. Indeed, Janus and Prentky (2004) highlight the transparency, accountability, and consistency that actuarial tools bring to the risk-finding process and suggest that actuarial risk assessment provides the most accurate indication of long-term re-offense risk currently available.

Sexually Violent Predator (SVP) Commitment

SVP commitment statutes typically allow for the indefinite post-sentence civil commitment of sex offenders thought to pose an elevated risk of re-offense. At the present time, 20 states (including New Jersey) have enacted SVP legislation. Despite legal challenges arguing that this type of indefinite, post-sentence detention violates substantive due process rights and constitutional prohibitions of *ex post facto* lawmaking and double jeopardy, the constitutionality of these preventive detentions schemes was upheld by the United States Supreme Court on three separate occasions (*Kansas v. Hendricks*, 1997; *Kansas v. Crane*, 2002; *United States v. Comstock*, 2010)

Eligibility for SVP commitment typically requires (i) a mental abnormality, (ii) a history of sexual offenses, (iii) some evidence of volitional impairment, and (iv) some link between the mental abnormality and risk such that the offender is likely to commit future acts of sexual violence (Mercado, Bornstein, & Schopp, 2006; Miller, Amenta, & Conroy, 2005). New Jersey, for example, defines a Sexually Violent Predator as someone with a history of sexual offenses and who "suffers from a mental abnormality or personality disorder that makes the person likely to engage in acts of sexual violence if not confined in a secure treatment facility for control, care, and treatment." (N.J.S.A. 30:4-27.24 to -27.38).

Most recent estimates indicate that there are currently 4,534 individuals held under SVP laws across the U.S., with some 494 individuals (or approximately 10% of those committed) having been released or discharged from SVP programs (Gookin, 2007). Additionally, each year many more individuals are screened or evaluated under these laws. While the number of individuals screened, detained, or committed continues to grow, research in this arena has not kept pace. Indeed, despite the increasing number of offenders being committed under SVP laws, little empirical research has addressed the range of issues pertinent to SVP legislation, which involves serious deprivations of individual liberties at tremendous cost to the state. Per offender, SVP commitment costs average $97,000 yearly -- nearly four times that of the $26,000 per offender annual rate of general correctional costs(Gookin, 2007). The newly constructed Coalinga State Hospital, which serves as the "largest public project on record in California," cost $310 million in construction alone and will house up to 1,500 SVPs (Crawford, 2009, p.1). With the number of SVP commitments growing at a rate of 5-24% per year, SVP commitment is expected to cost up to one billion dollars within the next decade (Janus, 2006). Given the high costs of commitment, which will continue increasing as programs increase in size, some have argued that the costs of SVP commitment outweigh the

potential benefits because it likely diverts taxpayer dollars from prevention or other sex offender management schemes and focuses these funds on a relatively small group of offenders (Gookin, 2007; Janus, 2003; 2006).

Researchers in several states have reported on the demographics and characteristics of offenders held in SVP commitment programs, though these samples have typically been fairly small. For example, Becker and colleagues (2003) examined the demographic and criminal characteristics of 120 sex offenders petitioned for commitment in Arizona; Janus and Walbeck (2000) analyzed 89 sex offender commitments in Minnesota; and Meyer, Mollett, Richards, Arnold, & Latham (2003) described the 21 persons committed as SVPs in Texas' unique outpatient civil commitment program.

Examinations of actuarial risk scores from those selected for SVP commitment or merely evaluated for commitment (but not committed) suggest that those selected as SVPs tend to have higher risk scores than those not selected; however, when comparing the findings of these risk-commitment studies that were conducted in different states, risk scores appear to vary from one state to the next. For example Elwood et al. (2010) observed that 86% of the offenders in their Wisconsin sample scored in the high risk range (RRASOR ³ 4, Static-99 ³ 6, or MnSOST-R ³ 8) on at least one actuarial scale. Further, Jackson and Richards (2007) found offenders held under an SVP statute in Washington had mean MnSOST-R scores of 7.62, mean SORAG scores of 19.08, mean VRAG scores of 10.05, and mean Static-99 scores of 5.40. In contrast, actuarial risk scores in Wisconsin on the Static-99 (M = 6.17) and the MnSOST-R (M = 11.08) were found to be significantly higher than those in Washington State, while RRASOR scores in Wisconsin (M = 3.5) were significantly lower than those in Florida (Elwood et al., 2010). The NYS Office of Mental Health (2009) observed differences in Static-99 actuarial risk scores among groups evaluated for civil management (the state's term for SVP commitment). Those recommended for civil management had the highest Static-99 scores (M = 6.2), followed by those referred for a second level of review but not recommended for civil management (M = 5.3), followed by those not referred for in-depth review (M = 2.3). Similarly, Levenson (2004) found offenders selected for commitment had higher scores on the Static-99 (M = 6), MnSOST-R (M = 10) and RRASOR (M = 4) than offenders not selected for commitment.

Given that so few offenders have been released from commitment facilities, no study has yet examined the recidivism rates of SVPs upon release from civil commitment. Some research has, however, examined the recidivism rates of offenders who were nearly committed: those who were referred for commitment but, for various reasons, were ultimately not committed as SVPs. Milloy (2007) examined the recidivism rates of 135 sex offenders who were referred for commitment but where no petition was filed and found that 50% of these offenders were convicted of of a new felony offense, while 23% were convicted of a new felony sex offense. While this estimated sexual recidivism rate of 23% is considerably higher than Hanson and Morton-Bourgon's (2004) meta-analytic estimate of 13.7%, it is not surprising given that these sex offenders were considered for civil commitment and thus considered to be at a high level of risk. Further empirical evidence is needed to estimate the likely recidivism rates of SVPs. These data could assist policymakers charged with making difficult decisions about how to most efficiently and efficaciously spend scarce public resources.

New Jersey – At the Forefront of Sex Offender Legislation

The structure and process of sex offender treatment, assessment, and legislation vary from state to state (Cohen & Jeglic, 2007). In the United States, New Jersey has been at the forefront of the development and implementation of sex offender policies and legislation. In 1976, New Jersey was one of the first states to establish a correctional facility that provided treatment specifically to sexual offenders. Still today, the Adult Diagnostic Treatment Center (ADTC) in Avenel, NJ is one of a handful in the country that provides sex offender-specific services.

Following the 1994 sexual molestation and death of seven-year old Megan Kanka in Hamilton Township, New Jersey, the New Jersey legislature enacted a series of statutes which pertain specifically to convicted sex offenders (Brooks, 1996). This package of legislation included offender registration, community notification (commonly known as Megan's Law), discretionary use of the death penalty, discretionary life imprisonment, the development of a national sexual offender registry, life time supervision, DNA, fingerprinting and the right to refuse good time credits. On a national level, sex offender registration was mandated in 1994 through the Jacob Wetterling Act. The Wetterling Act was amended in 1996 to require all fifty states to have some form of the Megan's Law notification statute (Brooks, 1996; Matson & Lieb, 1997; Rudin, 1996).

In 1997 the United States Supreme Court upheld Kansas' SVP commitment statute, a decision that constitutionally legitimized the post-sentence civil commitment of certain sex offenders (*Kansas v. Hendricks, 1997*). The Governor of New Jersey signed the New Jersey Sexually Violent Predator (SVP) Act in August 1998, which took effect in August 1999 (Cornwell et al., 1999). New Jersey, one of the first of what is now twenty states with post-incarceration civil commitment policies, currently has two facilities dedicated to the civil commitment and treatment of SVPs. New Jersey was one of the first states to enact this policy and is currently one of only 20 states with post incarceration civil commitment policies.

While sex offender policies differ from state to state, the trend in state sex offender legislation has been for enhanced confinement, supervision and monitoring of this population (Cohen & Jeglic, 2007). Since New Jersey was one of the first states to comprehensively implement many of these policies and procedures, we considered it an ideal model to study in order to assist other states in developing of the most effective and economic legislation that may serve to reduce sexual recidivism and enhance public protection.

Research Design and Method

Procedures

Data were gathered from the archival records of male sex offenders who (a) were housed at either the Adult Diagnostic Treatment Center (ADTC, the sex offender treatment facility) or any of New Jersey State prisons and (b) were released from custody between the years 1996 and 2007. The records of all offenders released from ADTC or committed to as SVPs over this period were examined, while we selected a random sample of approximately 45% of all the sex offenders who served their time in a non-treatment New Jersey State prison. Records for offenders who were housed at the ADTC are stored on site in Avenel, NJ, while records for sexual offenders housed in the general population are stored at the Central Reception and Assignment Facility (CRAF) in Trenton, NJ. In addition, archival data were gathered from all detained or committed SVPs currently housed at the Special Treatment Unit (STU) in Avenel, NJ.

Sample sizes for the case file reviews		
Site	N	Recidivism data available
Treatment – Offenders treated at ADTC prison-based sex offender treatment facility and who were released after serving sentence	824	Yes
Non-Treatment – Offenders who served their time in the general prison population and who were released after serving sentence	1,947	Yes
SVP – Offenders who were committed as Sexually Violent Predators after serving their prison sentences	375	No
TOTAL CASES	3,168[1]	

Data collected included demographic characteristics (such as age, ethnicity and county of residence), offense history (e.g., type and number of past sexual and non-sexual offenses), institutional behavior, treatment level and completion (where applicable – level 1-5), victim characteristics (e.g., age and gender), and static risk factors found to be associated with sexual offense recidivism as measured by the Static-99 and the MnSOST-R.

In addition to the archival data, recidivism data (obtained from the New Jersey State Police criminal records database) were also accessed for offenders released from the New Jersey Department of Corrections (DOC) between the years 1996 and 2007. These records include criminal records from the state of New Jersey as well as other states who share their records with the New Jersey State Police. Recidivism data were collected on the number and nature of sexual and non-sexual offenses, including sex offender registration and other probation violations. Because very few

[1] Note that the total cases presented here sum 3,146. Twenty-two cases did not have an identified associated site.

offenders committed as SVPs have been released from the STU, recidivism data were not collected for this sample. Recidivism data was collected through June 2009.

Measures

OFFENDER AND OFFENSE CHARACTERISTICS

Data collection tools were developed for the various sites to code demographic information (e.g., offender's current age, age at time of offense, ethnicity, marital status, education and employment history), criminal history, index offense characteristics, and victim information (e.g., gender, relationship to offender, age). In addition, treatment data were gathered for offenders who were housed at the ADTC, including, documented levels of treatment engagement and treatment completion.

RISK ASSESSMENT DATA

When records contained the completed risk assessment measures described below (Static-99 and MnSOST-R), those scores were directly transferred to the data collection tool.

STATIC-99

The Static-99 (Hanson & Thorton, 2000) is a measure of actuarial risk that was derived by combining the four items from the RRASOR with six items from the unpublished Structured Anchored Clinical Judgment Scale that can be scored from archival records. These six additional items are (1) number of prior sentencing dates, (2) any convictions for noncontact sexual offenses, (3) index nonsexual violent offense, (4) prior nonsexual violence, (5) any stranger victims, and (6) a lack of a prior relationship lasting at least 2 years. Total scores range from 0 to 12; these scores are then translated into risk levels ranging from 0 (lowest) to 6+ (highest). Hanson and Thorton (2000) found that the Static-99 had moderate to high accuracy in predicting both sexual and violent recidivism. Other studies have found significant correlations between scores on the Static-99 and recidivism (Barbaree et al., 2001; Nunes et al., 2002).

MNSOST-R

The Minnesota Sex Offender Screening Tool-Revised (MnSOST-R: Epperson, Kaul, Huot, Hesselton, & Alexander, 2000) is an actuarial risk assessment measure comprised of 16 items: twelve that pertain to the offender's sex offending history (historical scale) and four that pertain to the offender's institutional history (institutional scale). The historical scale items are (1) number of sex-related convictions, (2) length of sex offending history, (3) whether the offender was under supervision at the time of the sex offense, (4) the presence of sex offenses committed in a public place, (5) violence or threat of violence during the index offense, (6) multiple sexual offenses perpetrated during a sexual assault on a single victim, (7) number of different age groups victimized, (8) having a victim between the ages of 13-15 (and the perpetrator being at least five years older), (9) stranger victim, (10) adolescent antisocial behavior, (11) substance abuse in the year prior to arrest, and (12) employment history. The institutional scale items are (1) discipline history, (2) involvement in substance abuse treatment, (3) involvement in sex offender treatment, and (4) age at time of release. Total scores on the scale range from -14 to +30, and offenders are assigned to one of six risk levels based upon this score. Epperson and colleagues (2000) found that the MnSOST-R predicted

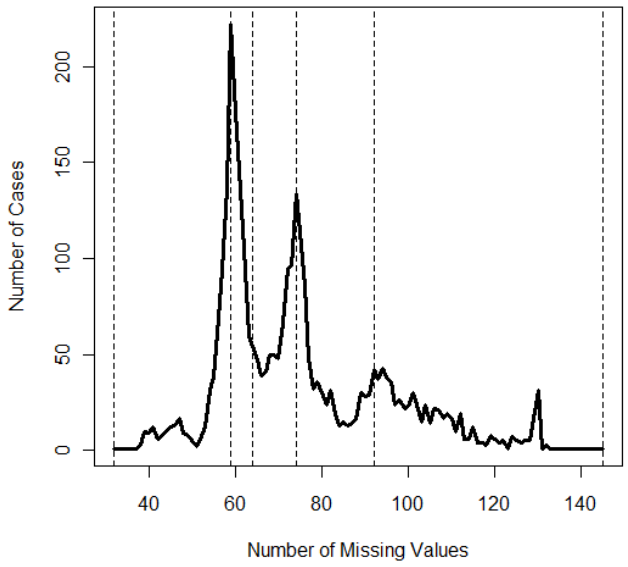
sexual offense recidivism. Another study found the MnSOST-R to be successful in predicting in general recidivism (Barbaree et al., 2001).

Missing Data Analyses

All analysis made use of the data set resulting from the data management steps described in the method section. This yielded 3,168 cases with 235,051 missing values spread across 144 variables, amounting to 51.5 percent missing data overall.
Figure 1.

Number of Cases Plotted against Number of Missing Values.

Figure 1 plots the number of cases with each number of missing values. This figure demonstrates that the missing data are not from a few aberrant cases with many missing values; in fact, very few cases are missing all of the variables. Instead, the majority of cases have between 50 and 80 missing values. . The dotted lines divide the sample into five quintiles, each containing approximately 20 percent of the cases (due to ties, the quintiles cannot discriminate precisely among 20 percent divisions). Unfortunately, it is not possible to separate expected missing data (i.e., variables that simply do not apply to some cases) from incidental missing data (i.e., variables for which the individual in question should ideally have data). This is because valid values are possible for individuals who are not expected to have valid values for most variables in the data set.



Appendix A presents the results of the missing data analysis in detail. Overall, very little relationship was found between the amount of missing data for a given offender and the values on key variables for the analysis. Overall, offenders with more missing data were somewhat less likely to be in general population, had somewhat lower MnSOST-R scores, and were somewhat older. Consequently, the results reported in the remainder of this report come with the important caveat that there may be a slight degree of bias due to missing data. At the same time, the limited analysis of missing data provided above suggests that strong bias due to missing data is not likely, at least not in relation to the variables investigated in this section. The amount and type of missing data are consistent with archival studies of this nature and most likely reflects random variation with regard to the information contained in police reports, pre-sentence investigations, treatment records, and other archival data of this type.

Results

The findings presented below focus on the four primary objectives and specifically address the composition of offenders in this sample, selection for treatment, how treatment impacts recidivism, and selection for post-sentence SVP commitment.

Unless otherwise indicated, the analyses that follow define recidivism as at least one *conviction* for a new crime. There is variability in the literature as to whether it is best to use charges or convictions as an indicator of recidivism. Some experts argue that use of the more conservative measure of re-conviction artificially deflates recidivism rates, as many charges are pled out or do not result in conviction for a variety of reasons (other than the offender being innocent of the crime). Nonetheless, for the purposes of this study we chose to use the more conservative estimate of re-conviction as an indicator of recidivism, as these are the cases for which enough evidence was gathered for a conviction.

What Are the Characteristics and Recidivism Rates of New Jersey Sex Offenders?

Objective One provides a normative description of the entire sample (N = 3,168) of offenders with regard to demographics, elements of the crime, actuarial risk scores, and rates of recidivism (for those not committed as SVPs). Because much of what is known about sex offenders, particularly with regard to the development and validation of risk measures, has been based on normative information from offenders outside of the U.S. (often Canada and the United Kingdom; see Hanson & Bussiere, 1998), this data are important.

With regard to the demographic characteristics of the entire sample, offenders averaged 39.57 (SD = 12.05) years of age at the time of evaluation. Over half of the sample had never been married (50.4%, n = 1,553), nearly one quarter of the sample (24%; n = 740) were married, and 7.5% (n=230) were living with a partner at the time of incarceration. The remaining 18.2% (n = 560) were separated, widowed, or divorced. With regard to race, most of the offenders in this sample were White (41.4%, n = 1,286) or African American (36.8%, n = 1,144), with the remainder being of Latino origin (20.1%; n = 624), Asian/Pacific Islander (0.9%, n = 27), American Indian/Alaska Native (0.1%, n = 2), or of other/unknown race or ethnicity (0.7%, n = 23).

Concerning their index offense characteristics, the overwhelming majority of offenders in this sample had female victims (83.9%; n = 2,566). Just over 13% had male victims only (13.1%; n = 400), while the remaining 3% had both male and female victims in the index offense (n = 91). With regard to their relationship to the victim, 9.2% (n = 279) of the offenders perpetrated against an immediate family member, while nearly a quarter of the sample (24.5%, n = 745) perpetrated against an extended- or step-family member. The most common victim type was acquaintance, with 44.1% (n = 1,339) of the sample perpetrating against someone already known to them (who was not a family or extended/step family member). An additional 7.5% (n = 227) committed their crimes against some combination of familial and acquaintance victims, meaning that 85.3% of the entire sample

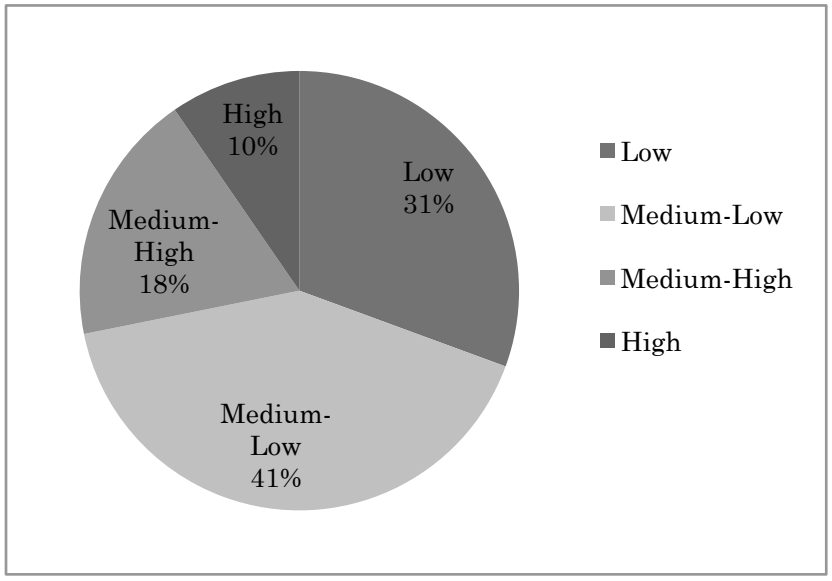
perpetrated against someone known to them (either family or acquaintance). A minority (14.7%; *n* = 445) had a stranger victim in their index offense.

Finally, with regard to the types of offenses committed, nearly three-quarters of index crimes involved molestation of a minor child (73.6%, *n* = 2,286). An additional 18.3% (*n* = 570) involved sexual assault perpetrated against an adult, while a small minority of the index sexual offenses included an act involving a child and an adult (1.1%, *n* = 35). The remaining portion (7.0%, *n* = 216) of the index crimes were of a non-contact nature. Like crimes of a contact nature, the majority of the non-contact sex crimes involved children, with some 93% of the non-contact sex crimes perpetrated against children.

In terms of criminal history, nearly 70% (68.3%; *n* = 2,123) had been charged with a prior *non*-sexual offense, while the remaining 31.8% (*n* = 986) had no known *non*-sexual offense history. A prior history of sex crimes was far less common, with under 30% (28.8%; *n* = 867) having a history of charges or convictions for prior sex crimes. With regard to their juvenile record, just over one quarter of the sample (25.5%) had any kind of juvenile offense charge or conviction, while 11.5% had a sex offense charge or conviction as a juvenile. On average offenders were nearly 30 years old at the time they committed their first sexual offense (*M* = 29.19) , though the standard deviation and range (SD = 11.09; range = 6 to 74) suggest considerable variability with regard to age at first sexual offense.

As a group, the offenders in this sample were of relatively low risk with regard to their outcomes on actuarial risk measures (see Figure 2 and Table 1 below).
Figure 2.

Static-99 Risk Categories for Sex Offenders (n=2333)[1]



Nearly ¾ of our sample were categorized as low or *medium-low* risk on the Static-99. Specifically, 30.6% (*n*=714) fell in the *low* risk category, 41.2% (*n*=962) fell in the *medium-low* risk category, 18.6% (*n*=433) fell in the *medium-high* risk category, and the remaining 9.6% (*n*=224) were categorized in the *high* risk category.

1 Note that this includes only those offenders who already had a completed Static-99 in their file.

Table 1.

Average Static-99 and Mn-SOST-R Risk Scores For Sex Offenders[1].

	n	Minimum	Maximum	*M* (SD)
MnSOST-R Dynamic	2,360	- 14	13	-0.76 (1.80)
MnSOST –R Historical	2,359	-10	25	1.59 (5.36)
MnSOST-R Total	2,492	-12	25	1.27(5.89)
Static-99	2,333	0.0	10.0	2.66 (1.94)

1 Note that this includes only those offenders who already had a completed Static-99 or MnSOST-R in their file.

As can be seen in Table 2 below, a significant percentage (44.0%) of offenders were convicted of a new offense of any variety, including probation and other violations, during the average 6.5 year follow-up period. On the other hand, a rather modest percentage (5%) of the offenders in our sample committed a new sexual offense during this same period. Parole violations for failure to register as a sex offender were fairly common (14%) during the follow-up period.

Table 2.

Reconviction Rates for Entire Sample of Sex Offenders[1]

		n	(%)[2]
Did Offender Recidivate		1,070/2,403	44.5
Type			
	Sexual	110/2,403	4.6
	Violent	132 /2,403	5.5
	Non-Violent	369/2,403	16.7-
	Drug	247/2,403	11.1-
	Parole Violation Failure to Register	310/2,403	14.0
	Parole Violation General	269/2,403	12.1
	Other	34/2,403	1.6

[1] Those committed as SVPs are not included in this analysis
[2]n(%) refers to the number and percent of "Yes" responses

OBJECTIVE ONE: WHAT ARE THE CHARACTERISTICS AND RECIDIVISM RATES OF NEW JERSEY SEX OFFENDERS?

DISCUSSION

There are currently very few large-scale analysesof sex offender samples among U.S. states. Several state department of corrections have posted characteristics of their sex offenders samples (ex. Ohio, Arizona, Colorado), but these reports are often general census data or representative of only a small subsample of the sex offender population. With regard to the overall findings from this study, molestation of a minor was the most common type of index sexual offense (74%). Even the non-contact index sexual offenses predominantly (93%) involved children. Additionally, most index offenses involved females (84%). Although the public perception of sex offenders may be just that of a highly dangerous stranger, relatively few (15%) of the offenders in this sample were strangers to their victims, and the sample were, on the whole, a relatively low-risk group. Seventy percent (70%) of the sample were considered low or medium-low risk for reoffense on a widely used actuarial risk assessment tool (the Static-99). Over 70% had no prior sex offense on record, and recidivism was an infrequent event, with only 5% of the sample having been convicted of a new sexual offense within the follow-up period. These findings are generally consistent with that reported in the literature, particularly that of U.S. based research. For example, in one of the largest U.S. based studies of sex offenders, the Bureau of Justice Statistics (2003) reported that 28.5% of sex offenders had a prior sex crime arrest, similar to the 28% found in our sample of offenders having a prior sex offense on record. Likewise, the Bureau of Justice Statistics found a minority (15%) of their overall sample to have victimized a stranger, the same rate observed in this study (15%). Given that much of the normative data, particularly that providing the bases for actuarial risk assessment measures, have been based on research outside of the U.S., this type of data are especially important.

The ethnic composition of sex offenders in this sample was somewhat unique. Approximately 37% of the sample was identified as African American, and 20% were identified as Hispanic. While this proportion of ethnic minority sex offenders is still lower than that found in the overall prison population in New Jersey (in 2001, 63% of offenders in NJ were Black, and 18% were Hispanic), it still comprises over half of the sex offender population. Moreover, the Bureau of Justice Statistics (2003) found 31.5% of their entire sex offender sample to be African American race. Additionally, of the entire BJS sample, 19.9% were of Hispanic origin. To date, with the exception of aboriginal populations (Bonta, 1989; Bonta, Lipinski & Martin, 1992), very little attention has been given to the relationship of ethnicity to sexual offending behavior. While it has been determined that aboriginal populations may have different treatment needs (as indicated by the responsivity principle), we do not know if the same principles apply to minority sex offenders in the Unites States. This is potentially important consideration given the growing minority sex offender population reflected in our sample of sex offenders. Additionally, it is unclear how effective actuarial scales are in predicting recidivism among African American and Hispanic sex offenders, as many of the existing actuarial measures (including the Static-99) were developed with normative samples that did not strongly represent these groups.

The most notable differences between our findings and those of some other studies involve the rate of recidivism. The overall sexual recidivism rate (based upon re-conviction) for this sample

was 5%. Though this rate is considerably lower than the 13-14% rate of sexual recidivism reported in meta-analytic research (see Hanson & Bussiere, 1998 and Hanson & Morton-Bourgon, 1994), it is comparable to the 5.3% rate of sexual recidivism (for new arrests) reported in other large U.S. based samples (Bureau of Justice Statistics, 2003). Still, given that re-conviction provides a much more conservative estimate than re-arrest, this rate of sexual recidivism is much lower than might be expected. One possible explanation for this finding is the general declining rate of sex crimes both in New Jersey (Zgoba and Bachar, 2009) and generally (Jones & Finkelhor, 2003). Another possible factor is the institution of post-sentence civil commitment in New Jersey in 1999, as it is conceivable that many of those offenders who would be committing new sex crimes are now indefinitely committed. One could also argue that Megan's Law legislation may serve as a deterrent, but there is little support for this argument. Zgoba and Bachar (2009), in a comprehensive analysis of Megan's Law in New Jersey, did not find that notification statutes decreased either sexual or general recidivism.

CONCLUSIONS

In our sample of 3,168 sex offenders, we found that many of the offender and offense characteristics of this sample mirror those described in previous research, including the types of crime committed, victim characteristics, offender criminal history, and offender risk for general (or any) recidivism. We did, however, find that our sample had lower base rates of sexual recidivism (5%) and was comprised of a higher percentage of minority sex offenders than described elsewhere. Although the stranger-danger notion of a highly recidivistic sexual offender abounds, only a small minority of sex offenders target persons unknown to them. Instead, the majority perpetrate their offenses against family members or persons with whom they are already acquainted. Additionally, the majority of these offenders do not have a prior sex crime history, and only a small percentage were detected to have a committed a new sexual offense. Given this normative data on sex offenders, tertiary prevention policy measures (such as Megan's Laws, residence restrictions, and electronic monitoring) that are targeted toward highly recidivistic predatory "stranger danger" type of offenders may focus efforts on preventing a minority of overall sex crime. Further, the development of such legislation may give the public the impression that sexual recidivism may be more rampanant than suugested by the research. Some of these misconceptions may be allieviated by primay prevention efforts. While some primary preventions programs already exist in New Jersey such as the Sexual Violence Primary Prevention Program instituted by the Office of the Prevention of Violence Against Women, Policymakers should consider additional primary prevention measures or other campaigns that direct efforts toward where sexual violence most likely occurs: in families or among persons already acquainted with the victim.

Which Sex Offenders Receive Treatment?

Objective Two addresses the selection for sex offender treatment within the New Jersey Department of Corrections by first comparing how a group offenders who served their time in a prison-based sex offender treatment facility (ADTC) differs from a group of offenders who were not selected for treatment and served their time in prison as usual. Following these descriptive analyses, we then use classification tree and logistic regression analyses to examine which variables have the greatest impact on selection decisions.

DESCRIPTIVE ANALYSES

Offenders selected for treatment tended to be, on average, over six years older at the time of release than those not selected for treatment. In addition to being older, those who were selected for treatment at ADTC were less likely to be African Americn or Hispanic and less likely to have never have been married than those who were not selected for treatment. See Table 3.

Table 3.

Demographic Comparison of Treated and Non-Treated Sex Offenders

		Treatment	Non-Treatment	t	X^2	df	*d*	*V*
		M (SD)	*M (SD)*					
Age[1]		43.65 (12.3)	37.31 (11.5)	-12.33**		2,621	0.53	
		n (%)	*n* (%)					
Marital Status[2]						3		0.20
	Never Married	281 (35.1)	1,054 (55.2)		105.01**			
	Married	294 (36.7)	403 (21.1)					
	Living with Partner	62 (77)	139 (7.3)					
	Separated/Widowed/ Divorced	164 (20.5)	315 (16.5)					
Race						3		
	Black	188 (23)	804 (42)		148.84**			0.23
	White	465 (58)	639 (33)					
	Hispanic origin	139 (17)	449 (23)					
	Other	12 (1)	37 (2)					

[1]Age at time of release

[2] Marital status at time of incarceration

**$p < 0.05$

Non-treated offenders tended to be significantly younger than treated offenders at both age of first sexual offense and age of first nonsexual offense. Likewise, a significantly greater proportion of the non-treated offenders (25%) were convicted of an offense as a juvenile as compared to the treated offenders (16.5%). Treated offenders did, however, have significantly more victims on average (M = 1.94) than did non-treated offenders (M = 1.5). See Table 4.

Table 4.

Criminal History of Treated and Non-Treated Sex Offenders

	Treatment	Non-Treatment					
	M (SD)	*M* (SD)	*t*	X^2	df	*d*	V
Age First Nonsexual Offense	24.5 (9.4)	21.3 (7.2)	-6.31**		1,749	0.38	
Age First Sexual Offense	30.5 (11.3)	28.7 (9.9)	-3.10**		2,420	0.17	
Number Previous Victims	1.94 (2.3)	1.5 (2.8)	-4.6**		610	0.17	
	n (%)	*n* (%)					
Psychiatric History	258 (32.7)	519 (28.4)		8.24	2		0.05
Juvenile Conviction	110 (16.5)	429 (24.9)		33.93**	2		0.12

[1] indicates "yes" response
**$p < 0.05$

Moreover, those selected for treatment had significantly younger victims than those not selected for treatment and were more likely to have child (as opposed to adult) victims in the index offense. Additionally, the index offense victims of those selected for treatment were more likely to be immediate or extended family members (50.2%) than those not selected for treatment (28.7%), of whom the majority of their victims tended to be acquaintances (53.5%). Those selected for treatment also tended to have disproportionately more male victims than those not selected for treatment. See Table 5 (next page).

Table 5.
Comparison of Index Crime Characteristics for Treated and Non-Treated Sex Offenders

		Treatment	Non-Treatment					
		M (*SD*)	*M* (*SD*)	*t*	X^2	df	*d*	V
Age of Victim		10.4 (5.9)	14.1 (9.6)	11.86**		2,487	0.46	
		n (%)	*n* (%)					
Type of Sex Crime								
	Adult Sexual Assault	44 (5.5)	411 (21.5)		122.83**	3		0.21
	Child Molestation	713 (88.7)	1,328 (69.3)					
	Both Adult and Child	7 (1.1)	22 (1.1)					
	Non-Contact Sex Crime	40 (8.1)	155 (8.1)					
Relationship to Victim								
	Immediate Family	130 (16.3)	127 (6.8)		294.47**	4		0.31
	Extended Family	270 (33.9)	411 (21.9)					
	Acquaintance	194 (24.4)	1,006 (53.5)					
	Stranger	91 (11.4)	232 (12.3)					
	Other	111 (13.9)	105 (5.6)					
Victim Gender								0.19
	Male	152 (19.2)	159 (8.4)		98.22**	2		
	Female	598 (75.6)	1,699 (90.1)					
	Male & Female	41 (5.2)	27 (1.4)					
Threatened Victim[1]		21 (19.4)	245 (15.8)		5.17	2		0.06
Weapon Used[1]		52 (6.5)	130 (7.1)		5.71	2		0.05

[1] indicates "yes" response
**$p < 0.05$

With regard to risk scores, those selected for treatment had lower scores (on the Static-99 and the MnSOST-R) than those not selected for treatment, although both groups scored within the moderate-low risk range overall. Notably, treated offenders had lower scores on the MnSOST-R Dynamic subscale, a measure of those risk factors thought to be most responsive to treatment interventions, than did untreated offenders. See Table 6.

Table 6

Comparison of Treated and Non-Treated Sex Offenders on Actuarial Risk Scores

	Treatment	Non-Treatment	*t*	df	*d*
	m (*SD*)	*m* (*SD*)			
Static-99 Total	2.08 (1.93)	2.57 (1.61)	5.64**	2,137	0.28
MnSOST-R Total	-.79 (4.7)	.55 (5.17)	5.67**	2177	0.27
MnSOST-R Dynamic	-2.03 (1.64)	-.26 (1.53)	24.01**	2,150	1.11
MnSOST-R Historical	1.15 (4.70)	.74 (4.84)	-1.78	2,148	0.09

** $p < 0.01$

Although differences in Static-99 scores between the treated and non-treated groups were statistically significant, the *clinical* difference between average scores of 2.08 (treatment) and 2.57 (non-treatment) may be less meaningful. The score distributions shown in Figure 3, nonetheless, clearly demonstrate that those selected for treatment had lower risk scores.

Figure 3.

Distribution of Static-99 Scores for Treated and Non-Treated Samples

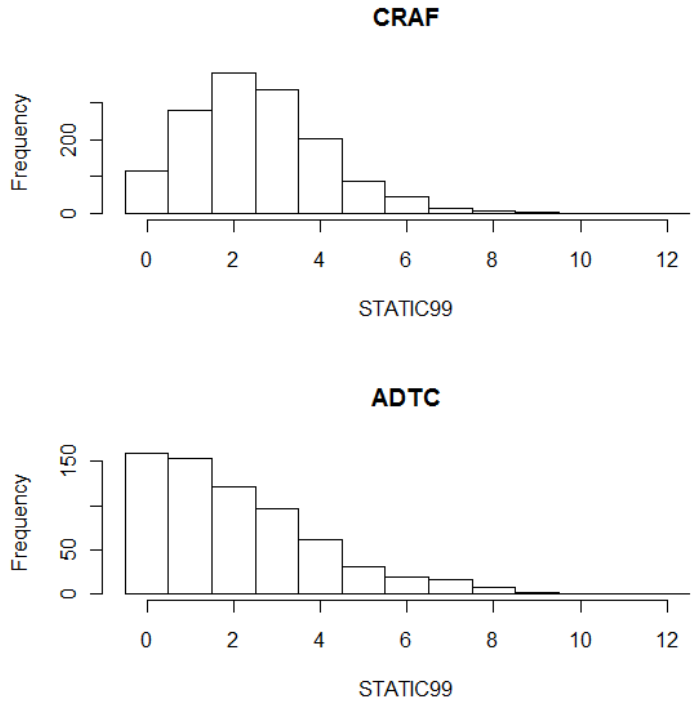


Figure 3 shows the frequency of Static-99 total scores by placement facility. From the figure, it is clear that the distributions of risk scores for treated and non-treated offenders are qualitatively different; offenders in the treatment sample have lower risk scores than those in the non-treated sample.

The mode (or score that occurs most frequently) for the treatment group is 0, but the mode for the non-treatment group is 2.

With regards to general recidivism rates, some important differences were observed between the treated and non-treated groups. While a slight majority (52%) of the non-treated offenders were convicted of any new type of offense, significantly fewer (25%) of treated offenders were convicted of any new offense during the follow-up period.

Overall, rates of *sexual* recidivism were rather low, regardless of treatment status. Those sex offenders in the treated group had a slightly higher (6.6%) rate of sexual recidivism than those sex offenders in the untreated group (4.6%). See Table 7.

Table 7.
Recidivism Rates of Treated and Non-Treated Sex Offenders.

	Treatment	Non-Treatment	X^2	*v*
	n[1] (%)	*n*[1] (%)		
Did Offender Recidivate	170 (24.9)	784 (51.9)	140.8**	0.25
Type				
Sexual	40 (6.6)	62 (4.6)	3.6	0.04
Violent	15 (2.5)	100 (7.5)	19.0**	0.09
Non-Violent	37 (6.1)	283 (21.0)	68.9**	0.17
Drug	20 (3.3)	190 (14.1)	51.8**	0.15
Parole Violation Failure to Register	33 (5.4)	235 (17.5)	51.4**	0.15
Parole Violation General	29 (4.7)	207 (15.4)	47.0**	0.15
Other	2 (.03)	28 (2.2)	11.3**	0.07

** $p < 0.01$

[1] *n* (%) refers to the number and percent of "Yes" responses

Objective Two also involves predicting selection for specialized sex offender treatment services. The primary analysis examines which variables predict treatment placement, while additional analyses consider specifically how treatment selection relates to MnSOST-R items.

Predicting Treatment from Offender Characteristics

The analysis for this section adopts a two-fold strategy. Classification trees and logistic regression have contrasting strengths and weaknesses for predicting membership. Classification trees make fewer assumptions about the data and incorporate missing data into the analysis; on the other hand, classification trees lack a firm statistical basis in maximizing the likelihood of the data given the model. Conversely, logistic regression makes more assumptions and omits missing data but has a firmer basis in statistical estimation. Capitalizing on this relationship, we began with a classification tree analysis to gain insight into the basic relationships in the data. We then used these results to guide the logistic regression. As will be seen, this strategy identified interactions using the MnSOST-R item data, reported in the next section, but not using the predictors considered in this section.

Classification Tree Analyses

Using the entire sample (N = 3,168), we attempted to predict selection for sex offender treatment at the ADTC using a number of variables that were deemed relevant in our review of the literature. The following 23 variables were selected prior to data analysis as plausible predictors of treatment placement: offender age at first non-sex offense, offender age at first sex offense, age of the first victim, weapon use during the index offense, use of threats during index offense, victim gender, relationship to victim(including separate variable categories for immediate family, extended family, step family, acquaintance, stranger, and other relationship), history of prior sexual offenses, history of prior non-sex offenses, total previous contact offenses, history of psychiatric problems, history of violent (non-sexual) offenses, juvenile sex offense history, juvenile offense (non-sexual) history, offender marital status, MnSOST-R[2,3] dynamic subscore, MnSOST-R historical subscore, and Static-99 total score.

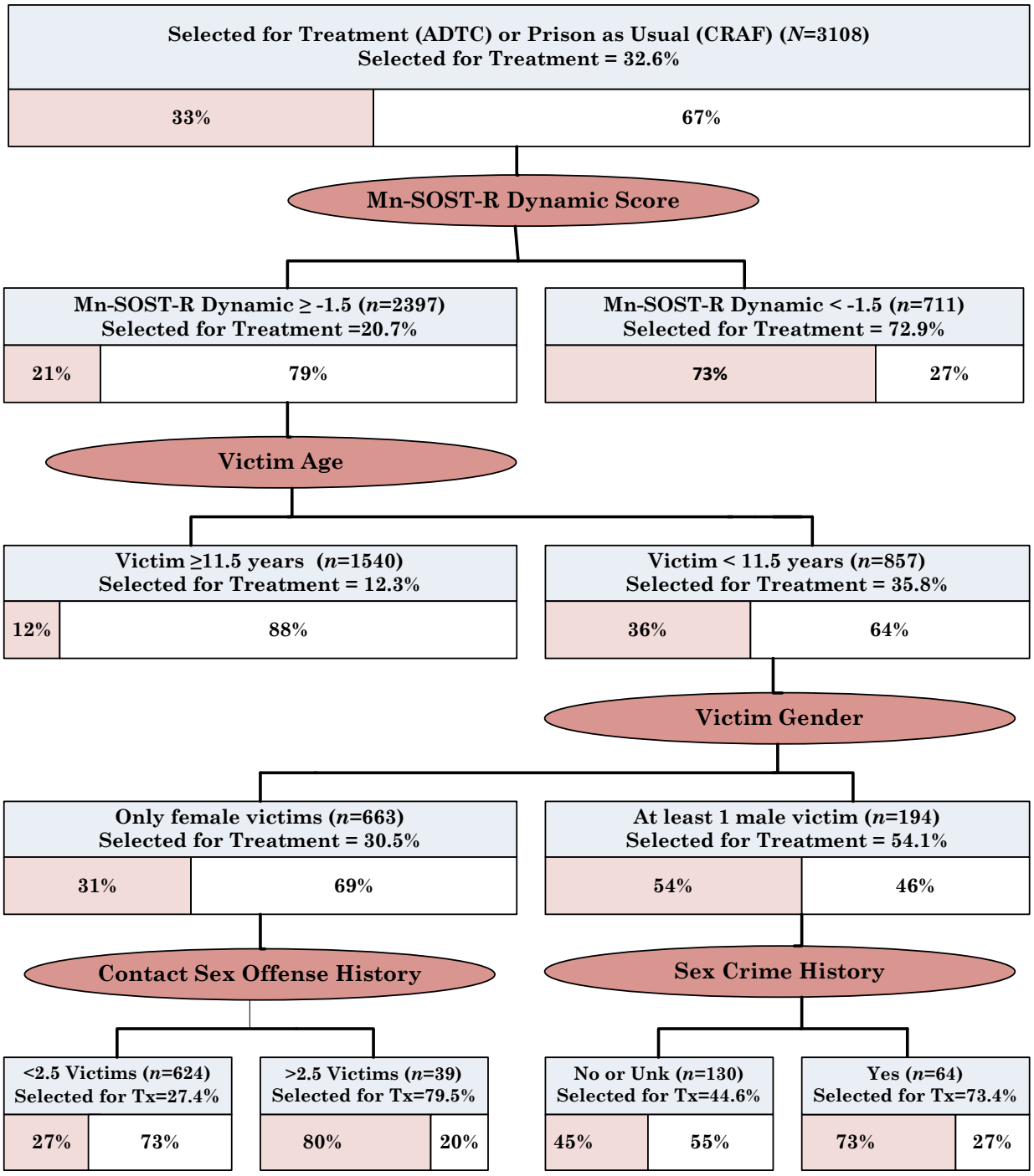
The classification tree analysis (Breiman et al., 1984) was conducted using the R package rpart (Venables & Ripley, 2002). Sixty cases were omitted due to missing values, leaving 3,108 cases for analysis, 32.6 percent of whom received treatment. The classification tree analysis made use of five variables. The analysis indicated that the MnSOST-R dynamic subscore servest as the most robust factor, with those having higher scores being more likely to be selected for treatment. Victim age appears as a level-two modifying factor, with those having victims younger than 11.5 years of age more likely to be selected for treatment than those having victims older than 11.5 years of age.

[2] Note that the MnSOST-R total score could not add to the prediction and thus could not be included in the analysis because it equals the sum of the two subscores.

[3] A minor caveat is necessary with respect to the interpretation of these results. We believe that the MN-SOST-R scores were completed at entry into the criminal justice system before placement into ADTC or CRAF. However, we cannot categorically rule out the possibility that some offender's MN-SOST-R scores reflect their completion of the ADTC treatment serving as the dependent variable in the above analyses. If any such cases exist, we anticipate that they are too few to fully account for the association between these two variables in the present data.

At the next level was victim gender. Those with only female victims split by number of previous contact offenses, while those with at least one male victim instead split by prior history of sex crimes. The classification tree is described in greater detail in Figure 4.

Figure 4.
Selection for Treatment Examined via Classification Tree Analysis.



Logistic Regression Analyses

On the basis of initial analyses, several predictors were excluded because of their lack of relationship to treatment placemen.t. Excluded factors included age at first non-sex offense, total previous contact sexual offenses, use of weapon during index offense, use of threats during index offense, violent offense history, juvenile sex offense history, juvenile offense history, and marital status. The variables flagging different relationships with victims (e.g., immediate family, acquaintance, stranger) all received positive regression weights of roughly equal size. Consequently, as a next step of model simplification, these variables were collapsed into a simple count of how many different relationships were identified for a given offender. Next, in order to put the regression weights on a common metric that could be compared across variables, all variables were rescaled to range from 0 to 1 so that the regression weight represents the effect of an increase from the minimum value to the maximum value for each variable (Cohen et al., 1999). Finally, two steps were taken to incorporate cases with missing data into the analysis. First, missing values in the predictor variables were replaced with the mean value for the non-missing values of the same variable[4.] Second, new variables were added to the regression indicating degree of missing data, which removes bias due to missing cases because the regression estimates are conditional on the other predictors (Cohen, Cohen, West & Aiken, 2003). This resulted in an effective sample size of 3,127 cases.

The resulting logistic regression was run with three subsets of the remaining variables: (1) predicting treatment selection from the MnSOST-R dynamic subscore only, (2) predicting treatment selection from the MnSOST-R Dynamic subscore and the age of the index offense victim, and (3) predicting treatment selection from all of the remaining variables.

Negative weights indicate that higher values predict a lower probability of ADTC treatment, whereas positive weights indicate that higher values predict higher probabilities of treatment. The MnSOST-R dynamic subscale score stood out with the largest regression weight (in absolute value), estimated fairly precisely. The next largest weight is for the age of the first victim, with a somewhat larger confidence interval. The only other weight of notable size is for the variable indicating unknown history of prior sexual offenses, but the estimated is questionable because of a lack of variability in this variable. Overall, as with the classification tree, MnSOST-R dynamic scores stand out as far and above the best predictor. The logistic regression revealed only one other substantial predictor: age of first victim. The rest of the predictors contributed very little, although most of the confidence intervals do not include zero. The results for this analysis are tabled in more detail below (see Table 8, next page).

[4] This does not affect regression estimates because the regression line pivots on the mean.

Table 8.

Summary of Logistic Regression Predicting Selection for Sex Offender Treatment

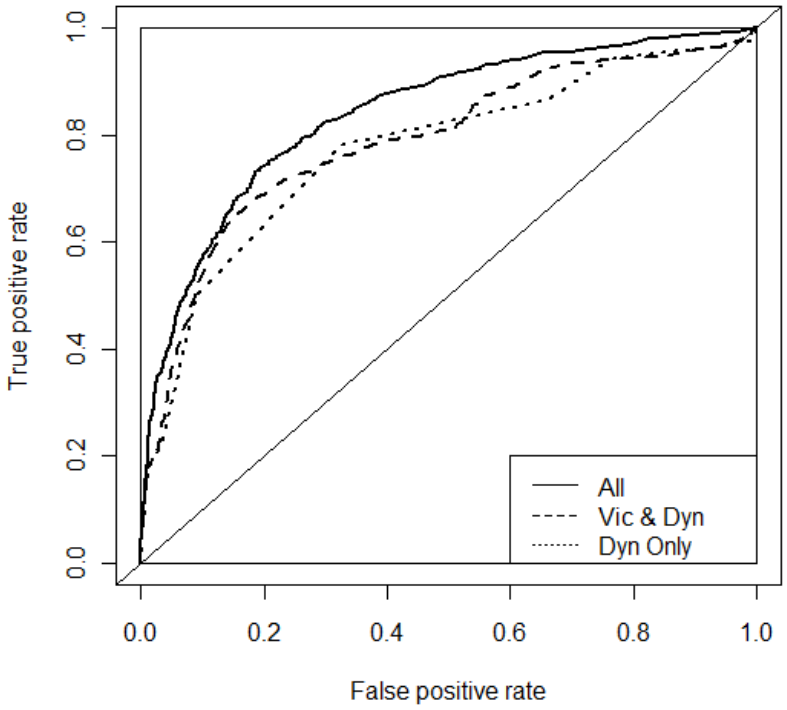
	Weight	Standard Error	Z score	*p* value
Predictor				
Intercept	2.76	0.27	10.13	< 0.001
Relationship to Victim	1.79	0.31	5.75	< 0.001
Age at First Sex Offense	-0.96	0.03	-3.13	< 0.002
Victim Age	-4.21	0.70	-6.01	< 0.001
Presence of Female Victims	-0.88	0.14	-6.41	< 0.001
Victims of Both genders	0.31	0.30	1.05	0.29
History of Prior Sex Offenses	1.01	0.12	8.24	< 0.001
History of Prior Non-Sexual offenses	-0.84	0.10	-8.10	< 0.001
Psychiatric History	0.41	0.10	4.06	< 0.001
MnSOST-R Dynamic Score	-7.54	0.45	-16.80	< 0.001
MnSOST-R Historical Score	0.88	0.42	2.06	0.04
Static-99 Total Score	-0.95	0.38	-2.52	0.01

Table note: The variable names reflect the rescaling of the variables between 0 and 1 (POMP) and the substitution of means for missing values (*M*).

To better gain a practical understanding of the effectiveness of prediction, we used Receiver Operating Characteristic (ROC) curves to summarize the logistic regression models (R package ROCR; Sing et al., 2005). Figure 5 shows the ROC curves for all three models[5].

Figure 5

ROC Curves Predicting Selection for Sex Offender Treatment.



The horizontal axis represents the proportion of cases wrongly predicted to receive treatment (the false positive rate). The vertical axis represents the proportion of cases correctly predicted to receive treatment (the true positive rate). The dotted line shows the ROC curve for the MnSOST-R Dynamic score only. The dashed line indicates that adding in the age of the first victim does not offer any practical improvement in prediction. The remaining variables collectively nudge the ROC curve up slightly but not much further above the dynamic scores alone. This is consistent with the results of the classification tree analysis.

The area under the curve (AUC) provides an overall summary of prediction, with values closer to 1.0 indicating better prediction. Table 9 summarizes this performance measure along with some inferential statistics for the three models. The AUC equals 77.3% and 78.9% for the first two models and increases to 83.9% with the inclusion of all of the predictors. Each increase in predictors

[5] ROC curves are especially useful for summarizing prediction of a dichotomous variable from a continuous variable because they do not rely on setting any cut score for prediction. The curve summarizes the relationship across the range of possible cut scores. The solid line running up the diagonal corresponds to the baseline of random guessing. Stronger predictions are indicated by the extent that the curve is above this diagonal.

attains statistical significance, but this is not surprising given the large sample size and the caveats regarding inferential statistics described at the start of this section.

Table 9

Logistic Regression Using MnSOST-R Dynamic Subscore and Victim Age to Predict Treatment Selection.

	AUC (%)	Resid.	Df Resid.	Dev	Df Deviance	P(>|Chi|)
Model						
Dynamic	77.3	3,124	3,450.3			
Dynamic & Age	78.9	3,122	3,313.8	2	136.48	< 0.001***
All Predictors	83.9	3,102	2,870.2	20	443.59	< 0.001***

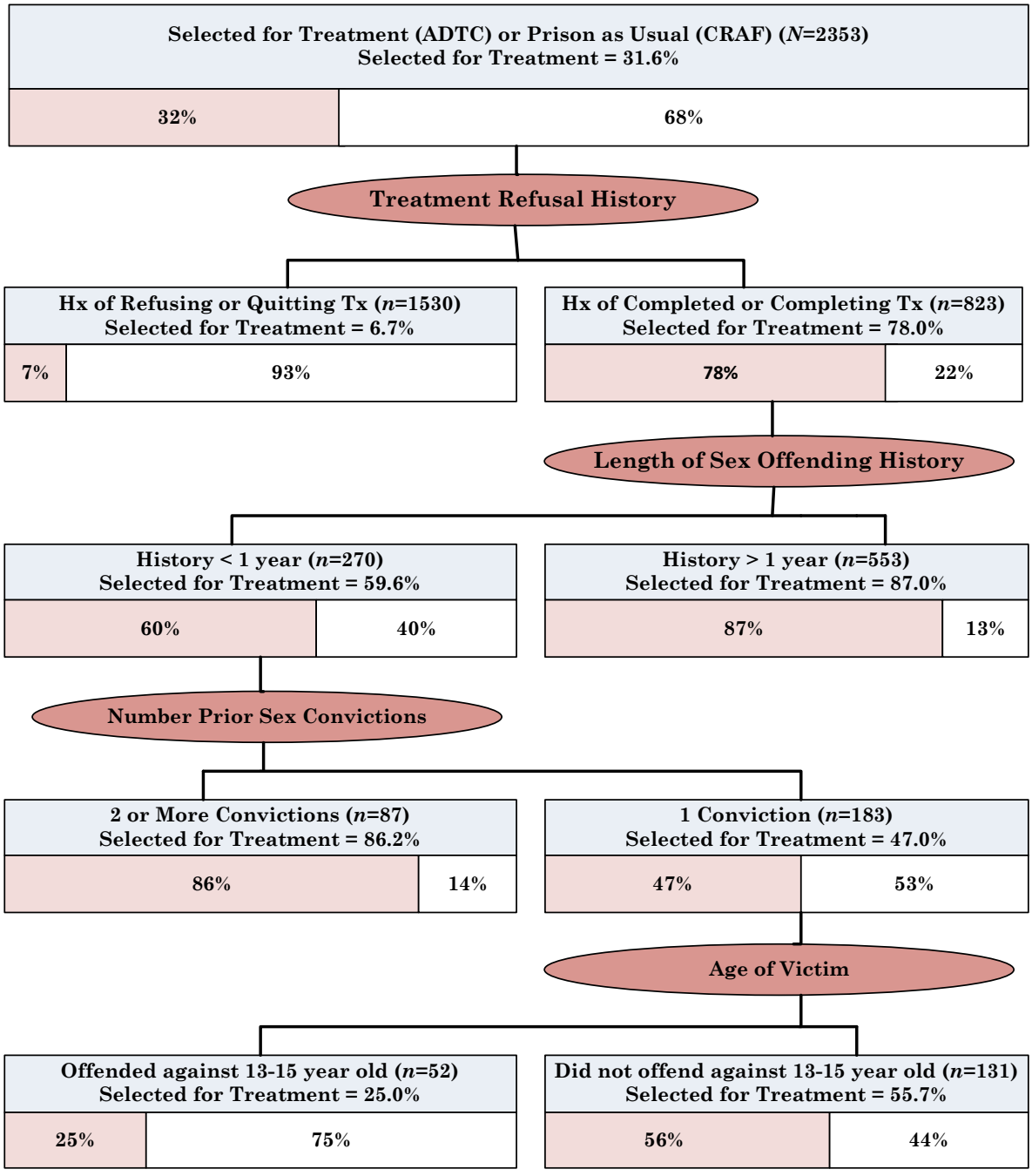
Predicting Treatment Selection from MnSOST-R Scores

Because the MnSOST-R dynamic scale emerged as the dominant predictor of placement, the next subsection explores the relationship between treatment and MnSOST-R scores in further detail.

A similar approach was taken to exploring the relationship between treatment and MnSOST-R items. All 16 items were considered, not just the dynamic items. The classification tree analysis included 2,353 cases (815 were omitted due to missing values), with only a minority (31.6%) having received treatment at the ADTC. The results are summarized in Figure 6. The breaks in the tree correspond to MnSOST-R items 15, 2, 1 and 8, respectively. The initial branching point involves offenders who refused, quit, or failed to pursue treatment while incarcerated at some point in their history, which could be understood as addressing the statutory criteria of treatment amenability. The next two branching points involve the offender's history of sex offenses (length of sex offending history and number of sex-related convictions), which could be understood in terms of the statutory criteria of repetitiveness. The final branching point involves victim age. This factor may be related to compulsiveness, but the connection is not as direct.

Figure 6.

Classification Tree Analyses of Selection for Treatment.



This sheds light on the previous analysis because the only item from the MnSOST-R dynamic subscale that seems to contribute to prediction is past completion of treatment. The remaining three

items all come from the historical scale (sexual offending history for more than 1 year; two or more convictions, did not offend again victims 13-15 years old).

OBJECTIVE TWO: WHICH SEX OFFENDERS RECEIVE TREATMENT?

DISCUSSION

In New Jersey, sex offenders may be placed in either the treatment facility (ADTC) or the general population upon incarceration. The decision to place an offender in the ADTC is based upon whether the offender is determined to be *repetitive and compulsive* and *amenable to treatment*. It is unclear, however, what specific factors are being used to assess whether offenders meet these criteria and would likely benefit from treatment services. Using the population of the ADTC and a sample of the general (i.e., non-treatment) population that was released from custody between 1996 and 2007, we found that overall the best predictor of placement in the ADTC was the MnSOST-R dynamic score, with victim age being the only other substantial predictor. When specifically examining which items on the MnSOST-R were related to placement at the ADTC, we found that those who *did not* have a history of treatment refusal were significantly more likely to be placed at the ADTC. In other words, those offenders who had already demonstrated some treatment amenability or readiness were among those most likely to be selected for treatment. That said, offenders with a history of multiple sex crimes and perceived as not being amenable to treatment might be less apt to be selected into treatment. Additionally, those offenders who had more than one victim were also more likely to be selected for treatment. It should be noted that both Static-99 and MnSOST-R total risk scores were actually higher for those offenders *not* selected for treatment at the ADTC.

These findings suggest that the main factor being considered when determining placement at the ADTC is whether the offender has refused to participate in treatment now or in the past. It appears that being perceived as *amenable to treatment* determines a sex offender's placement in a treatment facility moreso than their risk level. Jones, Pelissier, and Klein-Saffran (2006) found that offenders who volunteered for treatment reported higher motivation to change, were more likely to be recommended to treatment by a judge, were more likely to have participated in treatment in the past, and had lower rates of substance abuse the year prior to incarceration. These findings suggest that those offenders who participate in treatment may be those who are most motivated to change and not necessarily those offenders who are at highest risk to recidivate. Such a trend does not appear to fit within Bonta and Hoge's (1990) risk-needs-responsivity principle of providing treatment service to those at greatest risk (or need).

While evidence suggests that those who participate in treatment are less likely to recidivate than those who do not receive treatment or those who refuse treatment (Alexander, 1999; Gallagher, Wilson, Hirshfield, Coggeshall & MacKenzie, 1999; Hall, 1999; Hanson et al., 2002), not all sex offenders are offered the opportunity to participate in treatment. Further, not all sex offenders who participate in treatment may do so proactively and voluntarily; instead, some offenders who do participate in treatment may do so out of mandate or coercion. Seager, Jellicoe, & Dhaliwal (2004) found that offenders who refused or dropped out of treatment were six times more likely to reoffend sexually and violently than those offenders who completed treatment. Further review of the sample, however, revealed that a higher proportion of the treatment non-completers had Static-99 scores in the high-risk category.

Engaging unwilling partiicpants is clinically challenging. However, several studies have found that a brief motivational intervention (see Miller & Rollnick, 2002), such as those currently

used with substance abusers, can increase an offender's willingness and motivation to participate in treatment (Theodosi & McMurran, 2006). While there is still a dearth of research pertaining to the effectiveness of such techniques for use with sex offenders, such pretreatment interventions have promise in targeting those offenders who refuse treatment or who have low motivation to change.

Treatment refusal was found to be the strongest overall predictor of receiving or not receiving treatment. Having a history of more than one sexual conviction was also an important predictor of treatment selection. It is well established that the best predictor of future behavior is past behavior (Gibbons et al., 1998; Ouellette & Wood, 1998; Webb & Sheeran, 2006;Wood et al., 2002). It would, therefore, stand to reason both empirically and intuitively that sex offenders with more extensive sex crime histories would be at higher risk to recidivate. A more extensive sex crime history would certainly fall under the *repetitive* language of the statutory criteria, and those selected for placement at the ADTC were more likely to have engaged in sexual offending more than once.

The final significant predictor of treatment placement was having younger (i.e., child) victims. A meta-analysis by Quinsey, Lalumiere, Rice and Harris (1995) found that child molesters have higher sexual offending rates than other sexual offenders. Harris and Hanson (2004), however, found fairly similar recidivism rates among rapists and a combined group of child molesters. In light of their findings, Harris and Hanson suggest that focusing on subtypes of child molesters may provide more clarity into risk, as those child molesters who had boy victims were at highest risk of recidivism. In all, it is possible that certain subgroups of sexual offenders (e.g., based on a combination of victim age and gender) should be considered more carefully for treatment.

CONCLUSIONS

Refusal to participate in treatment was most predictive of selection for treatment services in this study, though having a history of sex crimes and having younger victims were also highly relevant to selection for treatment services. While these factors appear to be consistent with the New Jersey criteria of "repetitive" and "amenable to treatment" for placement at the ADTC, they do not directly address the offender's risk for future recidivism. Further, the research conducted to date suggests that offenders who refuse treatment are often those at highest risk and thus are among those most in need of treatment services. Overall, while New Jersey is correctly selecting offenders based upon their selection criteria, these offenders are not the highest risk to recidivate and thus not the most in need of treatment services.

Are Treated Sex Offenders Less Likely to Recidivate?

Objective Three focuses on the relationship between recidivism and treatment. We begin with a descriptive analysis predicting recidivism from treatment, which is followed by an analysis aimed at supporting tentative causal inference regarding the effect of treatment on recidivism.

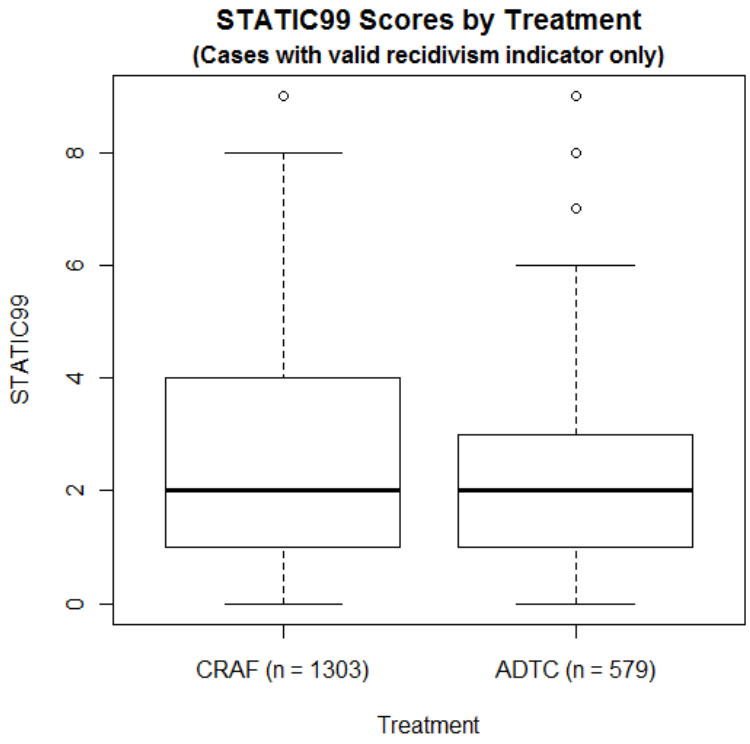
Recidivism data were collected between June and September 2009. The recidivism indicator reflects recidivism prior to this period (a time frame which is slightly different for different offenders). Offenders with a value of no recidivism did not recidivate during this period; however, it is possible that some offenders may have recidivated after the period (or will recidivate at a later time).

General Recidivism Rates of Treated and Non-Treated Sex Offenders

The remaining analyses includes only those sex offenders from our sample who were not committed as SVPs (n = 2,756), as those committed as SVPs were not released into the community and thus not given the potential opportunity to commit additional offenses. Of the 2,403 who also have recidivism data, 1,054 (43.8%) recidivated by being convicted of some sort of offense following release; the remainingand 1,349 (56.1%) had no follow-up criminal convictions and are thus considered non-recidivists. Among offenders who had been housed in the general prison population, 877 (51.7%) recidivated, and 819 (48.3%) did not. Among offenders who had received specialized sex offender treatment (ADTC), 177 (25.0%) recidivated, and 530 (75.0%) did not. The drastic differences in recidivism rates between these groups is of statistical, as well as practical, significance (and we can reject the independence model, X^2 [1, N = 2,403] = 144.19, $p < 0.001$).

Figure 7.

Static-99 Scores by Treatment



The next set of analyses use Static-99 scores to control for risk as a confound with treatment. Figure 7 shows the distribution of Static-99 scores for the groups that did and did not receive treatment, omitting offenders with no recidivism data. The lower portions of the distributions are very similar, with the non-treatment group displaying a heavier tail in the direction of higher scores (high scores indicate higher risk).

We next matched the 579 treated cases to the 579 optimal non-treated matches based on Static-99 total score (using the optmatch package in R; Hansen, 2004). This produced nearly identical Static-99 distributions, although the treated group had more scores of 0 (24.5% compared to 17.4% in the non-treated group) and fewer scores of 1 (23.3% compared to 30.4% in the non-treated group). The remaining values were matched exactly at 82 (18.1%), 48 (14.2%), 26 (8.3%), 18 (4.5%), 14 (3.1%) , 7 (1.2%), and 2 (0.3%) in both groups. As a result of matching, the proportions changed slightly, but the overall picture remained similar. In the non-treated group, 296 (51.1%) recidivated, and 283 (48.9%) did not. In the treated group, 129 recidivated (22.3%) and 450 did not (77.7%).

To address possible biases in the selection of offenders into treatment impacting later recidivism rates of the treated and untreated groups, we returned to the model developed under Objective Two to predict treatment from four MnSOST-R items and their interactions and used this model to create propensity scores. With this subset of offenders, the model attained an AUC of 93.4%. We initially matched on the basis of the propensity scores, but matching did not produce comparable distributions of propensity scores across treatment groups due to the vast differences in the distributions prior to matching (shown below). We therefore stratified by propensity scores and computed a weighted average across propensity score strata (the first and last strata were omitted because one group had low sample size). The results were again similar but provide more confidence in a causal interpretation. The overall result was recidivism rate of 22.0% among the treated offenders and a recidivism rate of 49.1% among the non-treated offenders.

The analysis began with 1,158 offenders (579 from each treatment group) matched on propensity scores. We then divided the data set into seven strata based on septiles, but these came out unequal in size due to propensity score ties. Omitting the first and last strata reduced the sample to 949. The strata were defined as follows: 1 = (-4.05, -2.57], 2 = (-2.57, -1.33], 3 = (-1.33, -1.1], 4 = (-1.1, 0.36], 5 = (0.36, 1.94], 6 = (1.94, 2.68], 7 = (2.68, 3.01].

One caveat when having limited overlap between the distributions of propensity scores in each condition is that it can lead to omitting a large proportion of the sample (Yue, 2007). In our case, the large sample size seems to have compensated for the limited overlap. Excluding the first and last strata excluded 18.0% of the sample (209 of 1,158 cases). To further explore the impact of these exclusions, we reran the propensity score estimates while omitting only the last strata, thus excluding only 2.3% of the cases (27 cases). The resulting estimates were very similar. For those who did not receive treatment, 51.6% recidivated. For those who received treatment 22.4% recidivated. Of course, the potential for bias due to unmeasured covariates remains. We do not consider this estimate to be definitive, but it does provide the best possible estimate from the data available.

Differential Treatment Effectiveness

We next examined the extent that certain factors seemed to moderate the effectiveness of treatment. Some offenders are more likely than others to recidivate independent of treatment, so one cannot conclude from such differences in the treatment group that some benefit more from treatment than others. Our strategy, therefore, was to look for treatment-by-offender interactions in recidivism. A relationship between an offender variable and recidivism varies by treatment suggests that the effect of treatment may potentially differ as a product of the offender variable in question. Because control variables had so little impact on the above recidivism analysis, we compared all treated offenders to all non-treated offenders for the present analysis.

We created side-by-side plots for non-SVP offenders who did and did not receive treatment, plotting recidivism by victim gender, relationship to victim, offender age, offender marital status, total number of previous contact victims, whether offender denied offense, age at first sexual offense, and age at first nonsexual offense. The three age variables showed a less-pronounced curve for the treatment group, but this difference appears best explained by compression due to a ceiling effect in the treatment group (resulting from lower overall recidivism rates). Consequently, the only variable that indicated a potential interaction was the relationship to the victim. Specifically, offenders who had offended against strangers seemed to recidivate more following treatment than would be expected based on recidivism rates of the non-treatment group. Victim gender, victim age, and offender marital status were also analyzed for interactions. We followed up the graphical analysis for victim gender, relationship to victim, victim age, and offender marital status with a log-linear modeling analysis. In each case, we fit three models. Model 1 includes main effects and the interaction between treatment and the offender variable. Model 2 adds interactions between the predictor variables and recidivism. Finally, Model 3 adds the three-way interaction term indicating a difference in treatment effectiveness. As such, the chi-square difference test for the addition of this last term (Model 3 compared to Model 2) tests the hypothesis of differences in treatment effectiveness. Overall, the analysis did not support such differences, although we have provisional support for differential treatment effectiveness for offenders with victims who are strangers based on the earlier graphical analysis. Victim age turned up an interesting case of Simpson's Paradox.

> ***Relationship to Victim.*** Among offenders with victims who were strangers, the recidivism rate of those who did not receive treatment was 57.8%, and the recidivism rate of those who received treatment was 42.3%. In contrast, among offenders without stranger victims, the recidivism rate of those who did not receive treatment was 50.4%, compared to a22.5% recidivism rate for those who received treatment. This pattern suggests that treatment may be less effective for those who have sexually victimized a stranger. The observed interaction did not reach statistical significance when we considered all six categories (stranger, direct family, extended or step family, acquaintance,... ?) of relationships to victims (c^2 [5, N = 2,337] = 9.58, p = 0.09) but did when we collapsed it into a dichotomy comparing strangers to all others (c^2 [1, N = 2,337] = 4.63, p = 0.03). It should nonetheless be warned that in addition to cautions regarding p values given that the study does not make use of a statistical sample from a population, one needs to interpret this p value with caution because the categories were collapsed on the basis of the relationship found in the data. As such, the

p value is biased toward zero by an unknown amount. Nonetheless, the result is noteworthy, particularly considering the large effect size observed.

Victim Gender. The vast majority of offenders had only female victims in their index offense (85.8%), and no differences in treatment effectiveness were evident across victim gender (c^2 [2, N = 2,337] = 0.56, p = 0.75). For those not treated, recidivism rates were 48.6% (male), 51.9% (female), and 47.8% (both). For those treated, the recidivism rates were consistently lower, at 20.3% (male), 25.2% (female), and 27.8% (both).

Age of First Victim. The age of the first victim did not suggest differential treatment effectiveness (c^2 [68, N = 2,175] = 32.32, p > 0.99) but did illustrate an interesting case of Simpson's Paradox. The primary difference appeared to be between adult and non-adult victims, so we dichotomized the variable, coding victims 18 or older as adults. Although the offender-by-treatment interaction did not reach statistical significance (c^2 [1, N = 2,175] = 1.31, p = 0.25), it did reveal an interesting pattern of observed effects. Collapsing across treatment, 52.2% of offenders with adult victims recidivated, compared to 40.8% of offenders with a non-adult victim. Breaking this down by treatment group, however, reveals a reverse pattern. Among offenders who received treatment, the recidivism rates for those with and without an adult victim were 22.6% and 24.8%, respectively. Among the non-treated offenders, however, the recidivism rates for those with and without an adult victim were 42.3% and 48.2%, respectively. Thus, for the groups combined, recidivism is higher for those with an adult victim, but for each group individually, recidivism is lower for those with an adult victim. This paradoxical result occurs because those with an adult victim are much less likely to receive treatment (13.4%) than those with a non-adult victim (33.7%).

Marital Status. Treatment effectiveness does not appear to differ by marital status of the offender (c^2 [2, N = 2,368] = 2.63, p = 0.27). For those not treated, the recidivism rates were 59.9% for those never married; 46.5% for those separated, divorced, or widowed; and 31.1% for those married at the time of evaluation. For those who received treatment treated, the recidivism rates were 31.5% for those never married; 23.4% for those separated, divorced, or widowed; and 17.2% for those married at the time of evaluation.

Treatment and Sexual Recidivism

Data indicating both whether the offender received treatment and whether the offender sexual recidivated upon release (yes or no) were available for 2,188 of offenders who did not receive SVP commitment (and were thus released from incarceration and "eligible" to recidivate). Of these offenders, 109 (5.0%) were convicted an additional sexual offense during the period studied. In comparing the sexual recidivism rates of those who did and did not receive treatment during incarceration, the sexual recidivism rates of the treated and non-treated offenders were 6.3% (n = 40) and 4.4% (n = 69), respectively. Given the low base rate and small number of recidivists in this analysis, these proportions can be considered overall equivalent (c^2[1, N = 2,188] = 2.98, p = 0.08).

OBJECTIVE THREE: ARE TREATED SEX OFFENDERS LESS LIKELY TO RECIDIVATE?

DISCUSSION

Overall, when comparing general recidivism rates for offenders who received sex offender treatment (ADTC) to those who did not , we found that those offenders who did not receive treatment recidivated at twice the rate of those who did receive treatment (51.7% versus 25.0%). Even when matched with regard to risk for reoffending (as indicated by Static-99 scores), this difference in general recidivism remained (49.1% recidivism for non-treated offenders versus 22.0% recidivism for treated offenders). These differences were further maintained when the differential selection criteria described in Objective Two were considered (49.1% recidivism for non-treated offenders and 22.0% recidivism for treated offenders).

Although the magnitude of the difference in general recidivism rates between treated and non-treated found in this study is similar to that found by Hanson and colleagues (2002), it is notable that our overall rates of recidivism in our non-treated sample was significantly higher than the non-treated sample from the Hanson investigation. One possible explanation for this difference may be the non-random assignment to treatment and non-treatment. Sex offenders in the non-treatment condition were more likely to be rapists (having adult victims), and the offenders in the treatment condition were more likely to be incest offenders. Hanson and Bussiere (1998) found that rapists had the highest rates of non-sexual reoffending (46.2%), which is more in-line with our findings. Further, 65% of the offenders in our sample who did not receive treatment were Black and Latino, single, and younger, which is also in accordance with the characteristics of general recidivists in Hanson and Bussiere's meta-analysis.

When looking specifically at sexual recidivism rates, we found that overall fewer than 5% of the offenders in our sample were convicted of a new sexual offense over an average 6.5 year follow-up period. Although we did not find statistically significant differences between the sexual recidivism rates of the treated and untreated groups, it is notable that those who received treatment recidivated at a slightly higher rate (6.3%) than those who did not receive treatment (4.4%). These findings are notable for two reasons. First, the overall sexual recidivism rate is considerably lower than that found in Hanson and Bussiere's (1998) and Hanson and Morton-Bourgnon's (2004) meta-analyses. These meta-analyses used diverse measurements of recidivism-- including rearrest, reconviction, and self report-- which would likely increase the apparent recidivism rate. Second, Hanson and colleagues (2002) found that those offenders who received sex offender treatment recidivated at lower rates (12.3%) than those who did not (16.8%); these differences were even larger when comparing only more recent CBT-based programs, where they found a sexual recidivism rate of 9.9% for treated offenders and 17.4% for untreated offenders. One possible explanation for these findings could be the discrepant composition of the treated and untreated groups with regard to potentially risk-relevant factors. As noted by Hanson and colleagues (2002), non-random assignment (or mismatched groups) would be expected to differ on a number of risk factors. We attempted to mitigate some of this selection bias by matching treated and untreated offenders on Static-99 scores.

Considering the criteria for selecting offenders for sexual offender treatment within the New Jersey DOC, offenders selected for treatment are presumed to be repetitive, compulsive, and amenable to treatment and, thus, at higher risk to recidivate sexually. Nonetheless, in this study we

found that those in the treatment group actually received lower scores on the actuarial risk measures than those in the non-treatment group, which would suggest that they should have lower sexual recidivism rates. Another possible contributing factor for these findings is the low overall base rate of sexual recidivism. In New Jersey, there has been a downward trend in sexual offense rates since 1995 (Zgoba & Bachar, 2009). New Jersey has been one of the states at the forefront of sex offender legislation. In 1976, they were the first state to develop a sex offender specific treatment facility; in 1994, Megan's Law was enacted to monitor released sex offenders; and in 1999, post-sentence civil commitment was enacted in the state. It is plausible that the existence of such laws serve as specific deterrents, preventing convicted sexual offenders from reoffending. There is controversy as to the effectiveness of such legislation to prevent sexual reoffending, and a recent study suggests that Megan's Law does not reduce the number of rearrests for sexual reoffending (Zgoba & Bachar, 2009); however, the researchers were not able to determine if the overall decrease in sexual offending resulted from a decrease in the number of new sexual offenders or a decrease in sexual recidivism. One final consideration would be that the non-treated offenders generally recidivated at significantly higher rates than the treated offenders, with almost 50% of them committing a new crime. It may be that a significant proportion of the offenders were reincarcerated and thus unable to commit additional sex crimes as compared to the larger percentage of treated sex offenders who were still in the community and who had access to victims.

When we examined possible moderating factors for treatment effectiveness among those who received treatment, we found that sex offenders who offended against strangers were more likely reoffend after treatment than sex offenders who knew or who were related to their victims to. Additionally, those who had adult victims were more likely to reoffend than those who had victims under the age of 18 (although those with adult victims were, as a whole, less likely to be placed in treatment). These findings are similar to those of Hanson and Bussiere (1998), who found that having a stranger victim and/or an adult victim increased the likelihood for both general and sexual reoffending. These findings suggested that those at higher overall risk for reoffending before treatment will remain at a higher risk for reoffending after treatment (relative to other treated offenders); thus, additional strategies may need to be implemented with these offenders both prior to and following release into the community.

Alternatively, the findings may suggest that traditional CBT-based sex offender treatment may not be as effective for rapists as for child molesters. There is some evidence to suggest that rapists (especially those who victimized strangers) are more likely to display psychopathic traits than other types of sex offenders (Prentky & Knight, 1991). There is currently a great deal of debate in the sex offender treatment literature as to whether psychopathic sex offenders can actually benefit from treatment. In a review of ten studies, Doren and Yates (2008) found inconclusive evidence for treatment efficacy, while Olver and Wong (2009) reported reduced violent and sexual recidivism rates for psychopathic sex offenders who remained in treatment. More research is needed in order to determine if indeed treatment methods need to be altered when working with these types of offenders.

CONCLUSIONS

Sex offenders who received treatment recidivated (in terms of any new offense) at about half the rate of those who did not receive treatment. There were very low base rates of sexual reoffending

for both treated and untreated offenders, though treated offenders sexually recidivated at a slightly higher (albeit non-signficiant) rate. The differences in recidivism rates for treated and non-treated offenders may be in part due to the fact that 50% of the non-treated offenders were reincarcerated after release and, thus, may not have access to future victims. Of those offenders who receive treatment, offenders who had stranger and adult victims were more likely to reoffend after treatment than those who offended against known victims and children. This suggests that high-risk offenders may need different or addition interventions, both pre-and-post release, in order to better address their risk for recidivism.

Who Gets Committed as a Sexually Violent Predator (SVP)?

Objective Four attempts to compare those offenders selected for commitment as an SVP with those offenders not selected for commitment. We first begin by describing groups of committed and non-committed offenders with regard to demographics, offense variables, and risk scores. We then examine the recidivism rates of a *nearly* committed group to approximate potential recidivism rates of SVPs. Finally, classification tree and logistic regression analyses attempt to highlight those variables that best predict SVP commitment.

Descriptive Analyses

Offenders who received SVP commitment averaged 42 years of age and tended to be significantly older than those not selected for commitment. Offenders committed as SVPs were more likely to be White and to have never been married than offenders not committed as SVPs. See Table 10.

Table 10.

Comparison of SVP and Non-SVP Groups on Demographic Items

	SVP	Non-SVP	t	X^2	*df*	*d*	v
	M (SD)	*M (SD)*					
Age[1]	42.33 (11.55)	39.21 (12.08)	4.63**		2,984	0.26	
	n (%)	*n* (%)					
Marital Status[2]				36.49**	2		0.11
Never Married	246 (66.31)	1,535 (56.57)					
Married	43 (11.59)	701 (25.84)					
Separated/Widowed/ Divorced	82 (22.10)	477 (17.58)					
Race				35.49**	3		0.11
Black	152 (40.86)	992 (36.30)					
White	182 (48.92)	1,104 (40.40)					
Hispanic origin	35 (9.4)	588 (21.51)					
Other	3 (0.80)	49 (1.79)					

[1]Age at time of evaluation

[2] Marital status at time of incarceration

*$p < 0.001$

Table 11 compares the criminal histories of offenders who were SVP committed and those released upon completion of their index sentence. Offenders selected for SVP commitment tended to be significantly younger at the age of both their first sexual and non-sexual offenses. Additionally, committed offenders had significantly more victims, were more likely to have a juvenile offense history, and were more likely to have a psychiatric history than those not selected for commitment.

Table 11.

Comparison of SVPs and Non-SVPs on Criminal History

	SVP	Non-SVP	*t*	X^2	df	*d*	*v*
	M (*SD*)	*M* (*SD*)					
Age First Nonsexual offense	19.17 (6.25)	21.85 (7.61)	6.56**		2,041	0.38	
Age First Sexual Offense	23.75 (8.57)	30.27 (11.26)	12.62**		2,761	0.65	
Number Previous Victims	2.62 (2.39)	1.45 (1.83)	-7.28**		889	0.55	
	n (%)	*n* (%)					
Psychiatric History	197 (53.10)	808 (30.00)		80.07**	2		0.16
Juvenile Conviction	166 (45.10)	562 (22.17)		108.70**	2		0.19

[1] indicates "yes" response
**$p < 0.05$

Table 12 (next page) compares the index crime characteristics of committed and not-committed offenders. While both those selected for SVP commitment and those not committed generally had child victims, SVP committed offenders had disproportionately more adult and stranger victims than those not selected for SVP commitment. Indeed, among committed SVPs, over 30% of the index offense victims were adult, and over 30% of their index offense victims were strangers. Offenders committed as SVPs were also more likely to have threatened their victims (39.3%) or used a weapon (25.3%).

Table 12.
Comparison of SVPs and Non-SVPs on Index Crime Characteristics.

		SVP	Non-SVP	*t*	X^2	df	*d*	v
		m (SD)	*m* (SD)					
Age of Victim		14.93 (12.69)	12.85 (8.50)	2.92**		2,823	0.19	
		n (%)	*n* (%)					
Type of Sex Crime					43.39**	3		0.12
	Adult Sexual Assault	114 (30.48)	455 (16.72)					
	Child Molestation	235 (62.83)	2,041 (75.04)					
	Both Adult and Child	6 (1.60)	195 (7.17)					
	Non-Contact Sex Crime	19 (5.08)	195 (7.17)					
Relationship to Victim					156.73**	4		0.17
	Immediate Family	23 (6.23)	257 (9.6)					
	Extended Family	63 (17.07)	681 (25.44)					
	Acquaintance	146 (39.57)	1,200 (44.82)					
	Stranger	111 (30.08)	323 (12.07)					
	Other	26 (7.04)	216 (8.07)					
Victim Gender					51.21**	2		0.13
	Male	83 (22.62)	311 (11.62)					
	Female	262 (71.39)	2,298 (85.84)					
	Male & Female	22 (5.99)	68 (2.54)					
Threatened Victim[1]		147 (39.62)	277 (15.97)		106.60**	2		0.23
Weapon Used[1]		93 (24.87)	190 (7.04)		124.85**	2		0.20

[1] indicates "yes" response
**$p < 0.05$

With regard to scores on actuarial risk measures, offenders selected for SVP commitment tended to have higher Static-99 and MnSOST-R risk scores than those not selected for commitment (see Table 13). Indeed, offenders selected for SVP commitment most often fell in the medium-high risk category of the Static-99, while those not selected were most often represented in the medium-low risk category.

Table 13

Comparison of SVP and Non-SVPs on Risk Scores

	SVP	Non-SVP	t	*d*
	m (*SD*)	*m* (*SD*)		
Static-99 Total	5.54 (1.91)	2.42 (1.73)	21.36**	1.71
MnSOST-R Total	9.30 (4.86)	0.15 (5.07)	29.58**	1.84
MnSOST-R Dynamic	-.47 (2.18)	-.79 (1.75)	1.99	0.16
MnSOST-R Historical	9.31 (4.97)	0.87 (4.80)	23.67**	1.73

**p <.05

Although reliably estimating the recidivism rates of offenders committed as SVPs is impossible given the extremely low number of offenders who have been released from the commitment facility in New Jersey, Table 14 shows the recidivism rates of a group of offenders who were independently evaluated by two mental health professionals, recommended for commitment by both evaluators, and, for various reasons, not referred for SVP commitment by the attorney general (we will refer to this unique subgroup of offenders as *nearly* committed). The general recidivism rate for nearly committed offenders was 59.1%, while 11.8% were convicted of a follow-up sexual offense. Table 14.

Recidivism Rates of Offenders Nearly Committed as SVPs (n = 127)

		%
Was offender convicted of a new offense?		59.1
Type		
	Sexual	11.8
	Violent	11.8
	Non-Violent	21.8
	Drug	12.6
	Parole Violation Failure to Register	13.4
	Parole Violation General	18.5
	Other	0.0

[1] Note that "highly considered" refers to offenders who were recommended for commitment by two independent clinicians, but for whom the attorney general opted not to initiate commitment proceedings.
[2] n refers to the number and percent of "Yes" responses

As noted previously, Objective Four also aims to deveop a model for predicting SVP designation[6]. Among our sample, 3,130 cases had data regarding both their placement during

[6] The following 23 variables were selected prior to the analysis of the data as plausible predictors of SVP designation: offender age at first non-sex offense, offender age at first sex offense, age of the index offense victim, use of weapon at index offense, victim gender, victim relationship (including separate variable categories for immediate family, extended family, step family, acquaintance, stranger, and other), offender history of prior sex offenses, offender history of prior non-sex offenses, total number of previous contact sexual offenses, threats to victims, history of psychiatric problems, history of convictions for violent non-sexual offenses, offender history of

incarceration and whether or not they were ultimately committed as SVPs. For these cases, 1,934 were non-treated and not committed; 822 were treated and not committed, and 374 were committed as SVPs. For the purposes of the present analyses, the former two categories were collapsed into a signle, non-SVP category (n = 2,756).

Classification Tree Analyses

The same strategy of classification tree analysis followed by logistic regression used in addressing Objective Two was applied to this objective. The initial classification tree is figured below (See Figure 8, next page). As is clear from the ns, the initial split involving prior history of sex crimes makes the primary impact in classifying offenders according to SVP designation.

juvenile sexual offenses, offender history of any juvenile offenses, offender marital status, MnSOST-R dynamic subscore, MnSOST-R historical subscore, and Static-99 total score.

Figure 8.

Classification Tree Analysis of those Selected and Not Selected for SVP Commitment

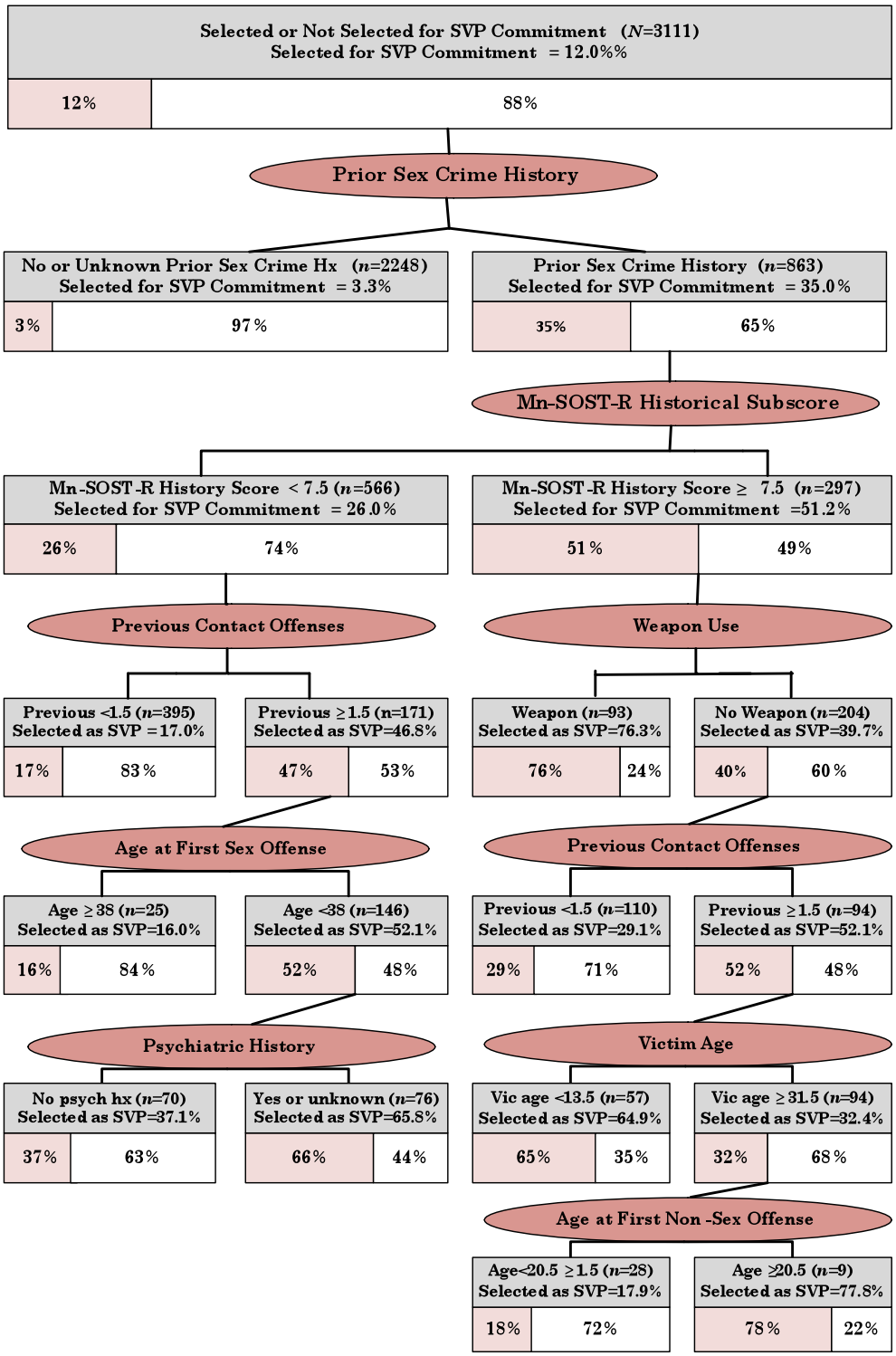
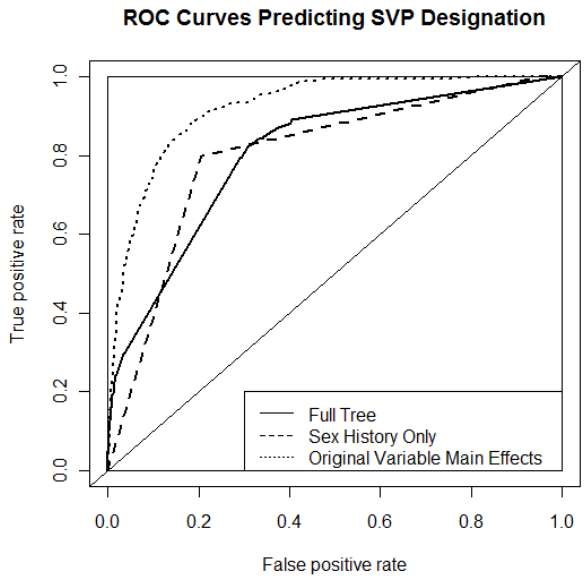


Figure 9.

ROC Curves Predicting SVP Designation



We ran a regression containing group membership variables coded to match the classification tree. Ten terminal nodes in the classification tree yield nine dummy-coded group membership variables. No or unknown prior sex crime history was taken as the reference group. We compare this to a reduced model, with only a dichotomous variable separating those with a known history of sex crimes from those without (none or unknown). We also ran a logistic regression containing all of the variables identified by the classification tree coded dichtomously but including only their main effects. Figure 9 presents the ROC curves for these three models.

The main effect model has an AUC of 92.2%. Not as robust, the logistic regression based on all the terminal nodes has an AUC of 80.6%, and the logistic regression based on only the sex offense history split has an AUC of 80.2%. The most plausible explanation for this result is that the model based on nodes of the tree does not differentiate cases within a node, whereas the main effects model uses all the variables to differentiate all the cases. It also appears that the additional variables on the classification tree fine tune the prediction at each extreme by giving up some ground in the center of the graph without substantially improving the overall AUC.

The main effects model indicates differences from an offender with none of the factors identified in the classification tree. Each positive effect indicates a risk factor, whereas a negative effect indicates a risk-reduction factor relative to offenders in the reference class.

Table 15 shows results of the regression predicting commitment relative to all those eligible offenders who were not committed (this includes both the *not committed* and *nearly committed* groups). SVP commitment was predicted by having prior sexual charges and convictions, higher risk scores on the MnSOST-R Historical subscale, prior contact sexual offenses, psychiatric history, having younger victims, and using a weapon during commission of the index offense. The model correctly classified 91.2% of offenders as receiving or not receiving SVP commitment.

Table 15.
Summary of Logistic Regression Predicting SVP Designation

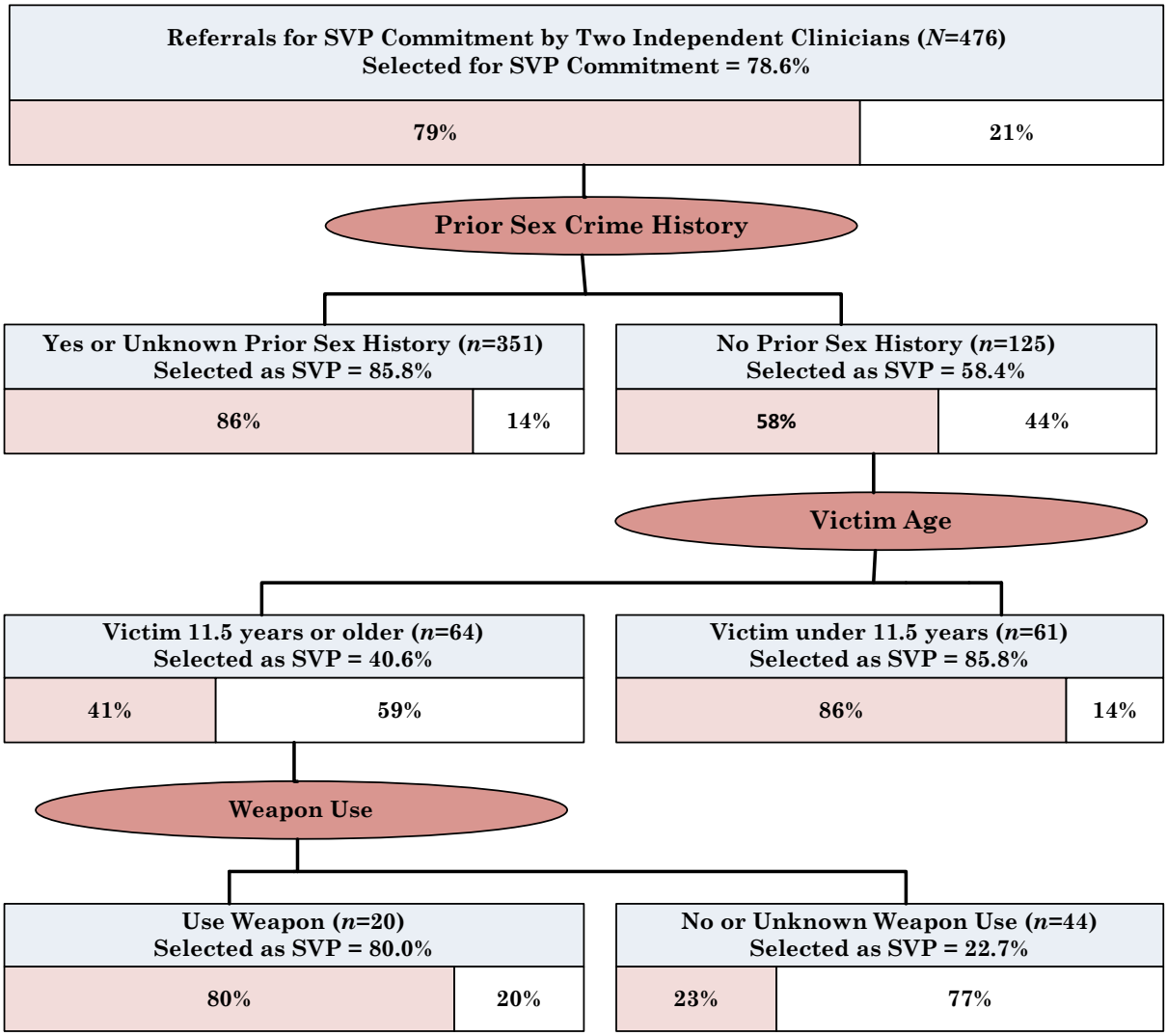
	Estimate	Std. Error	z value	p value
Predictor				
Intercept	-1.34	0.39	-3.45	< 0.001
History of Sex Crimes	1.51	0.20	7.45	< 0.001
MnSOST-R Historical Score less than 7.5	-1.97	0.20	-9.77	< 0.001
Fewer than 1.5 contact offenses	-1.08	0.18	-5.92	< 0.001
Younger than 38 at Age of First Sex Offense	0.39	0.26	1.49	0.14
No Psychiatric History	-0.60	0.14	-4.18	< 0.001
Weapon Used	1.41	0.21	6.76	< 0.001
Victim Age less than 13.5 years	0.36	0.17	2.15	0.03
First Non-Sexual Offense at less than 20.5 years	0.31	0.18	1.73	0.08

Analysis of SVP Referrals Only

Whereas the previous analysis looked at SVP designation in the general population of offenders, this subsection looks at SVP designation just among those offenders who received SVP referrals by two independent clinicians (n = 476). Of those so referred for SVP commitment, 374 (78.6%) ultimately received SVP designation, and 102 (21.4%) were nearly, but ultimately not, committed (as the attorney general in these cases opted not to pursue commitment proceedings). We first applied a classification tree analysis and then followed up with logistic regression. The tree first distinguished those with a history of sex crimes. For those with no such history, it then distinguished those with a first victim under the age of 11.5. For those with no such victim, it then distinguished those known to have used a weapon. The classification tree is shown in Figure 10 (next page).

Figure 10.

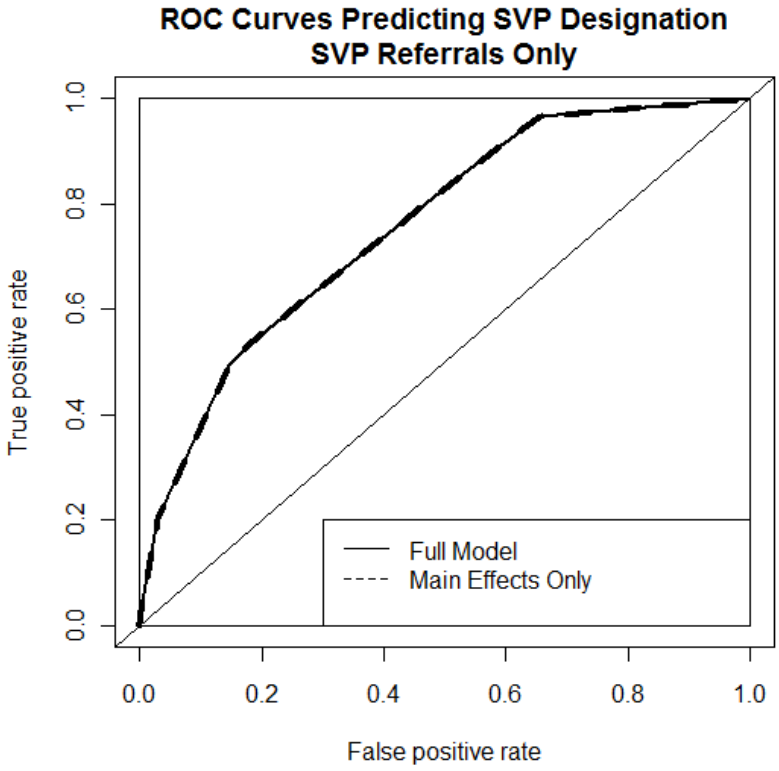
Classification Tree Analyses Examining Selection for SVP Commitment among Subgroup of Offenders Referred by Two Independent Clinicians.



We followed up the above classification tree with logistic regression comparing those who were nearly committed (i.e., those who were referred by two independent clinicians) to those who were committed as SVPs (see Table 16), fitting models with main effects only and with all the interactions included. The main effects clearly account for most of the prediction, with the interactions adding little ($c^2[4, N = 476] = 4.20$, $p = 0.38$). In terms of main effects, SVP commitment was predicted by having a history of prior sexual charges and convictions, weapon use, and having a victim aged less than 11.4 years.

Figure 11.

ROC Curves Predicting SVP Commitment among Offenders Referred by Two Independent Clinicians



The ROC analysis bore this out, with the AUC of 75.7% increasing less than 0.1% with the addition of the interaction terms. Nonetheless, we table the full model for completeness (the first interaction on the tree did reach statistical significance). The ROC curves are shown in Figure 11, which is followed by the regression table (Table 16).

Table 16.

Summary of Logistic Regression Predicting SVP Commitment Among Those who Were Nearly Committed

	Weight	SE	*p*Value
Predictor			
Intercept	-0.99	0.32	0.002
History of Sex Offenses	2.21	0.38	< 0.001
Victim Age less than 11.4 years	2.14	0.45	< 0.001
Weapon (Yes)	2.44	0.64	< 0.001
History by Vic Age	-1.15	0.58	0.048
History by Weapon	-0.49	0.89	0.585
Age by Weapon	11.98	1,029.12	0.991
3-Way Interaction	-0.57	1,328.59	> 0.999

OBJECTIVE FOUR: WHO GETS COMMITTED AS A SEXUALLY VIOLENT PREDATOR (SVP)?

DISCUSSION

Because the argument for SVP commitment is predicated on its application to the most dangerous offenders, we examined the factors that predict commitment of sexual offenders in an effort to ascertain whether or not those at highest risk for recidivism were indeed the offenders who were being civilly committed. Classification tree analyses found SVP commitment in this sample to be predicted by prior sex offense history, age of first sex offense, age at first non-sexual offense, prior contact sexual offense history, use of weapon during index offense, history of psychiatric problems, age of victim, and MnSOST-R historical scale score. . As previously described, those offenders typically considered for SVP commitment generally have been deemed to have a mental abnormality, a history of sexual offenses, some evidence of volitional impairment, and a link between the mental abnormality and the risk for future violence (Mercado, Bornstein, & Schopp, 2006; Miller, Amenta, & Conroy, 2005). Specifically in New Jersey, SVPs are defined as someone with a history of sexual offenses and who "suffers from a mental abnormality or personality disorder that makes the person likely to engage in acts of sexual violence if not confined in a secure treatment facility for control, care, and treatment." The selection criteria utilized in New Jersey appear to be congruent with these guidelines, as we found that those sexual offenders who were committed as SVPs did indeed have more extensive sexual criminal histories, significantly higher actuarial risk scores, and been determined to have a history of sexual problems.

In this sample, we had 102 *nearly* committed offenders who were evaluated and referred for commitment by two independent clinicians, but commitment proceedings were ultimately not pursued by the attorney general. This group of nearly committed offenders had a general recidivism rate of 67% and a sexual recidivism rate of 10.5%. Although Milloy (2007) found considerably higher rates of sexual recidivism (23%) in a similar sample of nearly committed offenders, general recidivism rates were very similar to that of Milloy's sample (69%). Given that rates of recidivism for this group are considerably (both in a practical and statistically significant sense) higher than that of other non-committed offenders, this finding is encouraging insofar as it suggests that the committed offenders are in fact those most likely to recidivate. While the recidivism rates of committed offenders cannot be examined given that only a handful have yet been released, it is reasonable to assume that those who receive two independent referrals from clinicians and for whom the attorney general decides to initiate commitment proceedings would be expected to have at least comparable, if not higher, rates of recidivism. These findings also suggest that those considered but not selected for SVP commitment represent a high-risk group; therefore, strategies/interventions need to be implemented to minimize the risk this group of offenders represents to the community upon release.

Finally, we examined the extent that factors could predict which offenders were nearly, but ultimately *not,* committed as SVPs relative to those who were eventually classified as SVPs. Those who had no previous sex crimes, had victims older than 11.5 years, and did not use a weapon during the commission of the offense were more likely to be referred but *not* committed as SVPs. In other words, when making the difficult decision of which offenders that have been referred for commitment by two independent clinicians will be committed or not, it appears that the attorney general's decision to not commitment someone was predicted by being a first-time sexual offender, having

older victims, and committing less-violent offenses. It is consistent with eligibility criteria for commitment that having a history of sex crimes would be highly predictive of commitment.

CONCLUSIONS

Sex offenders selected for civil commitment were found to be at a significantly higher actuarial risk of recidivating compared to those offenders who were not considered for civil commitment. Further, sex offense history, age of first sex offense, age at first non-sexual offense, prior contact sexual offense history, use of weapon during index offense, history of psychiatric problems, age of victim, and MnSOST-R historical scale score were predictive of SVP commitment. These findings are in line with the criteria set forth in the New Jersey SVP legislation. Those offenders (n = 102) that were highly considered for commitment, but ultimately not committed, were found to have high rates of general recidivism (67%) and elevated rates of sexual recidivism (10.5%); in fact, this sexual recidivism rate was double that of the general sample (5%).

Discussion

This study sought to provide a comprehensive exploratory examination of the program management, treatment, and recidivism of sexual offenders in New Jersey. We felt that in an attempt to gain insight into how sex offender placement decisions are made, New Jersey would serve as an excellent setting for this endeavor. As New Jersey has been the one of the U.S. states at the forefront of sex offender policy and legislation, the policies and practices of this state may serve as a model for other states that are in the process of developing or modifying their own sex offender policies.

Overall, it appears that in New Jersey, selection for treatment services generally follows that of the statutory criteria. When sex offenders first enter the system, they are evaluated and placed in either a prison-based sex offender treatment facility or in the general prison population. The decision to place an offender in treatment is based upon a determination that the sex offender is repetitive, compulsive and amenable to treatment. These offenders are thought to be those at highest risk for recidivism that may also respond to treatment in a way that can reduce risk. We found that the biggest predictors of being placed in treatment were (1) having no history of treatment refusal or dropout and (2) having a history of sex crimes prior to the index offense. These characteristics appear to be consistent with statutory criteria requiring amenablility to treatment and repetitive and compulsive sexual behavior. Although this consistency is encouraging, it is debatable whether these criteria are the most ideal for determining which sex offenders need treatment. For example, the sex offenders in the general population had higher scores on measures of risk than those in the treatment facility. Our data clearly show that selection for treatment is fairly inclusive to those higher in sexual deviancy and those who may be perceived as more responsive to treatment interventions, it systematically excludes those high in general criminality. According to the risk-need-responsivity (RNR) model, those at highest risk for reoffending should be the ones receiving treatment (Andrews, Bonta, & Hoge, 1990). Given our finding that those with higher risk scores are less likely to be selected for treatment, selection into treatment may, in part, run counter to the RNR model. Finally, according to the literature, amenability to treatment should *not* be considered when making placement decisions, as it is often those who refuse or withdraw from treatment who are at highest risk to reoffend. It is thus argued that treatment should be given to those sex offenders who need it the most, regardless of willingness to participate.

We next examined how placement in the treatment facility or general population affected recidivism. Overall, we found that a very small percentage of sex offenders recidivated sexually (approximately 5%). This rate is significantly lower than most published findings to date (e.g., Hanson & Bussiere, 1998; Hanson & Morton-Bourgon; 2004). Given our conservative definition of recidivism (i.e., re-conviction rather than merely re-arrest), lower estimates of recidivism would be expected. The low base rate of sexual recidivism likely contributed to the fact that no significant differences were found between those offenders who received treatment and those who did not on this factor. In terms of general reoffending, those in the general population reoffended at twice the rate of those in the treatment group, suggesting that there are either characteristics of those in the treatment group that make them less likely to reoffend in general or that the sex-offender specific treatment services play some role in reducing general criminal behavior.

Finally, we examined the characteristics of those sex offenders selected for SVP commitment. We found that those offenders selected for SVP commitment were in fact those deemed at highest risk for reoffending (in terms of actuarial risk scores on the MnSOST-R and Static-99). Indeed, the clinically and statistically significant differences in actuarial risk scores between those selected and not selected for post sentence civil commitment suggest that use of SVP commitment is targeted towardthose offenders most likely to offend. Interestingly, those offenders who were referred for commitment by two independent mental health professionals but who ultimately not committed (the *nearly* committed) recidivated sexually at nearly double the rate of other not committed offenders, suggesting again that those selected for SVP commitment are in fact those most likely to reoffend sexually.

Conclusions and Recommendations

The findings presented here have attempted to provide data about practices in the sentencing and management of sexual offenders. Although certain caveats should be considered when interpreting the findings of this study (for a comprehensive review of limitations, see Appendix C), the current study offers a compelling look into the state of sex offender management, treatment, and civil commitment within the New Jersey Department of Corrections. Beyond providing normative data on a large sample of New Jersey sex offenders, this investigation offers insight into determinations of which sex offenders get selected for treatment and what criteria are used to make that decision. We have examined the effect of treatment on recidivism, and we compared those offenders selected for commitment as an SVP with those offenders not selected for commitment. Based upon the empirical findings of our study we offer the following conclusions:

1. The majority of sex offenders (85%) of our sample perpetrated their offenses against family members or persons with whom they were already acquainted. Most offenders did not have a known prior sex crime history (71%), and only a small percentage of sex offenders were convicted of a new sexual offense (< 5%) upon release. These trends in combination strongly challenge public perceptions (and perceptions that likely influence sex offender legislation to some degree) that sexual crimes are most often perpetrated by strangers who go on to offend again and again.

2. While New Jersey is properly selecting offenders based upon their selection criteria (repetitive, compulsive and amenable to treatment), these offenders are not the highest risk to recidivate and thus not the most in need of treatment services.

3. The general recidivism rate of sex offenders who received treatment while incarcerated was half that of offenders housed in general population (and not receiving treatment). There are very low base rates overall of *sexual* recidivism among both treated and untreated offenders, with treated offenders engaging in a slightly higher rate, although not significantly, of sexual reoffending.

4. Among those offenders receiving treatment, rapists have higher rates of recidivsm than other types of sexual offenders, suggesting that high-risk offenders may need different or

additional intervention-- both pre- and post- release-- in order to decrease their risk for future recidivism.

5. New Jersey is properly selecting those sex offenders at highest actuarial risk for SVP commitment. Additionally, the characteristics of the offenders selected for SVP commitment are in line with the criteria set forth in SVP legislation of New Jersey.

6. Those considered for evaluation for SVP commitment, but ultimately not committed, represented a significantly higher risk for future recidivism as compared to those who were not selected for such an evaluation.

The following are our recommendations based upon the findings of this study:

1. Policymakers should consider primary prevention measures or other campaigns that better direct efforts to where sexual violence most likely occurs: in families and among persons already acquainted with the victim. Policy measures that target the myth of the highly recidivistic predatory "stranger danger" type of offenders (such as Megan's Laws, residence restrictions, and electronic monitoring) appear to focus efforts on a small minority of overall sex crime.

2. Treatment decisions should better consider risk-need-responsitivity (RNR) principles such that those offenders at highest risk to recidivate (based upon actuarial measures of static and dynamic risk) receive treatment services.

3. Placement for treatment services in the ADTC should *not* be contingent on offenders' willingness (or refusal) to participate in treatment but rather their risk for recidivism.

4. While it is more challenging to engage unwilling participants in treatment, several studies have found that a brief motivational intervention can increase an offender's willingness and motivation to participate in treatment (Theodosi & McMurran, 2006). While there is still a dearth of research pertaining to the effectiveness of such techniques for use with sex offenders, such pretreatment interventions have promise in targeting those offenders who refuse treatment or who have low motivation to change.

5. When matching offenders on risk for general recidivism, those offenders who receive sex offender-specific treatment are half as likely to reoffend as those who do not receive sex offender-specific treatment. It is thus recommended that all sex offenders receive sex offender-specific treatment as part of their incarceration.

6. Program effectiveness should be evaluated to determine if rapists may have different treatment needs than non-rapists in accordance with RNR principles. Services should then be provided accordingly.

7. Those who are considered for civil commitment but are ultimately not committed represent a significantly higher risk for recidivism than sex offenders who are not considered for SVP

commitment. Risk management efforts should continue to be focused on reducing the threat posed by this population.

8. It should also be noted, however, that even among this group of elevated-risk offenders (those highly considered for SVP commitment), detected rates of sexual recidivism are still relatively low. Given the exceptionally high cost of SVP commitment and the fact that most new sexual offenses are not committed by known offenders, policymakers should reevaluate the balance between resources dedicated to estimated crime prevention associated with SVP commitment and that of primary prevention strategies.

9. Primary prevention strategies that focus on raising awareness within the broader community, and especially those that are directed toward children and their parents, may have more impact than policies based on stereotyped characterizations of stranger-danger types of crimes. School-based intervention strategies that education and empower children to disclose abuse and avoid risky situations may be especially beneficial.

10. Because most offenders in this sample (>70%) did *not* have a known prior sex crime history, offender-based strategies that focus on managing the risk of already detected sex offenders are limited with regard to what they might achieve in terms of the prevention of new sex crime.

11. Research monies should be directed to (a) examining educational-based and other primary prevention programs and (b) cost-benefit analyses that examine the costs of particular prevention policies or initiatives as well as how much sex crime they might reasonably be estimated to prevent. Further, given that our findings show that an offender's perceived amenability to treatment highly influences treatment decisions, research should investigate the extent to which motivational strategies (such as those used in the substance abuse field) might impact willingness to participate in treatment and, ultimately, recidivism.

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Appendix A:

Missing Data Analyses

To evaluate the potential for bias due to missing data, we plotted variables separately for each quintile. Roughly equal distributions across quintiles would indicate an absence of bias, whereas marked differences would indicate the potential for bias due to missing data. The box-and-whisker plots show the middle 50% of the data inside the box, and most of the remaining 100% between the ends of the whiskers. The exceptions are outliers plotted as circles. The dark line inside the box indicates the median.

Figures R2 and R3 plot the distributions for the total risk score on two actuarial measures: the MnSOST-R (Figure R2)and the Static-99 (Figure R3). Both graphs show a slight tendency for individuals with more missing data to have lower risk, although the trend is slightly stronger for the MnSOST-R.

Figure R2

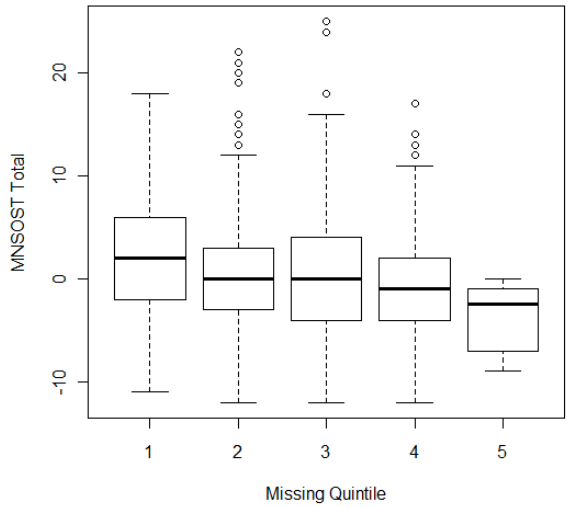
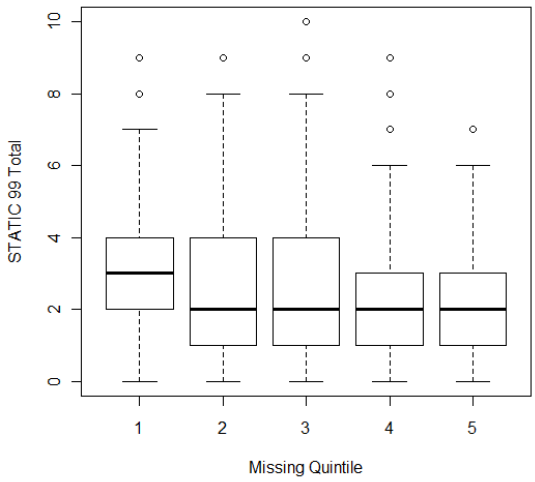


Figure R3.



Figures R4 to R6 present birth year, age at first non-sexual offense, and age at first sexual offense broken down by missing data quintile. There is a slight tendency for individuals with more missing data to be younger overall (regardless of age at first sexual or non-sexual offense). For the remaining two variables, no relationship with the amount of missing data is apparent, a trend that is consistent with minimal bias due to missing data.

Figure R4.

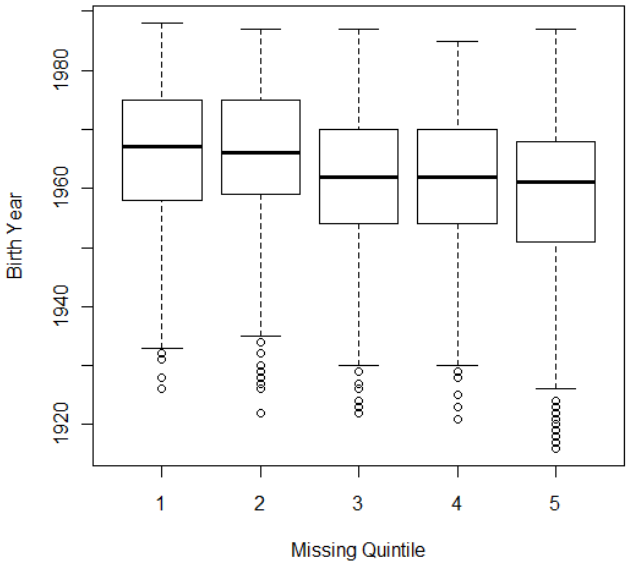


Figure R5.

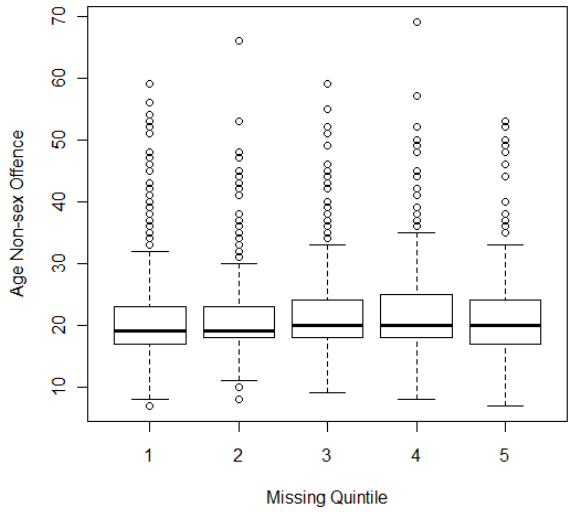
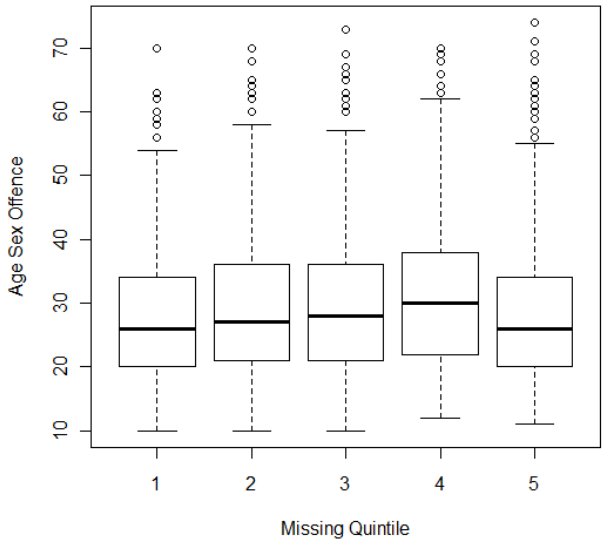


Figure R6.



Figures R7 and R8 plot the count of missing variables by offender marital status and ethnicity. The accompanying bar charts show the distribution of each variable for each quintile of missing data. We eliminated 6 cases from the marital status plot who had values not shown; these cases represented some unique combination of the shown values (e.g., lived together and divorced). Neither figure suggests evidence of bias due to missing data.

Figure R7.

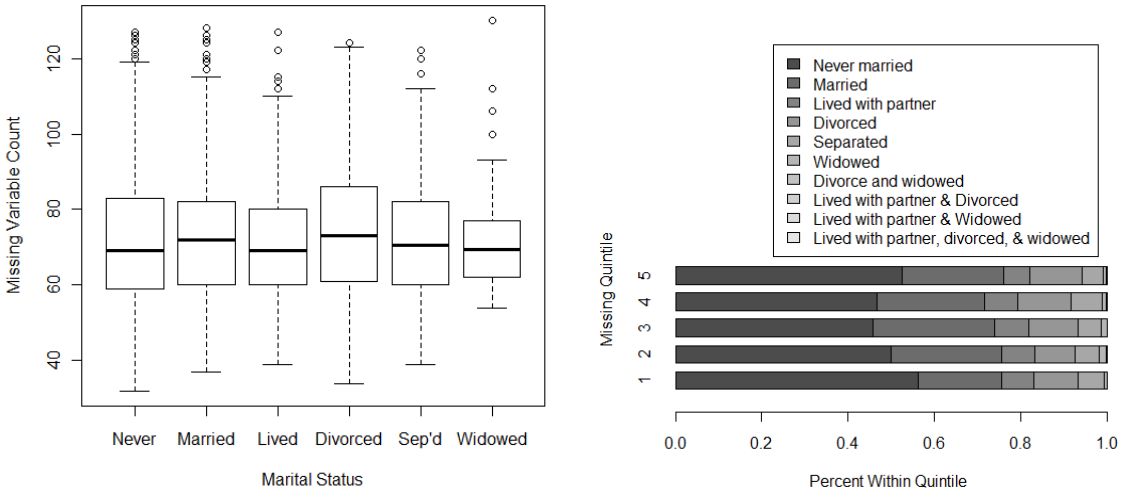
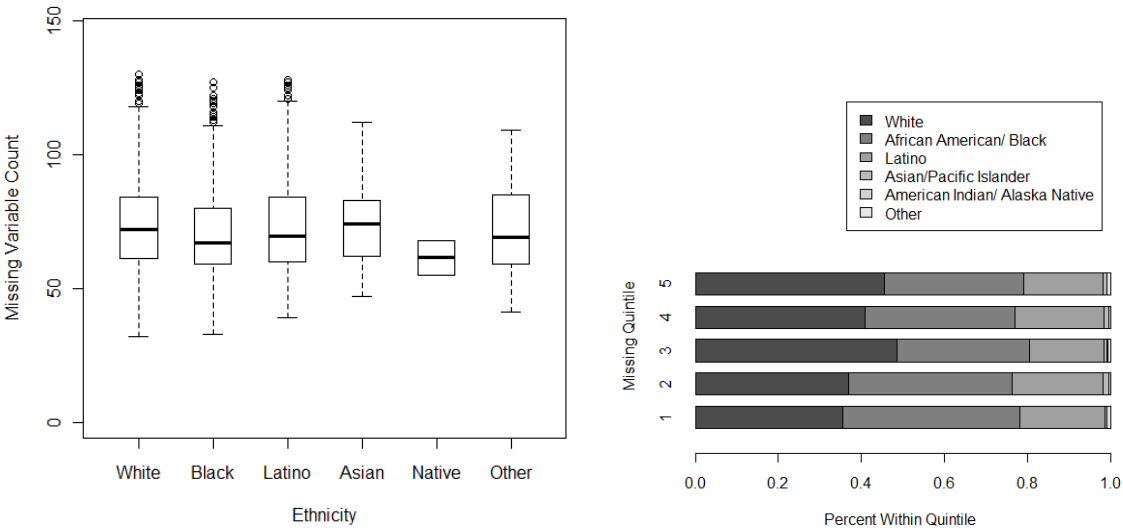


Figure R8.



Finally, we looked at two key variables for the remaining analysis in relation to missing data. Figures R9 and R10 relate missing data to facility (non-treated versus treated) and to reincarceration (our proxy for recidivism). For present purposes, both non-SVP and SVP individuals are broken down as non-treated or treated, yielding four groups. Reincarceration does not display any meaningful relationship with the amount of missing data. The relationship between facility and missing data, however, appears more complex. Non-SVP, non-treated individuals appear to have slightly less missing data. SVP individuals appear to have a flatter distribution with heavier tails,

whereas non-SVP individuals show a more peaked distribution with lighter tails. Both groups show signs of positive skew.

Figure R9.

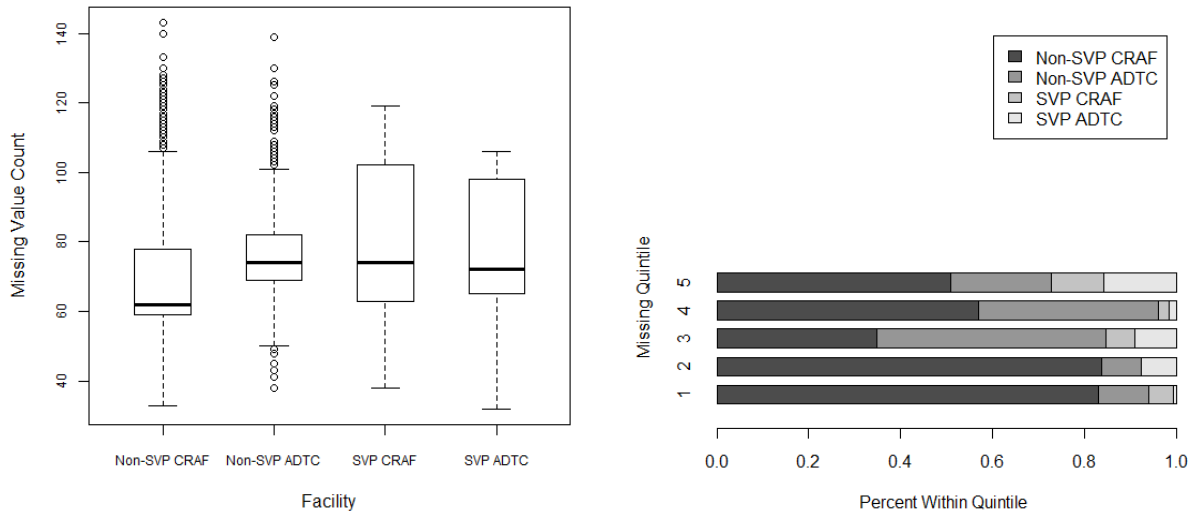
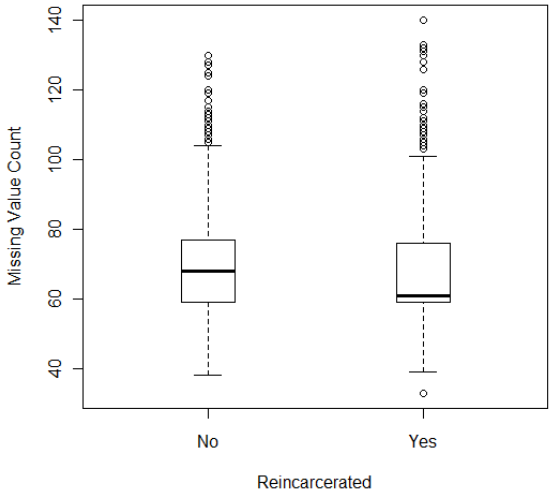


Figure R10.



Caveats

The following caveats are relatively standard in applied behavioral science research. Nonetheless, it is worth noting them here to help avoid over-interpretation of the results that follow.

The data support useful conclusions, but it remains important that these conclusions not be overstated.

A first caveat stems from the fact that the analyses rely on passive observational data. Although effective methods exist for making inferences about the effects of known causes using passive observational data, such data do not as readily support inferences about the causes of known effects. It is always possible to fit different causal models to the same passive-observational data. The present analyses seek to predict placement, and to some extent they may be taken as attempts to capture implicit placement policies. It is possible to rule out many causal hypotheses, but it is not possible to rule out all but one causal hypothesis. In particular, the lack of clear time ordering between the variables increases the number of plausible rival hypotheses regarding causal ordering.

A second caveat stems from the degree of missing data. Working with data missing a large proportion of values requires a constant tradeoff between the number of variables included in an analysis and the number of cases. Adding more variables generally results in losing more cases. The analyses seek to address this issue in various ways, but limitations on the confidence of generalizations or future replications of the findings nonetheless remain.

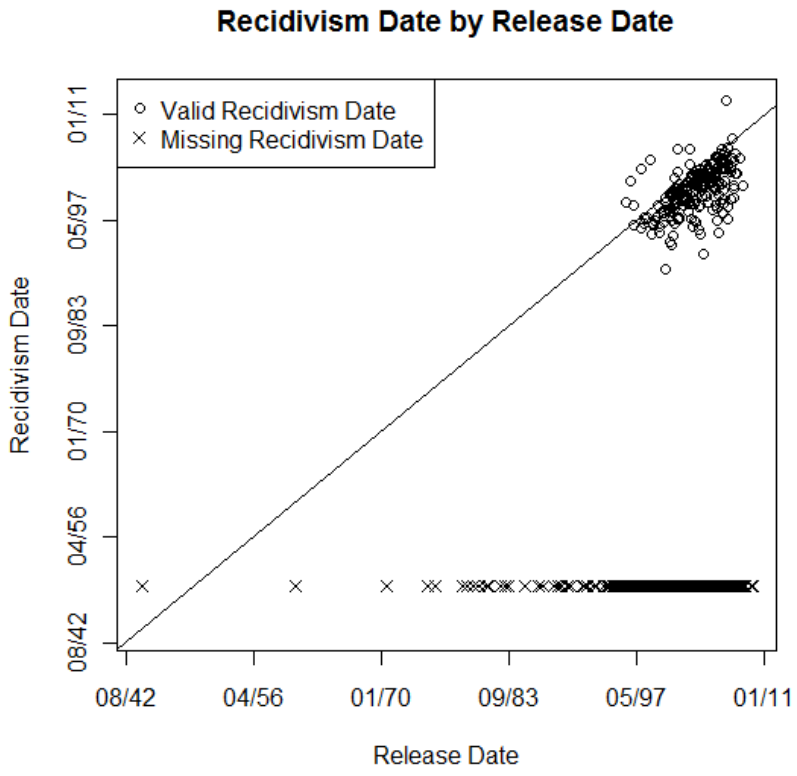
A third caveat stems from both the census methodology and the exploratory nature of the analyses. Aside from missing data, we have information for essentially the entire population of offenders during the time studied. Standard inferential statistics are intended to allow generalizations from representative samples to populations. Given that for all practical purposes we have data for the population in question, such tests have less meaning in the present context. Moreover, the very large sample size makes practical significance more important than statistical significance. Standard hypothesis testing methods assume that the hypothesis is formed prior to looking at the data. The analyses conducted here address research questions formulated before the data were collected but also reflect a substantial degree of model revision on the basis of the present data. As a result, the p values associated with such analyses do not have their standard interpretation. For the most part, they are too liberal. For these reasons, the following sections de-emphasize traditional null hypothesis significance tests, and we caution the reader against over-interpreting the inferential statistics that are reported.

Appendix B:

Date of Recidivism: Missing Data Analyses

Recidivism data posed a particular challenge. The four asterisks mark offenders with sufficient data to include in the analyses involving dates: 118 non-treated recidivists, 805 non-treated non-recidivists, 14 treated recidivists and 521 treated non-recidivists.

The fact that a date for recidivism is required for recidivists but not non-recidivists leads to a disproportionately low number of recidivists in a sample constructed in this manner. Nonetheless, conditional analyses can still make use of all four variables. Among those with valid treatment values, only five cases have a valid recidivism date but not a valid recidivism indicator, and there are no such cases without valid treatment data. This suggests that the recidivism date cannot greatly improve on the existing recidivism indicator.



Closer inspection of the release dates and recidivism dates revealed that even cases with valid values for either do not appear to provide clearly interpretable data. The following figure shows recidivism date by release date. Cases with missing recidivism dates are plotted with the letter 'x' at an arbitrary recidivism date (January 1, 1950). Of 221 cases with valid recidivism dates, only 16 (7.2%) have recidivism dates on or before their release date (205, or 92.8%, do not). The diagonal line on the graph indicates equal dates on the two axes. The large number of dates below the axis indicates recidivism dates prior to release dates. It is possible that the 205 cases of offenders who recidivated before they are released involve individuals charged with two crimes and wereconvicted of the second while serving time for the first. The overall distribution of release dates is similar for those with and without valid

recidivism dates (aside from a long trail of outliers on the low end for the group with no valid recidivism date). Moreover, those with valid recidivism dates show a similar distribution across types of recidivism offenses (e.g., parole violations, non-violent offenses, drug offenses). It is perhaps also worth mentioning that of 374 offenders who received SVP commitment, 365 have valid release dates despite the fact that SVP offenders should not have release dates (as they are not actually released into the community). This adds further confusion to what the release dates actually represent. As such, the release and recidivism date data do not appear to provide a useable source of information for analyzing recidivism.

Appendix C:

Study Limitations

As is often the case when relying on archival case data, the data available in the DOC files were often not complete and resulted in more missing data than would be desirable. As with any archival study of this nature, the data were not originally collected for research purposes for sentencing, treatment, and management purposes of the New Jersey DOC. Given variation in the type and amount of data available in the file, the analyses were run on subsamples of the entire dataset. Extensive missing data analyses (See Appendix A) fail to show systematic differences with regard to the types of cases that are missing data.

The recidivism data included here are based upon official records and, as such, should be considered an underestimate. It is well known that many sex crimes go unreported, authorities may decide not to press charges, charges may be pled down to non-sexual offenses, or there may simply not be sufficient evidence for conviction of offenses committed. Victim and offender reports, though hampered by issues of reliability, might paint a different picture of recidivism. Moreover, given the generally low base rate of sexual recidivism (5% in this sample), even with a large sample we may lack power to detect difference among groups. This becomes even more problematic when attempting comparisons among smaller sub-samples (e.g., those nearly committed as SVPs or those who offend against a particular type of victim).

Although this study attempts to provide a large-scale analysis of the treatment, processing, and commitment of sexual offenders, it should be noted that these are the practices of one state. While we expect that these results would generalize to other states, there are, of course, practices unique to New Jersey that limit generalizability. For example, clinicians in New Jersey making decisions about treatment are asked to assess the *treatment amenability* and the *repetitive and compulsive* nature of the sexual offending behavior, statutory criteria unique to New Jersey. Moreover, while treating sex offenders during the course of a prison stay is common, New Jersey is somewhat unique in having a single centralized prison-based sex offender treatment facility. Finally, legislation varies across states, which naturally impacts how the system manages sexual offenders. As previously noted, fewer than half of the U.S. states have enacted SVP legislation. While New Jersey has in many ways been a leader in terms of the passage of legislation, trends and practices with the regard to the treatment and management of sex offenders in this state system may differ as a result of this.

Issues of rater reliability may also impact the quality of the data extracted from the files. We attempted to minimize this problem through high-quality training of all research assistants; nonetheless, given the scale of the project and the number of research assistants employed through the data collection period, there is bound to be some inconsistency in the coding of data.