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Characteristics of juvenile sexual offender recidivists

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Characteristics of juvenile sexual offender recidivists

by

Christopher A. Ralston

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
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ABSTRACT

Accurate assessment of risk of sexual reoffense for juveniles has the potential to inform many decisions including how to segregate low from high risk offenders, allocate limited resources, make treatment assignments, and implement various registration and community notification laws. Past research has failed to identify many risk factors because of flaws in research designs. The present study employed an archival file review of 637 juvenile sexual offenders (JSOs) from Utah who entered the juvenile justice system for a sex offense between 12 and 17 years of age. Data from those files were extracted into a background codebook that tapped both previously explored variables and many others that had yet to be explored. Variables were grouped into nine families of variables: child abuse, family problems, education or learning problems, discipline problems in school, non-sexual antisocial behavior, mental health diagnoses, mental health treatments, sexual offender specific treatments, and sexual offending history. Variables were then analyzed using either chi-square or correlation analyses to determine significant marker variables predicting sexual reoffense. Upon arriving at sets of significant marker variables, hierarchical logistic regression analysis was employed to determine the independence and incremental predictive ability of the variables within each family. The result of this round of analysis was an optimal set of variables within each family. For the final round of analyses, each family of variables were entered into the second block of a hierarchical logistic regression analysis with variables from sexual offending history and abuse history families entered into the first block. Upon determining which families added to the prediction of sexual reoffense above and beyond offending and abuse history, the retained variables were entered into a series of simultaneous logistic regressions in order determine the independence of the final set of

variables. Overall, six total variables, including two with nonlinear effects, emerged as significant independent predictors of sexual recidivism for JSOs: the number of sexual offense adjudications, the number of sexual offense victims, the JSO's offending age range, offending while under supervision, the frequency of past hands-on sexual abuse, and any history of special education. Overall, the model was a good fit, correctly classifying 91.2% of JSOs in the sample.

INTRODUCTION

Introduction

Knight and Prentky (1993) reported that approximately 22% of adult rapists and 23% of adult child molesters in their sample had official sex offense charges as juveniles, and an additional 10% of that sample reported they had perpetrated a sexual offense as a juvenile for which they were not charged. Additionally, a National Incident Based Reporting System paper (NIBRS; Snyder, 2000) indicated that offenders age 18 or younger committed 23.2% of all sex offenses between 1991 and 1996, which reflected a 14% increase in the number of juvenile sexual offenders (JSOs) since 1984 (Bench, Kramer, & Erickson, 1995). When looking at specific offenses, JSOs committed 17% of all rapes, 23.4% of all sexual assaults with an object, 27% of forcible fondling cases, and 36.2% of all forcible sodomy cases reported to law enforcement agencies between 1991 and 1996 (Snyder, 2000). Furthermore, 40% of all offenders with victims age six or less and 39% of all offenders with victims age 6 to 11 were juveniles themselves (Snyder, 2000).

Sex offenses not only result in physical and emotional suffering on the part of victims and their families, but also enormous financial costs to society through the juvenile justice system; departments of child, family, or victims services; and through therapeutic intervention (Bench et al., 1995; Prentky & Burgess, 1990). Some examples include costs associated with trials, incarceration, probation or parole, medical and mental health treatment for the victim and his or her family, and rehabilitative services for the offender.

The criminal justice system has sought to reduce future victimization and costs to society by implementing a variety of mechanisms to control or reduce the risk of these perpetrators reoffending. Most obviously, crimes are punished by incarceration or other types

of sanctions, such as probation, restitution, and fines. Additionally, many of these sanctions are often coupled with some form of treatment. More recently, however, the governments of most states introduced additional regulations that impose more stringent controls over the possibility of sexual reoffense. These newer regulations include “Megan’s Law,” the Jacob Wetterling Crimes Against Children Act, and various sexual predator laws involving post-sentence, involuntary confinement.

In 1994, New Jersey introduced “Megan’s Law” in response to the abduction and murder of seven-year-old Megan Kanka by a known sexual offender. The basic purpose of “Megan’s Law” was to assist law enforcement officials and the community by providing information with which to combat sexual offenders who prey on children. New Jersey accomplished this task by requiring sexual offenders to register with law enforcement agencies for the purpose of giving those agencies information about offenders living in their jurisdictions. New Jersey hoped that this additional information would lead to preventing and promptly resolving incidents involving sexual abuse and missing persons. Additionally, that law allowed for the dissemination of that information to the general public if the offender was deemed a risk to reoffend. In New Jersey, this law typically applies to all persons convicted or found guilty by reason of insanity for the commission of a sexual offense (Swearingen, 1997; Travitis & Reppucci, 2002)¹.

Soon after the passage of “Megan’s Law” in New Jersey, the Federal Government passed the Jacob Wetterling Crimes Against Children Act (JWCACA). This act called upon all states to implement some form of “Megan’s Law.” More specifically, the JWCACA required all states to set up a system of sexual offender registration or face cuts in various federal funds. Though several states implemented some form of community notification as

modeled by the New Jersey system, community notification was not a requirement of JWCACA (Swearingen, 1997; Travitis & Reppucci, 2002). To this date, all states except Hawaii have some form of these laws in place (KlaasKids Foundation for Children, 2003).

As applied to juvenile offenders, only five states explicitly exclude juveniles from their registration requirements², while 18 states specifically require these juvenile offenders to register with local authorities. The remaining 27 states make no distinction between juvenile and adult offenders in applying these statutes (KlaasKids Foundation for Children, 2003)³. Of the 45 states that include juveniles under their registration laws, all allow for the possibility that some information regarding the juvenile can be released to the public (KlaasKids Foundation for Children, 2003). Seventeen states have passed laws allowing sexually violent persons to be involuntarily committed beyond the normal judicial sentence. Caldwell (2002) reported that at least four of these states allow juveniles to be committed under these statutes, and the others allow the commitment decisions to be based on offenses perpetrated as a juvenile.

Sexual crimes can be very heinous and alarming to the general public, and the new laws appeared to provide some form of protection to community members. However, the laws have had to withstand many constitutional challenges since their inception. Most of these challenges have been pursued in the adult court system, but to date, almost all of these challenges have failed (Swearingen, 1997; Travitis & Reppucci, 2002).

Like their adult counterparts, juvenile offenders have levied constitutional challenges against their inclusion in registration, community notification, and involuntary post-sentence confinement laws. Arguments against the application of these laws to juveniles are many. Typically, however, juvenile challengers argued that the application of these laws is contrary

to the philosophy of the juvenile code set forth after the establishment of the 1899 Cook County, Illinois Juvenile Court, and therefore, the application to juveniles is void. Others argued that if juveniles were obligated to register, the registration must end on the eighteenth birthday (*In re B.G.*, 1996; Swearingen, 1997; Travitis & Reppucci, 2002). Additionally, challengers argued that the courts had abused their discretion when they allowed for the disclosure of juveniles' identities to the public, violating longstanding federal policy decisions regarding a juvenile's right to privacy (*In re B.G.*, 1996; Swearingen, 1997; Travitis & Reppucci, 2002). Like most adult challenges, the courts rejected all of the arguments thus far (Swearingen, 1997; Travitis & Reppucci, 2002).

Despite the court's refusal to overturn the application of various forms of "Megan's Law" to juveniles, the arguments do have some merit. Historically, the juvenile justice system has treated juvenile offenders differently than adult criminals. During the establishment of the 1899 Cook County Juvenile Court, the justice system took the stance that the government's function was to rehabilitate youths who strayed from the law, instead of adjudicating guilt or fixing blame on the juvenile as a criminal (Swearingen, 1997; Travitis & Reppucci, 2002). As a result, many rigid procedural protections of the adult criminal courts were viewed as unnecessary and even an impediment to the successful treatment of young offenders. However, this argument was weakened by the recent granting of additional safeguards to juveniles by the U.S. Supreme Court that are similar to those found in the adult courts. These safeguards include the entitlement to due process, the right to counsel, the right to confront and cross-examine witnesses, privilege against self-incrimination, burden of proof beyond a reasonable doubt, extension of the protection of the double jeopardy clause, preventing the disclosure of information regarding juvenile offenders

to the public, extension of constitutional interests of liberty and privacy, and the Equal Protection Clause (see *In re Gault*, 1967; *In re Winship*; 1970; *Breed v. Jones*, 1975; *New Jersey v. T.L.O.*, 1985; *In re K.V.N.*, 1971).

Despite the increased similarity of the juvenile and adult justice system, the court still views juveniles differently because of the belief that juveniles' behavior patterns have not yet solidified, making them more amenable to rehabilitation (Travitis & Reppucci, 2002). However, the application of registration and community notification laws to juveniles not only ignores distinctions between juveniles and adults, but also fails to promote rehabilitation. Instead, the application of these laws may even hinder the rehabilitative process by isolating and exposing juvenile offenders to stigmatization and degradation. These laws also violate confidentiality and other protections granted by past courts to juveniles by releasing their identities, the nature of the offense, and in some instances, the juvenile's address, physical description, photograph, fingerprints, and employment or school address (Swearingen, 1997). In the end, the resulting stigmatization may additionally penalize juvenile offenders through a life of isolation, an inability to make new socially appropriate acquaintances, an inability to participate in certain activities, and a reduced potential to gain meaningful employment (*United States v. Glasgow*, 1975 in Swearingen, 1997). These ends are anything but therapeutic or rehabilitative, as was the original aim of the juvenile court.

Even if we assume that the juvenile justice system has shifted to a more punitive model, the application of these laws to juveniles is still questionable. Juveniles are still not afforded all the procedural safeguards that are granted to adult offenders (e.g. trial by jury of peers). Because of this disparity, any sanctions imposed upon JSOs may constitute a violation of the Equal Protection Clause of the Fourteenth Amendment.

The purpose of “Megan’s Law”, the Jacob Wetterling Crimes Against Children Act, and laws that allow for the extended incarceration of sexually violent offenders is noble and serves the valid purpose of potentially protecting society against the commission of additional heinous acts. However, when applied to juveniles, this society’s interest is not the only interest in danger. Thus, the application of these laws requires objective and valid criteria and methods for assessing future risk in order to identify which juvenile offenders are most likely to reoffend (Hanson, 1998).

Accurate assessment of risk is needed not only to identify to whom these laws should be applied, but also to inform sentencing decisions, programming decisions, treatment decisions, and decisions regarding when and under what level of supervision the juvenile offender may return to the community (Cellini, 1995; Prentky, Harris, Frizzell, & Righthand, 2000). Informed decisions about risk benefit public policy makers, judges, parole and probation officials, therapists, and anyone who needs to make decisions regarding risk (Bench et al., 1995). Furthermore, accurate risk assessment also benefits the recipient of those decisions, the JSO him or herself. Without accurate indicators of risk, most jurisdictions must resort to blind decisions about potential risk or engage in blanket policies that apply to all sexual offenders. The consequences of these unguided conclusions could span from the deprivation of liberty to the expenditure of sizeable resources for offenders who may have stopped offending given minimal intervention (Hanson, 1998). Thus, the purpose of this study is to try to identify those characteristics of JSOs that are most closely linked to an increase in their risk of reoffense.

Characteristics of Juvenile Sexual Offenders

What we know about JSOs, as a class, is that they are a heterogeneous population (Knight & Prenky, 1993). These offenders differ on many dimensions, including age, gender of victim, type of offense, level of violence used, environment of offending, psychiatric diagnoses, developmental characteristics, home environment, and level of education. (Caldwell, 2002; Hunter, Figueredo, Malamuth, & Becker, 2003; Righthand & Welch, 2001).

With respect to age, JSOs sometimes start offending at a very young age, possibly as early as six to nine years of age (Araji, 1997). However, rates of offending for different age categories are not stable (Caldwell, 2002; Snyder, 2000). Specifically, the rate of offending among juveniles tends to increase sharply from age seven until the mid-teens, around 13 or 14 years of age, and then gradually declines to the middle thirties where the rate levels off. Another trend is for many offenders to select victims from their approximate age cohort. For example, the rate of offending against victims under the age of 12 is three times greater for perpetrators age 13 and 14 than for perpetrators just a few years older (Caldwell, 2002)

The type of offending behavior that JSOs engage in also varies widely. Righthand and Welch (2001) reported that offenses range from noncontact types of offenses, such as making obscene phone calls, voyeurism, or lewdness, to contact types of offenses, such as sexual abuse or forced penetration. Additionally, the types of offenses vary in the degree of coercion, force, or violence used. Lastly, JSOs often engage in nonsexual criminal or antisocial behavior, as well. For example, in one sample of JSOs, 44% had at least one prior nonsexual charge (Fehrenbach, Smith, Monastersky, & Deisher, 1986), and in another sample only 26.1% of the JSOs committed sex offenses exclusively (Allan, Allan, Marshall, & Kraszlan, 2002). This relation between sexual and nonsexual offending is even stronger if

the offender committed a sexual offense that involved forcible sexual assault (Righthand and Welch, 2001).

A history of maltreatment has also been shown to be relevant with many JSOs. A variety of studies reported that between 11% and 80% of JSOs have experienced some form of sexual abuse (Bagley & Shewchuck-Dann, 1991; Becker & Hunter, 1997; Fehrenbach et al., 1986; Kahn & Chambers, 1991; McMackin, Leisen, Cusack, LaFratta, & Litwin, 2002; Prentky, Harris, Frizzell, & Righthand, 2000). Between 16% to 54% of JSOs reported histories of physical abuse, emotional abuse, or neglect (Bagley & Shewchuck-Dann, 1991; Fehrenbach et al., 1986; Kahn & Chambers, 1991; McMackin et al., 2002; Ryan, Miyoshi, Metzner, Krugman, & Fryer, 1996; Prentky et al., 2000), and between 7% and 74% reported experiencing both sexual and physical abuse (Fehrenbach et al., 1986; McMackin et al., 2002; Prentky et al., 2000). One study reported that only 12.5% of their sample had no direct experience with either sexual or physical abuse (McMackin et al., 2002). Additionally, violence in the home involving other family members was reported for between 25% and 50% of offenders (Kahn & Chambers, 1991; Ryan et al., 1996). Some researchers reported that these rates may not differ from other nonsexual offenders (Hunter & Figueredo, 1999; Knight & Prentky, 1993). However, others argued for a link between history of abuse and future sexual perpetration, particularly when the abuse was perpetrated early in life and in a more invasive way (Bagley & Shewchuck-Dann, 1991; McMackin et al., 2002; Smith & Monastersky, 1986). Some studies also reported that abused offenders tended to begin offending earlier, have more victims than their nonabused counterparts (Knight & Prentky, 1993; Murphy, DiLillo, Haynes, & Steere, 2001), and select victims and engage in

perpetration that resembled their own victimization (Hunter et al., 2003; Veneziano, Veneziano, & LeGrand, 2000).

There also seems to be some support for the relation between offending behavior and both familial and social relationships (Righthand & Welch, 2001). More specifically, some studies reported that JSOs have a higher degree of family instability, disorganization, and violence than other types of offenders (Bagley & Shewchuk-Dann, 1991; Miner, Siekert, & Ackland, 1997). Additional studies suggested that these offenders have a higher prevalence of physical and emotional separation from their parents or guardians (Kahn & Chambers, 1991; Fehrenbach et al., 1986). Furthermore, some evidence suggests that juvenile offenders experience a higher degree of social isolation and deficient peer relationships than their nonoffending counterparts, possibly due to deficits in social skills (Fehrenbach et al., 1986; Katz, 1990; Miner & Crimmins, 1995).

Additional relations have been supported between offending behavior and both sexual histories and sexual beliefs. Particularly, there is some support for the relation between previous consenting sexual experiences and sexual offending, in that perpetrators of sexual offenses may have prior sexual experiences that exceed those of their peers (Ryan et al., 1996). In that same sample, about one-third viewed sex as a means to demonstrate love, roughly a quarter saw sex as a means to feel power or control, approximately one-tenth viewed sex as a means to dissipate anger, and just under 10% considered sex as a way to hurt, degrade or punish others. Lastly, some investigators reported that JSOs had earlier exposures to pornography (Ford & Linney, 1995) and more prior experience with sexual dysfunction than nonoffending counterparts (Longo, 1982).

One of the most consistent predictors of adult sexual recidivism is the presence of deviant sexual arousal (Hanson & Bussière, 1998), which is commonly assessed using phallometric measurements. With respect to JSOs, increased deviant sexual arousal has been associated with sexually coercive behavior (Murphy et al., 2001). In that same sample, JSOs with male victims tended to have an overall heightened general level of deviant arousal.

Although JSOs vary in academic abilities, there is some support for academic difficulties and their relation to sexual offending. Particularly, disruptive behavior, truancy, learning disabilities, and inappropriate grade placement have been associated with sexual offending (Fehrenbach et al., 1986; Kahn & Chambers, 1991; Knight & Prentky, 1993; McMackin et al., 2002). In one sample of JSOs, 53% had behavior problems in school, 30% had histories of truancy, and 39% had learning disability classifications (Kahn & Chambers, 1991). In another sample, 53% had behavior problems in school and only 57% of JSOs were on schedule or better with respect to grade placement (Fehrenbach et al., 1986). Additionally, there is some support for some types of offenders scoring slightly lower on verbal intelligence measures (McCurry, McClellan, Adams, Norrei, Storck, Eisner, & Breiger, 1998), and in other studies approximately one-fourth of offenders displayed some form of neurological impairment (Bagley & Shewchuck-Dann, 1991; Ferrara & McDonald, 1996).

Lastly, cognitive distortions, attributions of blame, and other mental health issues have also been associated with juvenile sexual offending. Knight and Prentky (1993) reported that sexual offending may be associated with characteristics such as lower empathy, decreased ability to recognize appropriate emotions, and decreased ability to take another's perspective. In another sample, sexual offending was associated with negative attribution style and hostile masculinity (Hunter et al., 2003). Furthermore, others reported that sexual

offending in juveniles was associated with psychosocial dysfunction, conduct disorder or antisocial traits, impulse dyscontrol, and an increased rate of depression or other mental health disorder (Becker, Kaplan, & Tenke, 1992; Knight & Prentky, 1993; Hunter et al., 2003; McMackin et al., 2002; Miner & Crimmins, 1995; Prentky et al., 2000; Righthand & Welch, 2001).

What We Know About Adult Sexual Recidivism

Most research in the area of sexual offense recidivism has sampled adult populations (Hanson & Bussière, 1998), and because of the relative scarcity of studies that have looked at juvenile sexual recidivism, a review of the adult literature may provide some clues to important factors that may also affect recidivism in juvenile populations. Within the adult offender populations, Hanson and Bussière (1998) found that the overall recidivism rate in 61 studies reviewed was 13.4% with an average follow-up of five to six years. This rate could be broken down further in that 18.9% of rapists and 12.7% of child molesters continued to reoffend after being convicted and subsequently released for the commission of a sexual offense. Others have reported that the long-term rates of recidivism could be as high as 48.9% in general (Doren & Epperson, 2001) and 52% for extrafamilial child molesters (Doren, 1998). However, all rates are probably underestimates, as some commissions of offenses go undetected (Hanson and Bussière, 1998). Prentky and Knight (1993), for example, found that an additional 10% of their adult sample reported at least one additional juvenile sexual offense that was never detected by the criminal justice system.

Hanson and Bussière's (1998) review of recidivism studies indicated that there are only two demographic predictors of recidivism. Specifically, offenders who are young and single tended to reoffend at greater rates. However, other factors, such as an antisocial

personality disorder, the total number of prior nonsexual offenses, the total number of prior sexual offenses, victimization of strangers or extrafamilial victims, early onset of offending behavior, selection of male victims, and diverse sexual offending history were linked to an increase in rates of recidivism. Furthermore, failure in a sexual offender specific treatment program modestly predicted reoffending (Hanson & Bussière, 1998).

Others have supported these results and added additional risk predictors. These additional predictors included the length of the offenders offending history, offending while under supervision, committing offenses in public places, using force or threat to achieve victim compliance, offending characterized by multiple sex acts on a single victim during a single contact, offending against multiple victims in multiple age categories, offending against strangers, persistent adolescent antisocial behavior, unstable employment histories, discipline history while incarcerated, and histories of treatment failure in both sex offender specific and chemical dependency treatments (Epperson, Kaul, Hout, Hesselton, Alexander, & Goldman, 1999). However, the strongest predictor of sexual recidivism among adult offenders was the presence of deviant sexual interests, indicated by diverse sexual crimes, young male victims, stranger victims, and deviant sexual arousal as assessed by phallometric assessments, self-report, or MMPI masculinity-femininity scores (Hanson & Bussière, 1998).

What We Know About Juvenile Sexual Recidivism

Compared to the adult literature, few studies have attempted to point to factors that might indicate an increased risk of recidivism in juvenile populations. Part of the difficulties in identifying predictors of risk is the wide variety of reported recidivism rates. For example, a review of several recidivism studies yielded rates between 3% and 37% (Hagan & Gust-Brey, 2000; Kahn & Chambers, 1991; Prentky et al., 2000; Rasmussen, 1999; Rubinstein,

Yeager, Goodstein, & Otnow Lewis, 1993; Sipe et al., 1998; Worling and Curwen, 2000).

Meanwhile, others estimated that approximately 58% of juvenile offenders in one sample had at least one previous sexual offense (Fehrenbach et al., 1986), and about 33% of adult offenders in another sample also had juvenile offenses (Knight & Prentky, 1993).

There are a number of possible reasons for these discrepancies. Some studies suggest there are subgroups of offenders who reoffend at different rates or who continue to perpetrate sexual offenses as adults while other subgroups do not (e.g., Becker & Kaplan, 1993). Yet, most studies (see Hagan & Gust-Brey, 2000; Kahn & Chambers, 1991; Prentky et al., 2000; Rasmussen, 1999; Rubinstein et al., 1993; Worling & Curwen, 2000) combine various subgroups (e.g. noncontact, contact, and violent offenders) ignoring differences.

Secondly, recidivism rates vary depending on the length of the follow-up and whether or not the offender received treatment during the follow-up (Caldwell, 2002; Hanson, 2000; Worling & Curwen, 2000). For example, Hagan and Gust-Brey (2000) found that 20% of their entire sample reoffended within a ten year follow up, whereas only 12% of their sample reoffended during the first five years. Additionally, Caldwell (2002) found significant a correlation ($r = .74$) between rates of sexual offense reconviction and follow-up time in his review of eleven studies using any new conviction as the criterion for recidivism. Of the studies reviewed for this thesis, follow-up periods spanned from a few weeks (e.g. Smith & Monastersky, 1986) to as long as 10 years (e.g. Hagan & Gust-Brey, 2000; Worling & Curwen, 2000).

Other studies are plagued by small numbers of participants. In Caldwell's (2002) review of recidivism studies, five of 25 published studies used 50 or fewer JSOs, an additional four had 100 or fewer JSOs, and six of the remaining studies had fewer than 150

JSOs in their sample. Of those studies with the smallest numbers of JSOs, the rates of recidivism would have varied greatly with the addition or subtraction of just a few JSO recidivists. Small numbers of JSO also results in inadequate power to detect even large predictors of risk (Prentky et al., 2000; Rasmussen, 1999)

Other studies rely upon inadequate means to detect new perpetrations, use a variety of offender populations, and use a variety of definitions of or types of offenses used to indicate sexual recidivism (Bench et al., 1995; Caldwell, 2002; Prentky et al., 2000). As an example, Bench (1990 in Worling and Curwen, 2000) relied upon JSO and parent self-report of new sexual offenses as the criterion for detection of new sexual offenses, thus leading to questionable interpretation of results. Additionally, many samples used JSOs who had received sexual offender specific treatment prior to their release (e.g. Smith & Monasterky, 1986), which alters the generalizability of the results to the general population of JSOs. Lastly, Worling and Curwen (2000) reviewed ten studies reporting juvenile sexual recidivism rates and found an overall recidivism rate of 14% for those studies using a new charge as the criterion for a new offense and 8% for those studies using conviction or self-report as the definition of a new sexual offense, indicating that more stringent criteria results in lower rates of reoffense.

Despite the apparent methodological flaws in many studies, a number of variables relating to the offender, the victim, and the offense have been identified as potentially related to risk of recidivism. Specifically, several characteristics of the offender seem to indicate an increased risk to reoffend. These characteristics include a lack of age appropriate social competence, loneliness, social isolation, or poor social skills (Worling & Curwen, 2001; Långström & Grann, 2000; Prentky et al., 2000; Knight & Prentky, 1993; Kenny, Keogh, &

Seidler, 2001), learning problems (Kenny, Keogh, & Seidler, 2001), cognitive distortion (Kenny et al., 2001; Knight & Prentky, 1993), truancy (Schram et al., 1992), disruptiveness in school (Knight & Prentky, 1993), antisocial interpersonal orientation (Kenny et al., 2001; Knight & Prentky, 1993), lack of impulse control (Knight & Prentky, 1993; Worling & Curwen, 2001), blaming the victim (Kahn & Chambers, 1991; Prentky et al., 2000), deviant sexual attitudes (Kahn & Chambers, 1991; Schram, et al., 1992; Worling & Curwen, 2000, Worling & Curwen, 2001), past or present sexual fantasies about children (Schram, et al., 1992; Worling & Curwen, 2000, Worling & Curwen, 2001), a history of sexual abuse victimization (Kahn & Chambers, 1991; Knight & Prentky, 1993; Rubinstein et al., 1993; Smith & Monastersky, 1986), and deviant sexual experiences or arousal patterns (Kenny et al., 2001).

Other studies reported a variety of victim selection factors that may influence recidivism. Some such factors associated with increased recidivism rates include the commission of offenses against younger victims (Kahn & Chambers, 1991; Sipe et al., 1998; Worling & Curwen, 2000; Worling & Curwen, 2001), against any male victims (Kahn & Chambers, 1991; Långström & Grann, 2000; Smith & Monastersky, 1986), against large numbers of victims (Långström & Grann, 2000; Rasmussen, 1999; Schram, Malloy & Rowe, 1992; Worling & Curwen, 2001), against large numbers of female victims (Rasmussen, 1999), against the same victim multiple times (Worling & Curwen, 2001), and against stranger victims (Långström & Grann, 2000; Smith & Monastersky, 1986).

Additionally, some studies reported several characteristics of the actual offenses that were associated with higher rates of recidivism. These included the use of verbal threats before, during, or after the commission of an offense (Kahn & Chambers, 1991), presence of

grooming types of behavior prior to the offense (Worling & Curwen, 2000), and more intrusive sexual assault activities against children (Worling & Curwen, 2000).

Despite the aforementioned findings, JSOs are more likely to be rearrested for crimes that are not sexual in nature than for additional sexual crimes (Allan et al., 2002; Caldwell, 2002; Kahn & Chambers, 1991; Prentky et al., 2000; Worling & Curwen, 2000). Caldwell (2002) reported that JSOs are six times more likely to recidivate in nonsexual ways. Additionally, he suggested that young sexual offenders are at a higher risk for chronic nonsexual recidivism than chronic sexual reoffending. Likewise, more versatile young sexual offenders who commit a variety of offenses besides sexual offenses were less likely to continue perpetrating into adulthood than slightly older, yet more specialized, sexual offenders (Caldwell, 2002).

Regardless, juvenile offenders, particularly those who are adolescents, often endure a time of great change including changes in peer culture, relationships, social skills, and interpersonal sensitivity (Caldwell, 2002; Prentky & Righthand, 2003). Thus, it is possible that different factors affect risk of recidivism differently at different time periods in the adolescent's development. Consequently, this makes the prediction of recidivism for juveniles a very difficult task.

Actuarial Attempts to Predict Adult Sexual Recidivism

Several attempts have been made at developing objective measures to predict recidivism among adult offenders. Some examples of these measures include the MNSOST-R (Minnesota Sex Offender Screening Tool-Revised; Epperson, et al., 1998, 2000, 2003), the RRASOR (Rapid Risk Assessment for Sexual Offense Recidivism; Hanson, 1997), the SORAG (Sex Offender Appraisal Guide; Quinsey, Harris, Rice, & Cormier, 1998), and the

Static-99 (Hanson & Thornton, 1999), each with varying degrees of success (Barbaree, Seto, Langton, & Peacock, 2001).

Hanson (1996) hypothesized that, though the previously mentioned tools tap mainly static (fixed) factors, the future of adult recidivism prediction may depend upon the ability of new tools to assess both static and dynamic (changeable) factors. Static factors are characterized by those variables that are often found in criminal records, such as history of maladjustment, prior offenses, and deviant developmental trajectories that indicate an increased risk of engaging in criminal behavior. Hanson (1996) noted that these types of factors could indicate a general level of risk but fail to predict when an offense will occur or whether the offender has substantially reduced the likelihood of reoffending. Dynamic factors also have the potential to predict recidivism, but unlike static factors, these variables may change over time. Likewise, those changes are associated with increases or decreases in risk of recidivism. Within this category there are two types, stable and acute. Stable factors are those that are more enduring, such as alcoholism or deviant sexual interests, but that may still be altered by treatment or controlled through supervision. Acute factors, on the other hand, are highly variable from time to time. Examples of acute factors are sexual arousal and drunkenness that, when present, may help determine the timing of an offense (Hanson, 1996). Even though the assessment of dynamic factors may add significantly to the future of recidivism prediction, the use of these factors is still in its infancy stage, as dynamic variables (e.g., deviant sexual interests) are difficult to define and assess.

Measures, such as the MNSOST-R (Epperson et al., 1998, 2000, 2003), account for some of these dynamic factors in conjunction with assessing static factors. The result of

combining static and dynamic factors is better prediction of recidivism than assessing static factors alone (Beech, Friendship, Erikson, & Hanson, 2002; Hanson, 1996; Thornton, 2002).

Additionally, actuarial tools typically outperform other methods of assessing risk, such as clinical judgment or structured clinical assessment (Grove & Meehl, 1996; Harris, Rice, & Cormier, 2002; Harris, Rice, & Quinsey, 1993; Janus and Meehl, 1997). Simple correlation of scores on a measure with a criterion behavior, such as sexual recidivism, is one way that the adequacy of prediction is assessed. Past research has indicated that actuarial risk assessment scores tend to correlate between .28 and .35 with sexual recidivism (Epperson et al., 1998, 2000, 2003; Hanson & Thornton, 2000), whereas, clinical judgment or structured clinical assessment tends to correlate with recidivism at rates around .10 (Hanson & Bussière; 1998).

A better way of assessing the adequacy of prediction is the use of the area under the receiver operator curve (ROC-AUC) statistic. This type of statistic provides an advantage over correlations because, unlike correlations, ROC-AUC statistics are unaffected by base rates (Quinsey et al., 1998; Rice & Harris, 1995). Instead, ROC-AUC estimates the probability of a randomly selected subject that exhibits some characteristic (e.g., recidivism) having a higher score than a randomly selected subject that does not exhibit that characteristic. This probability ranges from 0.00 to 1.00, where .50 reflects mere chance and 1.0 indicates perfect positive prediction. Any significant difference from .50 reflects improvement over chance. Among methods of sexual recidivism prediction, clinical judgment and structured clinical assessment perform at near chance levels and actuarial risk assessment tools, such as the MNSOST-R, RRASOR and the Static-99, perform substantially

better with ROC-AUC estimates between .68 and .77 (Epperson et al., 1998, 2000, 2003; Hanson & Thornton, 2000).

Attempts to Predict Juvenile Sexual Recidivism

With relatively good predictors of sexual recidivism for adults offenders, one might ask: Are JSOs simply young sexual offenders, similar enough to adult sexual offenders, that the same tools can be used to determine their risk of recidivism? Or, are JSOs sufficiently different as to warrant the development of a more specific tool that captures those differences? The answer, as the review of the literature suggests, is that JSOs are different. They tend to be more heterogeneous and have different experiences. Subsequently, different factors influence their recidivism. Thus, new tools need to be developed to account for these differences.

Unfortunately, attempts to develop tools that predict JSO recidivism have had limited success (e.g. J-SOAP, Prentky et al., 2000; J-SOAP-II, Prentky & Righthand, 2003; The ERASOR, Worling & Curwen, 2000; The ERASOR Version 2.0, Worling & Curwen, 2001). First, many development and validation studies were seriously biased (e.g., small numbers of JSOs, short follow-ups, failing to account for treatment effects). Additionally, some tools failed to account for important dynamic factors that may be especially important in juvenile populations (Hanson, 2002). Also, some tools fail to provide or even determine *a priori* weighting to items that may have more or less influence on risk of reoffending or fail to state what scores constitute “high risk” (see Prentky et al., 2000; Prentky & Righthand, 2003; Worling & Curwen, 2000; Worling & Curwen, 2001). Furthermore, some scales rely on variables that have little or no empirical support for predicting recidivism among JSOs, base variables on adult studies or even conjecture (Prentky et al., 2000; Prentky & Righthand,

2003; Worling & Curwen, 2000; Worling & Curwen, 2001). Lastly, some tools rely on self-report, which often produce invalid and unreliable estimates of offense or victim characteristics, number of victims, and historical accounts of past abuse victimization (Baker, Tabacoff, Tornusciolo, & Eisenstadt, 2001).

Rationale and Purpose

The literature lacks a study that both is methodologically sound and points to characteristics that place some JSOs at more risk than others. To date, most studies have used convenience samples (e.g., JSOs in treatment or previously released from correctional facilities), limiting the generalizability of those results. Additionally, most studies use small numbers of JSOs, limiting the power needed to detect even larger effects. Lastly, most recidivism studies sample only a small number of all of the potential predictors of future risk. Thus, the field of JSO research is in dire need of a study that samples JSOs from the entire spectrum of offenders (e.g., those receiving treatment, those who receive no treatment, those receiving intensive correctional sanctions, those who receive minor sanctions, etc.) in sufficient numbers to have adequate power to detect moderate and large effects from a large pool of potential risk-related variables.

With the knowledge gained from past failures, the purpose of this study was to explore several background factors that are potentially associated with an increased risk of sexual recidivism in a large, representative sample of JSOs. Specifically, this study explored the relations between sexual recidivism and the offender's abuse history, history of family problems, history of education or learning problems, history of education discipline problems, mental health treatment and diagnosis history, history of antisocial behavior, and history of sexual offending in a sample drawn from the entire spectrum of JSOs in Utah. This

study is part of a larger study that will examine, in addition to background factors, specific offense characteristics, such as behavioral characteristics of offenses and the relationship of offender to his victim(s) and will include a longer follow-up period. The end goal of that study is the development of an actuarial juvenile sexual offense recidivism screening tool.

The identification of background characteristics associated with recidivism may contribute to the development of that tool that can be used to assist both treatment and law enforcement decision-making regarding these types of offenders. The advantages of this study include the use of a large, representative sample, and a comprehensive assessment of the majority of possible indicators of recidivism specified by other studies.

Hypotheses

Many specific hypotheses regarding how various background factors should relate to recidivism guided the analyses. In accordance with past research, reliable increases in reoffense rates above the baseline rate were expected to be associated with one or more of the following characteristics: 1) a history of being a sexual abuse victim, 2) a history of multiple sexual offenses, 3) a large number of victims, 4) a history of learning problems in school, 5) a history of truancy from school, 6) a history of disruptiveness in school, 7) antisocial interpersonal orientation, 8) lack of impulse control, and 9) blaming the victim. Though research on JSOs has not supported specific links between other variables and sexual offending recidivism, a number of additional exploratory analyses were also conducted to examine the relationship between recidivism and the following variables 1) a history of physical abuse, emotional abuse, or neglect, 2) earlier age at first abuse, 3) more invasive and pervasive abuse history, 4) dysfunctional familial and social relationships, 5) care giving instability, 6) familial substance use or abuse, 7) psychological diagnoses, such as

paraphilias, conduct disorder, or impulse control disorder, 8) presence of extensive mental health programming, 9) absence of sexual offender specific treatment histories for past offenses or failure in that type of treatment, 10) external attributions of blame or denial, 11) extensive criminal offense history, and 12) younger in age at first commission of a sexual offense. The rationale for exploring these areas follows either from relations that were established in the adult literature or from differences noted between JSOs and non-sexual offenders or non-offenders.

METHOD

This study was approved by Institutional Review Board for the Utah Department of Human Services and Iowa State University, and consent was granted by the Utah Juvenile Justice System.

Participants

The present study was based on archival file reviews of JSOs from the state of Utah. Files were obtained for 637 male juveniles who entered the juvenile justice system for a sex offense between 1990 and 1992 when they were between the ages of 12 and 18 years old. With the exception of files that could not be located, this was an exhaustive sample. The rationale for using JSOs from Utah was that Utah was one of few states that does not automatically expunge juvenile records once the offender reaches the age of 18.

The ethnic composition of the sample was 83.5% Caucasian/White, 7.5% Hispanic/Latino, 2.1% African American/Black, 1.5% Native American, 1.5% Asian/Pacific Islanders, 0.9% multiracial, and 9.4% not specified. The age that the offenders first entered the juvenile justice system ranged from 12 to 18 ($m = 15.25$, $sd = 1.57$).

Materials

Juvenile Judicial and Corrections Case Files. The case files varied somewhat in their content. The majority of cases contained a record of criminal involvement in the judicial system up to the JSO's index offense, including arrest, investigation, court, sentence, and probation reports. Additionally, most files included a description of the offender's sexual perpetrations prior to and including their index offense. These descriptions included the events that led up to the offense, the acts that took place during and after the commission of the offense, and a description of the victim or victims. Also, the majority of files contained

histories of familial involvement with the courts with respect to physical, sexual, or emotional abuse and neglect. Most files also contained a general profile of the offender that may have described substance use, social relations, and educational summaries. Lastly, a large number of files also included psychological profiles that included test results, treatment successes or failures, and clinical impressions of the offender.

Coding Instrument. Relevant variables were extracted from each file to an offender background codebook (see Appendix). Items that were coded included detailed demographic information, familial relationships, abuse history, educational history, substance use history, consenting sexual history, treatment history (chemical, sexual, and general mental health), sex offense history (charges and adjudications), attribution of responsibility in relation to each sexual offense, victim selection patterns, offense patterns, age at first commission of a sex offense (charged, adjudicated, and self-report), and non-sexual offense history. In addition, the number of victims of was obtained from another data source.

Recidivism Data. A listing of all new arrests, charges, and adjudications for both sexual and nonsexual offenses, was obtained for all subsequent offenses after the index offense until the JSO turned 18 years of age.

Procedures

Eight research assistants were trained over the course of several one to two hour meetings on the procedures for extracting information from the files and scoring the codebooks. Instructions were given for each individual item on the codebooks, and the assistants were paired and assigned identical practice cases. After completion of that case, the assistants met with the lead researcher to review the file and any discrepancies in coding that may have emerged. Discrepancies were discussed and the process was repeated with

additional case files until satisfactory reliability was achieved. After completion of the training, the research assistants coded all juvenile case files according to the prescribed protocol. When questions arose, they were directed to the lead researcher for discussion and clarification.

Three research assistants entered the data into an SPSS spreadsheet. All cases were double entered and then compared for possible entry errors. Upon finding of any errors, the research assistants were referred to original codebook to arrive at the correct entry.

Analyses

Sexual recidivism was defined as any arrest for a new sexual offense. Those offenders who were arrested within the time period between their release from the juvenile justice system and their 18th birthday were defined as recidivists, while those who were not rearrested were defined as nonrecidivists. The use of arrests rather than adjudications follows from the rationale used in the development of several other adult tools (e.g. MNSOST-R; Epperson et al., 1998, 2000, 2003). First, arrest dates represent a closer approximation to the actual date of the offense. Secondly, in the development of the MNSOST-R, a high proportion of arrests resulted in a conviction and results were nearly equivalent for arrests and convictions (Epperson et al., 1998, 2000, 2003). It was assumed that the same pattern would result here.

All categorical data variables were initially analyzed in crosstabulations with reoffense status. More specifically, if information was available for 25 or more JSOs on each marginal level of a variable, that variable was cross-tabulated with whether or not the offender recidivated to assess the number of recidivists and non recidivists who were identified as exhibiting that particular characteristic. Where variable levels included fewer

than 25 JSOs, that level was collapsed with an adjacent level within that variable or combined with another variable that was theoretically similar to obtain usable numbers of JSOs for analyses. Variables that still failed to meet the 25 JSO per level criterion were excluded from further analysis.

Chi-square analyses were used to determine which of these remaining variables were significantly associated with sexual recidivism. Items were retained if they were related to reoffense status at the $p < .05$ level. Additionally, point-biserial correlation analysis was used to test the relation between all continuous variables and reoffense status. All continuous variables were retained for further analysis if they correlate with recidivism at the $p < .05$ level. All significant variables were reported.

Finally, an analytic strategy using logistic hierarchical regression analyses were employed to assess the relative statistical independence and incremental predictive ability of the remaining items. Logistic regression analysis was chosen as the statistic for these analyses because the criterion variable, juvenile sexual recidivism, was dichotomous. The first round of these analyses evaluated statistical independence among related subgroups of variables (e.g., the presence or absence of hands-on types of sexual abuse, number of types of sexual abuse experienced, etc.). Once independent and significant variables were identified, these subgroup variables were subjected to another round of analyses within groups of related variables first (e.g., the presence or absence of any sexual abuse, the presence or absence of physical abuse, etc.). The procedures followed during this round of analysis included comparing more general variables first (e.g., the presence or absence of any sexual abuse), before including more specific variables (e.g., the presence or absence of hands-on types of sexual abuse) in later steps of the regression equations. The third round of analyses

evaluated the independence of the remaining variables within each family of variables (e.g., abuse history, family instability, etc.).

From the analyses of families of variables, the remaining statistically independent variables were subjected to a final round of hierarchical logistic regression analyses. The procedures followed for this final round included entering variables from the families of abuse history and sexual offense history into the initial block of the analyses followed by variables from each of the remaining families entered into the second block individually. The rationale for this procedure follows from past research and theory on factors influencing recidivism, in that these two families were expected to have the greatest contribution to prediction of risk. Variables from the other families were retained if they incrementally added to the prediction of recidivism at the $p < .05$ level. Following the test of the incremental predictive ability of these family variables, all remaining independent variables were tested in a simultaneous logistic regression. The result of these analyses was a pool of variable and variable levels that optimally discriminated those juveniles who sexually reoffend from those that do not. Lastly, to determine if time at risk differentially affected the fit of the model, those JSOs whose index offense occurred at the age of 16 or later were removed from the final logistic regression analysis, and those results were compared to the results of the model that included all JSOs.

The rationale for this analytic strategy was twofold. First, examining variables in groups allowed for the determination of independent predictive variables among conceptually similar variables. Second, by establishing strict criteria for each variables inclusion in latter rounds of analyses, the probability of Type I error was reduced.

RESULTS

Both codebook and constructed variables were categorized into nine families based upon conceptual similarity. These families included abuse history, family problems, education and learning problems, education discipline problems, history of antisocial behavior, mental health diagnoses, mental health treatments, sex offender specific treatment, and sexual offending history variables. During the analysis of these coded background variables, several new variables were created for one or more of the following reasons. First some conceptually similar variables exhibited parallel patterns of results. In some of those cases, the variables were combined where appropriate. Second, some continuous variables exhibited low frequencies of responses at all levels of those variables. In those cases, variables either were combined with other theoretically similar variables or variable levels were collapsed where to eliminate extreme scores. The dependent variable in all analyses was juvenile sexual recidivism, also referred to as reoffense status, which was defined as any arrest for a new sexual offense prior to age 18. The overall rate of sexual recidivism in this sample was 13.2%.

History of Abuse Bivariate Results

Sexual Abuse. Several variables in the background codebook tapped the JSO's own history of sexual abuse victimization. These variables included both self and official reports of the frequency of hands-off sexual abuse, and sexual abuse involving fondling through clothes, fondling under clothes, oral sex performed on the victim, forced penetration of the perpetrator, penetration of the victim, and unspecified acts. Additionally, variables were coded for the JSO's age when first sexually abused and the duration of the sexual abuse. Because of the high degree of similarity between the JSO's own self report and officially

documented reports of abuse, many of these different report variables were combined. In other words, new variables were created, such that, if the JSO had a history of abuse in either self or official reports, that juvenile was recoded in the new variable as having a history of that type of abuse. If the JSO had no history of abuse in both reports he was coded as having no history. These combined variables were reported unless otherwise specified. All significant abuse history variables are found in Tables 1 through 6.

The first abuse-related hypothesis stated that reliable increases in rates of sexual recidivism would be associated with any history of sexual abuse. To test this hypothesis a new variable was created from the codebook variables to represent the presence or absence of any history of sexual abuse in either self or official reports. As indicated in Table 1, significant differences in reoffense rates emerged between those JSOs who had and had not been sexually abused. Of the 145 JSOs with any history of sexual abuse, 28.3% recidivated before the age of 18, and of the 492 JSOs with no such history, 8.7% recidivated during that same time.

Table 1
Any history of sexual abuse

Variable	n (total)	%	n	Chi- Square	<i>p</i>
Does Offender Have a Record of Any Sexual Abuse by History (Either Self or Official-Report)?				37.34	<.001*
No	492	8.7%	43		
Yes	145	28.3%	41		

**p* < .0005.

Because a history of sexual abuse was associated with an increased reoffense rate, potential relations were explored between sexual recidivism and both age at onset and duration of sexual abuse. As indicated in Table 2, the age of onset for sexual abuse was not

significantly correlated with sexual reoffense status for either self or official reports.

Similarly, the duration of sexual abuse in months was not significantly correlated with reoffense status for either self or official reports (see Table 2). However, these null relations may have been influenced by the small number of JSOs who had information in their files about these variables.

Table 2
Sexual abuse onset and duration correlations

Variable	<i>R</i>	<i>n</i>	<i>p</i>
Age at First Sexual Abuse - Self Report	-.167	81	>.05
Age at First Sexual Abuse - Official Report	-.160	64	>.05
Number of Months Sexual Abused - Self Report	.084	51	>.05
Number of Months Sexual Abused - Official Report	.110	36	>.05

Two additional analyses were employed to determine whether or not the severity of the abuse was related to sexual recidivism. First, variables coded for the frequency of hands-off types of offenses were collapsed into a dichotomous presence or absence variable. Both self and official report versions of these new variables were combined. Chi-square analysis revealed reoffense rates between those JSOs with and without a history of hands-off types were not significantly different, though this result was probably an artifact of only two total JSOs with a documented history of hands-off types of sexual abuse. Second, a variable was constructed for the presence or absence of hands-on types of sexual offenses. A JSO was counted as having a history of hands-on sexual abuse if they had been the victim of any of the following: fondling over clothes, fondling under clothes, oral sex, penetration by the perpetrator, forced penetration by the victim, and abuse indicated but no details. Because of the high similarity between self and official reports of hands-on types of sexual offenses, the two versions of that variable were combined. Significant difference in reoffense rates emerged between those offenders who had been the victim of a hands-on type of sexual

abuse and those who had not (see Table 3). Specifically, 28.7% of the 47 JSOs who had been the victim of such sexual abuse sexually recidivated, whereas only 8.7% of the 490 JSOs who were not the victim of a hands-on type sexual abuse reoffended during that same time. As a result, a history of hands-on sexual abuse was retained for further analysis.

Table 3

Significant bivariate hands-on sexual abuse history variables

Variable	n (total)	%	n	Chi- Square	<i>p</i>
Does Offender Have a Record of Any Sexual Abuse by History - Hands off (Self or Official-Report)?				2.15	>.05
No	631	13.0%	82		
Yes	6	33.3%	2		
Does Offender Have a Record of Any Sexual Abuse by History - Hands on (Self or Official-Report)?				38.62	<.001*
No	494	8.7%	43		
Yes	143	28.7%	41		

**p* < .0005.

Because the more severe form of sexual abuse, that is hands-on as opposed to hands-off sexual abuse, was significantly related to reoffense status, a question was posed as to whether or not any individual hands-on sexual abuse behaviors were more predictive of recidivism. To examine the discrete effects of the different types of hands-on sexual abuse, dichotomous presence or absence variables were created for sexual abuse involving fondling through clothing, fondling under clothing, oral sex, victim forced to penetrate perpetrator, penetration by the perpetrator, and abuse indicated but no details. Because neither the sexual abuse variables involving fondling nor the variables involving oral sex met the criteria of 25 JSOs per marginal level, a combined fondling and a combined oral sex variable were created. In addition, neither of the two penetration types of sexual abuse meet the 25 JSO per

marginal level criteria, nor did the combined variable. Thus, it was not considered further. For the combined fondling variable significant differences in reoffense rates between JSOs who had been fondled and those who had not (see Table 4). Specifically, 37.9% of the 29 JSOs with a history of being fondled recidivated, whereas only 12% of the remaining JSOs reoffended before the age of 18. Significantly different reoffense rates also emerged between those offenders who had been sexually abused by oral sex, with 36.0% JSOs who were victims of such abuse reoffending before age 18 (see Table 4). Lastly, significantly different reoffense rates emerged between offenders whose case files indicated the JSO had been the victims of sexual abuse, without details about the abuse, and those who had no record of such abuse (see Table 4). Specifically, 26.1% of the 115 who had a history of sexual abuse without details reoffended, whereas only 10.3% of the remaining 522 without such abuse sexually recidivated.

Table 4
Significant bivariate sexual abuse history variables

Variable	n (total)	%	n	Chi- Square	<i>p</i>
Does Offender Have a Record of Any Sexual Abuse by History - Fondled (Self or Official-Report)?				16.25	<.001*
No	608	12.0%	73		
Yes	29	37.9%	11		
Does Offender Have a Record of Any Sexual Abuse by History - Oral Sex (Self or Official-Report)?				11.83	0.001
No	612	12.3%	75		
Yes	25	36.0%	9		
Does Offender Have a Record of Any Sexual Abuse by History - Penetration (Self or Official-Report)?				4.02	0.045
No	620	12.7%	79		
Yes	17	29.4%	5		
Does Offender Have a Record of Any Sexual Abuse by History - No Details (Self or Official-Report)?				20.40	<.001*
No	522	10.3%	54		
Yes	115	26.1%	30		

* $p < .0005$.

Review of the individual rates of reoffense associated with the sexual abuse subtype variables revealed similar reoffense patterns. As such, the relation between reoffense status and the frequency of these types of abuse was explored. Not only was the presence of fondling, oral sex, and no details subtypes of sexual abuse significantly related to reoffense status, but also the frequency of these types of abuse was significant. Because of the categorical nature of the self and official reports versions of these frequency variables, these variables were not easily combined. Thus, these variables were separated by report type. As indicated in Table 5, significant point-biserial correlations emerged between reoffense status

and both self and official reports of the number of times the JSO was fondled over his clothes, self and official reports of fondling under his clothes, self and official reports of abuse involving oral sex, and self and official reports of the number of times sexual abuse was perpetrated without details.

Table 5
Sexual abuse frequency correlations

Variable	<i>r</i>	<i>n</i>	<i>p</i>
Frequency of Fondling Over Clothes - Self Report	.102	637	<.05
Frequency of Fondling Over Clothes - Official Report	.120	637	<.05
Frequency of Fondling Under Clothes - Self Report	.176	637	<.05
Frequency of Fondling Under Clothes - Official Report	.186	637	<.05
Frequency of Oral Sex - Self Report	.156	637	<.05
Frequency of Oral Sex - Official Report	.146	637	<.05
Frequency of Sexual Abuse No Details - Self Report	.219	637	<.05
Frequency of Sexual Abuse No Details - Official Report	.191	637	<.05
Number of Types of Sexual Abuse - Self Report	.237	637	<.05
Number of Types of Sexual Abuse - Official Report	.237	637	<.05

Review of these correlations suggested that no one subtype frequency was most related to reoffense status. Coupled with these similarities, no dichotomous presence or absence variable for any given subtype appeared to emerge as most important to reoffense status. Consequently, a new question was explored. Namely, if no single abuse behavior was differentially related to reoffense status, was there a relation between the number of discrete abuse behaviors the JSO was a victim of and his rate of reoffense? A new variable was created to explore that potential relation between recidivism and the number of discrete subtypes of hands-on sexual abuse. This new variable represented a sum of all different dichotomous presence versus absence subtype variables. Self and official versions of this variable are reported separately. Again, significant point-biserial correlations emerged between recidivism and the number of different types of sexual abuse for both self and official reports (see Table 5).

Because a history of hands-on types of sexual abuse and the number of discrete types of that abuse was significantly related to reoffense status, a new question was advanced. Namely, was there a relation between the frequency of hands-on types of sexual abuse, regardless of subtype, and reoffense status? To examine that potential relation, two new frequency variables were created, where the variables represented the sum of all of hands-on abuse victimizations, regardless of subtype. Because the frequency of the component subtype variables was categorical in nature only certain cut-points could be explored. More specifically, only three levels of this variable could confidently be identified: those JSOs who had no abuse, those who had a history of between one and four subtypes, and those who had more than four subtypes. Furthermore, though self and official reports of these abuse variables were highly similar, the categorical nature of the new variable prohibited examination of a combined self or official report version of this variable. Thus, they are reported separately. As indicated in Table 6, significant differences in reoffense rates emerged among the different frequency levels of hands-on types of offenses for each type of report. Generally, JSOs who were the victim of one to four abuse incidents reoffended at a rate between 2.5 and 3 times greater than those without such a history. Furthermore, JSOs with a history of five or more hands-on abuse incidents were almost twice as likely to reoffend as those JSOs with between one and four incidents. See Table 6 for associated reoffense rates.

Table 6
Significant bivariate sexual abuse frequency variables

Variable	n (total)	%	n	Chi- Square	<i>P</i>
Number of Hands-On Sexual Abuse (Self-Report)				40.66	<.001*
None	495	9.3%	46		
One to Four Times	94	24.5%	23		
Five or More Times	30	43.3%	13		
Number of Hands-On Sexual Abuse (Official-Report)				41.23	<.001*
None	534	9.7%	52		
One to Four Times	77	26.0%	20		
Five or More Times	26	46.2%	12		

* $p < .0005$.

Physical Abuse. Several variables in the background codebook tapped the JSO's history of physical abuse. These included both self and official reports of the frequency of physical abuse that resulted in bruises, physical abuse that resulted in relatively minor cuts or burns, physical abuse that resulted in serious injury requiring medical attention, physical abuse indicated in the file with no details, the JSO's age at first physical abuse, and the duration in month the physical abuse. Because of the similarity between self and official reports of abuse, many variables were combined in the same either/or fashion described above and all. These combined variables are reported unless otherwise specified, and all significant variables are found in Table 7 through 9.

Though little research has examined the relation between a history of physical abuse and recidivism, an exploratory analysis of the relation between past physical abuse and reoffense status was employed. To explore this relation, a new dichotomous variable was created from the codebook variables representing the presence or absence of any subtype of

physical abuse in either self or official reports. Significant differences in reoffense rates emerged between JSOs who had and had not been physically offended against (see Table 7). Of the 125 JSOs with any history of physical abuse, 20.8% recidivated before the age of 18, and of the 512 JSOs with no such history, 11.3% recidivated during that same time period.

Table 7
Any history of physical abuse

Variable	n (total)	%	n	Chi- Square	<i>P</i>
Does Offender Have a Record of Any Physical Abuse by History (Either Self or Official-Report)?				7.87	0.005
No	512	11.3%	58		
Yes	125	20.8%	26		

Because of the increased reoffense rate associated with a history of physical abuse, the association between sexual recidivism and both the duration of the physical abuse and age of the JSO at his first physical abuse victimization was explored. As indicated in Table 8, age of onset for physical abuse was not significantly correlated with sexual reoffense status for either self or official reports. Similarly, the duration of physical abuse in the number of months was not significantly correlated with reoffense status for either self or official reports. As such, neither variable was retained for further analysis. However, it is important to note that, like the duration and age of onset variables for sexual abuse, very little information was available in the case files on these variables.

Table 8
Physical abuse onset and duration correlations

Variable	<i>r</i>	n	<i>p</i>
Age at First Physical Abuse - Self Report	-.242	30	>.05
Age at First Physical Abuse - Official Report	-.269	34	>.05
Number of Months Physical Abused - Self Report	-.235	14	>.05
Number of Months Physical Abused - Official Report	-.090	16	>.05

Because the presence of physical abuse was significantly related to reoffense status, a new question was posed. Namely, do JSOs with more frequent physical abuse victimizations reoffend more often than those who have no such history? A new variable that tapped the frequency of physical abuse was created to examine this potential relation by summing the frequencies of each of the four subtypes for both self and official reports. Similar to the creation of the sexual abuse frequency variable, the subtype variables that made up this physical abuse frequency variable were categorical in nature, and only certain cut-points could be explored with confidence. Furthermore, though self and official reports of these abuse variables were highly similar, the categorical nature of the new variable prohibited examination of a combined self or official report version of this variable. Thus, they are reported separately. As indicated in Table 9, significant differences in reoffense rates emerged among the different frequency levels of hands-on types of physical abuse for both self and official reports. Similar to the frequency of hands-on sexual abuse variables, those JSOs who were physically abused most frequently, namely five or more times, were much more likely to reoffend than those JSOs with little or no history of physical abuse. See Table 9 for associated reoffense rates.

Table 9
Significant bivariate physical abuse variables

Variable	n (total)	%	n	Chi- Square	<i>P</i>
Number of Times Physical Abuse (Self-Report)				27.47	<.001*
None	519	11.6%	60		
One to Four Times	87	16.1%	14		
Five or More Times	16	56.3%	9		
Number of Times Physical Abuse (Official-Report)				31.27	<.001*
None	523	11.3%	59		
One to Four Times	84	16.7%	14		
Five or More Times	15	60.0%	9		

* $p < .0005$.

Because of the strong relation between the frequency of physical abuse and recidivism the discrete effects of each physical abuse variable was examined. For each subtype of physical abuse, a new variable was created by collapsing the frequencies into a presence or absence variable. The four variables included the presence or absence of any history of each of the following subtypes: physical abuse resulting in minor bruises, physical abuse resulting in minor cuts or burns, physical abuse resulting in serious injury requiring medical attention, and abuse indicated but no details. Despite trends that would suggest an increased risk of reoffense was associated with the presence of physical abuse resulting in bruises, minor cuts or burns, or serious injury, none of the new physical abuse subtype variables, except physical abuse with no details, had the minimum number of JSOs at each marginal levels of the variable. However, chi-square analysis of physical abuse without details revealed no significant differences in reoffense rates between those who had been abused and those who had not ($\chi^2 (1) = 2.07, p > .05$).

Emotional or Verbal Abuse and Neglect. Twelve codebook variables tapped the JSO's history of emotional or verbal abuse and neglect. These variables included self and official reports of the frequency of emotional or verbal abuse, the frequency of neglect, the age at first emotional or verbal abuse and neglect, and the duration in months of emotional or verbal abuse and neglect. To explore the relation between emotional or verbal abuse and neglect, four dichotomous variables were created for the presence or absence of emotional or verbal abuse and the presence or absence of neglect for both self and official reports. Because of the similarity in result between both self and official reports, two additional variables were created that combined self and official reports in an either/or fashion. For the variable representing a history of emotional or verbal abuse, significant differences in reoffense rates emerged between JSOs who had and had not been emotionally or verbally abused (see Table 10). Of the 75 offenders who had a history of emotional or verbal abuse, 26.7% sexually recidivated, compared to 11.4% of the 562 JSOs without such histories. Similarly, JSOs who had experienced neglect reoffended 23.6% of the time compared to 12.2% of those offenders who had no report of neglect in their files. This difference in reoffense rates was also significant (see Table 10).

Table 10

Significant bivariate emotional or verbal abuse and neglect history variables

Variable	n (total)	%	n	Chi- Square	<i>p</i>
Does Offender Have a Record of Any Neglect (Either Self or Official-Report)?				5.74	0.017
No	582	12.2%	71		
Yes	55	23.6%	13		
Does Offender Have a Record of Any Emotional Abuse (Either Self or Official-Report)?				13.49	<.001*
No	562	11.4%	64		
Yes	75	26.7%	20		

**p* < .0005.

Because of the increased reoffense rates associated with a histories of emotional or verbal abuse and neglect, the association between sexual recidivism and both duration and age of onset was explored for each type of abuse. As indicated in Table 11, neither the age of onset nor the duration of emotional or verbal abuse was significantly correlated with sexual reoffense status for type of report. Similarly, neither age of onset nor duration in months of neglect was significantly correlated with sexual reoffense status for either self or official reports. Caution is warranted when interpreting these statistics as null results because of the small numbers of JSOs who had information on these variables in their case files.

Table 11

Emotional abuse and neglect onset and duration correlations

Variable	<i>r</i>	n	<i>p</i>
Age at First Emotional Abuse - Self Report	-.317	16	>.05
Age at First Emotional Abuse - Official Report	-.054	19	>.05
Number of Months Emotional Abused - Self Report	-.011	9	>.05
Number of Months Emotional Abused - Official Report	-.103	8	>.05
Age at First Neglect - Self Report	.016	24	>.05
Age at First Neglect - Official Report	.005	36	>.05
Number of Months Neglect - Self Report	.246	11	>.05
Number of Months Neglect - Official Report	-.058	13	>.05

Finally, frequency variables for both emotional or verbal abuse and neglect were examined for potential relations to sexual recidivism. For each analysis, both self and official reports were kept separate. Sexual reoffense was significantly related to the frequency of emotional or verbal abuse for both report types. Similarly, sexual recidivism was significantly correlated with self and official reports of the frequency of neglect (see Table 12).

Table 12
Emotional abuse and neglect frequency correlations

Variable	<i>r</i>	<i>n</i>	<i>p</i>
Frequency of Emotional Abuse - Self Report	.182	637	<.05
Frequency of Emotional Abuse - Official Report	.186	637	<.05
Frequency of Neglect - Self Report	.139	637	<.05
Frequency of Neglect - Official Report	.086	637	<.05

Combined Abuse Variables. Because histories of sexual abuse, physical abuse, emotional or verbal abuse, and neglect were all related to recidivism, the relation between the number of different types of abuse and sexual recidivism was explored. To explore this relation, three additional variables were created and analyzed. First, two variables were created for the total number of different discrete subtypes of abuse where the JSO was the victim, regardless of the nature of the abuse, for both self and official reports. For example, a JSO who had been the victim of oral sexual abuse and physical abuse resulting in bruises would receive a score of two. Scores on this variable ranged from zero to 13, where a score of 13 would represent a JSO had a history of all subtypes of abuse. Sexual reoffense was significantly related to the number of different subtypes of abuse for both self ($r(637) = .229$, $p < .05$) and official reports ($r(637) = .207$, $p < .05$).

Because of the sparseness of the frequencies of JSOs with two or more different subtypes of abuse, new versions of these variables were created by truncating each at two or

more different subtypes. For each variable, JSOs with a history of two or more subtypes were collapsed into a two or more category. As indicated in Table 13, significantly different rates of recidivism emerged among the different levels of subtypes for both report types. However, when those JSOs with no history of abuse were removed, rates of recidivism were not significantly different between JSOs with a history of only one subtype and those with two or more for both self and official reports.

Table 13
Significant bivariate combined abuse history variables

Variable	n (total)	%	n	Chi- Square	<i>P</i>
Number of Different Subtypes of Any Abuse (Self-Report)				37.38	<.001*
None	445	7.9%	35		
One	137	24.1%	33		
Two or More	55	29.1%	16		
Number of Different Subtypes of Any Abuse (Official-Report)				37.58	<.001*
None	458	8.1%	37		
One	127	25.2%	32		
Two or More	52	28.8%	15		
Number of Different Domains of Abuse				36.14	<.001*
None	411	7.3%	30		
One	115	22.6%	26		
Two	61	23.0%	14		
Three	37	27.0%	10		
Four	13	30.8%	4		

* $p < .0005$.

Second, a variable was created for the total number of abuse domains. For example, a JSO who had been the victim of both physical abuse and sexual abuse, regardless of the number of subtypes, would receive a score of two, whereas a JSO who had a history of physical, sexual, and emotional abuse would have a score of three. Scores on this variable

ranged from zero to four, and both self and official reports were combined. Sexual reoffense was significantly related to the number of different abuse domains ($r(637) = .217, p < .05$). Reoffense rates associated with the five different levels of abuse domains and the associated χ^2 statistic are found in Table 13. However, when those JSOs with no history of abuse were removed, rates of recidivism were not significantly different between JSOs with a history of only one domain and those with two or more for both self and official reports.

History of Abuse Multivariate Results

Sexual Abuse. Several hierarchical logistic regression analyses were employed to test the relative independence and incremental predictive ability of the above significant variables on sexual recidivism. However, not all significant variables were used in the following analyses. Variables considered for further analyses were chosen for the following reasons. First, because nearly all JSOs who were victims of sexual abuse were also the victim of a hands-on type of sexual abuse and because the reoffense rate associated with victims of hands-on types of sexual abuse was slightly higher than JSOs with any (both hands-on and hands-off) sexual abuse, the history of hands-on sexual abuse variable was used in initial analyses instead of the history of any sexual abuse variable. Second, because of the high similarity of results between self and official reports for all frequency variables, only the official report versions were used in the initial analyses to avoid redundancy.

The first hierarchical logistic regression analyses were used to determine whether or not the four dichotomous hands-on sexual abuse subtype variables added significantly to the prediction of reoffense status after accounting for the variable representing whether or not the JSO was ever a victim of hands-on sexual abuse. In that analysis, the variable representing the presence or absence of any hands-on sexual abuse was entered into the first block of the

regression equation, followed by the four dichotomous subtype variables in block two.

Results indicated that the four dichotomous subtype variables did not add significantly to the prediction of reoffense status after accounting for any history of hands-on sexual abuse ($\chi^2(4) = 2.67, p > .05$), and only the Wald χ^2 value representing any history of hands-on sexual abuse remained significant when all variables were entered simultaneously into the equation (see Table 14 for Wald χ^2 values and odds ratios). Thus, only history of any hands-on sexual abuse variable was retained for further analysis.

Table 14

Hierarchical logistic regression analysis of any sexual abuse and any of the four subtypes of sexual abuse

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	33.30	1	<.001						
Ever Victim of Hands-On Sexual Abuse				1.44	0.24	34.70	1	<.001	4.22
Constant				-2.35	0.16	216.85	1	<.001	0.10
Step 2	2.67	4	0.615						
Ever Victim of Hands-On Sexual Abuse				1.67	0.60	7.88	1	0.005	5.33
Ever Victim of Fondling Sexual Abuse				0.33	0.53	0.39	1	0.534	1.39
Ever Victim of Oral Sexual Abuse				0.32	0.55	0.35	1	0.557	1.38
Ever Victim of Penetration Sexual Abuse				-0.39	0.65	0.35	1	0.552	0.68
Ever Victim of No Details Sexual Abuse				-0.41	0.56	0.53	1	0.468	0.67
Constant				-2.35	0.16	216.85	1	<.001	0.10

To determine whether the variable representing the number of hands-on sexual abuse subtypes was linearly related to reoffense status, that variable and nonlinear effects were entered into three successive blocks of a logistic regression. Results indicated that both the linear and quadratic effects were significant at the $p = .05$ level (see Table 15). Thus, it appeared that the relation between the number of hands-on subtypes and reoffense status was

monotonic, where there was a more pronounced increase in risk from none to one subtype and a more gradual increase in risk thereafter.

Table 15
Logistic regression analysis of curvilinear relation between recidivism and number of types of hands-on sexual abuse

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	26.61	1	<.001						
Linear Number of Types of Hands-On Sexual Abuse				0.79	0.15	27.09	1	<.001	2.19
Constant				-1.97	0.12	252.01	1	<.001	0.14
Step 2									
	4.56	1	0.033						
Linear Number of Types of Hands-On Sexual Abuse				1.31	0.28	21.22	1	<.001	3.71
Quadratic Number of Types of Hands-On Sexual Abuse				-0.25	0.11	4.59	1	0.032	0.78
Constant				-1.91	0.13	221.42	1	<.001	0.15
Step 3									
	1.45	1	0.229						
Linear Number of Types of Hands-On Sexual Abuse				1.69	0.42	16.16	1	0.000	5.39
Quadratic Number of Types of Hands-On Sexual Abuse				-0.88	0.54	2.62	1	0.105	0.41
Cubic Number of Types of Hands-On Sexual Abuse				0.15	0.13	1.42	1	0.233	1.16
Constant				-1.79	0.17	117.35	1	<.001	0.17

To determine the relative independence of the any history of hands-on sexual abuse variable and the number of different subtypes of hands-on sexual abuse variable, two hierarchical logistic regression analyses were employed. In the first analysis, the hands-on sexual abuse variable was entered into the first block, followed by the linear and quadratic effects of the number of discrete subtypes variable. Results indicated that, though the hands-on sexual abuse variable was significant in the first block ($\chi^2 (1) = 33.30, p < .05$), the linear and quadratic effects of the number of hands-on subtypes variables did not add significantly to the prediction of reoffense status after accounting for block one ($\chi^2 (2) = 1.51, p > .05$). However, when the variables were entered in reverse order, the block representing any

history of hands-on sexual abuse emerged as a marginally significant predictor of reoffense status after accounting for the linear and quadratic effects of the number of subtypes variable ($\chi^2(1) = 3.64, p = .06$). When both variables were considered in the equation only the history of hands-on sexual abuse variable remained significant, with an odds ratio indicating just over three times greater risk of reoffense for JSOs with any history of hands-on sexual abuse (see Table 16). The results of these two analyses suggest that, though the number of discrete hands-on sexual abuse subtypes was predictive of reoffense status, a large portion of the variance it explained was subsumed by the ever-abused variable. Because the any history of abuse variable also accounted for a significant, additional amount of unique variance, it was the better predictor of reoffense status and was retained for further analysis.

Table 16

Hierarchical logistic regression analysis of any hands-on sexual abuse and the effects of number of types of hands on sexual abuse

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Ever Victim of Hands-On Sexual Abuse	33.30	1	<.001	1.44	0.24	34.70	1	<.001	4.22
Constant				-2.35	0.16	216.85	1	<.001	0.10
Step 2									
Ever Victim of Hands-On Sexual Abuse	1.51	2	0.470	1.18	0.58	4.21	1	0.040	3.27
Linear Number of Types of Hands-On Sexual Abuse				0.17	0.62	0.07	1	0.785	1.18
Quadratic Number of Types of Hands-On Sexual Abuse				0.03	0.18	0.04	1	0.851	1.03
Constant				-2.31	0.24	94.11	1	<.001	0.10

Table 16 (continued)

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp(β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	31.17	2	<.001						
Linear Number of Types of Hands-On Sexual Abuse				1.31	0.28	21.22	1	<.001	3.71
Quadratic Number of Types of Hands-On Sexual Abuse				-0.25	0.11	4.59	1	0.032	0.78
Constant				-1.91	0.13	221.42	1	<.001	0.15
Step 2	3.64	1	0.056						
Linear Number of Types of Hands-On Sexual Abuse				0.17	0.62	0.07	1	0.785	1.18
Quadratic Number of Types of Hands-On Sexual Abuse				0.03	0.18	0.04	1	0.851	1.03
Ever Victim of Hands-On Sexual Abuse				1.18	0.58	4.21	1	0.040	3.27
Constant				-2.31	0.24	94.11	1	<.001	0.10

To assess the relative independence of the any history of hands-on sexual abuse variable and the frequency of hands-on sexual abuse variable, a logistic regression analysis was conducted with the hands-on sexual abuse variable entered into the first block and the frequency variable entered into the second block. Results indicate that the first block ($\chi^2 (1) = 30.49, p < .001$) and the second block ($\chi^2 (1) = 4.61, p = .032$) were significant, both Wald χ^2 were significant when entered simultaneously in the regression equation, (see Table 17). Similarly, when the blocks were entered in reverse order, the second block representing any history of hands-on sexual abuse emerged as a significant predictor of reoffense status after accounting for the frequency of such abuse ($\chi^2 (1) = 12.36, p < .05$). Furthermore, odds ratios indicated that JSOs with a history of any hands-on abuse had a 2.95 times greater risk to reoffend than those who had no such history, and JSOs who were offended against more frequently had a 1.14 times greater risk of reoffense for every jump from one level to the

next. Because both variables added to the prediction of reoffense status independently and incrementally, they were retained for further analysis.

Table 17
Hierarchical logistic regression analysis of any hands-on sexual abuse and the frequency of hands-on sexual abuse

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	30.49	1	<.001						
Ever Victim of Hands On Sexual Abuse				1.40	0.25	31.93	1	<.001	4.05
Constant				-2.33	0.16	212.77	1	<.001	0.10
Step 2	4.61	1	0.032						
Ever Victim of Hands On Sexual Abuse				1.08	0.30	13.40	1	0.000	2.95
Frequency of Hands On Sexual Abuse				0.13	0.06	4.26	1	0.039	1.14
Constant				-2.33	0.16	212.77	1	<.001	0.10

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	22.74	1	<.001						
Frequency of Hands On Sexual Abuse				0.27	0.06	18.40	1	<.001	1.31
Constant				-2.08	0.13	250.70	1	<.001	0.12
Step 2	12.36	1	<.001						
Frequency of Hands On Sexual Abuse				0.13	0.06	4.26	1	0.039	1.14
Ever Victim of Hands On Sexual Abuse				1.08	0.30	13.40	1	<.001	2.95
Constant				-2.33	0.16	212.77	1	<.001	0.10

Physical Abuse. Because no single subtype of physical abuse emerged as significant in the bivariate analyses, only two variables representing any history of physical abuse and the frequency of physical abuse variables were retained for multivariate analysis. Two logistic regression analyses were conducted to assess the independence of these two variables (see Table 18). In the first analysis, the any history of physical abuse variable was entered in the first block, followed by the frequency of physical abuse variable in the second block. Results of that first analysis indicated that the frequency of physical abuse significantly

predicted reoffense status after accounting for any history of physical abuse ($\chi^2 (1) = 7.80, p < .05$). In the second analysis, the frequency variable was entered into the first block, and the any history variable was entered into the second block. Unlike the previous analysis the variable representing any history did not add significantly to the prediction of reoffense status after accounting for the frequency of that abuse ($\chi^2 (1) = .94, p > .05$). Results of these two analyses indicated that, though the any history of physical abuse was significantly related to reoffense status alone, when the variance shared with the frequency of physical abuse variable was removed, it no longer remained significant. However, the frequency variable remained significant after the shared variance was accounted for. Thus, the frequency of physical abuse variable was retained for further analysis.

Table 18

Hierarchical logistic regression analysis of any physical abuse and the frequency of physical abuse

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Ever Victim of Physical Abuse	7.53	1	0.006	0.74	0.26	8.07	1	0.005	2.10
Constant				-2.05	0.14	212.34	1	0.000	0.13
Step 2									
Ever Victim of Physical Abuse	7.80	1	0.005	-0.55	0.59	0.88	1	0.347	0.58
Frequency of Physical Abuse				1.21	0.46	7.08	1	0.008	3.37
Constant				-2.05	0.14	212.34	1	<.001	0.13
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Frequency of Physical Abuse	14.39	1	<.001	0.83	0.21	15.91	1	<.001	2.30
Constant				-2.09	0.14	230.16	1	<.001	0.12
Step 2									
Frequency of Physical Abuse	0.94	1	0.332	1.21	0.46	7.08	1	0.008	3.37
Ever Victim of Physical Abuse				-0.55	0.59	0.88	1	0.347	0.58
Constant				-2.05	0.14	212.34	1	<.001	0.13

Emotional or Verbal Abuse and Neglect. Only one emotional or verbal abuse variable and one neglect variable were retained for multivariate analysis. Two analyses were conducted to test the relative independence and incremental predictive ability of the any history of emotional or verbal abuse and the any history of neglect variables (see Table 19). In the first analysis, the emotional or verbal abuse variable was entered into the first block, followed by the neglect variable. Results indicated that neglect did not significantly add to the prediction of reoffense status after accounting for the variance explained by emotional or verbal abuse ($\chi^2 (1) = .85, p > .05$), and only the emotional or verbal abuse Wald χ^2 remained significant when both variables were entered together. In the second analysis, the variable blocks were reversed. Unlike the previous analysis, block two, emotional or verbal abuse, significantly added to the prediction of reoffense status over and above neglect ($\chi^2 (1) = 7.21, p < .05$). These results indicated that emotional or verbal abuse and neglect account for much shared variance, but emotional or verbal abuse accounts for an additional and significant amount unique variance beyond neglect. As such, only emotional or verbal abuse was retained for further analysis.

Table 19

Hierarchical logistic regression analysis of any emotional or verbal abuse and neglect

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	11.26	1	0.001						
Ever Victim of Emotional Abuse				1.04	0.29	12.61	1	<.001	2.83
Constant				-2.05	0.13	238.73	1	<.001	0.13
Step 2	0.85	1	0.356						
Ever Victim of Emotional Abuse				0.91	0.33	7.83	1	0.005	2.49
Ever Victim of Neglect				0.36	0.39	0.89	1	0.347	1.44
Constant				-2.07	0.13	235.98	1	<.001	0.13

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	4.91	1	0.027						
Ever Victim of Neglect				0.80	0.34	5.49	1	0.019	2.23
Constant				-1.97	0.13	242.84	1	0.000	0.14
Step 2	7.21	1	0.007						
Ever Victim of Neglect				0.36	0.39	0.89	1	0.347	1.44
Ever Victim of Emotional Abuse				0.91	0.33	7.83	1	0.005	2.49
Constant				-2.07	0.13	235.98	1	<.001	0.13

Combined Abuse Variables. Before the independence and incremental predictive ability of the number of discrete abuse subtypes and number of abuse domains variables could be tested, the linear and non linear effects of the variables were tested. In the first analysis, the linear effect of the number of abuse subtypes variable was entered into the first block of a hierarchical logistic regression analysis followed by the quadratic and cubic effects in the second and third blocks, respectively. The results indicated that the linear effect of the number of abuse subtypes significantly predicted reoffense status ($\chi^2(1) = 26.77, p < .05$). However, the quadratic and the cubic effects was nonsignificant (see Table 20). In the second analysis, the linear effect of the number of abuse domains variable was entered into the first block of the analysis followed by the quadratic and cubic effects in the second and

third blocks, respectively. Similar to the previous analysis the linear effect of the number of abuse domains variable significantly predicted reoffense status ($\chi^2(1) = 25.37, p < .05$). However, the quadratic effect was also a significant predictor of reoffense status ($\chi^2(1) = 5.98, p < .05$), while the cubic effect was not significant (see Table 21). Thus, it appeared that the number of abuse subtypes and the number of abuse domains variables were monotonically related to reoffense status. In other words, risk of reoffense initially increases more dramatically from no abuse to one type of abuse, followed by a less dramatic increase in risk as the number of subtypes and domains increases.

Table 20

Logistic regression analysis of curvilinear relation between recidivism and number of abuse subtypes

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	26.77	1	<.001						
Linear Number of Abuse Subtypes				0.45	0.08	28.75	1	<.001	1.57
Constant				-1.98	0.13	249.04	1	<.001	0.14
Step 2	3.55	1	0.060						
Linear Number of Abuse Subtypes				0.74	0.18	17.66	1	<.001	2.09
Quadratic Number of Abuse Subtypes				-0.11	0.06	3.41	1	0.065	0.90
Constant				-1.87	0.14	181.06	1	<.001	0.15
Step 3	2.87	1	0.090						
Linear Number of Abuse Subtypes				0.97	0.22	19.56	1	<.001	2.63
Quadratic Number of Abuse Subtypes				-0.42	0.19	4.81	1	0.028	0.66
Cubic Number of Abuse Subtypes				0.06	0.03	2.86	1	0.091	1.06
Constant				-1.67	0.18	86.97	1	<.001	0.19

Table 21

Logistic regression analysis of curvilinear relation between recidivism and abuse domains

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	25.37	1	<.001						
Linear Number of Abuse Domains				0.51	0.10	27.04	1	<.001	1.66
Constant				-1.99	0.13	247.60	1	<.001	0.14
Step 2	5.98	1	0.014						
Linear Number of Abuse Domains				0.92	0.20	21.99	1	<.001	2.51
Quadratic Number of Abuse Domains				-0.22	0.09	5.75	1	0.017	0.80
Constant				-1.81	0.15	153.88	1	<.001	0.16
Step 3	2.29	1	0.130						
Linear Number of Abuse Domains				1.04	0.21	24.20	1	<.001	2.84
Quadratic Number of Abuse Domains				-0.66	0.30	4.74	1	0.029	0.52
Cubic Number of Abuse Domains				0.13	0.08	2.33	1	0.127	1.14
Constant				-1.59	0.20	61.88	1	<.001	0.20

The independence and incremental predictive ability of the number of discrete abuse subtypes and number of abuse domains variables was tested using two logistic regression analyses. In the first analysis, the number of abuse subtypes variable was entered into the first block of the analysis, followed by the linear and quadratic effects of the number of abuse domains. In that analysis, the first block was significant at the $p = .05$ level (see Table 22), and the block representing the number of abuse domains significantly predicted reoffense status after accounting for the number of subtypes variables ($\chi^2 (2) = 11.67, p < .05$). When all when all three variables were entered simultaneously, the Wald χ^2 for the linear and quadratic effects of the domain variable were the only two variables that were significance (see Table 22). In the second analysis, the blocks were reversed. Results indicated that, though the first block representing the domains of abuse significantly predicted reoffense status ($\chi^2 (2) = 31.23, p < .05$), the number of subtypes block did not significantly add to the prediction of reoffense status above the number of abuse domains alone ($\chi^2 (1) = 1.67, p >$

.05). As such, only the linear and quadratic effects of the number of abuse domains variable was retained for further analysis.

Table 22

Hierarchical logistic regression analysis of number of abuse subtypes and number of abuse domains

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.43	1	<.001	0.15
Step 1									
Linear Number of Abuse Subtypes	21.20	1	<.001	0.39	0.09	21.00	1	<.001	1.47
Constant				-1.96	0.12	251.58	1	<.000	0.14
Step 2									
Linear Number of Abuse Subtypes	11.67	2	0.003	0.19	0.14	1.69	1	0.194	1.21
Linear Number of Abuse Domains				0.78	0.23	11.72	1	0.001	2.18
Quadratic Number of Abuse Domains				-0.25	0.10	6.801	1	0.009	0.78
Constant				-1.78	0.15	147.86	1	<.001	0.17
Step 0									
Constant				-1.88	0.12	258.43	1	<.001	0.15
Step 1									
Linear Number of Abuse Domains	31.22	2	<.001	0.92	0.20	21.99	1	<.001	2.51
Quadratic Number of Abuse Domains				-0.22	0.09	5.75	1	0.017	0.80
Constant				-1.81	0.15	153.88	1	0.000	0.16
Step 2									
Linear Number of Abuse Domains	1.67	1	0.196	0.78	0.23	11.72	1	0.001	2.18
Quadratic Number of Abuse Domains				-0.25	0.10	6.80	1	0.009	0.78
Linear Number of Abuse Subtypes				0.19	0.14	1.69	1	0.194	1.21
Constant				-1.78	0.15	147.86	1	<.001	0.17

All Abuse Variables. Six abuse related variables remained after initial hierarchical logistic regression analyses: any history of hands-on sexual abuse, frequency of hands-on sexual abuse, frequency of physical abuse, any history of emotional or verbal abuse, and the linear and quadratic effects of the number of domains of abuse. Three additional logistic regression analyses were conducted to determine the independence of the remaining variables. In each case, the two sexual abuse related variables were entered into the first

block followed by either the physical abuse, emotional or verbal abuse, or abuse domain variables entered into the second block (see Table 23).

In the first analysis, the frequency of physical abuse was entered into the second block. Results indicated that the frequency of physical abuse marginally predicted reoffense status after accounting for any history of hands-on sexual abuse and the frequency of hands-on sexual abuse ($\chi^2(1) = 3.55, p = .06$). As such, the frequency of physical abuse variable was retained. In the second analysis, the variable representing any history of emotional or verbal abuse variable was entered into the second block. Unlike the previous analysis, emotional or verbal abuse did not significantly add to the prediction of reoffense status above the two sexual abuse variables ($\chi^2(1) = 2.69, p > .05$). In the third analysis, the linear and quadratic effects of the number of abuse domains were entered into the second block. Like the second analysis, block two was not significant ($\chi^2(1) = 4.09, p > .05$), and thus, the number of abuse domains did not significantly add to the prediction of reoffense status above the two sexual abuse variables.

Table 23

Hierarchical logistic regression analysis of independence of three abuse variables beyond any hands-on sexual abuse and the frequency of hands on sexual abuse

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Ever Victim of Hands-On Sexual Abuse	35.17	2	<.001	0.82	0.39	4.54	1	0.033	2.28
Frequency of Hands-On Sexual Abuse				0.59	0.29	4.17	1	0.041	1.80
Constant				-2.32	0.16	210.94	1	<.001	0.10
Step 2									
Ever Victim of Hands-On Sexual Abuse	3.55	1	0.059	0.68	0.40	3.00	1	0.083	1.98
Frequency of Hands-On Sexual Abuse				0.56	0.29	3.63	1	0.057	1.74
Frequency of Physical Abuse				0.45	0.23	3.74	1	0.053	1.57
Constant				-2.38	0.16	209.69	1	<.001	0.09

Table 23 (continued)

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Ever Victim of Hands On Sexual Abuse	37.04	2	<.001	0.93	0.37	6.11	1	0.013	2.52
Frequency of Hands On Sexual Abuse				0.54	0.28	3.64	1	0.057	1.71
Constant				-2.35	0.16	216.85	1	<.001	0.10
Step 2									
Ever Victim of Hands On Sexual Abuse	2.69	1	0.101	0.87	0.38	5.21	1	0.022	2.38
Frequency of Hands On Sexual Abuse				0.48	0.29	2.81	1	0.094	1.62
Ever Victim of Emotional/Verbal Abuse				0.54	0.32	2.83	1	0.092	1.71
Constant				-2.40	0.16	215.40	1	<.001	0.09

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Ever Victim of Hands On Sexual Abuse	37.04	2	<.001	0.93	0.37	6.11	1	0.013	2.52
Frequency of Hands On Sexual Abuse				0.54	0.28	3.64	1	0.057	1.71
Constant				-2.35	0.16	216.85	1	<.001	0.10
Step 2									
Ever Victim of Hands On Sexual Abuse	4.09	2	0.130	0.38	0.45	0.71	1	0.401	1.46
Frequency of Hands On Sexual Abuse				0.53	0.28	3.48	1	0.062	1.70
Linear Number of Domains of Abuse				0.55	0.26	4.34	1	0.037	1.73
Quadratic Number of Domains of Abuse				-0.16	0.10	2.48	1	0.115	0.86
Constant				-2.09	0.20	110.27	1	<.001	0.12

Only three abuse related variables remained after multivariate analysis. These three variables include any history of hands-on sexual abuse, the frequency of hands-on sexual abuse, and the frequency of physical abuse. All three variables were entered simultaneously into a logistic regression, and all variables' Wald χ^2 remained significant (see Table 24).

Table 24
Logistic regression analysis of independence of three final abuse variables

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	38.80	3	<.001						
Ever Victim of Hands-On Sexual Abuse				0.64	0.40	2.50	1	0.114	1.90
Frequency of Hands-On Sexual Abuse				0.56	0.31	3.36	1	0.067	1.75
Frequency of Physical Abuse				0.49	0.24	4.30	1	0.038	1.64
Constant				-2.39	0.16	210.43	1	0.000	0.09

History of Family Problems Bivariate Results

Several variables in the background codebook tapped problems within the JSO's family. Such variables included the JSO's caregiving structure before age 7, from age 7 to 12, and after age 12, the presence and duration of physical separation from biological or adoptive parents before age 16, and the levels of difficulty relating to either parents or siblings. From these variables several new variables were created. The rationale for creating those variables is reported below. All significant family problem variables are reported in Table 25 through 27.

Consistent with past research (Bagley & Shewchuk-Dann, 1991; Miner, Siekert, & Ackland, 1997), the first general hypothesis stated that JSOs with a history of caregiving instability would have a significantly higher rate of recidivism than JSOs without such a history. Because no coded variable directly tapped this construct, a new variable was created from the three caregiving structure variables in the codebook. From those variables, any JSO that was coded as having multiple living situations during any age period was coded as having a history of caregiving instability. The remainder of JSOs were coded as having no history of instability. Consistent with the hypothesized relation between caregiving instability

and reoffense rates, JSOs with a history of caregiving instability reoffended at a significantly greater rate than those who had no such history (see Table 25). More specifically, 21.8% of the 110 JSOs with a history of caregiving instability sexually recidivated, while only 11.4% of the remaining JSOs reoffended during that same time period.

Table 25
Significant bivariate caregiving instability variables

Variable	n (total)	%	n	Chi- Square	<i>p</i>
Does Offender Have a Record of Any Caregiving Instability (Multiple Caregivers) During Any Ages Period?				8.65	0.003
No	527	11.4%	60		
Yes	110	21.8%	24		
Does Offender Have a Record of Any Caregiving Instability (Multiple Caregivers) During Ages 0 to 6?				5.08	0.024
No	602	12.5%	75		
Yes	35	25.7%	9		
Does Offender Have a Record of Any Caregiving Instability (Multiple Caregivers) During Ages 7 to 12?				2.18	0.140
No	593	12.6%	75		
Yes	44	20.5%	9		
Does Offender Have a Record of Any Caregiving Instability (Multiple Caregivers) During Ages 13 to 17?				11.59	0.001
No	558	11.5%	64		
Yes	79	25.3%	20		
Number of Caregiving Instability (Multiple Caregivers)?				10.634	0.005
None	526	11.5%	61		
One	55	25.5%	14		
Two or More	42	21.4%	9		

To determine whether or not caregiving instability was similarly related to recidivism at different periods of the JSO's development, this relation was further explored by creating three variables that tapped instability at each of the three time periods: before age 7, from age 7 to 12, and after age 12. Similar trends emerged for all three time periods, and JSOs with a history of instability reoffended at nominally higher rates than those who had no history in all three time periods (see Table 25); however, caregiving instability was significantly related to reoffense status for the periods of time before age 7 and from 13 and 17 years of age. For both time periods, JSOs with a history of caregiving instability reoffended at rates of approximately 25%, compared to approximately 12% for JSOs with stable living environments. As stated above, JSOs who had a history of caregiving instability during the ages of 7 to 12 had a very similar rate of reoffense (20.5%), but that difference was not significant. Because highly similar reoffense rates were observed across all age periods only the overall caregiving instability variable for all age levels was retained for further analysis.

Because of the high similarity among reoffense rates for caregiving instability at different age groupings, another question was explored: are JSOs with more than one age period with caregiving instability more likely to reoffend than those with none or only one period was tested? To address this question, a new summative, caregiving variable was created, but because of low frequencies at levels of two and three periods of caregiving instability, those two levels were collapsed. As indicated in Table 25, significant difference in reoffense rates emerged among the three variable levels. However, examination of the reoffense rates associated with each level revealed highly similar rates between those JSOs with only one age period of instability (25.5%) and two or more age periods (21.4%). This difference was tested by dropping the variable level that represented JSOs with no history of

instability. Results indicated that, indeed, the difference between the reoffense rates of the two remaining levels was not significant ($\chi^2 (1) = .213, p > .05$). As such, the summative, caregiving instability variable was not retained for further analysis.

The relation between living arrangements and recidivism was further explored by examining the relation between 17 different coded arrangements (e.g. living with only biological mother or foster care) for each age category and reoffense status. However, no single living arrangement emerged as significantly related to recidivism for any of the three time periods.

Consequently, physical separation from biological or adoptive parents was explored for association with sexual recidivism. Past research indicated that JSOs may have a higher degree of physical separation from their parents or guardians than other youth (Bagley & Shewchuk-Dann, 1991; Miner, Siekert, & Ackland, 1997). Among JSOs, the relation between physical separation and recidivism has yet to be explored. However, with relations between the caregiving instability variable and reoffense rates, one might expect the presence of physical separation from biological or adoptive parents to also be related to reoffense status. To test this potential relation, a dichotomous, presence or absence variable was created from a coded variable for the number of months separated from the biological parents before age 16, with adoption being categorized as no separation. As indicated in Table 26, JSOs who had experienced physical separation from their parents reoffended at a significantly higher rate than those JSOs who had no such experience. Offenders with no history of physical separation reoffended at a rate of 8.8%, compared to 30.7% for offenders with any history of physical separation.

Table 26
Significant bivariate family separation variables

Variable	n (total)	%	n	Chi- Square	<i>p</i>
If Biological Parents Were Ever Present, Does File Denote Physical Separation From Biological Parents Before the Age of 16?				42.54	<.001*
No	510	8.8%	45		
Yes	127	30.7%	39		
Number of Months Separation From Biological Parents Before the Age of 16?				42.79	<.001*
None	510	8.8%	45		
One to Six	42	28.6%	12		
Seven or More	85	31.8%	27		

* $p < .0005$.

The relation between separation and recidivism was explored further by examining the duration of the separation in number of months. The relation between the duration of this separation and recidivism was also significant ($r(637) = .119, p < .05$). Because the frequency of JSOs experiencing a large number of months of separation waned as the number of months exceeded 7, a new categorical variable was created to contrast rates of reoffense among JSOs who had no history of physical separation, those who had been separated six months or less, and those who had been separated for more than six months. Chi-square analysis revealed significantly different reoffense rates among these groups of JSOs (see Table 26). Specifically, 8.8% of the 510 JSOs with no history of physical separation sexually recidivated, while 28.6% of the JSOs separated less than six months and 31.8% of JSOs separated for more than 6 months sexually recidivated. However, when those JSOs with no physical separation were removed, the difference in reoffense rates between JSOs with less than six months and seven or more months was not significant ($\chi^2(1) = .135, p > .05$).

Another aspect of family stability is the relation between the JSO and his parents and the JSO and his siblings. Exploratory analyses were employed to determine if JSOs who had the most severe difficulty relating to either their parents or siblings were more likely to reoffend than those who did not. To investigate this question, two variables were coded for the difficulty relating to parents and difficulty relating to siblings. Both variables included four categories that ranged from no difficulty to severe difficulty and relied upon the coder's perception of any noteworthy difficulty the JSO had when relating to either parents or siblings (see Appendix). Because of the similarity in reoffense rates among JSOs with either mild or moderate difficulty relating to parents and siblings, a new variable was created that collapsed the middle two levels. The same pattern of results emerged for difficulty relating to siblings. As such, the middle two levels of the sibling difficulty variable were collapsed. Furthermore, because not all JSOs had siblings, those JSOs who had no recorded siblings were collapsed into the category with JSOs with no difficulty relating to siblings. As indicated in Table 27, reoffense rates were significantly different for each level of difficulty relating to parents and siblings. More specifically, 8.8% of JSOs who had no difficulty, 13.8% who had mild to moderate difficulty, and 30.0% who had severe difficulty relating to their parents sexually recidivated. Similarly, 8.2% of JSOs who either had no difficulty or no siblings, 15.9% who had mild to moderate difficulty, and 30.4 % who had severe difficulty relating to their siblings sexually recidivated.

Table 27
Significant bivariate family difficulty variables

Variable	n (total)	%	n	Chi- Square	<i>p</i>
Does File Denote Difficulty In Relating to Parents?				22.83	<.001*
No Difficulty	181	8.8%	16		
Mild or Moderate Difficulty	189	13.8%	26		
Severe Difficulty	100	30.0%	30		
Does File Denote Difficulty In Relating to Siblings?				38.76	<.001*
No Difficulty Or No Siblings	437	8.2%	36		
Mild or Moderate Difficulty	88	15.9%	14		
Severe Difficulty	112	30.4%	34		
Does File Denote Severe Difficulty In Relating to Either Parents or Siblings?				35.22	<.001*
No Severe Difficulty	305	7.2%	22		
Severe Difficulty With Only Parents or Siblings	175	11.4%	20		
Severe Difficulty With Both Parents and Siblings	157	26.8%	42		

**p* < .0005.

Lastly, a combined parent and sibling difficulty variable was created to test the whether or not JSOs with severe difficulty relating to either parents or siblings were more likely to reoffend than other JSOs. The combined variable had three levels. The first level captured those JSOs with either moderate or less difficulty relating to both parents and siblings. The second level captured those JSOs who had severe difficulty relating to either parents or siblings, but not both, and the last level captured JSOs who had severe difficulty relating to both parents and siblings. As indicated in Table 27, those JSOs at the three levels reoffended at significantly different rates. More specifically, JSOs at the first level of the variable sexually recidivated at a rate of 7.2%, while JSOs with severe difficulty relating to

either parents or siblings reoffended at a rate of 11.4%. Finally, 26.8% of JSOs with severe difficulty relating to both parents and siblings sexually recidivated.

History of Family Problems Multivariate Results

The variables retained from the bivariate analyses of family problems included a history of any caregiving instability, a history of any physical separation from the JSO's biological or adoptive parents before age 16, level of difficulty relating to parents, level of difficulty relating to siblings, and the combined parent and sibling difficulty variable. To assess the independence of the caregiving instability and physical separation variables, two hierarchical logistic regression analyses were conducted. In the first analysis (see Table 28), caregiving instability was entered into the first block of the model followed by the physical separation variable in the second block. Results indicated that both caregiving instability ($\chi^2(1) = 7.71, p < .05$) and physical separation were significant predictors of sexual reoffense status ($\chi^2(1) = 28.82, p < .05$). In the second analysis, the two blocks were entered in reverse order. Results indicated that though physical separation contributed significantly to the prediction of recidivism when entered alone ($\chi^2(1) = 35.70, p < .05$), caregiving instability did not significantly add to the prediction of recidivism after accounting for physical separation ($\chi^2(1) = .89, p > .05$). When both variables were entered into the final model, only the Wald χ^2 for the physical separation variable remained significant. Thus, it appeared that physical separation from biological or adoptive parents accounted for a large portion of the same variance in recidivism rates as caregiving instability, but physical separation also accounted for a significant amount of unique variance that caregiving instability did not account for.

Table 28

Hierarchical logistic regression analysis of any caregiving instability and any physical separation from parents

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Caregiving Instability at Any Age	7.71	1	0.005	0.78	0.27	8.34	1	0.004	2.17
Constant				-2.05	0.14	223.87	1	<.001	0.13
Step 2									
Caregiving Instability at Any Age	28.88	1	<.001	0.28	0.29	0.92	1	0.339	1.33
Was the Offender Ever Separated from Parents Prior to Age 16?				1.44	0.26	30.25	1	<.001	4.22
Constant				-2.37	0.16	215.36	1	<.001	0.09
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Was the Offender Ever Separated from Parents Prior to Age 16?	35.70	1	<.001	1.52	0.25	37.72	1	<.001	4.58
Constant				-2.34	0.16	223.77	1	<.001	0.10
Step 2									
Was the Offender Ever Separated from Parents Prior to Age 16?	0.89	1	0.345	1.44	0.26	30.25	1	<.001	4.22
Caregiving Instability at Any Age				0.28	0.29	0.92	1	0.339	1.33
Constant				-2.37	0.16	215.36	1	<.001	0.09

Three hierarchical logistic regression analyses were conducted to determine the independence and incremental predictive ability of the three parent and sibling difficulty variables. In the first analysis, the variable that tapped severe difficulty relating to both parents and siblings was entered into the first block of the equation, followed by the level of difficulty relating to only the JSO's parents. Results indicated that block one, severe difficulty relating to both parents and siblings, was a significant predictor of reoffense status ($\chi^2 (1) = 22.96, p < .05$). However, block two, level of difficulty relating to parents, did not add significantly to the prediction after accounting for the block one variable ($\chi^2 (1) = 2.80, p$

< .05). When both variables were entered simultaneously into the final model, only the Wald χ^2 for the variable representing severe difficulty relating to both parents and siblings remained significant (see Table 29). In the second analysis, the first block included severe difficulty relating to both parents and siblings, and the level of difficulty relating to siblings was entered into the second block. Similar to the previous analysis, the first block was significant, but unlike the previous analysis, the level of difficulty relating to siblings variable significantly added to the prediction of recidivism over and above the block one variable ($\chi^2 (1) = 5.03, p < .05$). When both variables were entered into the final model, only the variable representing the JSO's level of difficulty relating to his siblings remained significant (see Table 29). In the third analysis, block one and block two from the previous analysis were reversed. Results indicated that, though the block representing the level of difficulty relating to siblings contributed significantly to the prediction of recidivism ($\chi^2 (1) = 33.43, p < .05$), the block representing severe difficulty relating to both parents and siblings did not contribute to the prediction of recidivism above and beyond the block one variable ($\chi^2 (1) = 2.59, p > .05$). Thus, only the variable representing the level of difficulty relating to siblings was retained for further analysis.

Table 29

Hierarchical logistic regression analysis of level of difficulty relating to both parents and siblings

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.71	0.13	178.24	1	<.001	0.18
Step 1									
Did the Offender Severe Difficulty Relating to Either His Parents, Siblings, or Both?	22.96	1	<.001	0.81	0.18	20.45	1	<.001	2.25
Constant				-2.68	0.28	93.14	1	<.001	0.07
Step 2									
Did the Offender Severe Difficulty Relating to Either His Parents, Siblings, or Both?	2.80	1	0.094	0.56	0.23	5.78	1	0.016	1.76
Level of Difficulty Relating to Parents?				0.40	0.24	2.85	1	0.091	1.49
Constant				-2.78	0.29	90.38	1	<.001	0.06
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Did the Offender Severe Difficulty Relating to Either His Parents, Siblings, or Both?	31.00	1	<.001	0.79	0.15	29.31	1	<.001	2.20
Constant				-2.65	0.21	162.64	1	<.001	0.07
Step 2									
Did the Offender Severe Difficulty Relating to Either His Parents, Siblings, or Both?	5.03	1	0.025	0.38	0.23	2.60	1	0.107	1.46
Level of Difficulty Relating to Siblings?				0.50	0.22	5.04	1	0.025	1.65
Constant				-2.59	0.21	158.29	1	<.001	0.08

Table 29 (continued)

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	33.43	1	<.001						
Level of Difficulty Relating to Siblings?				0.79	0.13	34.33	1	<.001	2.20
Constant				-2.42	0.17	207.56	1	<.001	0.09
Step 2	2.59	1	0.107						
Level of Difficulty Relating to Siblings?				0.50	0.22	5.04	1	0.025	1.65
Did the Offender Severe Difficulty Relating to Either His Parents, Siblings, or Both?				0.38	0.23	2.60	1	0.107	1.46
Constant				-2.59	0.21	158.29	1	<.001	0.08

One final logistic regression analysis was conducted to determine the independence of the remaining two variables. In that analysis, the variables representing the presence of any physical separation from biological or adoptive parents and severe difficulty relating to siblings were entered simultaneously. Results indicated that both variables account for a significant amount of unique variance in the reoffense status variable (see Table 30). Specifically, odds ratios indicated that JSOs with a history of physical separation were 3.24 times more likely to reoffend than those JSOs with no such history when level of difficulty relating to siblings was accounted for. Similarly, JSOs at higher levels of difficulty relating to siblings were 1.82 times more likely to reoffend than JSOs only one level below after accounting for physical separation from biological or adoptive parents.

Table 30
Hierarchical logistic regression analysis of level of difficulty relating to siblings and any physical separation from parents

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	52.32	1	<.001						
Was the Offender Ever Separated from Parents Prior to Age 16?				1.18	0.26	19.73	1	<.001	3.24
Level of Difficulty Relating to Siblings?				0.60	0.14	17.14	1	<.001	1.82
Constant				-2.63	0.18	207.34	1	<.001	0.07

History of Education and Learning Problems Bivariate Results

Several variables were coded to tap a history of education or learning problems. These coded variables included the presence and type of special education placement, the appropriateness of grade placement, grade point average for grades 7 through 12, and intelligence test scores. All significant variables are found in Tables 31.

Table 31

Significant bivariate history of education or learning problem variables

Variable	n (total)	%	N	Chi-Square	<i>p</i>
Did Offender Participate in Any Special Education in K-12?				45.42	<.001*
No	455	7.5%	34		
Yes	182	27.5%	50		
Did Offender Participate in Any Special Education in K-12? (Learning Disability Classification)				18.16	<.001*
No	573	11.3%	65		
Yes	62	30.6%	19		
Did Offender Participate in Any Special Education in K-12? (Behavior Disability Classification)				12.65	<.001*
No	580	11.7%	68		
Yes	56	28.6%	16		
Did Offender Participate in Any Special Education in K-12? (Mental Disability Classification)				14.44	<.001*
No	624	12.5%	78		
Yes	12	50.0%	6		
Did Offender Participate in Any Special Education in K-12? (Classification Unclear)				11.49	0.001
No	556	11.5%	64		
Yes	79	25.3%	20		
Did Offender Participate in Any Special Education in K-12? (Either MD, LD, or BD Classifications)				26.73	<.001*
No	528	10.0%	53		
Yes	109	28.4%	31		
Number of Special Education Classifications				47.85	<.001*
None	455	7.5%	34		
One	158	25.9%	41		
Two or More	24	37.5%	9		

**p* < .0005.

The hypothesis concerning the relation between learning problems and reoffense rates stated that those JSOs with a history of participating in any special education would reoffend at a higher rate than those with no such history. To test this hypothesis, a new variable was created from a separate variable that coded the types of special education that the JSO participated in. For that variable, a JSO with a history of any of the special education classifications was coded as having such a history, and JSOs with no history indicated in their record were coded as having no such history. Significant differences in reoffense rates emerged between JSOs who had ever participated in special education and JSOs who had not (see Table 31). Specifically, JSOs with a history of any special education reoffended at a rate of 27.5%, while those JSOs without a history of special education reoffended at a rate of 7.5%.

Because a history of any special education was significantly related to reoffense rates, the relation between a history of each individual type of special education and recidivism was explored to determine any differential relations between certain types and recidivism. Trends in reoffense rates similar to the overall special education variable emerged for each specific type of special education, and all but one difference in reoffense rate for the specific types were significant. More specifically, significant differences in the reoffense rates emerged between those JSO who had no special education status and those who received a mental disability (MD) classification, learning disability (LD) classification, behavior disability (BD) classification, and special education present but classification was unclear (see Table 31). Offenders with these types of special education classifications reoffended at rates of 50.0%, 30.6%, 28.6%, and 25.3%, respectively. Only the emotional disability classification was not significant. Because the rates were so similar for all special education classifications,

with the exception of MD, which had a very small n, only the any special education variable was retained for further analyses.

A final special education variable was created to examine the relation between number of special education classifications and reoffense status. To create this variable, a new variable was created by summing the number of special education classifications found in the JSOs file. Results indicated that the correlation between reoffense status and the number of special education classifications was significant ($r(634) = .263, p < .05$). This variable was also analyzed by crosstabulating that variable with reoffense status and using chi-square analysis. However, not all levels of the variable had 25 JSOs. Therefore, before chi-square analysis was employed the JSOs with two or more special education classifications were collapsed into one level. Results indicated that significant differences in reoffense rates existed among the three levels of this new variable (see Table 31). Reoffense rates for offenders who had none, one, or two or more special education classifications were 7.5%, 25.9%, and 37.5%, respectively. However, when the level representing no history of special education was removed, no significant difference in reoffense rates emerged between those JSOs with one and those JSOs with two or more classifications. As such, this variable was not retained for further analysis.

Grade placement, intelligence test scores, and grade point average (GPA) were also analyzed for potential relations to reoffense status. However, none of those variables (grade placement, whether or not the offender was placed in an age-appropriate grade level, intelligence test scores, overall GPA, and individual grade GPA) were significantly related to reoffense status. Because only one special education variable was retained for further analyses, no multivariate analyses were conducted for this family of variables.

History of Education Discipline Problems Bivariate Results

A total of 21 variables were coded for discipline problems that occurred at school. The variables were coded for the frequency of six different problem behaviors plus one category of unspecified behavior problems at each of three school time periods: elementary school, middle school/junior high, and high school. The problem behaviors included non-sexual violence, sexual aggression, property offenses, oppositional behavior, verbal harassment, and truancy. From those 21 variables, several additional variables were created and included whether or not the JSO had a history of behavior problems at any time during his schooling, whether or not the JSO had behavior problems during each individual time period, the number of types of problematic behaviors that the JSO ever received a discipline from, and the number of different time periods that the JSO had behavior problems. All significant variables are found in Table 32 through 34.

The first hypotheses tested concerned whether or not a history of behavior problems was a predictor of future recidivism. Specifically, it was hypothesized that JSOs with a history of behavior problems would have a higher rate of juvenile sexual recidivism than those who had no such problems. To test this hypothesis, a variable was created where a JSO with any behavior problem (e.g. violence, sexual aggression, property offenses, oppositional behavior, verbal harassment, or other behavior problems noted but not specified) at any age was coded as having had a behavior problem, and the remaining JSOs were coded as having no behavior problems. As indicated in Table 32, the presence of any education discipline problems at any education level was significantly related to reoffense status. Specifically, JSOs with a history of any education discipline problems reoffended at a rate of 18.3%, compared to 8.0% for JSOs without such history.

Table 32
Significant bivariate education discipline types variables

Variable	n (total)	%	n	Chi-Square	<i>p</i>
Does Offender Have a Record of Any Discipline Problems in School Ever?				14.77	<.001*
No	314	8.0%	25		
Yes	323	18.3%	59		
Does Offender Have a Record of School Sexual Behavior?				3.42	0.064
No	543	12.2%	66		
Yes	94	19.1%	18		
Does Offender Have a Record of School Property Offenses?				1.88	0.170
No	540	12.4%	67		
Yes	97	17.5%	17		
Does Offender Have a Record of School Verbal Harassment?				3.64	0.056
No	581	12.4%	72		
Yes	56	21.4%	12		
Does Offender Have a Record of School Violence?				7.75	0.005
No	536	11.6%	62		
Yes	101	21.8%	22		
Does Offender Have a Record of School Oppositional Behavior?				5.86	0.015
No	529	11.7%	62		
Yes	108	20.4%	22		
Does Offender Have a Record of School Truancy?				7.03	0.008
No	443	10.8%	48		
Yes	194	18.6%	36		

* $p < .0005$.

After determining the presence of school related discipline problems was associated with sexual reoffense, a separate question was posed: "Were specific types of behavior problem differentially associated with sexual reoffense?" To answer this question, six variables were created to correspond to the presence or absence of each of the six coded

behavior problem types at any time during the JSO's education. Chi-square analysis was used to determine if the differences in reoffense rates were significant. As indicated in Table 32, though all behavior types exhibited the same trend, only a history of violence, oppositional behavior, and truancy were found to be significantly related to reoffense status. Both sexual aggression and verbal harassment were marginally related, and a history of property offenses was not significant (see Table 32). Of the significant or marginally significant variables, all reoffense rates for those JSOs with histories of the different behavior problems were between 18.6% and 21.4%. As such, no individual behavior appeared to stand out as more or less related to reoffense status. Thus, only the variable reflecting any history of discipline problems was retained for further analysis.

Because no single type appeared to emerge as more important to the prediction of recidivism, the relation between recidivism and the total number of different types of behavior problems was examined. To examine this potential relation, a summative variable for the number of discrete types of behavior problems was created. Point-biserial correlation analysis revealed that the number of different types of behavior problems engaged in during all time points of his education was significantly related to reoffense status ($r(637) = .126, p < .05$). This variable was also analyzed using chi-square analysis. However, because of the similar reoffense rates at several values of behaviors, values one to four, and five and above were collapsed, respectively, prior to the analysis. As indicated in Table 33, significant differences in reoffense rates emerged among the different levels of the variable. Specifically, of the 315 JSOs with no history of behavior problems 7.9% sexually recidivated, whereas 17.4% of JSOs with one to four different types of behavior problems

reoffended during that same timeframe. Finally, JSOs with five or more different types of behavior problems reoffended at the highest rate, 24.4%.

Table 33

Significant bivariate education discipline incident variables

Variable	n (total)	%	n	Chi-Square	<i>p</i>
Number of Different Types of School Behavior Problems				16.52	<.001*
None	315	7.9%	25		
One to Four	281	17.4%	49		
Five or More	41	24.4%	10		
Number of Discipline Behavior Problems Independent of Type for All Time Periods				21.54	<.001*
None	315	7.9%	25		
One to Two	146	14.4%	21		
Three to Four	82	18.3%	15		
Five or More	38	31.6%	12		

**p* < .0005.

Because the diversity of the JSO's behavior problem repertoire was significantly related to recidivism, a slightly different question was posed. Specifically, was the total number of behavior problem incidents, independent of type, significantly related to reoffense status? To examine that question, a new variable was created by summing the frequency of problems for all types of behavior during all time periods. The point-biserial correlation between this new variable and the reoffense status variable indicated the two variables were not significantly related ($r(637) = .055, p > .05$). However, because the frequency of JSOs at all levels of this variable waned as the value increased, a new categorical variable was created. For this variable, JSOs with one or two behavior problem incidents were collapsed into the same level, as well as JSOs with three to four and those with five or more. As indicated in Table 33, significant differences in reoffense rates emerged among JSOs with

different numbers of behavior problem incidents (see Table 33). More specifically, JSOs with no history of any behavior problems reoffended at a rate of 7.9%, while JSOs with histories of one or two behavior problem incidents reoffended at a rate of 14.4%. Additionally, JSOs with histories of three to four incidents reoffended at a rate of 18.3%, and offenders with five or more incidents reoffended at a rate of 31.6%.

Because data was coded for different education time periods, it was possible to examine whether or not reoffense rates were more strongly associated with JSOs who had behavior problems earlier as opposed to later. To examine this question, three variables were created for whether or not the JSO had a behavior problem in elementary school, middle school or junior high, and high school. The results from three separate chi-square analysis revealed that significant differences in reoffense rates occurred between JSOs with and without behavior problems during elementary school, middle school or junior high, and high school (see Table 34). JSOs with no history of behavior problems during elementary, middle school or junior high, and high school reoffended at rates of 11.3%, 8.8%, and 9.8%, respectively, while the corresponding JSOs with behavior problems reoffended at rates of 26.9%, 21.2%, 19.5%. Though it appeared on face value that JSOs with elementary school discipline problems were at a higher risk to reoffend, all three variables were retained for further analysis.

Table 34
Significant bivariate education discipline time period variables

Variable	n (total)	%	n	Chi-Square	<i>p</i>
Does Offender Have a Record of Any Elementary Discipline Problems?				14.65	<.001*
No	559	11.3%	63		
Yes	78	26.9%	21		
Does Offender Have a Record of Any Middle or Junior High Discipline Problems?				19.84	<.001*
No	411	8.8%	36		
Yes	226	21.2%	48		
Does Offender Have a Record of Any High School Discipline Problems?				11.87	0.001
No	417	9.8%	41		
Yes	220	19.5%	43		
Number of Different Periods				27.25	<.001*
None or One	482	9.3%	45		
Two	109	22.9%	25		
Three	46	30.4%	14		

* $p < .0005$.

Lastly, an additional time period regarding discipline problems question was posed. Specifically, was the number of education time periods a JSO had behavior problems related to recidivism? To answer this question a new variable was created that summed the number of different time periods where the JSO was recorded as having at least one behavior problem. Correlation analysis indicated that this new variable was significantly related to reoffense status ($r(637) = .207, p < .05$). Similar to previous continuous variables, this new time period variable was analyzed by using chi-square analysis. However, before employing that analysis those JSOs with no history of behavior problems and those with a history of only one time period with behavior problems were collapsed because of similar reoffense

rates. As indicated in Table 34, significant differences in reoffense rates occurred among the different levels of the variable. Of the 45 JSOs with no history or a history of behavior problems occurring during only one educational period, 9.3% reoffended before the age of 18. On the other hand, 22.9% of JSOs with a history of behavior problems during two educational periods and 30.4% with a history of three reoffended during that same time.

History of Education Discipline Problems Multivariate Results

After analyzing 21 education discipline problem variables, seven variables were retained for multivariate analysis. These included the presence or absence of any educational discipline problem, the number of different discrete problem types the JSO had over the entire course of education, the number of different behavior problem incidents the JSO had over the entire course of education, the presence or absence of behavior problems during elementary school, middle school or junior high, and high school, and the number of time periods with behavior problems.

Before testing the independence and incremental ability of each of the educational discipline variables, the linearity of the relation between three variables and reoffense status was examined. The three variables included the number of discrete problem types, the number of behavior problem incidents, and the number of time periods the JSO had discipline problems. In the first case, the linear number of discrete problem types was significantly related to reoffense status ($\chi^2(1) = 9.19, p < .05$), but the quadratic ($\chi^2(1) = 3.10, p > .05$) and cubic ($\chi^2(1) = 1.55, p > .05$) effects were not significant (see Table 35). However, the linear ($\chi^2(1) = 11.18, p < .05$) and quadratic ($\chi^2(1) = 5.72, p < .05$) effects of the number of different behavior problem incidents were significantly related to reoffense status (see Table 36). Thus, it appeared that the number of problem incidents was

monotonically related to risk of reoffense. Lastly, only the linear effect ($\chi^2(1) = 25.20, p < .05$) of the number of time periods with discipline problems was significantly related to reoffense status (see Table 37).

Table 35

Logistic regression analysis of curvilinear relation between recidivism and the number of behavior problem categories

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Linear Number of Education Behavior Problem Categories	9.19	1	0.002	0.19	0.06	9.75	1	0.002	1.21
Constant				-1.93	0.12	253.31	1	<.001	0.15
Step 2									
Linear Number of Education Behavior Problem Categories	3.10	1	0.079	0.34	0.11	10.37	1	0.001	1.40
Quadratic Number of Education Behavior Problem Types				-0.06	0.03	2.90	1	0.088	0.94
Constant				-1.77	0.15	143.50	1	<.001	0.17
Step 3									
Linear Number of Education Behavior Problem Categories	1.55	1	0.213	0.35	0.11	10.61	1	0.001	1.42
Quadratic Number of Education Behavior Problem Types				-0.17	0.10	3.18	1	0.074	0.84
Cubic Number of Education Behavior Problem Types				0.02	0.02	1.60	1	0.206	1.02
Constant				-1.60	0.20	65.08	1	<.001	0.20

Table 36

Logistic regression analysis of curvilinear relation between recidivism and the total number of discipline incidents

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Linear Number of Discipline Incidents	11.18	1	0.001	0.13	0.04	12.15	1	<.001	1.14
Constant				-1.93	0.12	253.74	1	<.001	0.15
Step 2									
Linear Number of Discipline Incidents	5.72	1	0.017	0.26	0.07	14.81	1	<.001	1.30
Quadratic Number of Discipline Incidents				-0.02	0.01	4.60	1	0.032	0.98
Constant				-1.81	0.13	183.47	1	<.001	0.16
Step 3									
Linear Number of Discipline Incidents	0.12	1	0.729	0.28	0.08	12.72	1	<.001	1.32
Quadratic Number of Discipline Incidents				-0.03	0.03	1.15	1	0.283	0.97
Cubic Number of Discipline Incidents				0.00	0.00	0.13	1	0.724	1.00
Constant				-1.77	0.17	107.85	1	<.001	0.17

Table 37

Logistic regression analysis of curvilinear relation between recidivism and the total number discipline time periods

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Linear Number of Education Discipline Time Periods	25.20	1	<.001	0.57	0.11	25.47	1	<.001	1.78
Constant				-2.00	0.13	243.38	1	<.001	0.14
Step 2									
Linear Number of Education Discipline Time Periods	0.00	1	0.961	0.58	0.18	10.61	1	0.001	1.79
Quadratic Number of Education Discipline Time Periods				-0.01	0.12	0.00	1	0.961	0.99
Constant				-1.99	0.16	147.50	1	<.001	0.14

Several hierarchical logistic regression analyses were employed to assess the independence and incremental predictive ability of the remaining education discipline variables. In the first analysis, the presence or absence of any discipline problem was entered

into the first block followed by the linear and quadratic number of behavior problem incidents in the second block. Results indicated that neither the linear nor the quadratic effects for the number of behavioral problem incidents variable added significantly to the prediction of reoffense status ($\chi^2(2) = 2.77, p > .05$). The variables were reversed in the second analysis to assess whether or not the presence or absence of any discipline problem variable significantly added to the number of problem incidents. Similar to the first analysis, the second block, presence or absence of behavior problems, did not significantly add to the prediction of recidivism ($\chi^2(1) = 1.04, p > .05$). Though all three variables appeared to be accounting for the same variance in reoffense status, when all three variables were entered simultaneously in the last step, the linear and quadratic effects of the number of incidents variables had the highest Wald χ^2 values (see Table 38). As such, those two variables were retained.

Table 38

Hierarchical logistic regression analysis of hierarchical logistic regression analysis of any school discipline problems and the effects of the total number of discipline incidents

Variable	Step			B	S.E.	Wald			Exp (β)
	χ^2	df	<i>p</i>			χ^2	df	<i>p</i>	
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	15.17	1	<.001						
Has Offender Ever Had A School Discipline?				0.95	0.25	14.03	1	<.001	2.58
Constant				-2.45	0.21	137.84	1	<.001	0.09
Step 2	2.77	2	0.249						
Has Offender Ever Had A School Discipline?				0.43	0.42	1.07	1	0.301	1.54
Linear Number of Education Behavior Problem Incidents				0.17	0.11	2.41	1	0.120	1.19
Quadratic Number of Education Behavior Problem Incidents				-0.01	0.01	1.19	1	0.274	0.99
Constant				-2.40	0.21	127.97	1	<.001	0.09

Table 38 (continued)

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	16.91	2	<.001						
Linear Number of Education Behavior Problem Incidents				0.26	0.07	14.81	1	<.001	1.30
Quadratic Number of Education Behavior Problem Incidents				-0.02	0.01	4.60	1	0.032	0.98
Constant				-2.28	0.17	189.12	1	<.001	0.10
Step 2									
	1.04	1	0.308						
Linear Number of Education Behavior Problem Incidents				0.17	0.11	2.41	1	0.120	1.19
Quadratic Number of Education Behavior Problem Incidents				-0.01	0.01	1.19	1	0.274	0.99
Has Offender Ever Had A School Discipline?				0.43	0.42	1.07	1	0.301	1.54
Constant				-2.40	0.21	127.97	1	<.001	0.09

Two additional hierarchical regression analyses were employed to test the independence of the linear and quadratic effects of the number of behavior problem incidents variable and the number of discrete behavior problem types of the JSO. In the first of these two analyses, the linear and quadratic effects of the number of incidents was entered into the first block, followed by the number of behavior types. Results showed that the number of behavior types did not add significantly to the prediction of reoffense status ($\chi^2 (1) = 1.21, p > .05$). Similarly, when the variable blocks were reversed, the linear and quadratic effects of the number of incidents did not add significantly to the prediction of recidivism beyond the number of behavior types ($\chi^2 (2) = 2.45, p > .05$). Thus, it appeared that the variables were accounting for the same variance in reoffense status. However, when all three variables were entered simultaneously in the last step, the linear and quadratic effects of the number of

incidents variables had the highest Wald χ^2 values (see Table 39). As such, those two variables were retained.

Table 39
Hierarchical logistic regression analysis of the number of discipline problem categories and the effects of the total number of discipline incidents

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	16.91	2	<.001						
Linear Number of Education Behavior Problem Incidents				0.26	0.07	14.81	1	<.001	1.30
Quadratic Number of Education Behavior Problem Incidents				-0.02	0.01	4.60	1	0.032	0.98
Constant				-2.28	0.17	189.12	1	<.001	0.10
Step 2									
	1.21	1	0.271						
Linear Number of Education Behavior Problem Incidents				0.16	0.11	2.08	1	0.149	1.18
Quadratic Number of Education Behavior Problem Incidents				-0.02	0.01	2.08	1	0.149	0.98
Number of Education Behavior Problem Categories				0.39	0.35	1.22	1	0.269	1.48
Constant				-2.37	0.19	155.22	1	<.001	0.09
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	15.67	1	<.001						
Number of Education Behavior Problem Categories				0.73	0.19	15.69	1	0.000	2.08
Constant				-2.38	0.19	163.54	1	0.000	0.09
Step 2									
	2.45	2	0.249						
Number of Education Behavior Problem Categories				0.39	0.35	1.22	1	0.269	1.48
Linear Number of Education Behavior Problem Incidents				0.16	0.11	2.08	1	0.149	1.18
Quadratic Number of Education Behavior Problem Incidents				-0.02	0.01	2.08	1	0.149	0.98
Constant				-2.37	0.19	155.22	1	<.001	0.09

To address the question of whether or not early discipline problems were more predictive of further reoffending, the variables for the presence or absence of discipline problems in elementary school, middle school or junior high, and high school were entered

simultaneously into a logistic regression (see Table 40). Results indicated that only the presence of middle school discipline problems was significantly related to reoffense status (Wald $\chi^2(1) = 6.39, p < .05$), whereas the presence of elementary school discipline problems was marginally significant (Wald $\chi^2(1) = 3.59, p = .06$) and the presence of high school discipline problems was not significant (Wald $\chi^2(1) = 2.59, p > .05$). Thus, it appeared that there was some support for early discipline problems relating more strongly to future recidivism. As such, only the presence and absence of elementary and middle school discipline problems were retained for further analysis.

Table 40
Hierarchical logistic regression analysis of any education discipline problems at three different time periods

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	25.63	3	<.001						
Did Offender Have Elementary School Discipline Problems				0.60	0.32	3.59	1	0.058	1.82
Did Offender Have Middle School Discipline Problems				0.70	0.28	6.39	1	0.011	2.01
Did Offender Have High School Discipline Problems				0.42	0.26	2.59	1	0.108	1.53
Constant				-2.47	0.19	171.46	1	<.001	0.08

To answer the question of whether or not behavior problems at individual time periods (elementary school and middle school/junior high) or the number of time periods with behavior problems had more influence on the prediction of recidivism, two additional hierarchical logistic regression analyses were conducted. In the first analysis, the first block of the regression analysis included elementary and middle school discipline problems. In the second block, the number of time periods that the JSO had discipline problems was added to the equation. In the second analysis, the blocks were reversed. Results of the two analyses

indicate that both blocks of variables seem to account for about the same amount of variance in reoffense status (see Table 41). Specifically, block two of the first analysis does not add significantly to the prediction of reoffense status after accounting for the presence of behavior problems during either elementary school or middle school ($\chi^2(1) = 1.81, p > .05$), and block two of the second analysis does not add significantly to the prediction after accounting for the number of time periods with behavior problems ($\chi^2(2) = 2.45, p > .05$). When all variables were entered into the equation, no Wald χ^2 approaches significance. Thus, in favor of parsimony, only the variable representing the number of time periods with discipline problems was retained.

Table 41
Hierarchical logistic regression analysis of the number of discipline time periods and discipline problems during either elementary or middle school

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	23.06	2	<.001						
Did Offender Have Elementary School Discipline Problems				0.65	0.31	4.29	1	0.038	1.91
Did Offender Have Middle School Discipline Problems				0.85	0.26	10.98	1	0.001	2.35
Constant				-2.37	0.18	182.69	1	<.001	0.09
Step 2									
	1.81	1	0.179						
Did Offender Have Elementary School Discipline Problems				0.21	0.46	0.21	1	0.645	1.24
Did Offender Have Middle School Discipline Problems				0.56	0.35	2.59	1	0.108	1.75
Number of Education Discipline Time Periods				0.43	0.33	1.73	1	0.188	1.54
Constant				-2.79	0.36	59.14	1	<.001	0.06

Table 41 (*continued*)

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	22.42	1	<.001						
Number of Education Discipline Time Periods				0.80	0.16	24.26	1	<.001	2.22
Constant				-3.02	0.28	119.29	1	<.001	0.05
Step 2	2.45	2	0.249						
Number of Education Discipline Time Periods				0.43	0.33	1.73	1	0.188	1.54
Did Offender Have Elementary School Discipline Problems				0.21	0.46	0.21	1	0.645	1.24
Did Offender Have Middle School Discipline Problems				0.56	0.35	2.59	1	0.108	1.75
Constant				-2.79	0.36	59.14	1	<.001	0.06

Two final hierarchical logistic regression analyses were employed to test the independence and incremental predictive ability of the remaining three variables, namely the linear and quadratic effects of the total number of education discipline incidents and the total number of time periods with discipline problems (see Table 42). In the first analysis, the number of education time periods variable was entered in the first block, followed by the linear and quadratic effects of the total number of discipline incidents variable. Results of that first analysis suggest that the number of discipline problems variable does not add significantly to the prediction of reoffense status above and beyond the number of time periods ($\chi^2 (2) = 2.66, p > .05$). However, when the blocks were reversed, the number of time periods variable significantly added to the prediction above and beyond the total number of disciplines ($\chi^2 (1) = 8.17, p < .05$). Thus, the number of time periods that the JSO had discipline problems shared much variance with the total number of discipline problems and accounted for an additional amount of unique variance in reoffense status. Consequently, only the number of time periods variable was retained for the final analysis.

Table 42
Hierarchical logistic regression analysis of the number of discipline time periods and the effects of the number of discipline problems

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Number of Education Discipline Time Periods	22.42	1	<.001	0.80	0.16	24.26	1	<.001	2.22
Constant				-3.02	0.28	119.29	1	<.001	0.05
Step 2									
Number of Education Discipline Time Periods	2.66	2	0.264	0.78	0.28	7.99	1	0.005	2.19
Linear Number of Discipline Incidents				0.08	0.10	0.62	1	0.432	1.08
Quadratic Number of Discipline Incidents				-0.02	0.01	2.02	1	0.155	0.98
Constant				-3.05	0.32	89.55	1	<.001	0.05
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Linear Number of Discipline Incidents	16.91	2	<.001	0.26	0.07	14.81	1	<.001	1.30
Quadratic Number of Discipline Incidents				-0.02	0.01	4.60	1	0.032	0.98
Constant				-2.28	0.17	189.12	1	<.001	0.10
Step 2									
Linear Number of Discipline Incidents	8.17	1	0.004	0.08	0.10	0.62	1	0.432	1.08
Quadratic Number of Discipline Incidents				-0.02	0.01	2.02	1	0.155	0.98
Number of Education Discipline Time Periods				0.78	0.28	7.99	1	0.005	2.19
Constant				-3.05	0.32	89.55	1	<.001	0.05

History of Adolescent Non-Sexual Antisocial Behavior Bivariate Results

The codebook contained a wide range of variables that tapped adolescent non-sexual antisocial behavior. In addition to school-related discipline problems, other variables included the total number of juvenile adjudications, the number of non-sex person adjudications (e.g., assault or robbery), the number of secure facility placements, the types of offenses committed, the offender's discipline record while under supervision or treatment,

and the coder's perception of the pervasiveness of adolescent antisocial behavior. Chi-square and correlation analysis were used to determine significant relations between these variables and reoffense status. All significant variables are found in Table 43 and 44.

Some past researchers indicated that an antisocial interpersonal orientation was predictive of future reoffending, including sexual reoffending (Kenny et al., 2001; Knight & Prentky, 1993). One indication of an antisocial interpersonal orientation is the number of non-sexual offenses that a juvenile commits. Thus, the first hypothesis in this family stated that the more non-sexual offenses that a juvenile committed would be significantly related to reoffense status. Using a point-biserial correlation, the two variables were found to be significantly related ($r(618) = .120, p < .05$). As further illustration of this relation, the number of juvenile non-sexual offenses variable was transformed into a categorical variable, where the levels represented no offenses, one to two offenses, three to five offenses, and six or more offenses. The collapsing of different levels was based on similar reoffense rates associated with individual values. This new variable was subjected to chi-square analysis and, as expected, significant differences in reoffense rates were found among the different categories of numbers of non-sexual adjudications (see Table 43). However, when looking at the rates of reoffense associated with each level, the relation does not appear to be linear. For example, of the 200 JSOs who only had sexual offenses, 7.0% sexually recidivated. In contrast with 11.1% of JSOs with one to two offenses, 21.3% of JSOs with three to five offenses reoffended, and 17.1% of JSOs with six or more offenses reoffended during that same time. As a result, this variable was retained for further analysis of the linearity of the relation between it and reoffense status. Results are found in the multivariate analysis section.

Table 43

Significant bivariate non-sexual antisocial behavior variables

Variable	n (total)	%	n	Chi-Square	<i>p</i>
Total Number of Juvenile Adjudications - Not Including Sex Offense Adjudications				15.13	0.002
None	200	7.0%	14		
One to Two	108	11.1%	12		
Three to Five	94	21.3%	20		
Six or More	216	17.1%	37		
Total Number of Juvenile Non-Sex Person Adjudications				5.13	0.024
None	505	11.7%	59		
One or More	130	19.2%	25		
Does Offender Have a Record of Any Secure Facility Placements?				14.00	<.001*
No	338	8.9%	30		
Yes	275	19.3%	53		

* $p < .0005$.

Because there appeared to be some relation between juvenile non-sexual offending and sexual recidivism, the relation between non-sex person offenses, typically more violent types of offenses, and recidivism was explored. Like the previous relation between all non-sexual offenses and recidivism, the point-biserial correlation between the number of non-sex person offenses and reoffense status was significant ($r(637) = .123, p < .05$). This variable was transformed into a categorical variable with three levels, representing no non-sex person adjudications, one non-sex person adjudication, and two or more non-sex adjudications. Though the correlation was significant, the chi-square statistic indicated no significant difference in reoffense rates among the three levels. Of particular note, the reoffense rates for the categories representing one and two or more adjudications were 19.1 and 19.4%, respectively. As such, a third variable was created that contrasted those JSOs who had no juvenile non-sex person adjudications and those who had at least one. The reoffense rate for

those JSOs with no such adjudications was 11.7%, compared to 19.2% for those JSOs with at least one non-sex person adjudication. This difference in reoffense rates was found to be significant (see Table 43). As such, that dichotomous variable was retained for further multivariate analysis.

A third means to look at that adolescent antisocial interpersonal orientation is to inspect the JSO's history of secure facility placements. To assess the relation between secure facility placements and reoffense status, a new variable was created that contrasted those JSOs who had at least one secure facility placement with those who had none. As indicated in Table 43, significant differences in reoffense rates emerged between those who had no secure facility placement and those who had at least one. More specifically, 19.3% of the 275 JSOs with a history of a secure facility placement recidivated before age 18, compared to 8.9% of the remaining JSOs with no such history.

Another indication of antisocial interpersonal orientation is a history of supervision failure. Thus, it was hypothesized that the number of supervision failures a JSO had would be related to the reoffense status. However, after analyzing that relation using a point-biserial correlation, no significant relation was found ($r(637) = .049, p > .05$). Therefore, to completely rule out the relation between supervision failures and reoffense status, a new variable that contrasted those JSOs with any supervision failure with those who had none was created. Significant differences in reoffense rates emerged between those JSOs with and without supervision failures (see Table 44). Of the 203 JSOs with supervision failures, 17.2% reoffended prior to 18, compared to 11.3% of the remaining JSOs.

Table 44

Significant bivariate supervision and discipline record variables

Variable	n (total)	%	n	Chi-Square	<i>p</i>
Did Offender Ever Have a Supervision Failure?				4.28	0.039
No	434	11.3%	49		
Yes	203	17.2%	35		
Does Offender Have a Discipline Record?				6.30	0.012
No	543	11.8%	64		
Yes	94	21.3%	20		
Has Offender Ever Been Cited for a Violation of a Violent Nature in the Institution?				6.11	0.013
No	583	12.2%	71		
Yes	54	24.1%	13		
Does Offender Have a Pattern of Adolescent Antisocial Behavior?				36.23	<.001*
No Indication	122	4.1%	5		
Some Relatively Isolated Acts	222	7.2%	16		
Persistent Pattern of Adolescent Antisocial Behavior	275	22.5%	62		

**p* < .0005.

Similarly, another indication of a JSO's antisocial interpersonal orientation is a history of having a discipline record while in some form of institution. Thus, it was hypothesized that JSOs with a history of a discipline record would have significantly higher reoffense rate than those who did not have such records. The results of chi-square analysis revealed significant differences in reoffense rates between those JSOs with and without discipline records (see Table 44). Specifically, 21.3% of those JSOs with a history of a discipline record reoffended, while only 11.8% of the remaining JSOs offended during that same time period.

In addition to the overall discipline record variable, three types of institution discipline problems were coded: being cited for drugs or alcohol, being cited for violence, and being cited for sexual behavior. Only the variables relating to being cited for drugs and alcohol or violence are discussed here, with citations for sexual behavior discussed in a later section. Both variables were collapsed to contrast those JSOs who had been cited and those who had not been cited for those two particular violations. Reoffense rates between those JSOs who had and had not been cited for drugs or alcohol while in some form of institution were not significantly different. However, reoffense rates between JSOs who had and had not been cited for violent behavior while in some form of institution were significantly different (see Table 44). Specifically, 24.1% of JSOs who had been cited for violence sexually recidivated, while only 12.2% of those who had not been cited for violence sexually recidivated. Because being disciplined for a violent offense while in some form of an institution was significant and being cited for drugs or alcohol was not significant, only the variable tapping violent behavior in the institution was retained.

Lastly, coders were asked to subjectively rate the JSO's pattern of adolescent antisocial behavior. The options included no indication, some relatively isolated acts, and a persistent pattern of adolescent antisocial behavior. As indicated in Table 44, significant differences in reoffense rates existed among the three levels of that variable. Those offenders rated as having no indication or some relatively isolated acts reoffended at rates of 4.1% and 7.2%, respectively. However, those JSOs rated as having a persistent pattern of adolescent antisocial behavior reoffended at a rate of 22.5%. Because this variable was a perception variable and because it was not dramatically stronger than behaviorally anchored variables, it was not retained for further analysis.

History of Adolescent Non-Sexual Antisocial Behavior Multivariate Results

Six variables that tapped the JSO's history of adolescent antisocial behavior were retained for further multivariate analysis. These variables included the number of non-sexual juvenile adjudications, whether or not the JSO had a non-sex person adjudication, whether or not the JSO had a record of a secure facility placement, whether or not the JSO had a supervision failure, and whether or not the JSO was cited for violent behavior while in some form of institution.

Because the number of non-sexual juvenile adjudications variable did not appear to be linearly related to reoffense status when analyzed categorically, the linearity of that variable was tested using hierarchical logistic regression. Results indicated that the linear ($\chi^2(1) = 6.72, p < .05$) and the quadratic effects ($\chi^2(1) = 8.44, p < .05$) of the number of non-sexual juvenile adjudications variable were significant, and the cubic effect did not significantly add ($\chi^2(1) = .52, p > .05$) to the prediction of reoffense status after accounting for the linear and quadratic components (see Table 45).

Table 45
Logistic regression analysis of curvilinear relation between recidivism and the number of non-sexual offense adjudications

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	6.72	1	0.010						
Linear Number of Non-Sex Offense Adjudications				0.08	0.03	6.85	1	0.009	1.08
Constant				-1.92	0.12	253.62	1	<.001	0.15
Step 2	8.44	1	0.004						
Linear Number of Non-Sex Offense Adjudications				0.19	0.05	14.70	1	<.001	1.21
Quadratic Number of Non-Sex Offense Adjudications				-0.04	0.01	8.66	1	0.003	0.96
Constant				-1.39	0.21	45.38	1	<.001	0.25
Step 3	0.52	1	0.469						
Linear Number of Non-Sex Offense Adjudications				0.13	0.10	1.65	1	0.199	1.14
Quadratic Number of Non-Sex Offense Adjudications				-0.06	0.03	4.46	1	0.035	0.94
Cubic Number of Non-Sex Offense Adjudications				0.00	0.01	0.53	1	0.467	1.00
Constant				-1.30	0.24	30.40	1	<.001	0.27

Two hierarchical logistic regression analyses were employed to test whether or not the presence of any non-sex person adjudication and the number of juvenile adjudications variables were independent in the prediction of reoffense status. In the first analysis, the linear and quadratic effects of the number of juvenile adjudications variable were entered into the first block followed by the presence of any non-sex person adjudications variable in the second block. Results indicated that the presence of a non-sex person offense did not add significantly to the prediction of reoffense status after accounting for the total number of adjudications ($\chi^2 (1) = 1.08, p > .05$). However, when the blocks were entered in reverse order, the linear and quadratic effects of the total number of juvenile adjudications added

significantly to the prediction of recidivism after accounting for non-sex person offenses ($\chi^2(2) = 11.28, p < .05$). This pattern of results suggested that the total number of juvenile adjudications subsumed the variance accounted for by the variable representing the presence or absence of non-sex person offenses, as well as, accounted for a significant amount of unique variance in reoffense status (see Table 46).

Table 46
Hierarchical logistic regression analysis of the number of non-sexual adjudications and any history of non-sex person offense

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	257.87	1	<.001	0.15
Step 1									
	14.94	2	0.001						
Linear Number of Non-Sex Offense Adjudications				0.19	0.05	14.48	1	<.001	1.21
Quadratic Number of Non-Sex Offense Adjudications				-0.04	0.01	8.57	1	0.003	0.96
Constant				-1.39	0.21	45.37	1	<.001	0.25
Step 2									
	1.08	1	0.299						
Linear Number of Non-Sex Offense Adjudications				0.17	0.05	10.58	1	0.001	1.19
Quadratic Number of Non-Sex Offense Adjudications				-0.04	0.01	8.64	1	0.003	0.96
Has Offender Ever Been Adjudicated of A Non-Sex Person Crime?				0.32	0.30	1.09	1	0.296	1.37
Constant				-1.45	0.22	44.88	1	<.001	0.23
Step 0									
Constant				-1.88	0.12	257.87	1	<.001	0.15
Step 1									
	4.74	1	0.029						
Has Offender Ever Been Adjudicated of A Non-Sex Person Crime?				0.59	0.26	5.03	1	0.025	1.80
Constant				-2.02	0.14	213.20	1	0.000	0.13
Step 2									
	11.28	2	0.004						
Has Offender Ever Been Adjudicated of A Non-Sex Person Crime?				0.32	0.30	1.09	1	0.296	1.37
Linear Number of Non-Sex Offense Adjudications				0.17	0.05	10.58	1	0.001	1.19
Quadratic Number of Non-Sex Offense Adjudications				-0.04	0.01	8.64	1	0.003	0.96
Constant				-1.45	0.22	44.88	1	<.001	0.23

Two additional hierarchical logistic regression analyses were employed to test whether or not the variable representing a history of any secure facility placement and the variables representing the number of juvenile adjudications variables were independent in the prediction of reoffense status. In the first analysis, the linear and quadratic effects of the number of juvenile adjudications variable were entered into the first block followed by the variable representing a history of any secure facility placement in the second block. Results indicated that a history of any secure facility placement added significantly to the prediction of reoffense status after accounting for the total number of adjudications ($\chi^2 (1) = 8.76, p < .05$). When the blocks were entered in reverse order, the linear and quadratic effects of the total number of juvenile adjudications added significantly to the prediction of recidivism after accounting for a history of any secure facility placement ($\chi^2 (2) = 9.30, p < .05$). Furthermore, Wald χ^2 values for all three variables were significant when entered simultaneously into the regression equation (see Table 47). Thus, the total number of juvenile adjudications and a history of a secure facility placement variables were retained for further analysis.

Table 47
Hierarchical logistic regression analysis of the effects of the number of non-sexual adjudications and any history of a secure facility placements

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.85	0.12	246.68	1	<.001	0.16
Step 1									
	14.52	2	0.001						
Linear Number of Non-Sex Offense Adjudications				0.19	0.05	14.04	1	<.001	1.20
Quadratic Number of Non-Sex Offense Adjudications				-0.04	0.01	8.51	1	0.004	0.96
Constant				-1.37	0.21	43.95	1	<.001	0.25
Step 2									
	8.76	1	0.003						
Linear Number of Non-Sex Offense Adjudications				0.14	0.05	7.52	1	0.006	1.15
Quadratic Number of Non-Sex Offense Adjudications				-0.04	0.01	8.75	1	0.003	0.96
Has Offender Ever Had A Secure Facility Placement?				0.79	0.27	8.60	1	0.003	2.21
Constant				-1.75	0.26	46.79	1	<.001	0.17

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				0.19	0.05	14.04	1	<.001	1.20
Step 1									
	13.99	1	<.001						
Has Offender Ever Had A Secure Facility Placement?				0.90	0.24	13.41	1	<.001	2.45
Constant				-2.33	0.19	148.27	1	<.001	0.10
Step 2									
	9.30	2	0.010						
Has Offender Ever Had A Secure Facility Placement?				0.79	0.27	8.60	1	0.003	2.21
Linear Number of Non-Sex Offense Adjudications				0.14	0.05	7.52	1	0.006	1.15
Quadratic Number of Non-Sex Offense Adjudications				-0.04	0.01	8.75	1	0.003	0.96
Constant				-1.75	0.26	46.79	1	<.001	0.17

To assess whether or not a history of a supervision failures significantly added to the prediction of reoffense status above and beyond both the total number of juvenile adjudications and the history of a secure facility placement variables, a hierarchical logistic regression analysis was employed. In that analysis, the variables for the total number of

juvenile adjudications and a history of a secure facility placement were entered into the equation in the first block, followed by a history of a supervision failure in the second block (see Table 48). Results indicated that a history of supervision failures did not add to the prediction of reoffense status after accounting for the total number of juvenile adjudications and a history of a secure facility placement ($\chi^2(1) = .05, p > .05$). Because a history of supervision failures did not add significantly, it was not retained for further analysis.

Table 48
Hierarchical logistic regression analysis of the effects of the number of non-sexual adjudications, any history of a secure facility placements, and any history of a supervision failure

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.81	0.12	224.75	1	<.001	0.16
Step 1									
	22.95	3	<.001						
Linear Number of Non-Sex Offense Adjudications				0.15	0.05	7.31	1	0.007	1.16
Quadratic Number of Non-Sex Offense Adjudications				-0.05	0.02	10.10	1	0.001	0.95
Has Offender Ever Had A Secure Facility Placement?				0.81	0.28	8.38	1	0.004	2.26
Constant				-1.70	0.27	41.13	1	<.001	0.18
Step 2									
	0.05	1	0.827						
Linear Number of Non-Sex Offense Adjudications				0.15	0.06	6.92	1	0.009	1.16
Quadratic Number of Non-Sex Offense Adjudications				-0.05	0.02	10.13	1	0.001	0.95
Has Offender Ever Had A Secure Facility Placement?				0.81	0.28	8.15	1	0.004	2.24
Does Offender Have A Supervision Failure?				0.01	0.05	0.05	1	0.825	1.01
Constant				-1.70	0.27	40.36	1	<.001	0.18

The final hierarchical logistic regression analysis for this family of variables investigated whether or not the variable representing violations of a violent nature in some form of institution added to the prediction of reoffense status after accounting for both the total number of juvenile adjudications and the history of a secure facility placement

variables. In that analysis, the variables for the total number of juvenile adjudications and a history of a secure facility placement were entered into the equation in the first block, followed the variable representing a history of one or more violent violations in the second block (see Table 49). Results indicated that a history of any violent violation did not add to the prediction of reoffense status after accounting for the total number of juvenile adjudications and a history of a secure facility placement ($\chi^2(1) = 1.93, p > .05$). Because a history of violent violations while in some form of institution did not add significantly, it was not retained for further analysis. Instead, the linear and quadratic effects of the number of non-sexual adjudications and the history of any secure facility placements were retained for further analysis.

Table 49
Hierarchical logistic regression analysis of the effects of the number of non-sexual adjudications, any history of secure facility placements, and any history of a violent violation while in some institution

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Has Offender Ever Had A Secure Facility Placement?	24.79	3	<.001	0.83	0.27	9.47	1	0.002	2.28
Linear Number of Non-Sex Offense Adjudications				0.14	0.05	7.46	1	0.006	1.15
Quadratic Number of Non-Sex Offense Adjudications				-0.04	0.01	8.75	1	0.003	0.96
Constant				-1.78	0.25	48.88	1	<.001	0.17
Step 2									
Has Offender Ever Had A Secure Facility Placement?	1.93	1	0.165	0.81	0.27	8.98	1	0.003	2.24
Linear Number of Non-Sex Offense Adjudications				0.13	0.05	6.00	1	0.014	1.14
Quadratic Number of Non-Sex Offense Adjudications				-0.04	0.01	8.49	1	0.004	0.96
Has Offender Been Cited for a Violation of a Violent Nature While In Some Institution?				0.52	0.36	2.04	1	0.153	1.68
Constant				-1.83	0.26	49.90	1	<.001	0.16

History of Mental Health Diagnosis Bivariate Results

The codebook assessed JSO's mental health diagnosis history for thirteen diagnoses at two separate time periods, after the index offense and at any time prior to the index offense. The diagnosis variables included hyperactivity, attention deficit disorder, attention deficit hyperactivity disorder, impulse control disorder, conduct disorder, oppositional defiant disorder, paraphilia, borderline mental retardation, mild or moderate mental retardation, depressive disorder including dysthymia, anxiety disorder, and psychotic disorder. Additionally, a space was provided to code any additional diagnosis listed in the file. Frequencies of these additional diagnoses allowed for the creation of two additional diagnosis categories, bipolar disorder and post-traumatic stress disorder. Because of the similarity of results on all diagnostic categories between diagnoses given prior and after the index offense additional variables were created for each diagnosis that tapped whether or not the JSO had ever been diagnosed. Two additional variables initially were created and included whether or not the JSO had ever been diagnosed with a mental disorder and the total number of diagnoses ever received. All significant variables are found in Table 50 and 51.

The first question addressed with this category of variables was whether or not a history of any diagnosis was related to reoffense status. As indicated in Table 50, those JSOs with a history of any diagnosis were significantly more likely to reoffend than those who had no such history. More specifically, of the 217 JSOs with a history of any mental disorder diagnosis, 22.6% reoffended compared to 8.3% of the remaining JSOs.

Table 50
Significant bivariate mental health diagnosis variables

Variable	n (total)	%	n	Chi-Square	<i>p</i>
Was Offender Ever Diagnosed?				25.37	<.001*
No	420	8.3%	35		
Yes	217	22.6%	49		
Was Offender Ever Diagnosed With Attention Deficit Disorder?				7.82	0.005
No	595	12.1%	72		
Yes	40	27.5%	11		
Was Offender Ever Diagnosed With Attention Deficit Hyperactivity Disorder?				15.95	<.001*
No	568	11.3%	64		
Yes	66	28.8%	19		
Was Offender Ever Diagnosed With Impulse Control Disorder?				7.82	0.005
No	595	12.1%	72		
Yes	40	27.5%	11		
Was Offender Ever Diagnosed With Conduct Disorder?				16.01	<.001*
No	569	11.2%	64		
Yes	66	28.8%	19		
Was Offender Ever Diagnosed With Oppositional Defiant Disorder?				15.90	<.001*
No	597	11.7%	70		
Yes	38	34.2%	13		
Was Offender Ever Diagnosed With Depression Including Dysthymia?				12.94	<.001
No	518	10.8%	56		
Yes	116	23.3%	27		
Was Offender Ever Diagnosed With Bipolar Disorder?				8.29	0.004
No	606	12.7%	77		
Yes	16	37.5%	6		

**p* < .0005.

Table 50 (continued)

Variable	n (total)	%	n	Chi-Square	<i>p</i>
Was Offender Ever Diagnosed With Post-Traumatic Stress Disorder?				21.84	<.001*
No	602	12.1%	73		
Yes	18	50.0%	9		
Was Offender Ever Diagnosed With a Paraphilia?				27.55	<.001*
No	612	11.8%	72		
Yes	25	48.0%	12		

In light of the significant relation between any history of mental disorder diagnosis and reoffense status, the second question addressed was what specific diagnoses were related to reoffense. Eight individual diagnoses emerged as related reoffense status. These diagnoses included attention deficit disorder, attention deficit hyperactivity disorder, impulse control disorder, conduct disorder, oppositional defiant disorder, depression including dysthymia, bipolar disorder, post-traumatic stress disorder, and paraphilia (see Table 50). A closer look at the rates of reoffense revealed that with the exception of bipolar disorder, post traumatic stress disorder, and paraphilia all reoffense rates were highly similar. However, both bipolar disorder and post traumatic stress disorder diagnoses failed to meet the 25 JSO per level criterion. As a consequence only paraphilia was retained as an independent diagnosis for further analysis.

Because of the similarity of reoffense rates with the remaining significant diagnoses, two additional variables were created and represented the presence and absence of a diagnosis in one of two families of diagnoses. The first family consisted of the diagnoses attention deficit disorder, attention deficit hyperactivity disorder, impulse control disorder,

conduct disorder, and oppositional defiant disorder. This first family was labeled self-regulatory diagnoses because of the inherent lack of self-regulation associated with each disorder. The second family of disorders consisted of depressive disorder including dysthymia, anxiety disorder, bipolar disorder, and post traumatic disorder. This second family was labeled affective-mood disorders due to the inherent changes in mood associated with each disorder.

To investigate whether or not a history of either family of diagnoses was associated with reoffense status, both variables were subjected to chi-square analysis. Results indicated that reoffense rates between JSOs with a history of self-regulatory types of diagnoses and those without such history differed significantly (see Table 51). Of the 158 JSOs with a history of a self-regulatory diagnosis, 25.3% sexually recidivated, while only 9.2% of the remaining JSOs reoffended during that same time. Similarly, significant differences in reoffense rates emerged between those JSOs with any affective-mood disorder and those JSOs without (see Table 51). Specifically, 25.0% of the 128 JSOs with an affective-mood disorder reoffended, while only 10.2% of the remaining 509 reoffended during that same time period. Because independence could not be established at this level of analysis, both variables were retained for multivariate analysis.

Table 51
Significant bivariate mental health diagnostic family variables

Variable	n (total)	%	n	Chi-Square	<i>p</i>
Was Offender Ever Diagnosed With a Self-Regulatory Type of Diagnosis (ADD, ADHD, Impulse Control, Conduct, or Oppositional Defiant Disorder)?				27.00	<.001*
No	479	9.2%	44		
Yes	158	25.3%	40		
Was Offender Ever Diagnosed With an Affective-Mood Disorder (Depression/Dysthymia, Anxiety or Bipolar, PTSD)?				19.53	<.001*
No	509	10.2%	52		
Yes	128	25.0%	32		
Number of Diagnostic Families				35.47	<.001*
None	436	8.3%	36		
One	103	17.5%	18		
Two or More	96	30.2%	29		

**p* < .0005.

Lastly, because both families of diagnoses, as well as the paraphilia diagnosis, were significantly related to reoffense status an additional variable was created to address whether or not having a diagnosis in more than one diagnostic family was significantly related to reoffense status. During the creation of this summative variable, paraphilia was considered a separate family. Because the frequency of those offenders who actually met the three diagnostic family criteria was below the 25 JSO per level criteria and because of the similar reoffense rates at the two and three family levels, both the two and three diagnostic family levels were collapsed. As indicated in Table 51, significant differences in reoffense rates emerged among the three remaining levels of that variable. Specifically, those JSOs who had no history of any diagnosis reoffended at a rate of 8.3%, while JSOs with a history of only

one diagnostic family or two or more diagnostic families reoffended at rates of 17.1 and 25.9%, respectively. As a result, that variable was retained for multivariate analysis.

History of Mental Health Diagnosis Multivariate Results

After the previous bivariate analyses, only five diagnosis-related variables remained. These included the any history of being diagnosed with a mental disorder, any history of being diagnosed with a paraphilia, any history of being diagnosed with a self-regulatory diagnosis, any history of being diagnosed with an affective-mood disorder, and the number of diagnostic families.

To answer the question of whether or not any one particular diagnostic family predicted reoffense status independently and incrementally above the history of any diagnosis variable three sets hierarchical logistic regression analyses were conducted, one set for each diagnostic family. For each family, the variable representing any history of a diagnosis was entered into the first block followed by the variable representing the presence or absence of that particular diagnostic family. For each family a second analysis was conducted where the blocks were reversed.

The first two logistic regressions in this series involved the presence or absence of a diagnosis of paraphilia. Results indicated that when paraphilia was added to the presence of any diagnosis, paraphilia significantly added to the prediction of reoffense status over the presence of any diagnosis ($\chi^2 (1) = 9.94, p < .05$). Similarly, when the blocks were reversed, the presence of any diagnosis significantly added to the prediction of reoffense status above and beyond a history of a paraphilia ($\chi^2 (1) = 15.13, p < .05$). These results indicate that both variables account for a significant amount of unique variance in reoffense status (see Table 52).

Table 52
Hierarchical logistic regression analysis of any diagnosis history and any history of a paraphilia diagnosis

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Was Offender Ever Diagnosed?	23.99	1	<.001	1.17	0.24	23.62	1	<.001	3.21
Constant				-2.40	0.18	184.48	1	<.001	0.09
Step 2									
Was Offender Ever Diagnosed?	9.94	1	0.002	0.98	0.25	15.28	1	<.001	2.67
Was Offender Ever Diagnosed with a Paraphilia?				1.42	0.44	10.53	1	0.001	4.14
Constant				-2.41	0.18	185.71	1	<.001	0.09
Step 0									
Constant				-1.89	0.12	259.02	1	<.001	0.15
Step 1									
Was Offender Ever Diagnosed with a Paraphilia?	18.80	1	<.001	1.93	0.42	21.27	1	<.001	6.92
Constant				-2.01	0.13	257.92	1	<.001	0.13
Step 2									
Was Offender Ever Diagnosed with a Paraphilia?	15.13	1	<.001	1.42	0.44	10.53	1	0.001	4.14
Was Offender Ever Diagnosed?				0.98	0.25	15.28	1	<.001	2.67
Constant				-2.41	0.18	185.71	1	<.001	0.09

The second two logistic regression analyses in the series involved the presence or absence of any diagnosis in the self-regulatory family. Results indicated that when the self-regulatory diagnosis family was added to the presence or absence of any diagnosis variable in the regression equation, it was marginally significant in the prediction of reoffense status ($\chi^2(1) = 3.21, p = .07$). When the variables were entered in reverse order, the presence of any diagnosis in history marginally predicted reoffense status above a history of a self-regulatory diagnosis ($\chi^2(1) = 3.16, p = .08$). Thus, it appeared that both accounted for much of the same variance in reoffense status, but because of the marginally significant results, both variables were retained for further analysis (see Table 53).

Table 53
Hierarchical logistic regression analysis of any diagnosis and any history of a self-regulatory diagnosis

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Was Offender Ever Diagnosed?	23.99	1	<.001	1.17	0.24	23.62	1	<.001	3.21
Constant				-2.40	0.18	184.48	1	<.001	0.09
Step 2									
Was Offender Ever Diagnosed?	3.21	1	0.073	0.69	0.37	3.41	1	0.065	1.99
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?				0.65	0.38	3.02	1	0.082	1.92
Constant				-2.41	0.18	185.60	1	<.001	0.09
Step 0									
Constant				-1.89	0.12	259.02	1	<.001	0.15
Step 1									
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?	24.04	1	<.001	1.21	0.24	25.00	1	<.001	3.35
Constant				-2.29	0.16	209.76	1	<.001	0.10
Step 2									
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?	3.16	1	0.076	0.65	0.38	3.02	1	0.082	1.92
Was Offender Ever Diagnosed?				0.69	0.37	3.41	1	0.065	1.99
Constant				-2.41	0.18	185.60	1	<.001	0.09

The third set of logistic regression analyses involved the presence or absence of affective-mood disorders. In the first analysis, the affective-mood disorders variable did not add significantly to the prediction of reoffense status above the presence of any disorder ($\chi^2(1) = 1.41, p > .05$). However, the presence of any disorder significantly added to the prediction above the affective-mood disorder variable ($\chi^2(1) = 8.35, p < .05$). Consequently, the affective-mood disorder variable was dropped from further analyses (see Table 54).

Table 54
Hierarchical logistic regression analysis of any diagnosis history and any history of an affective-mood type diagnosis

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Was Offender Ever Diagnosed?	23.99	1	<.001	1.17	0.24	23.62	1	<.001	3.21
Constant				-2.40	0.18	184.48	1	<.001	0.09
Step 2									
Was Offender Ever Diagnosed?	1.41	1	0.234	0.94	0.31	8.98	1	0.003	2.56
Has Offender Ever Been Diagnosed With an Affective-Mood Type Mental Disorder?				0.39	0.33	1.39	1	0.238	1.47
Constant				-2.40	0.18	185.01	1	<.001	0.09
<hr/>									
Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.89	0.12	259.02	1	<.001	0.15
Step 1									
Has Offender Ever Been Diagnosed With an Affective-Mood Type Mental Disorder?	17.60	1	<.001	1.07	0.25	18.31	1	<.001	2.93
Constant				-2.17	0.15	220.54	1	<.001	0.11
Step 2									
Has Offender Ever Been Diagnosed With an Affective-Mood Type Mental Disorder?	8.35	1	0.004	0.39	0.33	1.39	1	0.238	1.47
Was Offender Ever Diagnosed?				0.94	0.31	8.98	1	0.003	2.56
Constant				-2.40	0.18	185.01	1	<.001	0.09

Because two diagnostic family variables remained significant after accounting for the presence of any diagnosis, two additional hierarchical logistic analyses were conducted to explore the independence of the any history of a diagnosis variable and the two diagnostic family variables. In the first analysis, the presence of any diagnosis variable was added to the first block of the analysis, and the two family diagnosis variables (paraphilia and self-regulatory) were added to the second block. Results indicated that the second block of

variables significantly added to the prediction of reoffense status above the presence of any diagnosis ($\chi^2 (2) = 12.80, p < .05$). However, when the blocks were reverse entered for the second logistic regression analysis, the variable representing the presence of any diagnosis did not add significantly to the prediction of reoffense status ($\chi^2 (1) = 2.00, p > .05$). When all variables were entered into the equation simultaneously, only the Wald χ^2 for the paraphilia diagnosis was the only significant, though the Wald χ^2 for the self-regulatory family was marginal ($\chi^2 (1) = 2.73, p = .10$). As a consequence, both family diagnosis variables were retained for further analysis, and the variable for the presence of any diagnosis was dropped (see Table 55).

Table 55

Hierarchical logistic regression analysis of any diagnosis history, any history of a self-regulatory diagnosis, and any history of an affective-mood type diagnosis

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.89	0.12	259.02	1	<.001	0.15
Step 1	23.99	1	<.001						
Was Offender Ever Diagnosed?				1.17	0.24	23.62	1	<.001	3.21
Constant				-2.40	0.18	184.48	1	<.001	0.09
Step 2	12.80	2	0.002						
Was Offender Ever Diagnosed?				0.54	0.37	2.11	1	0.146	1.72
Was Offender Ever Diagnosed with a Paraphilia?				1.39	0.44	10.15	1	0.001	4.03
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?				0.62	0.37	2.73	1	0.099	1.85
Constant				-2.42	0.18	186.38	1	<.001	0.09

Table 55 (continued)

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.89	0.12	259.02	1	<.001	0.15
Step 1	34.79	2	<.001						
Was Offender Ever Diagnosed with a Paraphilia?				1.49	0.44	11.51	1	0.001	4.45
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?				1.03	0.25	16.81	1	<.001	2.81
Constant				-2.33	0.16	212.80	1	<.001	0.10
Step 2	2.00	1	0.157						
Was Offender Ever Diagnosed with a Paraphilia?				1.39	0.44	10.15	1	0.001	4.03
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?				0.62	0.37	2.73	1	0.099	1.85
Was Offender Ever Diagnosed?				0.54	0.37	2.11	1	0.146	1.72
Constant				-2.42	0.18	186.38	1	<.001	0.09

Because of the marginal contribution of the self-regulatory diagnostic family variable in the previous analysis, the independence of that variable and the paraphilia diagnosis variable was explored. In the first of two hierarchical logistic regression analyses, the presence of a paraphilia diagnosis variable was entered into the first block of the analysis followed by the presence of a self-regulatory diagnosis variable in the second block. The results indicated that the presence of a self-regulatory diagnosis significantly added to the prediction of reoffense status above a diagnosis of paraphilia ($\chi^2 (1) = 15.99, p < .05$). Similarly, when the blocks were entered in reverse order, the presence of a paraphilia diagnosis significantly added to the prediction above the presence of a self-regulatory diagnosis ($\chi^2 (1) = 10.75, p < .05$). Thus, it appeared that both variables significantly added uniquely to the prediction of reoffense status (see Table 56).

Table 56

Hierarchical logistic regression analysis of any history of a self-regulatory diagnosis and any history of an affective-mood type diagnosis

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.89	0.12	259.02	1	<.001	0.15
Step 1									
Was Offender Ever Diagnosed with a Paraphilia?	18.80	1	<.001	1.93	0.42	21.27	1	<.001	6.92
Constant				-2.01	0.13	257.92	1	<.001	0.13
Step 2									
Was Offender Ever Diagnosed with a Paraphilia?	15.99	1	<.001	1.49	0.44	11.51	1	0.001	4.45
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?				1.03	0.25	16.81	1	<.001	2.81
Constant				-2.33	0.16	212.80	1	<.001	0.10
Step 0									
Constant				-1.89	0.12	259.02	1	<.001	0.15
Step 1									
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?	24.04	1	<.001	1.21	0.24	25.00	1	<.001	3.35
Constant				-2.29	0.16	209.76	1	<.001	0.10
Step 2									
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?	10.75	1	0.001	1.03	0.25	16.81	1	<.001	2.81
Was Offender Ever Diagnosed with a Paraphilia?				1.49	0.44	11.51	1	0.001	4.45
Constant				-2.33	0.16	212.80	1	<.001	0.10

Finally, the predictive ability of the number of different diagnostic families variable was explored in relation to the history of a paraphilia and self-regulatory diagnoses variables. Similar to the above analyses, the first block of the logistic regression analysis included both the history of a paraphilia and self-regulatory diagnoses variables, followed by the variable representing the number of different diagnostic families. In that analysis, the number of different diagnostic families did not significantly add to the prediction of reoffense status

above and beyond the other two variables ($\chi^2(1) = 1.77, p > .05$). Conversely, when the blocks were entered in reverse order, the paraphilia and self-regulatory diagnosis variables significantly added to the prediction of reoffense status above the number of diagnostic families variable ($\chi^2(1) = 6.50, p < .05$). Consequently, only the history of a paraphilia and self-regulatory diagnosis variables were retained for further analysis (see Table 57).

Table 57
Hierarchical logistic regression analysis of any history of a self-regulatory diagnosis, any history of an affective-mood type diagnosis, and the number of diagnostic families

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.89	0.12	259.02	1	<.001	0.15
Step 1									
	35.50	2	<.001						
Was Offender Ever Diagnosed with a Paraphilia?				1.50	0.44	11.57	1	0.001	4.47
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?				1.05	0.25	17.33	1	<.001	2.87
Constant				-2.35	0.16	212.14	1	0.000	0.10
Step 2									
	1.77	1	0.183						
Was Offender Ever Diagnosed with a Paraphilia?				1.22	0.48	6.52	1	0.011	3.39
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?				0.45	0.52	0.73	1	0.393	1.56
Number of Diagnostic Families				0.43	0.32	1.81	1	0.178	1.53
Constant				-2.40	0.17	207.03	1	<.001	0.09
Step 0									
Constant				-1.89	0.12	259.02	1	<.001	0.15
Step 1									
	30.77	1	<.001						
Number of Diagnostic Families				0.79	0.14	31.93	1	<.001	2.20
Constant				-2.40	0.17	209.00	1	<.001	0.09
Step 2									
	6.50	2	0.039						
Number of Diagnostic Families				0.43	0.32	1.81	1	0.178	1.53
Was Offender Ever Diagnosed with a Paraphilia?				1.22	0.48	6.52	1	0.011	3.39
Was Offender Ever Diagnosed with a Self-Regulatory Type Diagnosis?				0.45	0.52	0.73	1	0.393	1.56
Constant				-2.40	0.17	207.03	1	<.001	0.09

History of Mental Health Treatment Bivariate Results

Several variables were coded that tapped the JSO's history of mental health treatment. These variables included mental health treatment status prior to the index offense, the number of mental health treatment entered prior to the index offense, and the intensity of mental health programming after the index offense. The first of these variables was a composite of several variables that tapped whether or not the JSO entered any treatment, completed all treatments, or failed at least one treatment prior to the index offense. With the second variable, number of mental health treatments, the frequency distribution waned after two prior mental health treatments. So, all JSOs with more than two prior mental health treatments were collapsed into a two or more category. On the last variable, intensity of mental health treatment after the index offense, the some and outpatient mental health categories were collapsed because of similar rates of sexual recidivism. The inpatient and significant mental health treatment categories were collapsed for the same reason. All significant variables are found in Table 58.

No past research had directly explored whether or not completion or failure in mental health treatment was related to later recidivism. To explore this potential relation, mental health treatment status was examined at two times, prior to the index offense and after the index offense. The first of these variables tapped three different outcomes of mental health treatment prior to the index offense: never entering, entering and completing all treatments, and entering and not completing at least one treatment. As indicated in Table 58, significant differences in reoffense rates emerged among the three different levels of this mental health status variable (see Table 58). More specifically, 35.7% of the JSOs who had failed at least one mental health treatment reoffended prior to the age of 18 compared to 18.0 and 10.7%

for those JSOs who had entered mental health treatment and completed it and those who had never entered mental health treatment prior to the index offense, respectively.

Table 58
Significant bivariate mental health treatment variables

Variable	n (total)	%	n	Chi-Square	<i>p</i>
Mental Health Treatment Program Status Prior to Index Offense				17.59	<.001*
Never Entered	487	10.7%	52		
Entered and Completed All	122	18.0%	22		
Entered and Did Not Complete at Least Once	28	35.7%	10		
Number of Mental Health Treatments Prior to Index Offense				16.43	<.001*
None	487	10.7%	52		
One	98	16.3%	16		
Two or More	52	30.8%	16		
Status of Mental Health Programming for Index Offense				32.08	<.001*
None	443	8.8%	39		
Some or Outpatient	118	17.8%	21		
Inpatient or Significant	76	31.6%	24		

**p* < .0005.

Because there was a relation between prior mental health treatment status and reoffense status, the relation between the number of prior mental health treatments and reoffense status was explored. Chi-square analysis was employed to examine the reoffense rates of the three levels of the number of mental health treatments variable. Results indicated that significant differences in reoffense rates existed among the three levels (see Table 58). Of these JSOs, those who had two or more prior treatments reoffended at a rate of 30.8%, those with only one prior treatment sexually recidivated at a 16.3% rate, and those with no prior treatment sexually recidivated at a 10.7% rate.

Lastly, the potential relation between the intensity of mental health treatment after the index offense recidivism was explored. As indicated in Table 58, significant differences emerged among the three levels of the treatment intensity variable. More specifically, 31.6% of the 76 JSOs with the most intense treatment sexually recidivated, compared to 17.8% of JSOs with intermediate intensity treatment and 8.8% for those JSOs with no mental health treatment after the index offense.

History of Mental Health Treatment Multivariate Results

All three mental health treatment variables were retained for multivariate analysis, and individual logistic regression analyses were employed for each. Before testing the independence of these variables, a test of the linearity of the relation between the number of prior mental health treatments and recidivism was employed. As indicated in Table 59, the linear effect of that variable was significant for the prediction of reoffense status ($\chi^2(1) = 17.69, p < .05$), while the quadratic effect was not significant ($\chi^2(1) = .48, p > .05$).

Table 59
Logistic regression analysis of curvilinear relation between recidivism and the number of prior mental health treatments

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.86	0.12	247.24	1	<.001	0.16
Step 1									
Linear Number of Prior Mental Health Treatments	17.69	1	<.001	0.48	0.11	18.69	1	<.001	1.61
Constant				-1.92	0.12	242.23	1	<.001	0.15
Step 2									
Linear Number of Prior Mental Health Treatments	0.48	1	0.488	0.34	0.23	2.28	1	0.131	1.41
Quadratic Number of Prior Mental Health Treatments				0.05	0.07	0.43	1	0.513	1.05
Constant				-1.95	0.13	220.15	1	<.001	0.14
Step 3									
Linear Number of Prior Mental Health Treatments	1.19	1	0.275	0.60	0.33	3.32	1	0.068	1.82
Quadratic Number of Prior Mental Health Treatments				-0.30	0.35	0.73	1	0.394	0.74
Cubic Number of Prior Mental Health Treatments				0.07	0.07	0.91	1	0.340	1.07
Constant				-1.82	0.18	102.92	1	<.001	0.16

To assess the independence of the prior mental health treatment status variable and the number of prior mental health treatment variable, two hierarchical logistic regression analyses were conducted (see Table 60). In the first analysis, prior mental health treatment status was entered into the first block, followed by the number of mental health treatments in the second block. In that analysis, the variable representing the number of mental health treatments did not significantly add to the prediction of sexual reoffense prior to the age of 18 over the status of prior mental health treatment ($\chi^2(1) = 1.14, p > .05$). In the second analysis, the blocks were entered in reverse order. Similar to the previous analysis, block two, which represented prior mental health treatment status, was not significant ($\chi^2(1) = .95, p > .05$). Consequently, both variables seem to be accounting for much of the same variance

in reoffense status. Because of the larger range of reoffense rates for the prior mental health treatment status variable, it was retained for further analysis.

Table 60
Hierarchical logistic regression analysis of prior mental health treatment status and the number of mental health treatments

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.86	0.12	247.24	1	<.001	0.16
Step 1									
Prior Mental Health Treatment Status	13.08	1	<.001	0.69	0.18	14.17	1	<.001	2.00
Constant				-2.11	0.15	211.25	1	<.001	0.12
Step 2									
Prior Mental Health Treatment Status	1.14	1	0.285	0.36	0.36	0.98	1	0.322	1.44
Number of Prior Mental Health Treatments				0.34	0.32	1.17	1	0.280	1.41
Constant				-2.13	0.15	207.37	1	<.001	0.12
Step 0									
Constant				-1.86	0.12	247.24	1	<.001	0.16
Step 1									
Number of Prior Mental Health Treatments	13.28	1	<.001	0.61	0.16	14.40	1	<.001	1.84
Constant				-2.11	0.15	211.41	1	<.001	0.12
Step 2									
Number of Prior Mental Health Treatments	0.95	1	0.330	0.34	0.32	1.17	1	0.280	1.41
Prior Mental Health Treatment Status				0.36	0.36	0.98	1	0.322	1.44
Constant				-2.13	0.15	207.37	1	<.001	0.12

Two final logistic regression analyses were conducted to determine if the prior mental health treatment status variable and the level of intensity of mental health treatment after the index offense variable were independent (see Table 61). In the first analysis the prior mental health treatment status variable was entered into the first block. The level of intensity variable was entered into the second block. Though prior mental health treatment status

significantly predicted reoffense status in the first block ($\chi^2(1) = 13.98, p < .05$), the level of intensity of mental health treatment after the index offense significantly added to the prediction above and beyond prior status ($\chi^2(1) = 14.96, p < .05$). In the second analysis, both variables were entered into the equation in reverse order. However, results indicated the prior mental health treatment status did not significantly add to the prediction of reoffense status above and beyond the level of intensity of mental health treatment after the index offense ($\chi^2(1) = 1.50, p > .05$). Thus, the intensity of mental health treatment after the index offense appeared to account for the majority of variance explained by the prior mental health status variable, as well as a significant amount of unique variance. As such, the intensity variable was retained for further analysis.

Table 61

Hierarchical logistic regression analysis of prior mental health treatment status and the level of mental health treatment after the index offense

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	13.98	1	<.001						
Prior Mental Health Treatment Status				0.71	0.18	15.21	1	<.001	2.04
Constant				-2.14	0.14	222.43	1	<.001	0.12
Step 2	14.96	1	<.001						
Prior Mental Health Treatment Status				0.28	0.22	1.55	1	0.214	1.32
Level of Mental Health Treatments After Index				0.68	0.17	15.46	1	<.001	1.96
Constant				-2.37	0.16	209.46	1	<.001	0.09

Table 61 (continued)

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	27.44	1	<.001						
Level of Mental Health Treatments After Index				0.78	0.15	28.86	1	<.001	2.19
Constant				-2.33	0.16	212.81	1	<.001	0.10
Step 2	1.50	1	0.221						
Level of Mental Health Treatments After Index				0.68	0.17	15.46	1	<.001	1.96
Prior Mental Health Treatment Status				0.28	0.22	1.55	1	0.214	1.32
Constant				-2.37	0.16	209.46	1	<.001	0.09

History of Sexual Offender Specific Treatment Bivariate Results

Several coded variables tapped JSOs' sex offender specific treatment history. These variables included sex offender specific treatment status prior to the index offense, sex offender specific treatment status after the index offense, whether or not the JSO had failed treatments both before and after the index offense, the number of treatment failures, the JSO's level of denial of responsibility for the index offense at the time of admission, the JSO's level of denial for all offenses at the time of admission, the JSO's level of denial of responsibility for the index offense at discharge, and the JSO's level of denial for all offenses at discharge. The first two of these variables were composites of several other coded variables. The first of these two variables, prior sexual offender treatment status, indicated that a JSO either never entered, completed all, or failed at least one sexual offender treatment prior to the index offense. The second variable utilized the same categories for sexual offender treatment after the index offense. Examination of the frequency distribution for the number of sex offender specific treatments failures variable resulted in JSOs with more than

two failures being collapsed into a two or more category. All significant variables are found in Table 62 and 63.

For adult sexual offenders, previous failures in sex offender specific therapy was associated with an increase in risk to reoffend (Epperson et al., 1998, 2000, 2003). Because of that association, it seemed plausible that past sex offender specific treatment failures among JSOs would also be associated with an increased reoffense rate. To test this potential relation, chi-square analysis was used to assess whether or not past completion status of treatment was associated with future recidivism. Similar to adult findings, significant differences emerged among the different levels of the prior sex offender specific treatment status variable (see Table 62). More specifically, of the 26 JSOs who entered and failed at least one prior sex offender specific treatment, 73.1% sexually recidivated, while 46.2% of those who entered a prior treatment and completed the treatment reoffended. The reoffense rate at the treatment completion level might be better understood if one remembers that though these JSOs completed treatment, they did go on to have at least one additional reoffense, the index offense that made them eligible for this sample. Thus, the prior treatment was not effective. Lastly, 9.1% of the remaining JSOs who had never entered a sex offender specific treatment prior to their index offense reoffended by the age of 18.

Table 62
Significant bivariate sexual offender specific treatment status variables

Variable	n (total)	%	N	Chi- Square	<i>p</i>
Sex Offender Treatment Program Status Prior to Index Offense				114.85	<.001*
Never Entered	585	9.1%	53		
Entered and Completed All	26	46.2%	12		
Entered and Did Not Complete at Least Once	26	73.1%	19		
Did Offender Complete Sex Offender Treatment for Index Offense?				33.65	<.001*
Never Entered	354	9.3%	33		
Entered and Completed	174	10.3%	18		
Entered and Failed	109	30.3%	33		
Did Offender Fail Both Prior and Index Sex Offender Treatment?				59.90	<.001*
No	622	11.6%	72		
Yes	15	80.0%	12		
How Many Sex Offender Treatments Did the Offender Fail?				85.03	<.001*
None - Never Entered	517	8.5%	44		
One	105	26.7%	28		
Two or More	15	80.0%	12		

**p* < .0005.

A similar analysis was employed to address whether or not sex offender specific treatment status after the index offense was also related to reoffense status. The results of the chi-square analysis were significant (see Table 62), indicating that significant differences in reoffense rates existed among the three levels of that variable. Like the previous treatment status variable, the highest rate of reoffense was associated with those JSOs who entered and failed sex offender specific treatment after the index offense. Of those 109 JSO, 30.3%

sexually recidivated. Unlike the previous variable, reoffense rates for those JSOs who entered and completed treatment and those who did not enter treatment were very similar. In fact, there was only a 1% difference in reoffense rates between those JSOs who completed treatment and those JSOs who had never entered (see Table 62).

Because those JSOs who failed treatments both before and after the index offense had higher rates of reoffense than those who had never entered and those who had both entered and completed the treatment, a third exploratory analysis was employed to examine the relation between the number of sexual offender specific treatment failures and recidivism. The results of the chi-square analysis were significant (see Table 62), indicating that those JSOs with failures both prior and after the index offense reoffended at a higher rate than those who did not meet that inclusion criterion. Of the JSOs in the double failure category, 80.0% sexually recidivated, compared to 11.6% of the remaining JSOs. However, it is worth noting that though double failure was associated with a high rate of reoffense, only 15 total JSOs actually met the double failure criterion. Thus, it could not be considered for further analysis.

Following that same investigative line, the number of failures was looked at in a slightly different way. Instead of requiring that the JSO have one failure prior and one after the index, a summative failure variable was created that counted all failures, regardless of when it occurred. As stated above, JSOs with two or more failures were collapsed into one level. As indicated in Table 62, significant differences in reoffense rates emerged among the different levels of the number of failures variable. The reoffense rate associated with those JSOs who had never failed any sex offender specific treatment was 8.5%, while those JSOs who had a history of one failure reoffended at a rate of 26.7%. Lastly, those JSOs with two or

more treatment failures reoffended at the highest rate, 80.0%. Though reoffense rates increased with every additional failure level, the level that included those with two or more JSOs only included 15 total JSOs, which were the same 15 JSOs who had met the double failure criterion in the previous variable. Thus, it could not be considered for further analysis.

In addition to treatment completions and failures, four denial related variables were analyzed. Two of these variables tapped the JSO's level of denial of responsibility for the index offense at the time of admission and at the time of discharge. The other two variables tapped the level of denial for all sex offenses at the time of admission and the time of discharge. For each of these variables, several levels were collapsed because of conceptual similarity and small numbers of JSOs at all levels of the variables. For example, JSOs who claimed their offense was consensual, minimized their role in the offense, or completely denied involvement in the offense were collapsed into one level and contrasted against those JSOs who fully admitted to their role in the offense. Of the four denial variables, only the two that represented denial at the time of discharge had significantly different rates of sexual recidivism between their two levels. Specifically, as indicated in Table 63, the rate of reoffense associated with JSOs who denied or minimized their role in their index offense reoffended at a significantly higher rate (24.7%) than those who did not deny their offense (9.4%). Similarly, as indicated in Table 63, the rate of reoffense associated with JSOs who denied or minimized their role in all of their sexual offenses was significantly higher than for JSOs who did not deny their offense. It is interesting to note that reoffense rates were higher for the variable representing denial for all offenses. This may have occurred because only those JSOs with multiple offenses were included in that variable, raising the base rate for this

group. Because of the similar pattern and greater n for the denial of the index offense, only that denial variable was retained for subsequent analyses.

Table 63
Significant bivariate denial variables

Variable	n (total)	%	n	Chi- Square	P
Offender's Level of Denial for Most Recent Offense at Time of Discharge				24.26	<.001*
No Denial-Fully Admits to the Sex Offense	479	9.4%	45		
Denies or Minimizes Responsibility	158	24.7%	39		
Offender's Level of Denial for All Sex Offense at Time of Discharge				11.54	0.001
No Denial-Fully Admits to the Sex Offense	79	21.5%	17		
Denies or Minimizes Responsibility	88	46.6%	41		

* $p < .0005$.

History of Sexual Offender Specific Treatment Multivariate Results

Three variables were retained for multivariate analyses. These variables included the status of sex offender specific treatment both prior and after the index offense and the JSO's level of denial for the index offense.

Two hierarchical logistic regression analyses were employed to determine the independence and relative predictive ability of the two sex offender specific treatment status variables (see Table 64). In the first analysis the status for treatment prior to the index offense was entered into the first block, followed by status variable for treatment after the index offense. Results indicated that the status variable for treatment after the index offense significantly added to the prediction of reoffense status after controlling for treatment status

prior to the index offense ($\chi^2 (1) = 8.77, p < .05$). In the second analysis, the variables were entered into the equation in reverse order. Similar to the first analysis, sex offender specific treatment status prior to the index offense added significantly to the prediction of reoffense status after controlling for the status of treatment after the index offense ($\chi^2 (1) = 59.58, p < .05$). Consequently, both variables were retained.

Table 64

Hierarchical logistic regression analysis of prior sex offender specific treatment status and sex offender specific treatment after the index offense

Variable	Step χ^2	Df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	73.82	1	<.001						
Prior Sex Offender Specific Treatment Status				1.76	0.22	63.11	1	<.001	5.82
Constant				-2.28	0.14	261.97	1	<.001	0.10
Step 2									
	8.77	1	0.003						
Prior Sex Offender Specific Treatment Status				1.63	0.23	52.23	1	<.001	5.11
Sex Offender Specific Treatment Status After Index Offense				0.48	0.16	9.01	1	0.003	1.62
Constant				-2.61	0.19	186.63	1	<.001	0.07
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	23.04	1	<.001						
Sex Offender Specific Treatment Status After Index Offense				0.70	0.15	23.17	1	<.001	2.01
Constant				-2.42	0.18	181.44	1	<.001	0.09
Step 2									
	59.56	1	<.001						
Sex Offender Specific Treatment Status After Index Offense				0.48	0.16	9.01	1	0.003	1.62
Prior Sex Offender Specific Treatment Status				1.63	0.23	52.23	1	<.001	5.11
Constant				-2.61	0.19	186.63	1	<.001	0.07

One final hierarchical logistic regression analysis was utilized to explore whether or not denial of responsibility added to the prediction of reoffense status above and beyond the

two treatment status variables (see Table 65). In that analysis, the denial variable was added to the second block after the two status variables were entered in the first block. Results indicated that denial significantly added to the prediction of reoffense status after controlling for the two treatment status variables ($\chi^2(1) = 11.92, p < .05$). Upon further analysis of the Wald χ^2 statistics associated with each variable when all were simultaneously entered into the equation, only the denial variable and the status variable for treatment prior to the index offense met the strict $p = .05$ level. However, because the status variable for treatment after the index offense was marginal ($\chi^2(1) = 3.65, p = .06$), all three variables were retained for further analysis.

Table 65

Hierarchical logistic regression analysis of prior sex offender specific treatment status, sex offender specific treatment after the index offense, and offender's level of denial of responsibility for the index offense at release

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	82.60	2	<.001						
Sex Offender Specific Treatment Status After Index Offense				0.48	0.16	9.01	1	0.003	1.62
Prior Sex Offender Specific Treatment Status				1.63	0.23	52.23	1	<.001	5.11
Constant				-2.61	0.19	186.63	1	<.001	0.07
Step 2									
	11.92	1	0.001						
Sex Offender Specific Treatment Status After Index Offense				0.32	0.17	3.65	1	0.056	1.37
Prior Sex Offender Specific Treatment Status				1.67	0.23	52.01	1	<.001	5.31
Offender's Level of Denial of Responsibility for Index Offense Upon Release				0.99	0.28	12.30	1	<.001	2.68
Constant				-2.82	0.21	182.38	1	<.001	0.06

History of Sexual Offending Bivariate Results

The final family of variables that were coded and analyzed tapped the JSO's history of sexual offending. Variables that were coded for this family included the total number of juvenile sex offense adjudications, the total number of felony sex offense charges, the age of the JSO at his earliest charged and adjudicated sexual offense, the age of the JSO at his earliest sexual offense based upon self-report, the age of the JSO at his last charged sexual offense, the JSO's offending age range, the JSO's total number of victims, and whether or not the JSO offended while on probation or under supervision. Significant variables are reported in Tables 66 through 68.

One of the best predictors of future behavior is past behavior. Thus, the first hypothesis for this family of variables stated that the more historical juvenile sexual offenses a JSO had, the more likely he would reoffend. To test this hypothesis, the total number of juvenile sexual offenses was correlated with reoffense status. Results confirmed the hypothesis, as the two variables were significantly related ($r(637) = .318, p < .05$). The relation between the number of past sexual adjudications and reoffense status was also explored by creating a categorical variable for the number of past sexual adjudications where JSOs with four or more adjudications were collapsed. Chi-square analysis was employed, and significant differences in reoffense rates were found among the four levels of the categorical number of sexual offense variables (see Table 66). Reoffense rates for those JSOs with one, two, three, and four or more sexual offenses reoffended at rates of 5.2%, 25.6%, 30.0%, and 47.5%, respectively. Despite the significant results for the categorical variable, only the continuous variable was retained for further analysis.

Table 66
Significant bivariate sexual offending history chronicity variables

Variable	n (total)	%	n	Chi- Square	<i>p</i>
Total Number of Juvenile Sex Adjudications				89.81	<.001*
One	425	5.2%	22		
Two	121	25.6%	31		
Three	40	30.0%	12		
Four or More	40	47.5%	19		
Number of Felony Charges for a Sex Offense				65.90	<.001*
Misdemeanor Only	149	7.4%	11		
One	313	7.0%	22		
Two	86	25.6%	22		
Three	39	35.9%	14		
Four or More	31	41.9%	13		
Number of Felony Charges for a Sex Offense				66.17	<.001*
Misdemeanor Only or One	481	7.3%	35		
Two	86	25.6%	22		
Three	39	35.9%	14		
Four or More	31	41.9%	13		
Total Number of Victims				122.28	<.001*
One	425	3.1%	13		
Two	119	27.7%	33		
Three or More	93	40.9%	38		

* $p < .0005$.

Because the number of adjudications was significantly related to reoffense status, the relation between the number of felony sex offense charges and reoffense status was explored. A point-biserial correlation analysis was employed, and a significant relation emerged between the two variables ($r(637) = .302, p < .05$). This relation was further explored by creating a new categorical variable for felony sex offenses. In this variable all JSOs with a

history of only misdemeanor charges were added as a separate category, and all JSOs with four or more felony charges were collapsed into one level. Chi-square analysis was employed, and significant differences in reoffense rates were found among the four levels of the categorical number of sexual offense variables (see Table 66). The reoffense rate for those JSOs with a history of only misdemeanor charges reoffended at a rate of 7.4%, and reoffense rates for those JSOs with one, two, three, and four or more sexual offenses reoffended at rates of 7.0%, 25.6%, 35.9%, and 41.9%, respectively.

Because of the high similarity in reoffense rates between those JSOs with only misdemeanor charges and those JSOs with only one felony charge, a new variable was created that collapsed those two levels. Similar to the previous chi-square analysis, significant differences were found among the different levels of the new variable (see Table 66). The reoffense rate associated with those JSOs who had either one felony charge or only misdemeanor charges was 7.3%. Reoffense rates for all other levels were the same as the previous number of felony charges variable. Despite the significant results for the categorical variables, only the continuous variable was retained for further analysis.

Past research indicated that JSOs with higher numbers of past victims were more likely to reoffend than those with very few victims (Långström & Grann, 2000; Rasmussen, 1999; Schram, Malloy & Rowe, 1992; Worling & Curwen, 2001). Thus, it was hypothesized that a significant relation would emerge between reoffense status and the number of JSO victims. Consistent with that hypothesis, a significant relation between reoffense status and the number of victims emerged ($r(637) = .389, p < .05$). This relation was explored more fully by the creation of a new categorical, number of victims variable. In that variable, JSOs who had three or more victims were collapsed into one level based upon

similar reoffense rates among those JSOs with the most victims. Chi-square analysis was employed to investigate the differences in reoffense rates among the three different levels of this new categorical variable. Significant differences in reoffense rates emerged among the different levels (see Table 66). Of the 425 JSOs with only one victim, 3.1% reoffended before the age of 18. Those JSOs who had two victims reoffended at a rate of 27.7%, and those JSOs with three or more victims reoffended at the highest rate, 40.9%. Despite the significant results for the categorical variable, only the continuous variable was retained for further analysis.

Three variables tapped the age of the JSO at his first offense. These variables included that JSO's age at the first charged, adjudicated, and self-reported sex offense. All three variables were originally continuous. However, for the bivariate analysis of these variables four age categories were created. These categories included those JSOs who were less than 12 years old, JSOs age 12 to 13, JSOs age 14 to 15, and JSOs 16 years old or older. Each variable was subjected to chi-square analysis. Significant differences in reoffense rates emerged among the different age groups for the earliest charged, earliest adjudicated, and earliest self-reported sex offenses (see Table 67). However, because self-report may not represent an accurate depiction of the earliest age at the first offense and because the earliest charged sex offense variable was the closest reliable approximation to the actual first offense, only the earliest charged variable was retained for further analysis. For that variable, JSOs whose first offense was before age 12 reoffended at a rate of 23.2%. JSOs whose first offense was between the ages of 12 and 13 reoffended at a rate of 18.6%, while JSOs who first offended between the ages of 14 and 15 at a rate of 11.2%. Finally, 5.8% of offenders whose first offense was at the age of 16 or later reoffended before the age of 18. Of note, this

descending rate of reoffense may be an artifact of older first time offenders having less time to reoffend before they turned 18 years of age.

Table 67
Significant bivariate sexual offending age at first offense variables

Variable	n (total)	%	n	Chi-Square	P
Age at Earliest Charged Sex Offense				20.11	<.001*
Under 12 Years of Age	99	23.2%	23		
12 or 13 Years of Age	118	18.6%	22		
14 or 15 Years of Age	259	11.2%	29		
16 Years of Age or Older	155	5.8%	9		
Age at Earliest Adjudicated Sex Offense				16.62	0.001
Under 12 Years of Age	95	23.2%	22		
12 or 13 Years of Age	113	18.6%	21		
14 or 15 Years of Age	256	11.7%	30		
16 Years of Age or Older	149	6.7%	10		
Age at Earliest Sex Offense Based Upon Self-Report				17.71	0.001
Under 12 Years of Age	129	23.3%	30		
12 or 13 Years of Age	115	14.8%	17		
14 or 15 Years of Age	239	10.9%	26		
16 Years of Age or Older	135	6.7%	9		
Offending Age Range				201.78	<.001*
Less Than One Year	514	4.3%	22		
One to Two Years	69	46.4%	32		
Three or More Years	46	63.0%	29		

* $p < .0005$.

To examine the relation between the length of time a JSO offended and reoffense status a new variable was created. For this variable the age at the JSOs first charged sex offense was subtracted from the age at the JSOs last charged sex offense. Point-biserial correlation analysis was employed to test this relation. Results indicated that a significant correlation existed between the JSO's offending age range and reoffense status ($r(629) =$

.531, $p < .05$). To illustrate the rates of reoffense associated with JSOs at different levels of the offending age range variable, a new categorical variable was created with three levels that represented offending for less than one year, offending from one to two years, and offending for three or more years. The variable was analyzed using chi-square analysis. As indicated in Table 67, significant differences emerged among the three levels. The rate of reoffense associated with JSOs who offended for less than one year was 4.3%. JSOs whose offending career was at least one year but less than three years reoffended at a rate of 46.4%, and those JSOs with the longest offending career reoffended at a rate of 63.0%. Despite the significant chi-square statistic for the categorical variable, only the continuous offending age range variable was retained for further analysis.

The final two sexual offending history variables tapped offending behavior that occurred while under some form of supervision. The first variable tapped whether or not the JSO had ever committed a violation of a sexual nature while in some form of institution. As indicated in Table 68, significant differences in reoffense rates emerged between those JSOs who had and had not ever been cited for a violation of a sexual nature in an institution. JSOs who had never been cited for such a violation reoffended at a rate of 10.6%, while those JSOs who had been cited reoffended at a rate of 54.1%. The last variable tapped whether or not the JSO had ever been charged with an offense while on probation or was under some other form of supervision. Significant differences in reoffense rates between JSOs who had and had not committed an offense while on probation emerged (see Table 68). Of the JSOs who had never been charged for an offense while on probation, only 7.9% sexually recidivated, compared to 31.5% of those JSOs who had been charged while on probation.

Table 68
Significant bivariate sexual offending under supervision variables

Variable	n (total)	%	n	Chi- Square	P
Has Offender Ever Been Cited for a Violation of a Sexual Nature in the Institution?				56.35	<.001*
No	530	10.6%	56		
Yes	37	54.1%	20		
Has Offender Ever Committed a Sex Offense While On Probation?				53.83	<.001*
No	494	7.9%	39		
Yes	143	31.5%	45		

* $p < .0005$.

History of Sexual Offending Multivariate Results

Seven history of sexual offending variables were retained for further analysis. These variables included the total number of juvenile sexual offense adjudications, the total number of felony sex offense charges, total number of victims, age at first charged sex offense, offending age range, whether or not the JSO had ever been cited for a sexual violation while in some form of institution, and whether or not the JSO had ever been charged for an offense while on probation or was under supervision.

Before the independence and incremental ability of any variables were tested, the linearity of the relation between several variables and reoffense status was tested. These variables included the number of past juvenile sexual offenses, the number of past felony charges, the number of victims, and the offending age range of the JSO. For the number of juvenile sexual offenses, both the linear ($\chi^2 (1) = 69.48, p < .05$) and quadratic effects ($\chi^2 (1) = 8.04, p < .05$) were found to be significant predictors of reoffense status (see Table 69).

Similarly, as indicated in Table 70, the linear ($\chi^2(1) = 44.60, p < .05$) and quadratic effects ($\chi^2(1) = 3.83, p = .05$) of the number of felonies was significant. For the number of victims, the linear ($\chi^2(1) = 84.95, p < .05$), quadratic ($\chi^2(1) = 22.49, p < .05$), and cubic effects ($\chi^2(1) = 7.86, p < .05$) were significant predictors of reoffense status (see Table 71). Lastly, the linear ($\chi^2(1) = 124.15, p < .05$), quadratic ($\chi^2(1) = 16.67, p < .05$), and cubic effects ($\chi^2(1) = 14.00, p < .05$) of the offending age range variable were significant predictors (see Table 72).

Table 69
Logistic regression analysis of curvilinear relation between recidivism and the number of sex offense adjudications

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	69.48	1	<.001						
Linear Number of Sex Offense Adjudications				0.95	0.11	68.27	1	<.001	2.58
Constant				-2.14	0.14	235.50	1	<.001	0.12
Step 2	8.04	1	0.005						
Linear Number of Sex Offense Adjudications				1.61	0.26	37.50	1	<.001	4.99
Quadratic Number of Sex Offense Adjudications				-0.37	0.13	8.16	1	0.004	0.69
Constant				-1.97	0.15	162.25	1	<.001	0.14
Step 3	3.04	1	0.081						
Linear Number of Sex Offense Adjudications				1.77	0.28	40.08	1	<.001	5.86
Quadratic Number of Sex Offense Adjudications				-1.37	0.59	5.34	1	0.021	0.26
Cubic Number of Sex Offense Adjudications				0.36	0.21	2.95	1	0.086	1.44
Constant				-1.65	0.23	49.61	1	<.001	0.19

Table 70

Logistic regression analysis of curvilinear relation between recidivism and the number of felony sex offense charges

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Linear Number of Felony Sex Offense Charges	44.60	1	<.001	0.53	0.09	38.83	1	<.001	1.70
Constant				-2.70	0.19	202.48	1	<.001	0.07
Step 2									
Linear Number of Felony Sex Offense Charges	3.83	1	0.050	0.72	0.13	30.85	1	<.001	2.06
Quadratic Number of Felony Sex Offense Charges				-0.05	0.02	4.51	1	0.034	0.95
Constant				-2.88	0.22	166.28	1	<.001	0.06
Step 3									
Linear Number of Felony Sex Offense Charges	1.18	1	0.277	0.62	0.16	15.93	1	<.001	1.86
Quadratic Number of Felony Sex Offense Charges				0.03	0.08	0.159	1	0.690	1.03
Cubic Number of Felony Sex Offense Charges				-0.08	0.01	1.17	1	0.280	0.99
Constant				-2.82	0.22	163.59	1	<.001	0.06

Table 71

Logistic regression analysis of curvilinear relation between recidivism and the number of sex offense victims

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Linear Number of Victims	84.95	1	<.001	0.95	0.11	77.55	1	<.001	2.59
Constant				-2.19	0.14	232.84	1	<.001	0.11
Step 2									
Linear Number of Victims	22.49	1	<.001	1.88	0.24	63.28	1	<.001	6.55
Quadratic Number of Victims				-0.43	0.09	21.61	1	<.001	0.65
Constant				-2.02	0.16	161.85	1	<.001	0.13
Step 3									
Linear Number of Victims	7.86	1	0.005	2.28	0.29	61.67	1	<.001	9.75
Quadratic Number of Victims				-1.29	0.32	16.05	1	<.001	0.28
Cubic Number of Victims				0.23	0.08	7.85	1	0.005	1.26
Constant				-1.71	0.19	79.71	1	<.001	0.18

Table 72

Logistic regression analysis of curvilinear relation between recidivism and the number of the juvenile sexual offender's offending age range

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Linear Offending Age Range	124.15	1	<.001	0.97	0.10	92.00	1	<.001	2.64
Constant				-2.23	0.15	229.81	1	<.001	0.11
Step 2									
Linear Offending Age Range	16.70	1	<.001	1.79	0.23	62.75	1	<.001	6.01
Quadratic Offending Age Range				-0.26	0.06	18.06	1	<.001	0.77
Constant				-2.06	0.16	165.47	1	<.001	0.13
Step 3									
Linear Offending Age Range	14.00	1	<.001	2.80	0.35	64.31	1	<.001	16.41
Quadratic Offending Age Range				-1.37	0.30	21.12	1	<.001	0.26
Cubic Offending Age Range				0.20	0.05	14.00	1	<.001	1.22
Constant				-1.55	0.21	55.62	1	<.001	0.21

Two hierarchical logistic regression analyses were conducted to determine the independence of the variables representing the effects of the number of previous sex offense adjudications and the number of sex offense felony charges (see Table 73). In the first analysis, the linear and quadratic effects of the number of juvenile sex offense adjudications variable were entered into the first block of the analysis, followed by the linear and quadratic effects of the number of felony charges variable in the second block. The second block representing the number of felony sex offense charges emerged as a significant predictor of reoffense status after accounting for the previous number of sex offense adjudications (χ^2 (2) = 10.88, $p < .05$). Similarly, when the block were entered in reverse order, the second block that represented the number of sex offense adjudications emerged as a significant predictor of reoffense status after accounting for the number of felony sex offense charges (χ^2 (1) = 29.04, $p < .05$). However, when all variables were entered into the final block simultaneously, the

quadratic effect of the number of felony sex offense charges did not remain significant. Thus, only the linear and quadratic effect of the number of sex offense adjudications and the linear effect of the number of felony sex offense charges were retained.

Table 73
Hierarchical logistic regression analysis of the effects of the number of sex offense adjudications and the number of felony sex offense charges

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	66.68	2	<.001						
Linear Number of Sex Offense Adjudications				0.81	0.13	50.95	1	<.001	2.25
Quadratic Number of Sex Offense Adjudications				-0.05	0.01	17.46	1	<.001	0.96
Constant				-1.97	0.13	223.33	1	<.001	0.14
Step 2									
	10.88	2	0.004						
Linear Number of Sex Offense Adjudications				0.63	0.12	25.54	1	<.001	1.88
Quadratic Number of Sex Offense Adjudications				-0.04	0.12	9.39	1	0.002	0.97
Linear Number of Felony Sex Offense Charges				0.38	0.14	6.82	1	0.009	1.46
Quadratic Number of Felony Sex Offense Charges				-0.02	0.03	0.57		0.452	0.98
Constant				-2.02	0.14	212.83	1	<.001	0.13
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	47.52	2	<.001						
Linear Number of Felony Sex Offense Charges				0.72	0.13	30.22	1	<.001	2.05
Quadratic Number of Felony Sex Offense Charges				-0.05	0.02	4.39	1	0.036	0.95
Constant				-1.99	0.13	226.90	1	<.001	0.14
Step 2									
	29.04	2	<.001						
Linear Number of Felony Sex Offense Charges				0.38	0.14	6.82	1	0.009	1.46
Quadratic Number of Felony Sex Offense Charges				-0.02	0.03	0.57		0.452	0.98
Linear Number of Sex Offense Adjudications				0.63	0.12	25.54	1	<.001	1.88
Quadratic Number of Sex Offense Adjudications				-0.04	0.12	9.39	1	0.002	0.97

Two additional hierarchical logistic regression analyses were conducted to assess whether or not variables representing the effects of the JSO's number of victims variable added to the prediction of reoffense status after accounting for the linear and quadratic effects of the number of sex offense adjudications and the number of sex offense felony charges (see Table 74). In the first analysis, block one represented the linear and quadratic effects of number of sex offense adjudications and number of felony sex offense charges, and block two represented the linear, quadratic, and cubic effects of the number of victims variable. In that analysis, block two contributed significantly to the prediction of reoffense status after controlling for the effects of block one ($\chi^2(3) = 47.85, p < .05$). Similarly, when the blocks were reversed, the block representing the number of sex offense adjudications and the number of felony charges added significantly to the prediction above the variables representing the effects of the number of victims ($\chi^2(3) = 17.90, p < .05$). However, when all variables were entered into the equation simultaneously in the final step, the Wald χ^2 values for the variables representing the number of felony charges and the quadratic effect of the number of sex offense adjudications were not significant.

Table 74
*Hierarchical logistic regression analysis of the number of sex offense adjudications,
the number of felony charges, and the effects of the number of victims*

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	85.35	3	<.001						
Number of Felony Sex Offense Charges				1.42	0.27	26.94	1	<.001	4.12
Linear Number of Sex Offense Adjudications				-0.37	0.13	7.99	1	0.005	0.69
Quadratic Number of Sex Offense Adjudications				0.34	0.12	7.81	1	0.005	1.40
Constant				-1.99	0.16	161.48	1	<.001	0.14
Step 2									
	47.85	3	<.001						
Number of Felony Sex Offense Charges				0.88	0.29	8.94	1	0.003	2.41
Linear Number of Sex Offense Adjudications				-0.16	0.15	1.14	1	0.286	0.86
Quadratic Number of Sex Offense Adjudications				-0.18	0.15	1.53	1	0.216	0.83
Linear Number of Victims				2.11	0.33	41.43	1	<.001	8.24
Quadratic Number of Victims				-1.36	0.34	15.70	1	<.001	0.26
Cubic Number of Victims				0.25	0.09	8.54	1	0.003	1.29
Constant				-1.66	0.20	68.35	1	<.001	0.19

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	115.30	3	<.001						
Linear Number of Victims				2.28	0.29	61.67	1	<.001	9.75
Quadratic Number of Victims				-1.29	0.32	16.05	1	<.001	0.28
Cubic Number of Victims				0.23	0.08	7.85	1	0.005	1.26
Constant				-1.71	0.19	79.71	1	<.001	0.18
Step 2									
	17.90	3	<.001						
Linear Number of Victims				2.11	0.33	41.43	1	<.001	8.24
Quadratic Number of Victims				-1.36	0.34	15.70	1	<.001	0.26
Cubic Number of Victims				0.25	0.09	8.54	1	0.003	1.29
Number of Felony Sex Offense Charges				-0.18	0.15	1.53	1	0.216	0.83
Linear Number of Sex Offense Adjudications				0.88	0.29	8.94	1	0.003	2.41
Quadratic Number of Sex Offense Adjudications				-0.16	0.15	1.14	1	0.286	0.86
Constant				-1.66	0.20	68.35	1	<.001	0.19

Because of the non-significant Wald statistics for the two variables in the previous analysis, the same hierarchical logistic regression analysis was conducted with the number of felonies variable removed from the second block (see Table 75). Though the second block of the analysis, representing the linear and quadratic effects of the number of sex offense adjudications, significantly predicted reoffense status after controlling for the number of victims ($\chi^2(1) = 16.38, p < .05$), the Wald χ^2 statistic for the quadratic effect of the number of sex offense adjudications remained insignificant. Subsequently, one more hierarchical logistic regression was conducted to assess whether or not the linear effect of the number of sex offense adjudications variable alone added significantly to the prediction of reoffense status, after accounting for the number of victim variables (see Table 76). Results of the analysis indicated that, the linear effect of the number of sex offense adjudications significantly added to the prediction after accounting for the number of victim variables ($\chi^2(1) = 15.26, p < .05$). Additionally, all Wald χ^2 statistics remained significant. Thus, the linear, quadratic, and cubic effects of the number of victims variable, as well as, the linear effect of the number of sex offense adjudications variable were retained for further analysis.

Table 75

Hierarchical logistic regression analysis of the effects of the number of sex offense adjudications and the effects of the number of victims

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Linear Number of Victims	115.30	3	<.001	2.28	0.29	61.67	1	<.001	9.75
Quadratic Number of Victims				-1.29	0.32	16.05	1	<.001	0.28
Cubic Number of Victims				0.23	0.08	7.85	1	0.005	1.26
Constant				-1.71	0.19	79.71	1	<.001	0.18
Step 2									
Linear Number of Victims	16.38	2	<.001	1.97	0.31	40.96	1	<.001	7.15
Quadratic Number of Victims				-1.38	0.34	16.18	1	<.001	0.25
Cubic Number of Victims				0.26	0.09	9.14	1	0.003	1.30
Linear Number of Sex Offense Adjudications				0.85	0.29	8.40	1	0.004	2.34
Quadratic Number of Sex Offense Adjudications				-0.15	0.15	1.12	1	0.289	0.86
Constant				-1.65	0.20	67.87	1	<.001	0.19

Table 76

Hierarchical logistic regression analysis of the linear effect of the number of sex offense adjudications and the effects of the number of victims

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Linear Number of Victims	115.30	3	<.001	2.28	0.29	61.67	1	<.001	9.75
Quadratic Number of Victims				-1.29	0.32	16.05	1	<.001	0.28
Cubic Number of Victims				0.23	0.08	7.85	1	0.005	1.26
Constant				-1.71	0.19	79.71	1	<.001	0.18
Step 2									
Linear Number of Victims	15.26	2	<.001	2.05	0.30	47.77	1	<.001	7.78
Quadratic Number of Victims				-1.46	0.33	18.97	1	<.001	0.23
Cubic Number of Victims				0.27	0.09	10.17	1	0.001	1.31
Linear Number of Sex Offense Adjudications				0.58	0.15	15.13	1	<.001	1.79
Constant				-1.69	0.20	74.91	1	<.001	0.18

Two additional hierarchical logistic regression analyses were employed to assess whether or not the variable representing the age at the earliest charged sex offense

independently added to the prediction of sexual reoffense status above the variables representing the number of victims and the number of sex offense adjudications (see Table 77). The first analysis included the variables representing the number of victims and the number of sex offense adjudications in the first block, followed by the variable representing the JSO's age at his first charged sex offense. In that analysis, the age at the first charged sex offense significantly added to the prediction of reoffense status after controlling for the variables representing both the number of victims and the number of sex offense adjudications ($\chi^2 (1) = 6.89, p < .05$). Similarly, when the blocks were entered in reverse order the second block representing the number of victims and the number of sex offense adjudications significantly predicted recidivism after accounting for the age of the first charged sex offense ($\chi^2 (4) = 116.67, p < .05$). Additionally, all Wald χ^2 statistic variables remained significant when all variables were entered simultaneously into the regression equation. Thus, the variables representing the age at the first charged sex offense, the linear, quadratic, and cubic effects of the number of victims, and the number of sex offense adjudications uniquely contribute to the prediction of reoffense status.

Table 77

Hierarchical logistic regression analysis of the linear effect of the number of sex offense adjudications, the effects of the number of victims, and the juvenile's age at his first charged sex offense

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Linear Number of Victims	129.17	4	<.001	2.02	0.30	45.58	1	<.001	7.50
Quadratic Number of Victims				-1.43	0.34	18.04	1	<.001	0.24
Cubic Number of Victims				0.27	0.09	9.65	1	0.002	1.31
Number of Sex Offense Adjudications				0.60	0.15	15.66	1	<.001	1.82
Constant				-1.71	0.20	74.88	1	<.001	0.18
Step 2									
Linear Number of Victims	6.89	1	0.009	1.98	0.30	43.70	1	<.001	7.26
Quadratic Number of Victims				-1.38	0.34	16.54	1	<.001	0.25
Cubic Number of Victims				0.26	0.09	8.72	1	0.003	1.29
Number of Sex Offense Adjudications				0.56	0.15	13.67	1	<.001	1.76
Age at First Charged Sex Offense				-0.35	0.13	6.80	1	0.009	0.71
Constant				-0.83	0.38	4.85	1	0.028	0.43

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
Age at First Charged Sex Offense	19.37	1	<.001	-0.51	0.12	19.03	1	<.001	0.60
Constant				-0.58	0.30	3.72	1	0.054	0.56
Step 2									
Age at First Charged Sex Offense	116.70	4	<.001	-0.35	0.13	6.80	1	0.009	0.71
Linear Number of Victims				1.98	0.30	43.70	1	<.001	7.26
Quadratic Number of Victims				-1.38	0.34	16.54	1	<.001	0.25
Cubic Number of Victims				0.26	0.09	8.72	1	0.003	1.29
Number of Sex Offense Adjudications				0.56	0.15	13.67	1	<.001	1.76
Constant				-0.83	0.38	4.85	1	0.028	0.43

Two hierarchical logistic regression analyses tested whether or not the linear, quadratic, and cubic effects of the offending age range variable contributed to the prediction

of reoffense status above the previous uniquely contributing variable (see Table 78). In the first analysis, the variables representing the age at the first charged sex offense, the linear, quadratic, and cubic effects of the number of victims, and the number of sex offense adjudications were added to the equation in the first block, followed by the linear and nonlinear effects of the offending age range variable in the second block. The second block significantly added to the prediction of reoffense after controlling for the variables in the first block ($\chi^2 (3) = 58.86, p < .05$). Similarly, when the blocks were entered in reverse order the variables representing the age at the first charged sex offense, the linear, quadratic, and cubic effects of the number of victims, and the number of sex offense adjudications added significantly beyond the linear and nonlinear effects of the offending age range variable ($\chi^2 (5) = 38.85, p < .05$). However, when all variables were entered simultaneously into the equation in the final step, the age at first offense variable became non-significant. As such the same analysis was conducted without the variable representing the age at the first charged sex offense (see Table 79). As before, the second block was significant ($\chi^2 (4) = 39.82, p < .05$). However, all Wald χ^2 statistics remained significant. Thus, the age at first offense variable was dropped from further analysis.

Table 78

Hierarchical logistic regression analysis of the linear effect of the number of sex offense adjudications, the effects of the number of victims, the juvenile's age at first charged sex offense, and the offending age range

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	136.06	5	<.001						
Linear Number of Victims				1.98	0.30	43.70	1	<.001	7.26
Quadratic Number of Victims				-1.38	0.34	16.54	1	<.001	0.25
Cubic Number of Victims				0.26	0.09	8.72	1	0.003	1.29
Number of Sex Offense Adjudications				0.56	0.15	13.67	1	<.001	1.76
Age at First Charged Sex Offense				-0.35	0.13	6.80	1	0.009	0.71
Constant				-0.83	0.38	4.85	1	0.028	0.43
Step 2									
	58.86	3	<.001						
Linear Number of Victims				1.57	0.34	21.20	1	<.001	4.82
Quadratic Number of Victims				-1.46	0.39	14.45	1	<.001	0.23
Cubic Number of Victims				0.30	0.10	9.36	1	0.002	1.36
Number of Sex Offense Adjudications				0.43	0.17	6.63	1	0.010	1.54
Age at First Charged Sex Offense				0.15	0.17	0.70	1	0.404	1.16
Linear Offending Age Range				2.10	0.39	29.45	1	<.001	8.18
Quadratic Offending Age Range				-1.10	0.32	12.10	1	0.001	0.33
Cubic Offending Age Range				0.17	0.06	9.43	1	0.002	1.19
Constant				-1.71	0.55	9.55	1	0.002	0.18

Table 78 (*continued*)

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	156.08	3	<.001						
Linear Offending Age Range				2.83	0.35	64.85	1	<.001	16.93
Quadratic Offending Age Range				-1.38	0.30	21.48	1	<.001	0.25
Cubic Offending Age Range				0.20	0.05	14.23	1	<.001	1.22
Constant				-1.56	0.21	56.19	1	<.001	0.21
Step 2									
	38.85	5	<.001						
Linear Offending Age Range				2.10	0.39	29.45	1	<.001	8.18
Quadratic Offending Age Range				-1.10	0.32	12.10	1	0.001	0.33
Cubic Offending Age Range				0.17	0.06	9.43	1	0.002	1.19
Linear Number of Victims				1.57	0.34	21.20	1	<.001	4.82
Quadratic Number of Victims				-1.46	0.39	14.45	1	<.001	0.23
Cubic Number of Victims				0.30	0.10	9.36	1	0.002	1.36
Number of Sex Offense Adjudications				0.43	0.17	6.63	1	0.010	1.54
Age at First Charged Sex Offense				0.15	0.17	0.70	1	0.404	1.16
Constant				-1.71	0.55	9.55	1	0.002	0.18

Table 79

Hierarchical logistic regression analysis of the linear effect of the number of sex offense adjudications, the effects of the number of victims, and the offending age range

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	156.08	3	<.001						
Linear Offending Age Range				2.83	0.35	64.85	1	<.001	16.93
Quadratic Offending Age Range				-1.38	0.30	21.48	1	<.001	0.25
Cubic Offending Age Range				0.20	0.05	14.23	1	<.001	1.22
Constant				-1.56	0.21	56.19	1	<.001	0.21
Step 2									
	39.82	4	<.001						
Linear Offending Age Range				2.03	0.38	28.46	1	<.001	7.58
Quadratic Offending Age Range				-1.11	0.32	12.29	1	<.001	0.33
Cubic Offending Age Range				0.17	0.06	9.71	1	0.002	1.19
Linear Number of Victims				1.63	0.34	23.44	1	<.001	5.13
Quadratic Number of Victims				-1.49	0.38	15.26	1	<.001	0.23
Cubic Number of Victims				0.31	0.10	9.75	1	0.002	1.36
Number of Sex Offense Adjudications				0.40	0.16	5.95	1	0.015	1.49
Constant				-1.28	0.27	23.04	1	<.001	0.28

Following from the previous analysis, one logistic regression was employed to determine if the variable representing whether or not the JSO had ever been cited for a sexual violation while in some form of an institution added significantly to the prediction of reoffense after accounting for all previous significant predictors from this family of variables (see Table 80). In that analysis the sexual violation variable was added to the second block of the analysis. However, it did not add significantly to the prediction of reoffense status after accounting for all of the other significant independent sex offense related variables ($\chi^2 (1) = 3.68, p > .05$). Additionally, when all variables were entered into the equation simultaneously, the sexual violation variable was the only variable with a non-significant Wald χ^2 statistic. Thus, it was not retained for further analysis.

Table 80

Hierarchical logistic regression analysis of the linear effect of the number of sex offense adjudications, the effects of the number of victims, the offending age range, and any violations while in some institution

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.87	0.12	229.09	1	<.001	0.15
Step 1									
	194.68	7	<.001						
Linear Number of Victims				1.63	0.34	23.44	1	<.001	5.13
Quadratic Number of Victims				-1.49	0.38	15.26	1	<.001	0.23
Cubic Number of Victims				0.31	0.10	9.75	1	0.002	1.36
Number of Sex Offense Adjudications									
				0.40	0.16	5.95	1	0.015	1.49
Linear Offending Age Range				2.03	0.38	28.46	1	<.001	7.58
Quadratic Offending Age Range				-1.11	0.32	12.29	1	<.001	0.33
Cubic Offending Age Range				0.17	0.06	9.71	1	0.002	1.19
Constant				-1.28	0.27	23.04	1	<.001	0.28
Step 2									
	3.68	1	0.055						
Linear Number of Victims				1.59	0.34	21.76	1	<.001	4.88
Quadratic Number of Victims				-1.55	0.39	16.01	1	<.001	0.21
Cubic Number of Victims				0.33	0.10	10.91	1	0.001	1.39
Number of Sex Offense Adjudications									
				0.39	0.17	5.50	1	0.019	1.48
Linear Offending Age Range				1.97	0.38	26.39	1	<.001	7.20
Quadratic Offending Age Range				-1.13	0.32	12.41	1	<.001	0.32
Cubic Offending Age Range				0.18	0.06	10.18	1	0.001	1.20
Has Offender Ever Been Cited for A Sexual Violation While Institutionalized?									
				0.91	0.47	3.67	1	0.055	2.47
Constant				-1.31	0.27	23.55	1	<.001	0.27

Two final logistic regression analyses were employed to determine if the variable representing sex offenses charged while on probation or under supervision added significantly to the prediction of recidivism after controlling for all other significant and independently contributing variables (see Table 81). In the first of the two analyses, the probation related variable was entered into the second block of the analyses after the other variables were entered into the first block. The probation variable significantly added to the

prediction of reoffense after accounting for the variance related to the other significant variables ($\chi^2 (1) = 9.00, p < .05$). Similarly, when the variables were entered in reverse order, the block representing all previously independent variables significantly added to the prediction after accounting for the probation related variable ($\chi^2 (7) = 157.91, p < .05$). Additionally, all Wald χ^2 statistics were significant when all variables were entered simultaneously into the regression equation. Thus, the variables representing the number of sex offense adjudications, the linear, quadratic, and cubic effects of the number of victims, the linear, quadratic, and cubic effects of the offending age range, and whether or not the JSO had been charged with a sexual offense while on probation or under supervision were retained for the final round of analyses.

Table 81

Hierarchical logistic regression analysis of the linear effect of the number of sex offense adjudications, the effects of the number of victims, the offending age range, and any sex offense charge while on probation or under supervision

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	194.68	7	<.001						
Linear Number of Victims				1.63	0.34	23.44	1	<.001	5.13
Quadratic Number of Victims				-1.49	0.38	15.26	1	<.001	0.23
Cubic Number of Victims				0.31	0.10	9.75	1	0.002	1.36
Number of Sex Offense Adjudications				0.40	0.16	5.95	1	0.015	1.49
Linear Offending Age Range				2.03	0.38	28.46	1	<.001	7.58
Quadratic Offending Age Range				-1.11	0.32	12.29	1	<.001	0.33
Cubic Offending Age Range				0.17	0.06	9.71	1	0.002	1.19
Constant				-1.28	0.27	23.04	1	<.001	0.28
Step 2									
	9.00	1	0.003						
Linear Number of Victims				1.66	0.34	23.48	1	<.001	5.28
Quadratic Number of Victims				-1.61	0.39	16.72	1	<.001	0.20
Cubic Number of Victims				0.34	0.10	10.91	1	0.001	1.40
Number of Sex Offense Adjudications				0.37	0.17	4.72	1	0.030	1.44
Linear Offending Age Range				1.92	0.39	23.82	1	<.001	6.81
Quadratic Offending Age Range				-1.05	0.32	10.50	1	0.001	0.35
Cubic Offending Age Range				0.16	0.06	8.19	1	0.004	1.18
Has Offender Ever Committed An Offense While On Probation or Under Supervision?				1.00	0.33	9.24	1	0.002	2.71
Constant				-1.51	0.29	27.82	1	<.001	0.22

Table 81 (*continued*)

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	45.76	7	<.001						
Has Offender Ever Committed An Offense While On Probation or Under Supervision?				1.68	0.25	46.74	1	<.001	5.36
Constant				-2.46	0.17	216.80	1	<.001	0.09
Step 2	157.91	1	0.003						
Has Offender Ever Committed An Offense While On Probation or Under Supervision?				1.00	0.33	9.24	1	0.002	2.71
Linear Number of Victims				1.66	0.34	23.48	1	<.001	5.28
Quadratic Number of Victims				-1.61	0.39	16.72	1	<.001	0.20
Cubic Number of Victims				0.34	0.10	10.91	1	0.001	1.40
Number of Sex Offense Adjudications				0.37	0.17	4.72	1	0.030	1.44
Linear Offending Age Range				1.92	0.39	23.82	1	<.001	6.81
Quadratic Offending Age Range				-1.05	0.32	10.50	1	0.001	0.35
Cubic Offending Age Range				0.16	0.06	8.19	1	0.004	1.18
Constant				-1.51	0.29	27.82	1	<.001	0.22

Multivariate Analyses of 19 Retained Independent Variables

In total, 19 variables were retained for the final analysis of the independent effects to the prediction of reoffense status. These variables are reported in Table 82.

Table 82

Independent Variables From Each Family

History of Child Abuse (As the Victim)
Does Offender Have a Record of Any Hands-On Sexual Abuse by History?
Number of Times the Victim of Hands-On Sexual Abuse (Official-Report)
Number of Times the Victim of Physical Abuse (Official-Report)
History of Family Problems
Does Offender Have a History of Physical Separation from Parents Prior to Age 16?
Level of Difficulty Relating to Siblings
History of Learning Problems
Did Offender Participate in Any Special Education in K-12?
History of Discipline Problems in School
Number of Different Education Periods With Discipline Problems
History of Non-Sexual Adolescent Antisocial Behavior
Total Number of Non-Sexual Juvenile Adjudications (Linear Effect)
Total Number of Non-Sexual Juvenile Adjudications (Quadratic Effect)
Does Offender Have a Record of Any Secure Facility Placements?
Mental Health Diagnosis
Was Offender Ever Diagnosed With a Paraphilia?
Was Offender Ever Diagnosed With a Self-Regulatory Type Diagnosis (ADD, ADHD, Impulse Control, Conduct, or Oppositional Defiant Disorder)?
Mental Health Treatment
Intensity of Mental Health Programming After Index Offense
Sexual Offender Treatment
Sex Offender Treatment Program Status Prior to Index Offense
Sex Offender Treatment Program Status After Index Offense
Offender's Level of Denial for Index Offense at Time of Discharge
Sexual Offending History
Total Number of Juvenile Sexual Offense Adjudications
Total Number of Victims (Linear Effect)
Total Number of Victims (Quadratic Effect)
Total Number of Victims (Cubic Effect)
Has Offender Ever Committed a Sex Offense While On Probation or Under Supervision?
Offending Age Range (Linear Effect)
Offending Age Range (Quadratic Effect)
Offending Age Range (Cubic Effect)

Because of the strong relations between sexual reoffense and the families of variables representing past sexual offending and past abuse, these two families of variables were entered simultaneously into a logistic regression equation to predict reoffense status. Though

the model was significant overall ($\chi^2(11) = 211.67, p < .05$), not all Wald χ^2 values were significant (see Table 83). Particularly, the variables representing any history of hands-on sexual abuse and the frequency of physical abuse were not significant when all variables were considered in the equation. As such, those two variables were removed and the logistic regression analysis was rerun. For that analysis, not only was the model significant ($\chi^2(9) = 211.26, p < .05$), but also, all Wald χ^2 values for all variables were significant (see Table 84).

Table 83

Logistic regression analysis of independence of sexual offending history and abuse history variables

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	252.91	1	<.001	0.15
Step 1	211.67	11	<.001						
Number of Sexual Offense Adjudications				0.33	0.18	3.65	1	0.056	1.40
Linear Number of Victims				1.69	0.36	21.99	1	<.001	5.42
Quadratic Number of Victims				-1.64	0.41	16.25	1	<.001	0.19
Cubic Number of Victims				0.34	0.11	10.67	1	0.001	1.41
Linear Offending Age Range				1.82	0.41	19.54	1	<.001	6.14
Quadratic Offending Age Range				-0.91	0.34	7.15	1	0.007	0.40
Cubic Offending Age Range				0.14	0.06	5.31	1	0.021	1.15
Offending on Probation of Under Supervision				1.06	0.35	9.32	1	0.002	2.89
Ever Victim of Hands-On Sexual Abuse				-0.39	0.52	0.55	1	0.458	0.68
Frequency of Hands-On Sexual Abuse				1.10	0.42	6.98	1	0.008	3.00
Frequency of Physical Abuse				-0.05	0.32	0.02	1	0.883	0.95
Constant				-1.81	0.32	31.85	1	<.001	0.16

Table 84

Logistic regression analysis of independence of remaining sexual offending history and abuse history variables

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	0.000	0.15
Step 1	214.26	9	<.001						
Number of Sexual Offense Adjudications				0.34	0.17	3.96	1	0.047	1.41
Linear Number of Victims				1.71	0.35	23.92	1	<.001	5.52
Quadratic Number of Victims				-1.69	0.40	17.59	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.76	1	0.001	1.43
Linear Offending Age Range				1.82	0.40	20.74	1	<.001	6.18
Quadratic Offending Age Range				-0.97	0.33	8.47	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.54	1	0.011	1.16
Offending on Probation of Under Supervision				1.02	0.33	9.26	1	0.002	2.77
Frequency of Hands-On Sexual Abuse				0.84	0.26	10.82	1	0.001	2.32
Constant				-1.79	0.31	33.78	1	<.001	0.17

For the next step of the analyses, all remaining significant, independent variables from the sexual offending and abuse history families were entered into the first blocks of several hierarchical logistic regression analyses predicting reoffense. The second block of each of the analyses contained the remaining significant variables from each of the remaining families entered one at a time. Thus, each family of variables was tested individually after accounting for the variance in reoffense status explained by both sexual offending history and abuse history.

In the first of these analyses, the significant family instability variables were entered into the second block (see Table 85). However, those variables did not add significantly to the prediction of sexual reoffense beyond the sexual offending history and abuse history variables ($\chi^2(2) = 1.76, p > .05$). For the second analysis, the variable representing the number of education discipline problem time periods was entered into the second block (see

Table 86). In that analysis, block number two significantly added to the prediction of reoffense after accounting for the block one variables ($\chi^2(1) = 6.59, p < .05$). As such, it was retained for the final round of analysis.

Table 85

Logistic regression analysis of independence of family instability variables after accounting for sexual offending history and abuse history variables

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	214.26	9	<.001						
Number of Sexual Offense Adjudications				0.34	0.17	3.96	1	0.047	1.41
Linear Number of Victims				1.71	0.35	23.92	1	<.001	5.52
Quadratic Number of Victims				-1.69	0.40	17.59	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.76	1	0.001	1.43
Linear Offending Age Range				1.82	0.40	20.74	1	<.001	6.18
Quadratic Offending Age Range				-0.97	0.33	8.47	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.54	1	0.011	1.16
Offending on Probation of Under Supervision				1.02	0.33	9.26	1	0.002	2.77
Frequency of Hands-On Sexual Abuse				0.84	0.26	10.82	1	0.001	2.32
Constant				-1.79	0.31	33.78	1	<.001	0.17
Step 2									
	1.76	2	0.414						
Number of Sexual Offense Adjudications				0.33	0.17	3.52	1	0.061	1.39
Linear Number of Victims				1.71	0.35	23.70	1	<.001	5.55
Quadratic Number of Victims				-1.74	0.41	17.98	1	<.001	0.18
Cubic Number of Victims				0.37	0.11	12.12	1	<.001	1.45
Linear Offending Age Range				1.81	0.40	20.23	1	<.001	6.09
Quadratic Offending Age Range				-0.98	0.34	8.50	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.55	1	0.010	1.17
Offending on Probation of Under Supervision				0.91	0.34	7.06	1	0.008	2.50
Frequency of Hands-On Sexual Abuse				0.75	0.27	7.48	1	0.006	2.12
Physical Separation From Parents Before Age 16				0.46	0.37	1.58	1	0.209	1.59
Level of Difficulty Relating to Siblings				0.03	0.20	0.02	1	0.894	1.03
Constant				-1.84	0.32	33.46	1	<.001	0.16

Table 86
Logistic regression analysis of independence of education discipline problem variables after accounting for sexual offending history and abuse history variables

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	214.26	9	<.001						
Number of Sexual Offense Adjudications				0.34	0.17	3.96	1	0.047	1.41
Linear Number of Victims				1.71	0.35	23.92	1	<.001	5.52
Quadratic Number of Victims				-1.69	0.40	17.59	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.76	1	0.001	1.43
Linear Offending Age Range				1.82	0.40	20.74	1	<.001	6.18
Quadratic Offending Age Range				-0.97	0.33	8.47	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.54	1	0.011	1.16
Offending on Probation of Under Supervision				1.02	0.33	9.26	1	0.002	2.77
Frequency of Hands-On Sexual Abuse				0.84	0.26	10.82	1	0.001	2.32
Constant				-1.79	0.31	33.78	1	<.001	0.17
Step 2									
	6.59	1	0.010						
Number of Sexual Offense Adjudications				0.37	0.17	4.58	1	0.032	1.45
Linear Number of Victims				1.71	0.35	23.58	1	<.001	5.51
Quadratic Number of Victims				-1.70	0.41	16.99	1	<.001	0.18
Cubic Number of Victims				0.36	0.11	11.35	1	0.001	1.43
Linear Offending Age Range				1.93	0.41	22.34	1	<.001	6.88
Quadratic Offending Age Range				-1.10	0.34	10.42	1	0.001	0.33
Cubic Offending Age Range				0.17	0.06	8.29	1	0.004	1.19
Offending on Probation of Under Supervision				0.85	0.34	6.03	1	0.014	2.33
Frequency of Hands-On Sexual Abuse				0.77	0.25	9.21	1	0.002	2.17
Number of Education Discipline Problem Time Periods				0.60	0.23	6.72	1	0.010	1.83
Constant				-2.52	0.43	34.87	1	<.001	0.08

The third analysis of the independence of variable families beyond sexual offending history and abuse history included the adolescent antisocial behavior variables. Though the second block, adolescent antisocial variables, was not significant ($\chi^2(3) = 24.26, p > .05$), the linear effect of the number of non-sexual offense adjudications remained significant when all

variables were entered into the equation simultaneously, while its quadratic effect and any history of a secure facility placement failed to reach significance (see Table 87). Because the linear effect of the number of non-sexual adjudications was significant, the previous analysis was repeated with only that variable entered into the second block (see Table 88). However, the second block of that analysis was not significant ($\chi^2 (1) = 3.07, p > .05$), and as such, no adolescent antisocial behavior variables were retained for the final round of analysis.

Table 87

Logistic regression analysis of independence of adolescent antisocial behavior variables after accounting for sexual offending history and abuse history variables

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	214.26	9	<.001						
Number of Sexual Offense									
Adjudications				0.34	0.17	3.96	1	0.047	1.41
Linear Number of Victims				1.71	0.35	23.92	1	<.001	5.52
Quadratic Number of Victims				-1.69	0.40	17.59	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.76	1	0.001	1.43
Linear Offending Age Range				1.82	0.40	20.74	1	<.001	6.18
Quadratic Offending Age Range				-0.97	0.33	8.47	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.54	1	0.011	1.16
Offending on Probation of Under Supervision				1.02	0.33	9.26	1	0.002	2.77
Frequency of Hands-On Sexual Abuse				0.84	0.26	10.82	1	0.001	2.32
Constant				-1.79	0.31	33.78	1	<.001	0.17
Step 2									
	5.87	3	0.118						
Number of Sexual Offense									
Adjudications				0.40	0.18	5.03	1	0.025	1.49
Linear Number of Victims				1.70	0.35	23.09	1	<.001	5.50
Quadratic Number of Victims				-1.68	0.41	16.88	1	<.001	0.19
Cubic Number of Victims				0.36	0.11	11.28	1	0.001	1.43
Linear Offending Age Range				1.96	0.41	22.66	1	<.001	7.09
Quadratic Offending Age Range				-1.09	0.34	10.09	1	0.001	0.34
Cubic Offending Age Range				0.17	0.06	7.78	1	0.005	1.18
Offending on Probation of Under Supervision				0.85	0.35	6.08	1	0.014	2.35
Frequency of Hands-On Sexual Abuse				0.86	0.26	10.93	1	0.001	2.36
Linear Number of Non-Sexual									
Adjudications				0.17	0.07	5.67	1	0.017	1.18
Quadratic Number of Non-Sexual Adjudications				-0.03	0.02	2.51	1	0.113	0.97
Any History of a Secure Facility Placement				-0.19	0.37	0.26	1	0.610	0.83
Constant				-1.27	0.41	9.61	1	0.002	0.28

Table 88

Logistic regression analysis of independence of the number of non-sexual adjudications variable after accounting for sexual offending history and abuse history variables

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	214.26	9	<.001						
Number of Sexual Offense Adjudications				0.34	0.17	3.96	1	0.047	1.41
Linear Number of Victims				1.71	0.35	23.92	1	<.001	5.52
Quadratic Number of Victims				-1.69	0.40	17.59	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.76	1	0.001	1.43
Linear Offending Age Range				1.82	0.40	20.74	1	<.001	6.18
Quadratic Offending Age Range				-0.97	0.33	8.47	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.54	1	0.011	1.16
Offending on Probation of Under Supervision				1.02	0.33	9.26	1	0.002	2.77
Frequency of Hands-On Sexual Abuse				0.84	0.26	10.82	1	0.001	2.32
Constant				-1.79	0.31	33.78	1	<.001	0.17
Step 2									
	3.07	1	0.080						
Number of Sexual Offense Adjudications				0.36	0.17	4.46	1	0.035	1.44
Linear Number of Victims				1.72	0.35	24.01	1	<.001	5.59
Quadratic Number of Victims				-1.71	0.41	17.72	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.93	1	0.001	1.44
Linear Offending Age Range				1.93	0.41	22.42	1	<.001	6.89
Quadratic Offending Age Range				-1.05	0.34	9.75	1	0.002	0.35
Cubic Offending Age Range				0.16	0.06	7.54	1	0.006	1.18
Offending on Probation of Under Supervision				0.85	0.35	6.10	1	0.014	2.35
Frequency of Hands-On Sexual Abuse				0.82	0.25	10.53	1	0.001	2.27
Linear Number of Non-Sexual Adjudications				0.08	0.04	3.08	1	0.079	1.08
Constant				-1.73	0.31	31.74	1	<.001	0.18

The fourth family of variables considered was any history of special education. In that analysis the lone variable representing any history of special education was entered into the second block (see Table 89). That block significantly added to the prediction of reoffense

status after accounting for sexual offending history and abuse history variables ($\chi^2(1) = 6.89$, $p < .05$) and was retained for the final analysis.

Table 89

Logistic regression analysis of independence of history of special education variable after accounting for sexual offending history and abuse history variables

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	214.26	9	<.001						
Number of Sexual Offense									
Adjudications				0.34	0.17	3.96	1	0.047	1.41
Linear Number of Victims				1.71	0.35	23.92	1	<.001	5.52
Quadratic Number of Victims				-1.69	0.40	17.59	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.76	1	0.001	1.43
Linear Offending Age Range				1.82	0.40	20.74	1	<.001	6.18
Quadratic Offending Age Range				-0.97	0.33	8.47	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.54	1	0.011	1.16
Offending on Probation of Under									
Supervision				1.02	0.33	9.26	1	0.002	2.77
Frequency of Hands-On Sexual									
Abuse				0.84	0.26	10.82	1	0.001	2.32
Constant				-1.79	0.31	33.78	1	<.001	0.17
Step 2									
	6.89	1	0.009						
Number of Sexual Offense									
Adjudications				0.39	0.18	5.00	1	0.025	1.48
Linear Number of Victims				1.63	0.35	21.80	1	<.001	5.12
Quadratic Number of Victims				-1.69	0.41	16.91	1	<.001	0.18
Cubic Number of Victims				0.36	0.11	11.52	1	0.001	1.44
Linear Offending Age Range				1.81	0.41	19.80	1	<.001	6.13
Quadratic Offending Age Range				-1.02	0.34	8.83	1	0.003	0.36
Cubic Offending Age Range				0.16	0.06	7.07	1	0.008	1.17
Offending on Probation of Under									
Supervision				0.83	0.35	5.74	1	0.017	2.29
Frequency of Hands-On Sexual									
Abuse				0.74	0.26	7.83	1	0.005	2.09
Any History of Special Education				0.87	0.33	6.94	1	0.008	2.39
Constant				-2.00	0.33	36.90	1	<.001	0.13

The family representing mental health diagnosis history was analyzed in the fifth analysis (see Table 90). In that analysis, a history of a paraphilia or self-regulatory diagnosis did not significantly add to the prediction of reoffense status above the block one variables ($\chi^2(2) = 3.09$, $p > .05$). Similarly, when the one remaining mental health treatment variable

was entered into the second block of the analysis (see Table 91), it did not significantly predict reoffense status after accounting for sexual offending history and abuse history ($\chi^2 (1) = .040, p > .05$). Neither diagnosis history nor mental health treatment families of variables were retained for the final analysis.

Table 90

Logistic regression analysis of independence of the diagnosis history variables after accounting for sexual offending history and abuse history variables

Variable	Step χ^2	df	p	B	S.E.	Wald χ^2	df	p	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	214.26	9	<.001						
Number of Sexual Offense Adjudications				0.34	0.17	3.96	1	0.047	1.41
Linear Number of Victims				1.71	0.35	23.92	1	<.001	5.52
Quadratic Number of Victims				-1.69	0.40	17.59	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.76	1	0.001	1.43
Linear Offending Age Range				1.82	0.40	20.74	1	<.001	6.18
Quadratic Offending Age Range				-0.97	0.33	8.47	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.54	1	0.011	1.16
Offending on Probation of Under Supervision				1.02	0.33	9.26	1	0.002	2.77
Frequency of Hands-On Sexual Abuse				0.84	0.26	10.82	1	0.001	2.32
Constant				-1.79	0.31	33.78	1	<.001	0.17
Step 2									
	3.09	2	0.214						
Number of Sexual Offense Adjudications				0.34	0.17	3.88	1	0.049	1.41
Linear Number of Victims				1.70	0.35	23.19	1	<.001	5.48
Quadratic Number of Victims				-1.67	0.41	16.54	1	<.001	0.19
Cubic Number of Victims				0.35	0.11	10.96	1	0.001	1.42
Linear Offending Age Range				1.75	0.40	18.96	1	<.001	5.78
Quadratic Offending Age Range				-0.97	0.34	8.23	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.52	1	0.011	1.17
Offending on Probation of Under Supervision				1.01	0.34	9.05	1	0.003	2.75
Frequency of Hands-On Sexual Abuse				0.77	0.26	8.46	1	0.004	2.15
History of a Paraphilia Diagnosis				0.85	0.59	2.07	1	0.150	2.34
History of a Self-Regulatory Diagnosis				0.24	0.36	0.46	1	0.500	1.27
Constant				-1.90	0.32	35.54	1	<.001	0.15

Table 91

Logistic regression analysis of independence of mental health treatment after the index offense after accounting for sexual offending history and abuse history variables

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	214.26	9	<.001						
Number of Sexual Offense									
Adjudications				0.34	0.17	3.96	1	0.047	1.41
Linear Number of Victims				1.71	0.35	23.92	1	<.001	5.52
Quadratic Number of Victims				-1.69	0.40	17.59	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.76	1	0.001	1.43
Linear Offending Age Range				1.82	0.40	20.74	1	<.001	6.18
Quadratic Offending Age Range				-0.97	0.33	8.47	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.54	1	0.011	1.16
Offending on Probation of Under Supervision				1.02	0.33	9.26	1	0.002	2.77
Frequency of Hands-On Sexual Abuse				0.84	0.26	10.82	1	0.001	2.32
Constant				-1.79	0.31	33.78	1	<.001	0.17
Step 2									
	0.40	1	0.529						
Number of Sexual Offense									
Adjudications				0.34	0.17	3.94	1	0.047	1.41
Linear Number of Victims				1.72	0.35	24.15	1	<.001	5.58
Quadratic Number of Victims				-1.71	0.41	17.72	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.86	1	0.001	1.43
Linear Offending Age Range				1.79	0.40	19.65	1	<.001	5.98
Quadratic Offending Age Range				-0.98	0.33	8.60	1	0.003	0.37
Cubic Offending Age Range				0.15	0.06	6.77	1	0.009	1.17
Offending on Probation of Under Supervision				1.02	0.34	9.30	1	0.002	2.78
Frequency of Hands-On Sexual Abuse				0.77	0.28	7.81	1	0.005	2.16
Mental Health Treatment After the Index Offense				0.14	0.23	0.40	1	0.527	1.15
Constant				-1.83	0.31	33.72	1	<.001	0.16

The final family of variables analyzed was the history of sex offender specific treatment variables. Results of this analysis indicated that the block representing sex offender treatment marginally predicted reoffense status over sexual offending history and abuse history ($\chi^2 (1) = 7.71, p = .052$). Of the three treatment-related variables, only the Wald χ^2 statistic for the JSO's level of denial remained significant when all variables were significant,

whereas the Wald χ^2 for treatment status after the index offense was not significant and Wald χ^2 for treatment status prior to the index was marginal (see Table 92). To ascertain whether or not the second block would add significantly to the prediction of reoffense status if the treatment status after the index offense was removed, the same analysis was conducted with that variable removed (see Table 93). In that analysis, the sex offender specific treatment variables significantly added to the prediction of reoffense beyond the sexual offending history and abuse history variables ($\chi^2 (2) = 6.87, p < .05$). As such both variables were retained for the final analysis.

Table 92

Logistic regression analysis of independence of sex offender specific treatment variables after accounting for sexual offending history and abuse history variables

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	214.26	9	<.001						
Number of Sexual Offense									
Adjudications				0.34	0.17	3.96	1	0.047	1.41
Linear Number of Victims				1.71	0.35	23.92	1	<.001	5.52
Quadratic Number of Victims				-1.69	0.40	17.59	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.76	1	0.001	1.43
Linear Offending Age Range				1.82	0.40	20.74	1	<.001	6.18
Quadratic Offending Age Range				-0.97	0.33	8.47	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.54	1	0.011	1.16
Offending on Probation of Under Supervision				1.02	0.33	9.26	1	0.002	2.77
Frequency of Hands-On Sexual Abuse				0.84	0.26	10.82	1	0.001	2.32
Constant				-1.79	0.31	33.78	1	<.001	0.17
Step 2									
	7.71	3	0.052						
Number of Sexual Offense									
Adjudications				0.32	0.18	3.23	1	0.072	1.38
Linear Number of Victims				1.78	0.36	23.98	1	<.001	5.95
Quadratic Number of Victims				-1.80	0.42	18.33	1	<.001	0.17
Cubic Number of Victims				0.38	0.11	12.37	1	<.001	1.46
Linear Offending Age Range				1.66	0.41	16.24	1	<.001	5.26
Quadratic Offending Age Range				-0.99	0.34	8.38	1	0.004	0.37
Cubic Offending Age Range				0.16	0.06	7.08	1	0.008	1.18
Offending on Probation of Under Supervision				0.93	0.34	7.54	1	0.006	2.55
Frequency of Hands-On Sexual Abuse				0.78	0.27	8.46	1	0.004	2.18
Prior Sex Offender Specific Treatment Status				0.52	0.29	3.25	1	0.071	1.68
Sex Offender Specific Treatment Status After the Index Offense				-0.19	0.21	0.84	1	0.360	0.83
Offender's Level of Denial of Responsibility for Index Offense				0.78	0.35	5.00	1	0.025	2.18
Constant				-1.89	0.35	28.71	1	<.001	0.15

Table 93

Logistic regression analysis of independence of sex offender specific treatment status prior to index offense and offender's denial after accounting for sexual offending history and abuse history variables

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	214.26	9	<.001						
Number of Sexual Offense Adjudications				0.34	0.17	3.96	1	0.047	1.41
Linear Number of Victims				1.71	0.35	23.92	1	<.001	5.52
Quadratic Number of Victims				-1.69	0.40	17.59	1	<.001	0.18
Cubic Number of Victims				0.36	0.10	11.76	1	0.001	1.43
Linear Offending Age Range				1.82	0.40	20.74	1	<.001	6.18
Quadratic Offending Age Range				-0.97	0.33	8.47	1	0.004	0.38
Cubic Offending Age Range				0.15	0.06	6.54	1	0.011	1.16
Offending on Probation of Under Supervision				1.02	0.33	9.26	1	0.002	2.77
Frequency of Hands-On Sexual Abuse				0.84	0.26	10.82	1	0.001	2.32
Constant				-1.79	0.31	33.78	1	<.001	0.17
Step 2									
	6.87	2	0.032						
Number of Sexual Offense Adjudications				0.31	0.18	3.05	1	0.081	1.36
Linear Number of Victims				1.71	0.35	23.34	1	<.001	5.54
Quadratic Number of Victims				-1.73	0.41	17.62	1	<.001	0.18
Cubic Number of Victims				0.37	0.11	11.83	1	0.001	1.45
Linear Offending Age Range				1.64	0.41	16.02	1	<.001	5.18
Quadratic Offending Age Range				-0.98	0.34	8.27	1	0.004	0.37
Cubic Offending Age Range				0.16	0.06	6.97	1	0.008	1.17
Offending on Probation of Under Supervision				0.95	0.34	7.80	1	0.005	2.59
Frequency of Hands-On Sexual Abuse				0.73	0.26	7.89	1	0.005	2.08
Prior Sex Offender Specific Treatment Status				0.49	0.28	2.93	1	0.087	1.63
Offender's Level of Denial of Responsibility for Index Offense				0.70	0.34	4.29	1	0.038	2.00
Constant				-2.00	0.33	36.48	1	<.001	0.13

The remaining pool of variables included the number of sexual offense adjudications, the linear, quadratic, and cubic effects of the number of victims, the linear, quadratic, and cubic effects of the offending age range, whether or not the offender was charged with a

sexual offense while on probation or under supervision, the frequency of hands-on sexual abuse, the status of sex offender specific treatment prior to the index offense, the offender's level of denial of responsibility for the index offense, the number of education discipline problem time periods, and any history of special education. All variables were entered simultaneously into a logistic regression analysis predicting sexual reoffense status (see Table 94). Though the overall model was significant ($\chi^2 (13) = 229.63, p < .05$), not all Wald χ^2 values remained significant at the $p < .05$ level. The nonsignificant variables included the offender's level of denial and the number of education discipline time periods. Additionally, the status of sex offender specific treatment was marginally significant. The same analysis was conducted without the non significant and marginally significant variables. Results indicated that the model significantly predicted reoffense status ($\chi^2 (13) = 229.63, p < .05$) and all Wald χ^2 values remained significant (see Table 95). The Hosmer and Lemeshow Test indicated that the overall model was a good fit ($\chi^2 (5) = 7.07, p = .22$). Thus, the results of this final analysis represented a maximally fitting model for this samples background characteristics.

Table 94

Logistic regression analysis of independence of remaining significant variables

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1									
	229.63	13	<.001						
Number of Sexual Offense Adjudications				0.36	0.18	3.97	1	0.046	1.44
Linear Number of Victims				1.64	0.36	21.24	1	<.001	5.14
Quadratic Number of Victims				-1.72	0.42	16.53	1	<.001	0.18
Cubic Number of Victims				0.37	0.11	11.26	1	0.001	1.45
Linear Offending Age Range				1.73	0.43	16.63	1	<.001	5.66
Quadratic Offending Age Range				-1.11	0.36	9.70	1	0.002	0.33
Cubic Offending Age Range				0.18	0.06	8.40	1	0.004	1.20
Offending on Probation of Under Supervision				0.70	0.36	3.88	1	0.049	2.02
Frequency of Hands-On Sexual Abuse				0.65	0.27	5.96	1	0.015	1.91
Prior Sex Offender Specific Treatment Status				0.49	0.29	2.95	1	0.086	1.63
Offender's Level of Denial of Responsibility for Index Offense				0.46	0.35	1.73	1	0.188	1.59
Number of Education Discipline Problem Time Periods				0.36	0.26	1.89	1	0.169	1.43
Any History of Special Education				0.65	0.36	3.26	1	0.071	1.92
Constant				-2.53	0.44	33.50	1	<.001	0.08

Table 95

Logistic regression analysis of independence of final pool of significant variables

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp (β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	224.09	11	<.001						
Number of Sexual Offense Adjudications				0.39	0.18	5.00	1	0.025	1.48
Linear Number of Victims				1.63	0.35	21.80	1	<.001	5.12
Quadratic Number of Victims				-1.69	0.41	16.91	1	<.001	0.18
Cubic Number of Victims				0.36	0.11	11.52	1	0.001	1.44
Linear Offending Age Range				1.81	0.41	19.80	1	<.001	6.13
Quadratic Offending Age Range				-1.02	0.34	8.83	1	0.003	0.36
Cubic Offending Age Range				0.16	0.06	7.07	1	0.008	1.17
Offending on Probation of Under Supervision				0.83	0.35	5.74	1	0.017	2.29
Frequency of Hands-On Sexual Abuse				0.74	0.26	7.83	1	0.005	2.09
Any History of Special Education				0.87	0.33	6.94	1	0.008	2.39
Constant				-2.00	0.33	36.90	1	<.001	0.13

Note. Hosmer and Lemeshow Test $\chi^2(5) = 7.07, p = .22$

A review of the classification table resulting from the predictions of the final model (see Table 96) also indicated a good fit to the data. As indicated in the table, the model correctly classified 91.2% of all JSOs in the sample. The kappa statistic indicated that the model provided a significant improvement over chance level prediction ($\kappa = .57, p < .001$). Accuracy can be measured in other ways as well, such as specificity, sensitivity, negative predictive power, and negative predictive power using the logistic regression generated cut point. The specificity of the model, the number of all observed non-recidivists accurately predicted as a non-recidivist, was 96.7%, whereas the sensitivity of the model, the percentage of all observed recidivists predicted to recidivate, was 54.1%. The positive predictive power was 71.9%, which is the percentage of predicted recidivists who actually recidivated, and the negative predictive power was 93.4%, which is the percentage of predicted non-recidivists who did not recidivate. If one were to bet the base rate, that is to predict that all JSOs would

be non-recidivists, the overall accuracy be 86.8% (one minus the base-rate) and the negative predictive power would be 100%. However, the positive predictive power would be 0%, as all JSOs would be predicted as non-recidivists. In other words, all prediction errors would be of one type, false negatives. However, when one moves to the final model, which used an optimally generated cut-score, the one gains much in positive predictive power (from 0% to 71.9%) and loses very little in negative predictive power (from 100% to 93.4%). It is worth noting here that, this model does not represent a risk assessment tool, but if it was, one could move the cut-point to minimize either false positive or false negative predictions based on the type of decision that needed to be made.

Table 96

Classification table of predictions from final pool of variables

Observed		Predicted		Total	Percentage Correct
		Does Offender Have A Recidivating Offense?			
	No	Yes			
Does Offender Have A Recidivating Offense?	No	535	18	533	96.7%
	Yes	38	46	84	54.8%
Total		573	64	637	
Percentage Correct		93.4%	71.9%		91.2%

Note. $\kappa = .57, p < .001$

Finally, the model was explored using only those JSOs who were less than 16 years of age at the time of the index offense. This analysis was run to address the problem of those JSOs who were at risk for shorter periods of time. As indicated in Table 97 that the model significantly predicted sexual recidivism ($\chi^2(13) = 188.06, p < .05$), and the Hosmer and Lemeshow test also indicated a good fit ($\chi^2(5) = 2.94, p = .82$). As indicated in Table 98, the kappa statistic for predicting only JSOs less than age 16 at the time of their index offense

also indicated that the model provided a significant improvement over chance level prediction ($\kappa = .59, p < .001$). Using the final model, 89.9% of all JSOs in that sample were correctly classified, and the positive predictive power was 76.9%. Thus, the positive predictive ability of the model increased with only a nominal reduction in the overall predictive power of the model.

Table 97

Logistic regression analysis of independence of remaining significant variables for JSO less than age 16 at the time of their index offense

Variable	Step χ^2	df	<i>p</i>	B	S.E.	Wald χ^2	df	<i>p</i>	Exp(β)
Step 0									
Constant				-1.88	0.12	258.99	1	<.001	0.15
Step 1	229.63	13	<.001						
Number of Sexual Offense Adjudications				0.73	0.41	3.264	1	0.071	2.08
Linear Number of Victims				1.58	0.40	15.93	1	<.001	4.84
Quadratic Number of Victims				-1.81	0.49	13.43	1	<.001	0.16
Cubic Number of Victims				0.44	0.14	10.40	1	0.001	1.56
Linear Offending Age Range				0.43	0.22	3.96	1	0.047	1.54
Quadratic Offending Age Range				1.86	0.49	14.15	1	<.001	6.42
Cubic Offending Age Range				-0.93	0.43	4.63	1	0.031	0.40
Offending on Probation of Under Supervision				0.14	0.08	3.35	1	0.067	1.15
Frequency of Hands-On Sexual Abuse				0.75	0.30	6.44	1	0.011	2.11
Prior Sex Offender Specific Treatment Status				0.68	0.39	3.00	1	0.083	1.98
Offender's Level of Denial of Responsibility for Index Offense				-1.81	0.41	19.90	1	<.001	0.17
Number of Education Discipline Problem Time Periods				0.73	0.41	3.26	1	0.071	2.08
Any History of Special Education				1.58	0.40	15.93	1	<.001	4.84
Constant				-1.81	0.49	13.43	1	<.001	0.16

Note. Hosmer and Lemeshow Test $\chi^2(5) = 2.94, p = .82$

Table 98

Classification table of predictions from final pool of variables for JSOs less than age 16 at the time of their index offense

Observed		Predicted			Percentage Correct
		Does Offender Have A Recidivating Offense?		Total	
		No	Yes		
Does Offender Have A Recidivating Offense?	No	351	12	363	96.7%
	Yes	32	40	72	55.6%
Total		383	32	435	
Percentage Correct		91.6%	76.9%		89.9%

Note. $\kappa = .59, p < .001$

DISCUSSION AND CONCLUSIONS

General Discussion

Overall, the results from the 637 JSOs indicated that rate of sexual recidivism was similar to those rates found in many other studies. Specifically, Caldwell's (2002) review of 25 treatment based studies found the average rate of juvenile sexual reoffense to be 8.98%. The 13.2% rate found in this study is slightly higher; however, this might be expected because only 47.3% of the JSOs in this sample received some form of sexual offender specific treatment. Additionally, this study's rate was quite similar to the 13.4% reoffense rate found by Hanson and Bussière (1998) in adult recidivism studies.

The results of this study confirmed most stated hypotheses. In the area of abuse history, four main hypotheses were advanced. The first followed from research linking sexual abuse victimization to future sexual reoffense (Kahn & Chambers, 1991; Knight & Prentky, 1993; Rubinstein et al., 1993; Smith & Monastersky, 1986). Specifically, it was hypothesized that increased risk of reoffense would be associated with JSOs who had a history of sexual abuse, physical abuse, emotional or verbal abuse, or neglect as well as with, a history of abuse earlier in life and with more invasive and pervasive abuse. Of those hypotheses, only the link between earlier abuse and reoffense status was not confirmed. However, caution is warranted when interpreting that particular result, as very few JSOs had information in their case files on that variable. Thus, the disconfirming result may have been influenced by poor power to detect that effect.

Although the presence of all major types of abuse was associated with sexual recidivism, the associations were strongest for sexual abuse and physical abuse. Furthermore, the strength of these associations increased with a greater frequency of abuse. There was also

some indication that JSOs who had experienced more than one type of abuse were also at greater risk, but only three variables emerged as making independent and incremental contributions to the prediction of juvenile sexual recidivism: any hands-on sexual abuse, the frequency of hands-on sexual abuse, and the frequency of physical abuse. Overall these results were consistent with past research linking abuse history to future reoffense risk (Kahn & Chambers, 1991; Knight & Prentky, 1993; Rubinstein et al., 1993; Smith & Monastersky, 1986).

The two exploratory hypotheses concerning family problems were also confirmed. First, past research found that caregiving instability, disorganization, and violence within the family were higher for JSOs in general than other types of offenders (Bagely & Shewchuk-Dann, 1991; Miner et al., 1997). Additionally, compared to non-offenders, JSOs were reported to have a generally higher degree of physical and emotional separation from guardians (Kahn & Chambers, 1991; Fehrenbach et al., 1986). These two research findings were extended by hypothesizing there would be a relation between reoffense status and both caregiving instability and dysfunctional familial relationships.

Results generally confirmed these hypotheses. First, caregiving instability, as tapped by multiple caregiving arrangements, was predictive of future risk to reoffend. However, no one time period emerged as more related to future risk. Secondly, separation from parents or guardians was also related to risk, though there was no apparent relation between the length of time separated and future risk. These two findings tended to suggest JSOs who have unstable living structures were most at risk to reoffend. Third, severe difficulty relating to parents or siblings was an additional risk factor. However, caution may be warranted when interpreting this result. Specifically, severe difficulty, though operationalized as difficulty

beyond what is considered normal in a parent-child or sibling relationship, was largely a subjective judgment. Thus, it is difficult at this time to quantify the degree of severity needed to confidently state in what way this variable related to risk. Despite that caution, it appears that JSOs with the highest degree of family problems tended to be most at risk to reoffend.

The literature on learning problems generally states that JSOs tend to have higher degrees of learning disabilities (Kahn & Chambers, 1991), are more likely to be behind schedule with respect to grade placement (Fehrenbach et al., 1986), and may have deficits in some forms of intelligence (McCurry et al., 1998). As such, a general hypothesis was advanced, stating that JSOs with learning problems would be at greater risk to reoffend than those JSOs without such problems.

Results of this study partially confirmed that hypothesis, as JSOs with a history of special education were more likely to reoffend than those who did not. However, the analyses of grade placement, grade point average, and intelligence test scores yielded no significant relations between those variables and later reoffense status. Again, caution may be warranted in interpreting these findings due to the relative paucity of information on variables such as grade point average and intelligence, thus limiting the power to detect smaller effects. However, the significant relation between special education classification and reoffense status lent some confirmation to the relation between learning problems and future reoffense among juveniles.

Past researchers indicated that there was some relation between recidivism and both school problems involving truancy (Schram et al., 1992) and disruptiveness (Knight & Prentky, 1993). As such, one general and two specific hypotheses were advanced. The more general hypothesis stated that school discipline problems would be associated with later

sexual reoffense, and the two specific hypotheses stated there would be a positive relation between recidivism and both truancy and disruptiveness in school. Overall, results tended to confirm that JSOs with any history of school discipline problems were at a greater risk to reoffend. Additionally, JSOs who engaged in a variety of discipline problem types (e.g., truancy, verbal harassment, and oppositional behavior), who had large numbers of behavior problem incidents, and who had problems over longer periods of time were most likely to reoffend sexually. Despite several variables emerging as significant, the best predictor from this family was the number of time periods that the JSO had discipline problems. Thus, the more enduring the discipline problems, the more likely the JSO will have a later reoffense.

Though school discipline problems may also be an indication of an emerging antisocial interpersonal orientation, other forms of antisocial behavior were analyzed separately. Several sources in both the adult (Hanson and Bussiere, 1998; Epperson et al., 1998, 2000, 2003) and juvenile literature (Kenny et al., 2001; Knight & Prentky, 1993) have linked non-sexual antisocial social behavior to sexual recidivism. As such, one general and one specific hypothesis were advanced. Specifically, it was hypothesized that an adolescent antisocial interpersonal orientation, as indicated by an extensive non-sexual criminal record, a history of violent behavior, and a history of supervision failures, would be associated with future reoffense risk. Secondly, it was hypothesized that the most important variable in this complex of variables would be the number of non-sexual criminal offenses in the JSOs history.

The results tended to confirm these two hypotheses. JSOs with greater numbers of non-sexual offenses, those who had non-sexual person offenses, those who had a history of a secure facility placement, those who had a supervision failure, and those who had been

disciplined for violence within some form of institution were more likely to reoffend than JSOs without those characteristics. Additionally, when subjected to hierarchical logistic regression analysis, the variable that tapped the number of non-sexual criminal offenses emerged as a significant, independent predictor of risk. Thus, it appeared these results further confirm the results of previous researchers in that an antisocial orientation is related to future reoffense.

Very little research has been conducted on the link between mental health issues and JSO recidivism. However, other researchers have reported that sexual offending in general was associated with mental health concerns (Becker et al., 1992; Knight & Prentky, 1993; Hunter et al., 2003; Knight & Prentky, 1993; McMackin et al., 2002; Miner & Crimmins, 1995; Prentky et al., 2000; Righthand & Welch, 2001; Worling & Curwen, 2001). Because little was known about the relation between specific diagnoses and recidivism, an exploratory analysis was employed to determine if JSOs with a mental health diagnosis would be more likely to reoffend.

Results from the analysis of this family of variables indicated that any history of a mental health diagnosis was related to future recidivism. Similarly, most diagnoses emerged as significant predictors, and when these diagnoses were grouped into like-families (paraphilia, self-regulatory, affective-mood), similar patterns of reoffense emerged. Additionally, JSOs who had a diagnosis from more than one of these three family groups reoffended at a greater rate. When these variables were subjected to analysis of independence and incremental predictive ability, only the paraphilia and self-regulatory diagnoses emerged as significant. Thus, it appeared that, though any diagnosis is a risk factor, a diagnosis of a

paraphilia or a self-regulatory type of disorder (e.g., conduct disorder, impulse control disorder) was the best predictor.

Similar to mental health diagnoses, little research has examined the link between past mental health treatment and future risk to reoffend. However, because of the link between some diagnoses and recidivism, the link between past mental health treatment and recidivism seemed plausible. To investigate this link, an exploratory analysis was employed to determine if the presence of extensive mental health programming in a JSO's history would be directly linked to future reoffense status. The results of the analysis generally confirmed that JSOs who had entered and failed prior mental health treatment (e.g., they refused, quit, or were terminated by a staff member), those who had at least two mental health treatments prior to their index offense, and those JSOs who had the most intensive treatment after their index offense reoffended at the greatest rate. Of these three variables, the one that emerged as independent was the level of intensity of treatment post-index offense. Thus, there appeared to be some relation between the extensiveness of mental health treatment and reoffense status.

Research in the area of sexual offender specific treatments has largely been conducted with adults. Particularly, Hanson and Bussière's (1998) review of the adult literature found that failure in a sex offender specific treatment was a risk factor for future reoffense. This result was confirmed elsewhere (e.g., Epperson et al., 2003). Several treatment studies using JSOs have compared treatment completers with treatment dropouts (e.g., Worling & Curwen, 2000). In most of those cases, the argument was that treatment reduced the risk of reoffense. Instead, a different conclusion might be advanced from the results of those studies. It may be possible that those JSOs who either dropped out or were terminated from treatment were a

higher risk group than those who either stayed in treatment or never were offered treatment. As such, it was hypothesized that those JSOs who entered and completed sexual offender treatment would have a lower rate of reoffense than those JSOs who entered and did not complete treatment.

Several results tend to confirm a greater risk for those JSOs who failed at least one treatment. First, those JSOs who entered a treatment prior to their index offense reoffended at a substantially greater rate than those who did not enter treatment prior to their index offense. For those individuals who entered prior treatment, the treatment did not appear to reduce future offending, as all of those offenders had at least one offense, their index offense. However, those JSOs who had a prior failure in treatment composed an even higher risk group, with approximately 73% reoffending after their index offense. Roughly the same pattern emerged for treatment completers and treatment non-completers after the index offense, though the rates of reoffense were much lower. Lastly, though there were very few JSOs who had failures both prior to and after their index offense, 80% of those double failure JSOs reoffended before the age of 18. Thus, there may be something qualitatively different about treatment non-completers compared to those JSOs who either enter and completed the treatment or never enter treatment at all.

Past research is mixed on denial's role in reoffense risk, yet a few authors purport that the link exists (Kahn & Chambers, 1991; Prentky et al., 2000). Part of the controversy may have resulted from when denial was assessed. For the present study, denial was assessed at two time periods, at admission and at discharge and included blaming the victim, minimizing of the JSO's role in the offense, claiming that the act was consensual, and outright denial that the offense occurred. Results from this study tended to confirm the link between reoffense

and denial when assessed at discharge but not at admission. Denial of the JSO's role in the index offense at the time of discharge also emerged as an independent predictor after accounting for both sexual offender specific treatment status variables. Thus, as a treatment outcome measure, denial at discharge appears to be an important factor to attend to.

One of the best predictors of future behavior is past behavior, as is indicated in the adult sexual offender literature (Epperson et al., 1998, 2000, 2003; Hanson & Bussière, 1998) and the juvenile literature (Långström & Grann, 2000; Rasmussen, 1999; Schram et al., 1992; Worling & Curwen, 2001). As such, several hypotheses were advanced that related past sexual offending behavior to future recidivism. Additionally, an exploratory hypothesis was set forth to explore the relation between age at first offense and recidivism.

As hypothesized, several history of sexual offending variables emerged as significantly related to reoffense. Specifically, the number of sex offense adjudications, number of felony sex offense charges, number of sex offense victims, the age of the offender at his first sex offense offense, and two variables that tapped offending while under some form of supervision were significant predictors of recidivism. Of these, four emerged as independent predictors.

Two points are worth noting about these variables. First, curvilinear relations emerged between sexual recidivism and the number of adjudications, the number of victims, and the offender's offending age range. The relation involving the number of adjudications appeared to be monotonic in nature, where a larger increase in risk was associated with moving from one to two adjudications, and a smaller increase in risk was associated with subsequent numbers of adjudications. The relations between recidivism and the number of victims and offending age range appeared to be cubic in nature, as indicated by two bends in

the predicted curve. Specifically, it appeared there was a sharp increase in risk among JSOs with one to three victims, where the risk of reoffense levels off until another sharp increase occurred for JSOs with more than five victims. Similarly, there appeared to be a more pronounced increase in risk to reoffend as the JSO's offending career moved from less than one year to between one to three years where the risk level tended to level off. However, there appeared to be another more pronounced increase in risk from three years of offending thereafter. Second, two variables that tapped offending while under some form of supervision emerged as significantly related to reoffense. This is noteworthy because these offenders may have realized they were being watched in some capacity and offended despite that added attention, which might indicate a higher drive to reoffend or, conversely, poorer judgment and impulse control.

Six variables emerged from all of the families as independent, significant predictors of sexual reoffense. These included the number of sex offense adjudications, the number of victims, the JSO's offending age range, a history of offending while under some form of supervision or probation, the frequency of hands-on sexual abuse, and a history of special education. As stated earlier, several relations are not perfectly linear, and as such it is difficult to adequately explain in words how these variables influence each other when all are considered. However, a picture of an offender who is at the highest risk to reoffend might be described as one who was the victim of multiple sexual abuse incidents, who started offending early in life, had many victims, persisted offending even after being sanctioned, and who may have some learning difficulties.

Overall, the final model represented a good fit, as just over 91% of JSOs were correctly classified. Additionally, the classifications of offenders represented a strong

improvement over chance classification. The model also seemed to be strengthened somewhat by eliminating those JSOs who were at risk for shorter periods of time, namely those whose index offense occurred at age 16 or later. Though the overall predictive accuracy was reduced (89.9%), the positive predictive ability increased 5%. Thus, the model may best characterize those younger offenders.

Limitations and Future Research

There are a number of general considerations that need to be made when interpreting the results of this study. First, though a number of variables emerged as predictive of reoffense status, other variables were not included in the analyses due to failing to meet the 25 JSO per marginal level criterion. Thus, not all small effects could be determined due to either a lack of sufficient power or small numbers at all levels of the variable. The result of failing to include these variables could have resulted in Type II error. An example of this failure might be the relation between multiple sexual offender specific treatment failures and reoffense status. Though there were clear differences between those who had multiple failures and those who did not, that variable could not be included because it lacked sufficient numbers at all levels of the variable.

Second, because of the number of calculations, there is the possibility for the capitalization on chance characteristics leading to Type I error. An analytic strategy was employed where strict inclusion criteria were established in order for variables to be retained for later rounds of analyses. Yet, that strategy does not rule out the possibility of some Type I error in the final model.

Third, not all JSOs were followed for equal amounts of time. Thus, the model may fit better for those JSOs who were younger at the time of their index offense. In order to

establish the adequacy of the fit for those JSOs who spent the least amount of time at risk, those offenders would need to be followed for longer periods of time. Consequently, this study is only part of a larger project that will follow these offenders up to 12 years after their index offense.

Fourth, not all possible predictors of reoffense were either sampled or analyzed. For example, it was difficult to sample variables that directly tapped dynamic factors, such as deviant sexual fantasies or arousal, which may be another potential predictor (e.g., Kenny et al., 2001; Quinsey et al., 1995). Additionally, this study did not directly address specific offense variables (e.g., relationship of victim, location of offense, behaviors employed in offense, actions used to gain compliance, etc.), though they, too, may have some predictive ability.

Fifth, the results of this analysis may not extend to the general population of JSOs because of the racial breakdown of this sample. Specifically, nearly 84% of the JSOs in this sample were Caucasian/White, which is much higher than the 2003 estimate of 67.63% for that group (United States Census Bureau, 2004). Percentages for African American/Black and Hispanic/Latino groups fall below census estimates for each respective group. Furthermore, generalization may be further complicated due to having no knowledge of other demographic variables, such as religion.

Sixth, the measures of accuracy (e.g., sensitivity, specificity, positive predictive power, negative predictive power) reflect a model optimally suited for this sample. As such, some amount of shrinkage may be expected with other samples.

Lastly, results from recidivism studies are often underestimates because of the nature of these types of crimes (Hanson and Bussière, 1998). As such, these results must be

interpreted knowing that not all first time offenders were detected initially and not all recidivists were detected after entering the system for their index offense.

There is still much that needs to be done with respect to future directions. First, this study only looked at background characteristics of the JSO, leaving offense characteristics out of the analyses. Thus, one future step will be to establish the predictive ability of various offense-types of variables and how those variables interact with the background variables in predicting reoffense. Second, this study assessed mostly static predictors of reoffense. As Hanson (1996) noted, prediction of recidivism may be enhanced by considering both static and dynamic variables in combination. Third, the JSOs in this study were only followed until they turned 18 years of age. Though the information gained through this study is valuable for the prediction of reoffense for those JSOs before the age of 18, little is known about how these variables will predict recidivism into these JSO's adult years. As such, these variables need to be tested against samples that follow JSOs several years past their 18th birthday. Fourth, the results of this study need to be validated in other samples outside of Utah. Fifth, this study only produced an equation about how a few background variables interrelate to predict recidivism. As such, the use of this equation as a predictive tool would be difficult, particularly with the use of nonlinear effects. What is still needed is a screening tool that incorporates a listing of predictive background and offense-related variables using an unambiguous scoring system. With this type of tool, it would be possible to determine meaningful cut-points for various decisions based upon the percent of false positives and negatives associated with offenders at each score level.

Despite the limitations presented earlier and the need for future research, there are a number of advantages of this study. First, the size of the sample is much larger than any

other previous study of this type and covers the entire spectrum of JSOs from those who received minor sanctions to those who received the most intensive supervision. Second, because of the large sample size, there was sufficient power to detect medium and large effects. Third, hundreds of variables were analyzed for their potential relation to sexual recidivism. Fourth, the variables that were coded from case files are those variables available to most court officials, case managers, and treatment officials and rely little on subjective impression about a JSO's standing on some construct. Finally, the variables in the final pool represent strong predictors of recidivism. The final model was able to correctly classify 91.2% of the offenders in this sample and provide a statistically significant improvement to the prediction over chance. These advantages represent a major advance in the field of sexual offense recidivism prediction and should provide a firm base from which the field can now advance.

Footnotes

¹ The definition of what constitutes sexual offense in New Jersey includes any act or attempt to commit any of the following: aggravated sexual assault, sexual assault, aggravated criminal sexual contact, kidnapping, endangering the welfare of a child by engaging in sexual conduct which would impair or debauch the morals of the child including luring or enticing, criminal sexual contact, criminal restraint, or false imprisonment (Swearingen, 1997).

² These states include Alabama, New Hampshire, New Mexico, Utah, and Wyoming (KlaasKids Foundation for Children, 2003).

³ States that do not distinguish between adult and juvenile offenders in their registration laws include Arkansas, Connecticut, Delaware, Georgia, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, District of Columbia, and West Virginia (KlaasKids Foundation for Children, 2003). States that specifically include juveniles in their registration laws include Alaska, Arizona, California, Colorado, Florida, Idaho, Illinois, Indiana, Kentucky, Louisiana, Maine, Montana, North Dakota, South Carolina, South Dakota, Texas, Washington, and Wisconsin (KlaasKids Foundation for Children, 2003). Of those states that specifically require juveniles to register, four states specify that the juvenile must be convicted as an adult (Alaska, Florida, Maine, and Montana), two allow for the court's discretion (Arizona and Montana), and two impose a minimum age requirement (Indiana and South Dakota).

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8. **TOTEDLEV**

OFFENDER'S TOTAL EDUCATION LEVEL: *Code the highest grade completed prior to the index sex offense REGARDLESS of setting. If the offender failed most of the classes in the last year(s) he/she attended school, the highest grade completed would be the last grade successfully completed. Do not infer highest grade completed from achievement derived from test (e.g., achievement level of tenth grade.*

1	First grade	8	Eighth grade
2	Second grade	9	Ninth grade
3	Third grade	10	Tenth grade
4	Fourth grade	11	Eleventh grade
5	Fifth grade	12	GED
6	Sixth grade	13	Twelfth grade (high school graduate)
7	Seventh grade	888	Uncertain due to home schooling, etc.
		999	Missing/unable to determine

9. **AGEEDLEV**

OFFENDER'S AGE-APPROPRIATE GRADE LEVEL: Code highest grade completed that offender should have achieved given his age. _____ (Age 7 = first grade, etc.)

10. **AGEEDENT**

OFFENDER'S AGE AT SCHOOL ENTRANCE: _____ (use 999 for missing/unable to determine)

11. **IQ INFORMATION** (use 999 for missing/unable to determine)

IQSCORE OFFENDER'S MOST RECENT IQ SCORE IN THE FILE IS _____
IQNAME TEST NAME IS _____
IQAGE AGE AT TESTING WAS _____

12. **GPA**

RECORD ANY GPA'S THAT ARE REPORTED IN THE FILE FOR THE FOLLOWING GRADES (use 666 for dropped out of school, 777 for age appropriate but no evidence of enrollment, and 888 for never enrolled due to being too young, and 999 for missing/unable to determine):

GPA7TH Seventh grade GPA	_____	GPA10TH Tenth grade GPA	_____
GPA8TH Eighth grade GPA	_____	GPA11TH Eleventh grade GPA	_____
GPA9TH Ninth grade GPA	_____	GPA12th Twelfth grade GPA	_____

13. **AGEDATE**

OFFENDER'S AGE WHEN DATING BEGAN: _____
 (use 777 if it occurred but there are no details, 888 for never occurred, and 999 for missing/unable to determine)

14. **NUMDATE**

NUMBER OF PEOPLE OFFENDER DATED: _____
 (use 0 for no dating, 777 when dating occurred but there are not details, and 999 for missing/unable to determine)

15. **DATEREL**

NUMBER OF MEANINGFUL/LONG-TERM DATING RELATIONSHIPS: _____
 Code the number of people that the offender dated for at least 6 months (use 0 for no dating, 777 when dating occurred but there are not details, and 999 for missing/unable to determine)

22. **DISMS**

OFFENDER'S DISCIPLINE PROBLEMS IN MIDDLE OR JUNIOR HIGH SCHOOL: Indicate the number of instances of each type of discipline problem documented in the file as occurring at school. If zero is circled for each type of problem, then also circle none. If there is no indication of school problems, then code as none rather than missing. Unable to determine (999) would be coded only when there are missing reports in the file that would normally address school behavior or if there is indication that school behavior was overlooked in such reports. Use 888 if the student was not enrolled in middle/jr. high school. Use 777 when a discipline problem occurred more than once but a frequency cannot be determined.

MSVIOL	Violence (non-sexual)	0	1	2	3	4	5	6+	777	888	999
MSSEX	Sexual Aggression	0	1	2	3	4	5	6+	777	888	999
MSPROP	Property Offense	0	1	2	3	4	5	6+	777	888	999
MSOPP	Oppositional Behavior	0	1	2	3	4	5	6+	777	888	999
MSVERB	Verbal Harassment	0	1	2	3	4	5	6+	777	888	999
MSTRU	Truancy	0	1	2	3	4	5	6+	777	888	999
MSOTH	Other behavior problems noted but not specified	0	1	2	3	4	5	6+	777	888	999
MSNONE	None										

23. **DISHS**

OFFENDER'S DISCIPLINE PROBLEMS IN HIGH SCHOOL: Indicate the number of instances of each type of discipline problem documented in the file as occurring at school. If zero is circled for each type of problem, then also circle none. If there is no indication of school problems, then code as none rather than missing. Unable to determine (999) would be coded only when there are missing reports in the file that would normally address school behavior or if there is indication that school behavior was overlooked in such reports. Use 888 if the student was not enrolled in high school. Use 777 when a discipline problem occurred more than once but a frequency cannot be determined.

HSVIOL	Violence (non-sexual)	0	1	2	3	4	5	6+	777	888	999
HSSEX	Sexual Aggression	0	1	2	3	4	5	6+	777	888	999
HSPROP	Property Offense	0	1	2	3	4	5	6+	777	888	999
HSOPP	Oppositional Behavior	0	1	2	3	4	5	6+	777	888	999
HSVERB	Verbal Harassment	0	1	2	3	4	5	6+	777	888	999
HSTRU	Truancy	0	1	2	3	4	5	6+	777	888	999
HSOTH	Other behavior problems noted but not specified	0	1	2	3	4	5	6+	777	888	999
HSNONE	None										

24. **SPECED DID OFFENDER PARTICIPATE IN ANY SPECIAL EDUCATION CLASSES IN K-12? (CIRCLE ALL THAT APPLY):**

- 0 No evidence of special education classes for any reason
- 1 Yes – MD (mentally disabled) classification
- 2 Yes – LD (learning disabled) classification
- 3 Yes – BD (behaviorally disabled) classification
- 4 Yes – ED (emotionally disabled) classification
- 5 Yes – classification unclear
- 999 unknown because of missing critical reports/information

Questions 25-27 pertain to the presence or absence of both biological parents as caregivers at different points in the offender's life. If a pattern was variable, or does not fit in category given, code "Other" and specify.

USE THE FOLLOWING CODES TO ANSWER QUESTIONS 13-16:

- | | |
|---|---------------------------------------|
| 1 Biological parents married and together | 11 Biological mother and step father |
| 2 Biological parents not married but together | 12 Biological father and step mother |
| 3 Biological mother only, never married | 13 Neither biological parents present |
| | Specify: _____ |
| 4 Biological father only, never married | 14 Living with friend's family |
| 5 Biological mother only, father deceased | 15 Foster care |
| 6 Biological father only, mother deceased | 16 Group home |
| 7 Both biological parents deceased | 17 Homeless without supervision |
| 8 Biological mother only, divorced | 18 Other: _____ |
| 9 Biological father only, divorced | 888 Offender not in age range |
| 10 Both biological parents married, but separated | 999 Missing/unable to determine |

25. **PARINVB**

Indicate caregiving structure in terms of biological parents when offender was 0-6 years. _____

26. **PARINVC**

Indicate caregiving structure in terms of biological parents during offender's childhood (7-12 years of age..)?: _____

27. **PARINVA**

Indicate caregiving structure in terms of biological parents during offender's adolescence (13-17 years of age)?: _____

28. **SEPPAR**

DOES FILE NOTE PHYSICAL SEPARATION FROM BOTH BIOLOGICAL PARENTS BEFORE THE AGE OF 16?: *Include placement out of the home, running away from home for an extended period of time (6 months or longer), expulsion from home, etc.*

- | | |
|-----|---|
| 0 | No |
| 1 | Yes, specify number of months _____ |
| 2 | Not applicable (biological parents never present) |
| 999 | Missing |

29. **PADIFF**

DOES FILE NOTE THAT OFFENDER HAD DIFFICULTY IN RELATING TO PARENTS?:

Indicate whether file notes that offender had difficulty relating to parent(s). This question pertains only to a level of difficulty that seemed noteworthy, rather than typical parent-child conflicts.

- | | | | |
|---|---------------------|-----|-----------------------------|
| 0 | No difficulty | 3 | Severe difficulty |
| 1 | Mild difficulty | 999 | Missing/unable to determine |
| 2 | Moderate difficulty | | |

30. **SIBDIFF**

DOES FILE NOTE THAT OFFENDER HAD DIFFICULTY IN RELATING TO SIBLINGS?:

Indicate whether file notes that offender had difficulty relating to at least one sibling. This question pertains only to a level of difficulty that seemed noteworthy, rather than typical sibling rivalries/conflicts.

0	No difficulty	3	Severe difficulty
1	Mild difficulty	999	Missing/unable to determine
2	Moderate difficulty		

31. **EMOATTA**

WHICH OF THE FOLLOWING BEST DESCRIBES OFFENDER'S HIGHEST LEVEL OF EMOTIONAL ATTACHMENT WITH THE FAMILY OF ORIGIN AND EXTENDED FAMILY?:

Indicate the highest level of emotional attachment that offender has with family of origin and extended family. Note: DO NOT make a subjective determination of level of attachment. Code only the level of attachment indicated by the file.

0	No attachment with any family members	5	Strong, SOME family members
1	Weak, SOME family members	6	Strong, ALL/MOST family members
2	Weak, ALL/MOST family members	888	Not applicable--no family of origin
3	Moderate, SOME family members	999	Missing/unable to determine
4	Moderate, ALL/MOST family members		

32. **OEMOATTA**

WHICH OF THE FOLLOWING BEST DESCRIBES OFFENDER'S LEVEL OF EMOTIONAL ATTACHMENT WITH THE FAMILY OF ORIENTATION WITHIN TWO YEARS PRIOR TO THE INDEX OFFENSE?: *Indicate the highest level of emotional attachment that offender has with family of orientation as specified (family of orientation refers to the family the offender identified as family at that time). Note: DO NOT make a subjective determination of level of attachment. Code only the level of attachment indicated by the file.*

0	No attachment with any family members	5	Strong, SOME family members
1	Weak, SOME family members	6	Strong, ALL/MOST family members
2	Weak, ALL/MOST family members	888	Not applicable--no family of orientation
3	Moderate, SOME family members	999	Missing/unable to determine
4	Moderate, ALL/MOST family members		

33. **ABHXR****OFFENDER'S OWN PERSONAL ABUSE/VICTIMIZATION HISTORY BY SELF-REPORT:**

code offender's personal victimization history his self-report by indicating the frequency of each type of self-reported abuse using the following scale. DO NOT include abuse perpetrated by the offender. Code 777 when the frequency is clearly more than one, but a specific frequency cannot be determined.

0 = never, 1 = once or twice, 2 = three or four times, 3 = five or six times, 4 = seven or eight times, 5 = 9+

SAHOSR	sexual abuse (hands off abuse)	0	1	2	3	4	5	777
SAFONS	sexual abuse (fondling through clothes)	0	1	2	3	4	5	777
SAGENS	sexual abuse (under clothes)	0	1	2	3	4	5	777
SAORSR	sexual abuse (oral)	0	1	2	3	4	5	777
SAPPENS	sexual abuse (penetrated perpetrator)	0	1	2	3	4	5	777
SAVPENS	sexual abuse (victim penetrated)	0	1	2	3	4	5	777
SANOSS	sexual abuse indicated but no details	0	1	2	3	4	5	777
PAMINS	physical abuse (bruises)	0	1	2	3	4	5	777
PAMODS	physical abuse (relatively minor cuts/burns)	0	1	2	3	4	5	777
PASEVSR	physical abuse (serious injury requiring medical attention)	0	1	2	3	4	5	777
PANOSS	physical abuse indicated but no details	0	1	2	3	4	5	777
EMABSR	emotional/verbal abuse	0	1	2	3	4	5	777
NEGSR	neglect	0	1	2	3	4	5	777
NOABSR	no abuse of any kind is self-reported							777

34. **ABAGESR**

OFFENDER'S AGE IN YEARS WHEN SELF-REPORTED ABUSE BEGAN: If an exact age is not available, use the earliest approximation. Use 888 for not applicable/no abuse. Use 999 if critical reports/information are missing and you suspect abuse.

SAAGESR	offender's age at earliest self-reported sexual abuse	_____
PAAGESR	offender's age at earliest self-reported physical abuse	_____
EMAGESR	offender's age at earliest self-reported emotional abuse	_____
NEAGESR	offender's age at earliest self-reported neglect	_____

35. **ABDURSR**

DURATION OF SELF-REPORTED ABUSE IN MONTHS. Code the number of months between the first incident of abuse and the most recent incident of abuse. Code 888 if there was no abuse. Code 1 for single event abuse. Code 999 if duration cannot be determined from the information in file.

SADURSR	_____	Number of months sexually abused
PADURSR	_____	Number of months physically abused
EMDURSR	_____	Number of months emotionally/verbally abused
NEDURSR	_____	Number of months neglected.

36. **ABHXOR**

OFFENDER'S OWN PERSONAL ABUSE/VICTIMIZATION HISTORY BY OFFICIAL REPORT:
code offender's OFFICIALLY documented personal victimization history his self-report by indicating the frequency of each type of self-reported abuse using the following scale. Count only officially founded reports of abuse or abuse. DO NOT include abuse perpetrated by the offender. Code 777 when the frequency is clearly more than one, but a specific frequency cannot be determined

0 = never, 1 = once or twice, 2 = three or four times, 3 = five or six times, 4= seven or eight times, 5 = often

SAHOOR	sexual abuse (hands off abuse)	0	1	2	3	4	5	777
SAFONOR	sexual abuse (fondling through clothes)	0	1	2	3	4	5	777
SAGENOR	sexual abuse (under clothes)	0	1	2	3	4	5	777
SAOROR	sexual abuse (oral)	0	1	2	3	4	5	777
SAPPENOR	sexual abuse (penetrated perpetrator)	0	1	2	3	4	5	777
SAVPENOR	sexual abuse (victim penetrated)	0	1	2	3	4	5	777
SANOSOR	sexual abuse indicated but no details	0	1	2	3	4	5	777
PAMINOR	physical abuse (bruises)	0	1	2	3	4	5	777
PAMODOR	physical abuse (relatively minor cuts/burns)	0	1	2	3	4	5	777
PASEVOR	physical abuse (serious injury requiring medical attention)	0	1	2	3	4	5	777
PANOSOR	physical abuse indicated but no details	0	1	2	3	4	5	777
EMABOR	emotional/verbal abuse	0	1	2	3	4	5	777
NEGOR	neglect	0	1	2	3	4	5	777
NOABOR	no abuse of any kind is officially reported							777

37. **ABAGEOR**

OFFENDER'S AGE IN YEARS WHEN OFFICIALLY DOCUMENTED ABUSE BEGAN: If an exact age is not available, use the earliest approximation. Use 888 for not applicable/no abuse. Use 999 if critical reports/information are missing and you suspect abuse.

SAAGEOR	offender's age at earliest officially reported sexual abuse	_____
PAAGEOR	offender's age at earliest officially reported physical abuse	_____
EMAGEOR	offender's age at earliest officially reported emotional abuse	_____
NEAGEOR	offender's age at earliest officially reported neglect	_____

39. **ABDUROR**

DURATION OF OFFICIALLY DOCUMENTED ABUSE IN MONTHS. Code the number of months between the first incident of abuse and the most recent incident of abuse. Code 888 if there was no abuse. Code 1 for single event abuse. Code 999 if duration cannot be determined from the information in file.

SADUROR	_____	Number of months sexually abused by official report
PADUROR	_____	Number of months physically abused by official report
EMDUROR	_____	Number of months emotionally/verbally abused by official report
NEDUROR	_____	Number of months neglected by official report.

40. **NELSCHS**
 NUMBER OF DIFFERENT ELEMENTARY SCHOOLS OFFENDER HAS ATTENDED: _____
 Code the number of ELEMENTARY schools attended by the offender, including those while institutionalized. Use 999 for missing/unable to determine. Code 777 if more than one elementary school was attended but the exact number is unclear. Use your best judgment. For example, if the home address was the same throughout this period and there is nothing in the file to indicate multiple schools, code as one school attended.
41. **NMSSCHS**
 NUMBER OF DIFFERENT MIDDLE/JR. HIGH SCHOOLS OFFENDER HAS ATTENDED: _____
 Code the number of MIDDLE/JR. HIGH schools attended by the offender, including those while institutionalized. Use 888 for never enrolled in middle/jr. high school. Use 999 for missing/unable to determine. Code 777 if more than one middle/jr. high school was attended but the exact number is unclear. Use your best judgment. For example, if the home address was the same throughout this period and there is nothing in the file to indicate multiple schools, code as one school attended.
42. **NHSSCHS**
 NUMBER OF DIFFERENT HIGH SCHOOLS OFFENDER HAS ATTENDED: _____
 Code the number of HIGH schools attended by the offender, including those while institutionalized. Use 888 for never enrolled in high school. Use 999 for missing/unable to determine. Code 777 if more than one high school was attended but the exact number is unclear. Use your best judgment. For example, if the home address was the same throughout this period and there is nothing in the file to indicate multiple schools, code as one school attended.
43. **ELATTPAT**
 OFFENDER'S ELEMENTARY SCHOOL ATTENDANCE PATTERN PRIOR TO COMING UNDER COURT JURISDICTION FOR THE MOST RECENT SEX OFFENSE: *Code offender's elementary school attendance pattern prior to coming under court jurisdiction for the most recent sex offense. (circle one)*
- | | | | | | |
|---|--------------------|---|----------------------|-----|---|
| 1 | Regular attendance | 3 | Moderate absenteeism | 999 | Missing |
| 2 | Mild absenteeism | 4 | Severe absenteeism | 666 | Age appropriate but not enrolled/drop out |
| | | | | 888 | Not enrolled because too young |

44. **MSATTPAT**

OFFENDER'S MIDDLE SCHOOL/JUNIOR HIGH SCHOOL ATTENDANCE PATTERN PRIOR TO COMING UNDER COURT JURISDICTION FOR THE MOST RECENT SEX OFFENSE:
Code offender's middle/jr. high school attendance pattern prior to coming under court jurisdiction for the most recent sex offense. (circle one)

1	Regular attendance	3	Moderate absenteeism	999	Missing
2	Mild absenteeism	4	Severe absenteeism	666	Age appropriate but not enrolled/drop out
				888	Not enrolled because too young

45. **HSATTPAT**

OFFENDER'S HIGH SCHOOL ATTENDANCE PATTERN PRIOR TO COMING UNDER COURT JURISDICTION FOR THE MOST RECENT SEX OFFENSE: *Code offender's high school attendance pattern prior to coming under court jurisdiction for the most recent sex offense. (circle one)*

1	Regular attendance	3	Moderate absenteeism	999	Missing
2	Mild absenteeism	4	Severe absenteeism	666	Age appropriate but not enrolled/drop out
				888	Not enrolled because too young

46. **DRGUSEHX**

GENERAL DEGREE OF ALCOHOL USE PRIOR TO INDEX SEX OFFENSE ADJUDICATION?:
Indicate degree of alcohol and/or drug use prior to adjudication for index sex offense. Describe the pattern of use that was most typical for this period (circle one).

- 0 None/none indicated
- 1 Rare--*experimental*
- 2 Light--*light social usage which generally is not considered debilitating e.g., did not inhibit work/school performance, family relations, etc.*
- 3 Moderate – usage causes occasional problems with work, school, and/or family without serious consequences
- 4 Heavy--*alcohol use causes problems with work, school, and/or family with a higher degree of frequency or with serious consequences (e.g., suspension from school, separation from family whether voluntary or involuntary, arrests, suicidal or assaultive behavior while intoxicated).*
- 999 Unknown due to critical missing reports/information

47. **DRGPRIHX**
 OFFENDER'S DRUG OF PRIMARY USE PRIOR TO INDEX SEX OFFENSE ADJUDICATION?:
 (circle one)
- 0 None
 - 1 Narcotics -- codeine, demorol, kilaudil, heroin, methadone, morphine, opium, percodan
 - 2 Related analgesics -- darvon, talwin
 - 3 Barbiturates/sedatives -- amytal, nembutal, phenobarbital, seconal, tuinal, doriden, noludar, placidyl, quaalude, sopor, parest, optimil, somnafac
 - 4 Minor tranquilizers -- dalmane, equanil/miltown, librium, serax, valium, xanax
 - 5 Alcohol
 - 6 Major tranquilizers -- mellaril, thorazine
 - 7 Inhalants -- amyl nitrite, butyl nitrite, nitrous oxide
 - 8 Amphetamines/stimulants -- benzedrine, bephedramine, desoxyn, dexedrine, methedrine, precludin, ritalin
 - 9 Cocaine -- cocaine hydrochloride
 - 10 Crack cocaine
 - 11 Cannabis -- hashish, hash oil, marijuana
 - 12 Hallucinogens -- LSD, MDA, mescaline, peyote, psilocybin/mushrooms, PCP/phencyclidine
 - 13 Over-the-counter drugs
 - 999 Missing
48. **DSECHX**
 OFFENDER'S DRUG OF SECONDARY USE PRIOR TO MOST RECENT SO ADJUDICATION?:
 (circle all that apply)
- 0 None
 - 1 Narcotics -- codeine, demorol, kilaudil, heroin, methadone, morphine, opium, percodan
 - 2 Related analgesics -- darvon, talwin
 - 3 Barbiturates/sedatives -- amytal, nembutal, phenobarbital, seconal, tuinal, doriden, noludar, placidyl, quaalude, sopor, parest, optimil, somnafac
 - 4 Minor tranquilizers -- dalmane, equanil/miltown, librium, serax, valium, xanax
 - 5 Alcohol
 - 6 Major tranquilizers -- mellaril, thorazine
 - 7 Inhalants -- amyl nitrite, butyl nitrite, nitrous oxide
 - 8 Amphetamines/stimulants -- benzedrine, bephedramine, desoxyn, dexedrine, methedrine, precludin, ritalin
 - 9 Cocaine -- cocaine hydrochloride
 - 10 Crack cocaine
 - 11 Cannabis -- hashish, hash oil, marijuana
 - 12 Hallucinogens -- LSD, MDA, mescaline, peyote, psilocybin/mushrooms, PCP/phencyclidine
 - 13 Over-the-counter drugs
 - 999 Missing
49. **AGEFUSE**
 OFFENDER'S AGE AT FIRST DRUG/ALCOHOL USE:PRIOR TO MOST RECENT SO
 ADJUDICATION _____
 (use 888 for never used, use 999 for missing/unable to determine)
50. **TOBACCO**
 DID OFFENDER USE TOBACCO PRIOR TO MOST RECENT SO ADJUDICATION?:
- 0 No
 - 1 Yes
 - 999 Missing/unknown

51. **DRGUSOFF**

Was alcohol/drug use involved in any sex offenses (other than the index offense)?:

- 0 No
- 1 Offender under influence, alcohol
- 2 Offender under influence, other drug
- 3 Offender under influence, both alcohol and other drug
- 4 Offender under influence, intoxicant unspecified
- 999 Missing/unknown

52. **PADRGUSE**

GENERAL DEGREE OF PARENTAL ALCOHOL/DRUG USE?:

Indicate degree of alcohol and drug use by offender's parent/legal guardian(s). Describe the pattern of use that was most typical for this period.

- 0 None/none indicated
- 1 Rare--*experimental*
- 2 Light--*light social usage which generally is not considered debilitating e.g., did not inhibit work/school performance, family relations, etc.*
- 3 Moderate – usage causes occasional problems with work, school, and/or family without serious consequences
- 5 Heavy--*alcohol use causes problems with work, school, and/or family with a higher degree of frequency or with serious consequences (e.g., suspension from school, separation from family whether voluntary or involuntary, arrests, suicidal or assaultive behavior while intoxicated)..*
- 6 Addicted/very heavy use--*psychological and/or physical addiction noted in file*
- 999 Unknown due to critical missing reports/information

53. **JUVENILE CHARGE AND ADJUDICATION INFORMATION**

CH1-CH15

Indicate date(s) of all charges and check appropriate categories. If date is missing, code "99/99/99". If type of charge is unknown, code "999" in "Sex" category. Check if it is a felony level charge or a misdemeanor charge. Circle "Y" (yes) or "N" (no) or "U" (unknown) for adjudication of charge (write date of adjudication in right-hand margin. Circle "Y" (yes) or "N" (no) or "U" (unknown) for the secure facility category. When offender's juvenile adjudication history is complete and there is not another charge to code, stop coding and SKIP TO QUESTION #54.

	Charge Date (99/99/99 if missing)	Type of Charge (ONLY check ONE category)				Offense Level Felony (numbers) Misdemeanor (letters) Unknown	Adjudicated Yes No Unknown	Secure Facility Yes No Unknown	Date of Adjudication (99/99/99 if missing)
		Sex	Non-Sex Person	Property	Other				
1						M F U	Y N U	Y N U	
2						M F U	Y N U	Y N U	
3						M F U	Y N U	Y N U	
4						M F U	Y N U	Y N U	
5						M F U	Y N U	Y N U	
6						M F U	Y N U	Y N U	
7						M F U	Y N U	Y N U	
8						M F U	Y N U	Y N U	
9						M F U	Y N U	Y N U	
10						M F U	Y N U	Y N U	
11						M F U	Y N U	Y N U	
12						M F U	Y N U	Y N U	
13						M F U	Y N U	Y N U	
14						M F U	Y N U	Y N U	
15						M F U	Y N U	Y N U	

JUVENILE PRIORS TOTALS:

54. **TJA** TOTAL NUMBER OF JUVENILE ADJUDICATIONS _____
55. **TSXA** TOTAL NUMBER OF JUVENILE SEX ADJUDICATIONS _____
56. **TJNSXPA** TOTAL NUMBER OF JUVENILE NON-SEX PERSON
ADJUDICATIONS _____
57. **TJCNA** TOTAL NUMBER OF JUVENILE SEX OFFENSES CHARGED--NO
ADJUDICATIONS _____
58. **TSFP** TOTAL NUMBER OF SECURE FACILITY PLACEMENTS _____

60. **AGEFCSO**

AGE OF OFFENDER AT EARLIEST CHARGED SEX OFFENSE: Examine all of the offender's charged sex offenses and code youngest age at which the offender engaged in sex offense behavior in any of the charged sex offenses. If an exact age is not available, then use the earliest reasonable approximation. If offending occurred over a period of time, use the age when it first began. _____

61. **AGEFASO**

AGE OF OFFENDER AT FIRST ADJUDICATED SEX OFFENSE: Examine all of the offender's adjudicated sex offenses and code youngest age at which the offender engaged in sex offense behavior in any of the adjudicated sex offenses. If an exact age is not available, then use the earliest reasonable approximation. If offending occurred over a period of time, use the age when it first began. _____

62. **AGEFSRSO**

AGE OF OFFENDER AT FIRST SEX OFFENSE BASED ON ALL SELF-REPORT: Examine all of the offender's sex offenses (self-reported, charged, and/or adjudicated and code youngest age at which the offender engaged in sex offense behavior in any sex offenses. If an exact age is not available, then use the earliest reasonable approximation. If offending occurred over a period of time, use the age when it first began. (use the age of the first sex offense resulting in a formal charge if the offender has not self-reported earlier sex offenses. _____

63. **AGELCSO**

AGE OF AFFENDER AT LAST CHARGED SEX OFFENSE: Code the offender's age in years at the time of the sex offense that resulted in his most recent charge. If an exact age is not available, then use the latest reasonable approximation. _____

64. **OVPAT1**

OFFENDER'S OVERALL BEHAVIORAL PATTERN OF SEX OFFENDING: Code the offender's overall pattern of sex offending

- 0 no pattern – one single-event offense
- 1 no pattern even though there were multiple offenses
- 2 pattern of a single act repeated in multiple event contacts
(specify act: _____)
- 3 pattern of multiple acts repeated in multiple event contacts
- 999 Missing/unable to determine

65. **OVPAT2**

OFFENDER'S VICTIM OVERALL VICTIM SELECTION PATTERN: Code the offender's overall pattern in victim selection.

- 0 no pattern – single victim
- 1 no pattern even though there were multiple victims
- 2 victim selection pattern evident

(specify: _____)

999 Missing/unable to determine

SUPERVISION/PROBATION INFORMATION

66. **SUPFAIL**

Record the number of supervision failures (i.e.: probation and/or release violations, revocations, contempt of court charges...) prior to being released from court jurisdiction for the most recent sex offense. This would include supervision failures in conjunction with the most recent sex offense adjudication and all prior adjudications for any offense.

NUMBER OF SUPERVISION FAILURES: _____ (999 if missing)

67. **OFFENDER'S PRIOR SEX OFFENDER AND/OR CHEMICAL DEPENDENCY
TREATMENT HISTORY
PTX1-PTX14**

Record offender's sex offender and/or chemical dependency treatment prior to arrest for the index sex offense. This includes BOTH community and institutional programs (residential, outpatient, correctional, etc.). If name of program is unknown, code "MISSING". If date admitted is unknown, code "99/99/99". Circle the number of the most recent treatment. When offender's treatment history is complete and there is not another program to enter, stop coding and SKIP TO QUESTION #67.

USE THE FOLLOWING CODES TO INDICATE TYPE OF TREATMENT:

- A Inpatient/residential
- B Outpatient/nonresidential
- C Correctional
- D Institutional (non-correctional)---refers to non-correctional institutions, such as hospitals, etc.
- E Evaluation
- F Unknown

USE THE FOLLOWING CODES TO INDICATE REASON FOR OFFENDER'S DISCHARGE FROM PROGRAM:

- 1 Successful completion of program
- 2 In program and doing well at time of release
- 3 Terminated
- 4 Quit
- 5 Absconded from program
- 6 Transfer
- 7 Non-completion--reason unknown
- 8 Assessment only
- 999 Missing/unknown

	TYPE: circle	NAME OF PROGRAM Code "Missing" if unknown	DATE ADMITTED mo/dy/yr	Duration of treatment in months	TREATMENT TYPE	REASON FOR DISCHARGE
1.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
2.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
3.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
4.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
5.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
6.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
	SO					

7.	CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
8.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
9.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
10.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
11.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
12.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
13.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999
14.	SO CD		___/___/___		A B C D E F	1 2 3 4 5 6 7 8 999

- 67. **TOSOTX** _____ **TOTAL NUMBER OF SO PROGRAMS**
- 68. **TOSONC** _____ **NUMBER OF SO PROGRAMS NOT COMPLETED**
- 69. **TOCDTX** _____ **TOTAL NUMBER OF CD PROGRAMS**
- 70. **TOCDNC** _____ **NUMBER CD NOT COMPLETED**

71. **OFFENDER’S PRIOR MENTAL HEALTH TREATMENT HISTORY**

MHTX1-MHTX10

Record offender’s mental health treatment prior to arrest for the index sex offense. This includes BOTH community and institutional programs (residential, outpatient, correctional, etc.). This includes previous programming while incarcerated. If name of program is unknown, code “MISSING”. If date admitted is unknown, code “99/99/99”. When offender’s treatment history is complete and there is not another program to enter, stop coding and SKIP TO QUESTION #72. Event or ongoing situation refers to the reason for admittance. “Event” would be a specific incident (death in the family, suicide attempt, etc.) which would prompt the offender into treatment. “Ongoing situation” would be non-event specific which would prompt the offender into treatment (chronic depression, mental illness, etc.). circle the number of the most recent treatment.

USE THE FOLLOWING CODES TO INDICATE TYPE OF TREATMENT:

- | | | | |
|---|--|---|--------------------------|
| A | Inpatient/residential | E | Individual Psychotherapy |
| B | Outpatient/nonresidential | F | Evaluation only |
| C | Correctional | G | Unknown |
| D | Institutional (refers to non-correctional institutions, such as hospitals, etc.) | | |

USE THE FOLLOWING CODES TO INDICATE REASON FOR OFFENDER’S DISCHARGE FROM PROGRAM:

- | | | | |
|---|----------------------------------|-----|--------------------------------|
| 1 | Successful completion of program | 5 | Absconded from program |
| 2 | Treatment is ongoing | 6 | Non-completion--reason unknown |
| 3 | Terminated, noncompletion | 7 | Transfer |
| 4 | Quit, noncompletion | 999 | Missing/unknown |

NAME OF PROGRAM Code “Missing” if unknown	DATE ADMITTED mo/dy/yr	DURATION OF TREATMENT IN MONTHS	TREATMENT TYPE	MEDICATION			REASON FOR DISCHARGE
				YES	NO	MISS	
	__/__/__		A B C D E F G				1 2 3 4 5 6 7 999
	__/__/__		A B C D E F G				1 2 3 4 5 6 7 999
	__/__/__		A B C D E F G				1 2 3 4 5 6 7 999
	__/__/__		A B C D E F G				1 2 3 4 5 6 7 999
	__/__/__		A B C D E F G				1 2 3 4 5 6 7 999
	__/__/__		A B C D E F G				1 2 3 4 5 6 7 999
	__/__/__		A B C D E F G				1 2 3 4 5 6 7 999
	__/__/__		A B C D E F G				1 2 3 4 5 6 7 999
	__/__/__		A B C D E F G				1 2 3 4 5 6 7 999

72. **TMHTX** _____ **TOTAL NUMBER OF TREATMENTS**

73. **TMHNC** _____ **TOTAL NUMBER OF NON-COMPLETIONS**

CURRENT ADJUDICATION INFORMATION

73. **DISCREC**
DOES OFFENDER HAVE A DISCIPLINE RECORD?:
0 No
1 Yes
999 Missing
74. **GOODTIME**
TOTAL NUMBER OF GOOD TIME DAYS LOST: _____ (Code "999" if missing or unknown)
75. **CITEUSE**
HOW OFTEN HAS OFFENDER EVER BEEN CITED FOR DRUG/ALCOHOL USE WHILE IN THE INSTITUTION?: *Include even if report did not result in hearing or finding against offender.*
0 None 4 Four times
1 Once 5 Five times
2 Twice 6 Six or more times
3 Three times 999 Missing/unable to determine
76. **CITSESEX**
HOW OFTEN HAS OFFENDER EVER BEEN CITED FOR SEXUAL BEHAVIOR IN THE INSTITUTION?: *Include even if report did not result in hearing or finding against offender.*
0 None 4 Four times
1 Once 5 Five times
2 Twice 6 Six or more times
3 Three times 999 Missing/unable to determine
77. **CITEVIO**
HOW OFTEN HAS OFFENDER EVER BEEN CITED FOR VIOLENT BEHAVIOR IN THE INSTITUTION?: *Include even if report did not result in hearing or finding against offender.*
0 None 4 Four times
1 Once 5 Five times
2 Twice 6 Six or more times
3 Three times 999 Missing/unable to determine
78. **REPORTS**
DISC1-DISC5

DESCRIPTION OF DISCIPLINE REPORTS: (Code "99" if missing or unclear) *INCLUDE ONLY REPORTS RESULTING IN HEARING OR WAIVER OF HEARING AND/OR SHOWING IN CMIS SUMMARY REPORT.*

LEVEL OF SEVERITY	NUMBER OF REPORTS
DISC1 MAJOR REPORTS)	
DISC2 SECONDARY REPORTS	

79. **NOREPTS**
 TOTAL NUMBER OF DISCIPLINE REPORTS: _____ (Code "999" if missing or unclear)
INCLUDE ONLY REPORTS RESULTING IN HEARING OR WAIVER OF HEARING AND/OR SHOWING IN CMIS SUMMARY REPORT.

DENIAL/MINIMIZATION OF INCARCERATING OFFENSE(S)

80. **DENIAL1**
 OFFENDER'S LEVEL OF DENIAL OF **MOST RECENT SEX OFFENSE AT TIME OF ADMISSION**: *Refer to instant offense only. Pertains to denial/minimization at time of offender's institutionalization or entry into probation. (CIRCLE ONE)*
- 1 Total denial of involvement in the sex offense)
 - 2 Claims act was consensual
 - 3 Acknowledges the sex offense but minimizes his responsibility and/or the impact on the victim
 - 4 No denial – full admits to the sex offense
 - 999 Missing/unable to determine
81. **DENIAL2**
 OFFENDER'S LEVEL OF DENIAL OF **MOST RECENT SEX OFFENSE AT TIME OF DISCHARGE**: *Refer to instant offense only. Pertains to denial/minimization at time of offender's discharge from institution or release from probation if not institutionalized. (CIRCLE ONE)*
- 1 Total denial of involvement in the sex offense)
 - 2 Claims act was consensual
 - 3 Acknowledges the sex offense but minimizes his responsibility and/or the impact on the victim
 - 4 No denial – full admits to the sex offense
 - 999 Missing/unable to determine)
82. **DENIAL3**
 OFFENDER'S GENERAL LEVEL OF DENIAL OF **ALL SEX OFFENSES AT TIME OF ADMISSION** FOR HIS MOST RECENT OFFENSE: *Pertains to general level denial/minimization of all sex offenses at time of offender's institutionalization or entry into probation for his most recent sex offense. (CIRCLE ONE)*
- 1 Total denial of involvement in all offenses
 - 2 Claims all/most acts were consensual
 - 3 Acknowledges some sex offenses but minimizes his responsibility and/or the impact on the victims
 - 4 fully admits some offenses
 - 5 No denial – fully admits to all offenses
 - 888 One offense only
 - 999 Missing/unable to determine)

83. **DENIAL4**
OFFENDER'S GENERAL LEVEL OF DENIAL OF ALL SEX OFFENSES AT TIME OF DISCHARGE FOR HIS MOST RECENT OFFENSE: *Pertains to general level denial/minimization of all sex offenses at time of offender's most recent discharge from the institution or release from probation if not institutionalized. (CIRCLE ONE)*
- 1 Total denial of involvement in all offenses
 - 2 Claims all/most acts were consensual
 - 3 Acknowledges some sex offenses but minimizes his responsibility and/or the impact on the victims
 - 4 fully admits some offenses
 - 5 No denial – fully admits to all offenses
 - 888 One offense only
 - 999 Missing/unable to determine)

SEX OFFENDER PROGRAMMING FOLLOWING ADJUDICATION FOR THE INDEX SEX OFFENSE

84. **ISOEV**
DID OFFENDER HAVE A SEX OFFENDER EVALUATION FOLLOWING ADJUDICATION FOR THE INDEX SEX OFFENSE?: *If offender received a sex offender evaluation, indicate "yes" and enter date. If no date is available, code "99/99/99". (Circle one.)*
- 0 No
 - 1 Yes: **ISOEDATE** DATE ASSESSED ____/____/____
 - 999 Missing
85. **ISOFIND**
WHAT WERE THE FINDINGS OF THE SEX OFFENDER EVALUATION?: *Indicate the findings of the sex offender evaluation. DO NOT infer what they were, but code the answer that is specified by the assessor. (Circle one.)*
- 0 No treatment recommended--offender not amenable
 - 1 No treatment recommended or treatment recommended but not enough incarceration time to participate in programming
 - 2 No treatment recommended--other reason(s),
specify: _____
 - 3 Yes, treatment mandated/recommended
 - 888 Not applicable – no evaluation performed
 - 999 Missing
86. **ISOENTRY**
DID OFFENDER ENTER SEX OFFENDER TREATMENT?: *Code whether or not the offender did enter sex offender treatment. If yes, code the date of entrance. If that date is missing, code "99/99/99". If the offender has not entered treatment, indicate the answer that best explains why not. (Circle one.)*
- 0 Yes--- **ISOENDAT** DATE ENTERED PROGRAM: ____/____/____
 - 1 No, appealing adjudication
 - 2 No, lack of space in program
 - 3 No, sentence length too short
 - 4 No, not amenable to treatment
 - 5 No, reason unknown
 - 6 No, offender refused to enter
 - 7 Other, specify: _____
 - 888 Not applicable – no recommendation for treatment
 - 999 Missing

87. **ISOCOMP**
 DID OFFENDER COMPLETE SEX OFFENDER PROGRAMMING?: *Indicate whether offender completed institutional sex offender programming (treatment). If yes, but the date is missing, code "99/99/99". (Circle one.)*
- 0 No
 1 Yes-- **ISOCODAT** DATE OF COMPLETION ____/____/____
 2 Still in program at time of release
 888 Not applicable--offender never entered treatment
 999 Missing/unknown
88. **SONCREA**
 REASONS FOR TREATMENT NON-COMPLETION: (circle all that apply) *Indicate the reasons why the offender did not complete sex offender treatment. If the offender did not enter treatment, code "888". If the reasons are missing, code "999". (Circle one.)*
- 0 None – completed program
 1 Refused to enter treatment
 2 Quit
 3 Terminated by staff due to not amenable
 4 Terminated by staff due to denial of offense
 5 Terminated by staff due to discipline problems--other than sexual behavior or chem. use
 6 Terminated by staff due to engaging in sexual behavior
 7 Terminated by staff due to engaging in use of chemicals
 8 Time constraint due to conviction appealed and/or overturned
 9 Time constraint --still in treatment at expiration of sentence
 10 Time constraint – in treatment until transfer to another institution providing no treatment
 11 Other,
 specify: _____
 888 Not applicable—no recommendations for treatment
 99 Reason for non-completion not indicated

CHEMICAL DEPENDENCY PROGRAMMING FOLLOWING ADJUDICATION FOR THE INDEX SEX OFFENSE

89. **ICDEV**
 DID OFFENDER HAVE A CHEMICAL DEPENDENCY EVALUATION FOLLOWING ADJUDICATION FOR THE INDEX SEX OFFENSE?: *If offender received a CD evaluation, indicate "yes" and enter date. If no date is available, code "99/99/99". (Circle one.)*
- 0 No
 1 Yes: **ICDEDATE** DATE ASSESSED ____/____/____
 999 Missing
90. **ICDFIND**
 WHAT WERE THE FINDINGS OF THE CD EVALUATION?: *Indicate the findings of the CD evaluation. DO NOT infer what they were, but code the answer that is specified by the assessor. (Circle one.)*
- 0 No treatment recommended--offender not amenable
 1 No treatment recommended or treatment recommended but not enough incarceration time to participate in programming
 3 No treatment recommended--other reason(s),
 specify: _____
 4 Yes, treatment mandated/recommended
 888 Not applicable – no evaluation performed
 1000 Missing

91. **ICDENTRY**

DID OFFENDER ENTER CD TREATMENT?: Code whether or not the offender did enter CD treatment. If yes, code the date of entrance. If that date is missing, code "99/99/99". If the offender has not entered treatment, indicate the answer that best explains why not. (Circle one.)

- 0 Yes--- **ICDENDAT** DATE ENTERED PROGRAM: _____/_____/_____
- 1 No, appealing adjudication
- 2 No, lack of space in program
- 3 No, sentence length too short
- 4 No, not amenable to treatment
- 5 No, reason unknown
- 6 No, offender refused to enter
- 7 Other, specify: _____
- 888 Not applicable – no recommendation for treatment
- 999 Missing

92. **ICDCOMP**

DID OFFENDER COMPLETE CD PROGRAMMING?: Indicate whether offender completed CD programming (treatment). If yes, but the date is missing, code "99/99/99". (Circle one.)

- 1 No
- 1 Yes-- **ICDCODAT** DATE OF COMPLETION _____/_____/_____
- 2 Still in program at time of release
- 888 Not applicable--offender never entered treatment
- 999 Missing/unknown

93. **CDNCREA**

REASONS FOR TREATMENT NON-COMPLETION: (circle all that apply) Indicate the reasons why the offender did not complete sex offender treatment. If the offender did not enter treatment, code "888". If the reasons are missing, code "999". (Circle one.)

- 0 None – completed program
- 1 Refused to enter treatment
- 2 Quit
- 3 Terminated by staff due to not amenable
- 4 Terminated by staff due to denial of offense
- 5 Terminated by staff due to discipline problems--other than sexual behavior or chem. use
- 6 Terminated by staff due to engaging in sexual behavior
- 7 Terminated by staff due to engaging in use of chemicals
- 8 Time constraint due to conviction appealed and/or overturned
- 9 Time constraint --still in treatment at expiration of sentence
- 10 Time constraint – in treatment until transfer to another institution providing no treatment
- 11 Other,
specify: _____
- 888 Not applicable—no recommendations for treatment
- 999 Reason for non-completion not indicated

MENTAL HEALTH INSTITUTIONAL PROGRAMMING94. **IMHHX**

OFFENDER MENTAL HEALTH HISTORY WHILE INSTITUTIONALIZED OR UNDER SUPERVISION FOR THE MOST RECENT ADJUDICATION

- 0 No mental health programming indicated
- 1 Some history---*brief situational contact, event driven*
- 2 Mental health programming--*outpatient only, individual or group treatment, no major mental illness (situational/reactive)*
- 3 History of mental health treatment--*inpatient (situational/reactive) and/or outpatient medication*
- 4 Significant history of mental health issues/medications--*diagnosis of major mental illness (schizophrenia, delusional disorder, manic-depression, chronic depression); ongoing outpatient/ psychiatric consultations; inpatient treatment.)*
- 999 Missing/unable to determine

95. **IMHDX**

OFFENDER'S CLINICAL DIAGNOSIS WHILE INSTITUTIONALIZED: OR UNDER THE SUPERVISION FOR THE MOST RECENT ADJUDICATION (circle all that apply) *Diagnosis must be made at an institution.*

- | | |
|---------------------------------|--|
| 0 None | 8 Borderline mental retardation |
| 1 Hyperactivity | 9 Mild/moderate mental retardation |
| 2 Attention Deficit Disorder | 10 Depressive disorder including dysthymia |
| 3 ADHD | 11 Anxiety disorder |
| 4 Impulse Control Disorder | 12 Psychotic disorder |
| 5 Conduct Disorder | 13 Other, specify: _____ |
| 6 Oppositional Defiant Disorder | 999 Missing/unable to determine |
| 7 Paraphilias, specify: _____ | |

96. **ANYMHDX**

WAS OFFENDER EVER DIAGNOSED IN HIS/HER LIFETIME AS HAVING ANY OF THE FOLLOWING: (circle all that apply) *Include childhood, time prior to incarceration and while incarcerated.*

- | | |
|---------------------------------|--|
| 0 None | 8 Borderline mental retardation |
| 1 Hyperactivity | 9 Mild/moderate mental retardation |
| 2 Attention Deficit Disorder | 10 Depressive disorder including dysthymia |
| 3 ADHD | 11 Anxiety disorder |
| 4 Impulse Control Disorder | 12 Psychotic disorder |
| 5 Conduct Disorder | 13 Other, specify: _____ |
| 6 Oppositional Defiant Disorder | 999 Missing/unable to determine |
| 7 Paraphilias, specify: _____ | |

97. **PEERS**

INDICATE THE AGE APPROPRIATENESS OF OFFENDERS PEERS OUTSIDE THE INSTITUTION (Circle one).

- 1 most friends are 2 or more years younger than the offender
- 2 most friends are 1 to 1.99 years younger than the offender
- 3 most friends are within plus or minus one year of the offender's age
- 4 most friends are 1 to 1.99 years older than the offender
- 5 most friends are 2 or more years older
- 6 explicitly states that offender has no friends
- 999 Missing/unable to determine

98. **WILLREOF**

IS THERE ANY EVIDENCE IN THE FILE THAT EXPLICITLY STATES THAT THE OFFENDER IS LIKELY TO REOFFEND UPON RELEASE?:

- 0 No
- 1 Offender states reoffense likely (*e.g.*, "says that s/he will rape again")
- 2 File states reoffense likely (*e.g.*, *case manager says offender is at high risk to reoffend*)

99. **PHYSCOND**

IS THERE EVIDENCE IN THE FILE THAT OFFENDER DEMONSTRATES A PHYSICAL CONDITION THAT MINIMIZES THE RISK OF REOFFENSE, INCLUDING BUT NOT LIMITED TO ADVANCED AGE OR DEBILITATING ILLNESS OR PHYSICAL CONDITION?:

- 0 No
- 1 Yes
- 999 Missing/unable to determine

100 **ADOLANTI**

IS THERE EVIDENCE OF A PATTERN OF PERSISTENT ADOLESCENT ANTISOCIAL BEHAVIOR IN FILE?

(SEE POSTED INSTRUCTION SHEET IN THE LAB)

- 1 No indication of adolescent antisocial behavior
- 2 Some relatively isolated antisocial acts
- 3 A persistent pattern of adolescent antisocial behavior
- 999 missing/unable to determine

101. **FILECOMP**

RATE THE COMPLETENESS OF THE FILE FOR CODING PURPOSES:



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