
What We Do Not Know About Juvenile Sexual Reoffense Risk

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States have increasingly subject juvenile sexual offenders to sex offender registration and commitment under sexual predator laws in recent years. These statutes assume that sexual offenders present a sustained risk to recommit sexually violent crimes over an extended time period. Implicit in this assumption is that criminal sexual behavior is a product of some form of stable trait or condition that continues to push the juvenile toward sexually violent behaviors as they get older. This article examines these assumptions in light of the available research on the stability of sexually offending behavior in juveniles. The difficulties attendant to applying adult offender risk assessment models to juvenile sexual offenders are addressed. The available evidence indicates that the development and persistence of sexually criminal behavior is poorly understood, making the prediction of sustained sexual offending in juveniles that is required by some sexual predator statutes a particularly difficult task.

Can juvenile sex offenders who are likely to become chronic adult sex offenders be reliably identified in their adolescence? The answer to this question rests in no small part on how sexual offending develops and is sustained in juveniles, and how sex-offending behavior relates to other forms of juvenile sexual development. At least 17 states have passed laws allowing individuals to be committed as a sexually violent person (SVP). At least four states allow juveniles to be committed under these statutes, and all of the others allow the commitment to be based on offenses committed as a juvenile. A total of 38 states include juveniles under their sex offender registration laws. These laws implicitly assume that juvenile sexual offenders as a

group will present a sustained risk for sexual offending for many years.

A degree of concern about juvenile sex offenders is not without substance. Juvenile offenders are heavily overrepresented in the known data on sexual offenses. The Federal Bureau of Investigation's National Incident-Based Reporting System has indicated that approximately one out of every five sexual assaults, and one third of sexual assaults of children under 12, involve an offender under age 18 (Snyder & Sickmund, 1999).

Early identification and effective intervention with young offenders holds the promise of preventing numerous sexual offenses that may otherwise be committed by the offender over the course of their adult careers. Meaningful risk assessments, however, require a relatively precise understanding of the patterns of, and potential for, repeated sexual offense behaviors. Research has repeatedly demonstrated that actuarial prediction methods are superior to clinical impressions in making predictions of dangerousness, particularly under low base-rate conditions (but see Litwack, 2001, for an alternative viewpoint of the role of clinical judgment in actuarial assessments). Although there has been recent progress in developing reliable actuarial sexual reoffense prediction instruments for adult offenders (Epperson, Kaul, & Hesselton, 1999; Hanson & Thornton, 1999) efforts to develop similar measures for juveniles have been unsuccessful (Prentky, Harris, Frizzell, & Righthand, 2000; Rasmussen, 1999). Even when researchers have been able to develop standardized tools, such as Prentky and Righthand's J-SOAP (Prentky et al., 2000) and Worling's ERRASOR (Worling & Cruwen, 2000), these tools have not been proven to predict sexual recidivism. Professionals may be understandably tempted to simply adapt models and methods

that have proven reliable with adult offenders to juvenile offenders. But this approach begs the fundamental question: Are juvenile sex offenders simply sex offenders that are young, or is juvenile sexual offending sufficiently different that it cannot be accurately examined through the lens of existing adult offending models?

This article will discuss several difficulties encountered in our understanding and predicting sustained sexual offending in juveniles, with a particular emphasis on the kinds of prediction required by SVP statutes and implied in mandatory registration laws. Although sound research on patterns of offending and desisting in juvenile sex offending is limited, recent studies have contributed important information that suggests that the task of risk prediction with juvenile sexual offenders may be much more difficult than was previously apparent. These studies also suggest that developing actuarial risk measures for juvenile sexual reoffense may require a different perspective and approach than that which has proven successful with adult sexual offenders. More important, the assumptions that underlie statutes that juvenile sex offenders as a group require extended supervision and/or commitment to control their risk are unproven.

THE PREVALENCE OF JUVENILE SEXUAL MISBEHAVIOR

Implicit in the prediction of any future offense behavior is the assumption that the behavior represents a pattern that is driven by relatively constant causal factors. Although the factors may not be directly observable, reliable behavioral manifestations of the factors (such as repeated offending, selection of certain victims, etc.) can be observed and measured. Presumably, these observations are uncommon in the general public and can be used to identify a distinct subset of individuals. In the adult literature, factors that are both rare in the general public and uncommon among sexual offenders have proven valuable in assessing sexual reoffense risk. The prevalence and characteristics of sexual behavior among juveniles, then, may help us understand how uncommon the behavior of adjudicated juvenile sexual offenders may be.

Unfortunately, detailed information on the sexual behavior of young people is limited. Several studies of local jurisdictions, however, have found that between 1.6% and 3.5% of all juvenile males in the jurisdiction are charged with a sexual offense annually (Ryan & Lane, 1997). For example, in a nationally representative sample of 2,000 youth, Finkelhor and Dziuba-

Letherman (1994) found that 5.6% of the girls and 1.0% of the boys reported any history of sexual abuse involving any form of genital contact. Of all of the sexual assaults (including noncontact), 41% involved perpetrators who were under 18 years of age. In a survey of 863 males, Ageton (1983) found that between 0.8% and 7.9% of juveniles between the ages of 13 and 19 reported using some degree of force to engage a partner in a sexual act. However, two thirds of these reported that the only form of force used was verbal pressure or persuasion. This suggests that between 0.27% and 2.6% of the sample had engaged in using some form of physical force or threats in a sexual act. Juvenile arrest data from 1999 indicate that about one in every 527 males (0.19%) between ages 11 and 18 were arrested for a sexual offense that year (Federal Bureau of Investigation, 2000).

These estimates undoubtedly underestimate the actual prevalence of illegal juvenile sexual behavior. In most states, intercourse with an individual under the age of 14, 15, or 16 is defined as a sexual assault, regardless of any consideration of consent. Some states require the perpetrator of the assault to be substantially older than the victim (e.g., Minnesota), whereas many others require that the offender have some degree of authority or control over the victim (e.g., Michigan). Still others are silent on this issue, allowing both otherwise consenting underage sexual partners of the same age and station to be charged with a felony sexual assault (e.g., Kansas, Wisconsin).

Although adjudication of noncoerced peer teen sexual activity is apparently not widespread, it is fairly common in at least one state. In Wisconsin this activity falls under the mandatory child abuse reporting laws because the acts are statutorily defined as felony sexual abuse of a child, regardless of the age of the offender. As a result, juvenile residential treatment programs routinely report "consensual" teen sexual intercourse to authorities. Often both youth are charged with felony sexual assault of a child, an adjudication that carries mandatory sex offender registration for at least 15 years after the end of the juvenile supervision. The author has an association with a small juvenile sex offender treatment program in a secured juvenile correctional facility. Of the last 25 admissions to that program, 11 had been adjudicated on this type of offense.

Although Wisconsin's legislative scheme may be extreme, and possibly unique, it rests on an implicit assumption that early sexual misbehavior is atypical and indicates a long-term risk to society. Information from the 1997/1998 wave of the National Longitudinal Survey of Youth (NLSY) (U.S. Department of Labor, 2000), however, found that out of the 3,444

TABLE 1: Studies of Juvenile Sexual Offenders Who Fail With New Charges

Source	n	Age Range (M)	Number of Recidivists Sexual/Total	Sexual Failure Rate (%)	Total Failure Rate (%)	Follow-Up (mean months)
Atcheson and Williams (1954)	116	12 to 16	3/47	2.6	40.5	12
Auslander (1998)	124	nr	10/78	8.0	62.9	34.3
Brannon and Troyer (1995)	36	14 to 19	1/6	2.8	16.7	60
Doshay (1943)	108	nr	2/3	1.8	2.8	108
Kennedy and Hume (1998)	114	nr	5/nr	4.4	nr	34.32
Lab, Shields, and Schondel (1993)	155	nr	5/29	4.4	18.7	36
Miner, Siekert, and Ackland (1997)	96	nr	8/35	8.3	36.4	19.3
Prentky, Harris, Frizzell, and Righthand (2000)	75	9 to 20 (14.2)	3/8	4.0	10.7	12
Schram, Milloy, and Rowe (1991)	197	8 to 18 (14.5)	24/124	12.2	62.9	82
Sipe, Jensen, and Everett (1998)	164	nr	16/40	9.8	24.4	72
Smets and Cebula (1987)	21	13 to 18	1/nr	4.8	nr	36
Smith and Monastersky (1986)	112	10 to 16 (14.1)	13/55	11.6	49.1	28.9
Worling and Cruwen (2000)	148	12 to 19 (15.5)	19/69	12.8	46.6	75

NOTE: nr = not reported.

respondents (37% of the total) who reported having had sexual intercourse, more than half reported having had intercourse by age 14 and more than 80% reported sexual intercourse by age 15.

This data suggests that sexual behavior that is often defined as illegal is common among juveniles; nearly one third of the total group surveyed had engaged in sexual intercourse before they were of legal age to do so. In states that do not require any force, age, or power differential between the youths involved, the meaning of a violation of these statutes is particularly hard to interpret. If far fewer juveniles are charged with sexual offenses than engage in illegal sexual behaviors, then there must be some process that selects those who are charged. Presumably, teens whose behavior is more violent or flagrantly inappropriate would be more apt to result in a charge. But when a juvenile comes to the attention of authorities for any reason, their behavior is likely to be more closely scrutinized. To what extent, then, might juvenile sexual offenders be primarily ordinary delinquents, not a distinct subgroup driven to sexual offending specifically but generally criminal youth driven only to offend in whatever ways opportunity affords? We can begin to address this question by examining the available research on juvenile sexual offender recidivism.

JUVENILE SEX OFFENDER RECIDIVISM STUDIES

Recently, popular theories of delinquency have focused on a single causal trait for all delinquent acts (Gottfriedson & Hirschi, 1990; Patterson & Yoerger, 1993). These theories have disputed the notion that various types of juvenile offending arise from different offender traits or dynamics and instead propose

that variation in offense types is a function of varying opportunities for crime. Consistent with these theories, most juvenile recidivism studies have not focused on subtypes of offenders, such as sex offenders, because distinctions between juvenile offenses are seen as misconstrued. By contrast, SVP and sex offender registration laws implicitly assume that sexual offenses do not simply reflect the most convenient opportunity for a delinquent, but are driven by a distinct causal trait for sexual offending that makes the offender probable to selectively persist in sexual offense behaviors.

There have been some attempts to follow juvenile sex offenders to determine how many reoffend with new sexual offenses. A search of the literature revealed 25 studies that followed a representative group of juvenile sex offenders and reported sexual reoffense statistics (see Tables 1 and 2). The definitions of sexual recidivism varied but generally included either rearrest (Table 1) or reconviction (see Table 2) for a sexual offense, including in most cases misdemeanor offenses. Six additional studies followed a selective group of juvenile sex offenders (such as mentally disordered, small experimental treatment samples, or treatment successes only) and were not included in this analysis.

The studies show several clear trends. As would be expected, longer follow-up periods have generally been associated with higher reoffense rates. However, studies using reconviction as the outcome present several differences from those utilizing rearrest. The relationship between reconviction and follow-up time was much stronger ($r = .74$) than that between rearrest and follow-up time ($r = .18$). Surprisingly, reconviction rates were not generally lower than rearrest rates, despite the latter being a more sensitive

TABLE 2: Studies of Juvenile Sexual Offenders Who Are Reconvicted

<i>Source</i>	<i>n</i>	<i>Age Range (M)</i>	<i>Number of Recidivists Sexual/Total</i>	<i>Sexual Failure (%)</i>	<i>Total Failure (%)</i>	<i>Follow-Up (mean months)</i>
Boyd (1994)	73	13 to 16	8/nr	10.9	nr	34.3
Bremer (1992)	193	14 to 16 (15.3)	15/nr	7.8	nr	48
Hagan and Cho (1996)	100	12 to 19	9/nr	9.0	nr	42
Hagan and Gust-Brey (1999)	50	nr	8/45	16.0	90.0	120
Hagan, Cho, Gust-Brey, and Dow (2001)	100	nr	18/nr	18.0	nr	96
Hagan, King, and Patros (1994)	50	nr	5/29	10.0	58.0	24
Kahn and Chambers (1991)	221	(14.7)	17/99	7.7	44.8	20.4
Kahn and LaFond (1988)	350	(14.5)	32/60	9.1	17.1	36
Langstrom, Grann, and Lindblad (2000)	46	15 to 20 (18.13)	9/19	19.6	41.3	96
Milloy (1994)	59	(16.5)	1/26	1.7	44.1	36
Rasmussen (1999)	170	7 to 18 (14)	24/92	14.1	54.1	60
Steiger and Dizon (1991)	105	nr	12/72	11.4	68.6	78

NOTE: nr = not reported.

outcome measure. This is most probably due to differences in the populations of the studies. Studies that followed institutionalized youth were more likely to rely on reconviction data, whereas those that were based in family courts or other community settings were more apt to use rearrest data. The higher reoffense rates from reconviction studies may simply reflect a more criminally prone sample of institutionalized youth that were both more likely reoffend and more likely to be prosecuted and convicted if apprehended.

More important for this discussion, the observed recidivism rates are generally lower than those commonly reported in the literature of studies of adult sex offender samples. The general age/risk trends show that younger adult offenders reoffend at higher rates than older offenders do. If the age/risk relationship were uniform from adolescence through the adult years, we would expect to see significantly higher reoffense rates among juvenile sex offenders than we find in adult samples. Although the data are preliminary, they do not support this notion. Rather, the data suggest that age and sexual reoffense risk may have a curvilinear relationship.

The studies have many shortcomings. A total of 13 studies present a mean follow-up time of 3 years or less. Of the studies, 5 were conducted with samples from the same institution, with some overlap between studies (Boyd, 1994; Hagan & Cho, 1996; Hagan, Cho, Gust-Brey, & Dow, 2001; Hagan & Gust-Brey, 1999; Hagan, King, & Patros, 1994). None controls for the age at which the juvenile sex offense occurred. Many are treatment-efficacy studies and may have followed a population screened for treatability. Nonetheless, they provide some initial sense of the prevalence of sexual reoffense among juvenile sexual offenders.

General Recidivism Among Juvenile Sexual Offenders

All recidivism studies encounter the problem of how best to assess criminal behavior. The recidivism criteria of rearrest or reconviction are considered fairly insensitive because many offenders may be able to avoid detection. Groth, Longo, and McFaddin (1982) have suggested that the low rate of sexual recidivism found in juvenile offender groups is likely to be due to the low visibility of this type of offense. SVP and mandatory registration laws are aimed not at controlling criminality in general but at controlling the risk for future sexual offenses specifically. Although it is possible for a sexual offender to be arrested or convicted for a nonsexual offense while concealing his continued sexual offending behavior, the bulk of the undetected continuing offenders are more likely to be in the group that was never rearrested or reconvicted for any offense. A defendant with a prior history of sexual offenses is likely to be questioned by police with that possibility in mind. Those who are never rearrested at all, on the other hand, undergo no such scrutiny.

For this reason, it is often useful to know the rate of general recidivism in a population of sexual offenders. In very rough terms, about one third to one half of adult sexual offenders who are rearrested are charged with a nonsexual crime (Hanson & Bussiere, 1998). In the data sets presented here, however, juvenile sex offenders were, on average, more than six times more likely to be arrested for nonsexual offenses than for sexual offenses (mean = 6.01, range = 1.5 to 15.6). Hagan and Gust-Brey (1999) found that 90% of the sexual offenders they followed were reconvicted for some offense within 10 years, whereas only 16% were reconvicted for a sexual offense. Although others found lower rates of general recidivism, on average, sexual offenses accounted for only 24.6% of the

detected recidivism. Juvenile sexual offenders as a group do not appear to be skilled at avoiding police contact or being treated more generously by prosecutors or police than are their adult counterparts. These data again support the notion that many, perhaps most, juvenile sexual offenders are not specific in their sexual offending. The data also suggest that the well-established link between an early onset of offending and chronicity is not offense specific. Young sex offenders may be at higher risk for chronic offending but not necessarily at higher risk for sexual offending.

The observation that juvenile sex offenders are more likely to reoffend with nonsexual delinquency than sexual delinquency lends support to those who question whether juvenile sex offenders constitute a distinct group. Although dedicated sex offender treatment is considered essential to reduce recidivism risk in adult sex offenders, the same is less clear with juvenile sexual offenders. Berliner (1998) and Milloy (1998) have questioned the value of specialized sex offender treatment and the label that goes with it in light of evidence that dedicated sex offender treatment has not demonstrated greater efficacy than generic delinquency rehabilitation services in reducing sexual recidivism.

Age-Related Trends in Juvenile Sex Offending

Additional information on the age patterns in sexual assaults involving juveniles can be found in the data from the National Incident-Based Reporting System (NIBR). In the past decade, the system has collected information on the apparent age of the perpetrators of sexual assault, generally based on an estimate offered by the victim. Snyder (2000) recently reported data on sexual assault of young children that were reported to police between 1991 and 1996 in 12 states.

With respect to sex offenses, the available data from the National Incident-Based Reporting System (NIBR) show the same general pattern of a decline in the rate of offending, but with a peak offending rate among offenders in their early to mid-teens, 13 or 14 years of age, and a gradual decline to the early 30s (see Figure 1). Data from the Canadian Uniform Crime Report show a similar pattern but with a slightly greater decline from the late teens through the early 30s (Canadian Centre for Justice Statistics, 1999). On its face, these data seem to indicate that juvenile sexual offenders start offending at an earlier age and are more apt to continue offending as they age than are other violent offenders. A more detailed examination of the data, however, suggests that other dynamics may be playing a role in the form of the data.

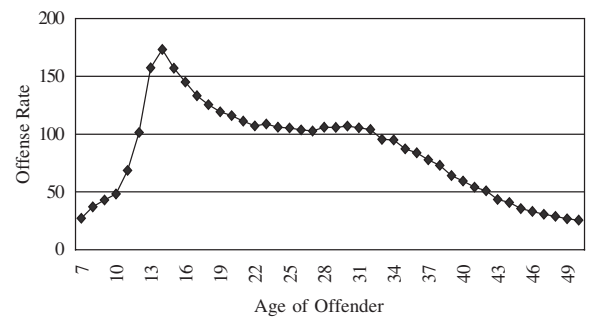


FIGURE 1: Reported Age of Offender for Offenses Reported to Law Enforcement (per 1,000 victims)

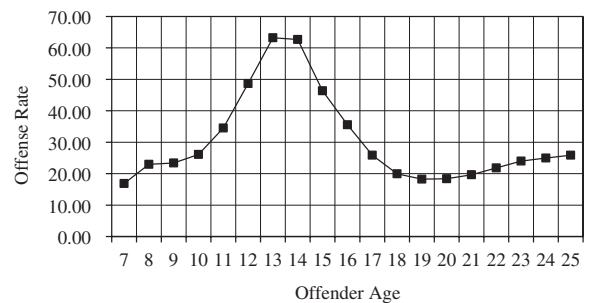


FIGURE 2: Proportion of Offenders at Various Ages for Victims Under Age 6 (per 1,000 victims) for Offenses Reported to Law Enforcement

Figure 2 shows the same NIBR data for victims under age 6. Again, the most common age of the offender is 13 or 14, but the incidence drops by two thirds over the next 4 years. These data should capture the majority of pedophilic offenders if one interprets the sexual assault of a child under age 6 as indicating a developing pedophilia. The NIBR data would suggest, however, that the average age of onset would be between the ages of 12 and 15. But retrospective studies of adult pedophilic offenders have found an age of onset of sexual deviance between 18 and 22 years old, considerably older than these data would suggest.

Figure 3 shows the NIBR system data for offenses against victims broken out by age groups. These data show a rough victim/offender age relationship, with offenders generally selecting victims in their approximate age cohort. For victims under age 12, the offense rate for 13 and 14 year-old offenders is more than triple the rate seen in offenders ages 17 to 20, just a few years older. Offenders ages 17 to 20 are more likely to assault teen victims. Adult victims are more likely to be assaulted by young adult offenders. Again, the Canadian data show a highly similar pattern.

These data present several problems in assessing juvenile sex offenders, both in understanding the dynamics of the sexual assault and in predicting

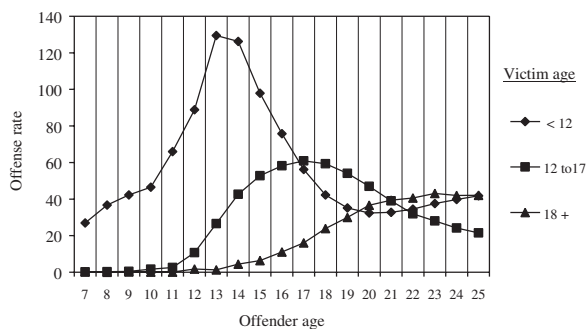


FIGURE 3: Offense Rates by Age of Offender for Victims Under Age 12, 12 to 17 Years Old, and 18 and Older for Offenses Reported to Law Enforcement

future risk. Among the most consistent findings in studies of persistent juvenile offending is that an early onset to offending in adolescence predicts a longer offending career. Indeed, Moffitt (1993) cites this as one of the key features that distinguishes the life-course persistent offender from the adolescent-limited delinquent. Early onset offenders are those who begin offending before the prevalence of offending becomes common in their age cohort. The incidence of offending for most offenses, however, peaks in the late teens or early 20s, making offenders who begin at age 13 or 14 early onset offenders. If the most common age for a child molestation offender is 13 or 14, it is unclear whether that should still be considered an early onset for that specific offense type.

Equally unclear is the meaning of young teen offenses against very young children. Among adult offenders, for instance, the presence of a young victim suggests pedophilic interests or other deviant sexual arousal patterns. A deviant arousal pattern has been found to be one of the most reliable predictors of sustained sexual offending in adults (Hanson & Bussiere, 1998) and is often cited as the key basis for assessing an offender as posing a high risk of sustained sexual offending throughout adulthood (Becker, 1990). In one of the few large studies of the age of onset of sexual deviancy, Abel, Osborn, and Twigg (1993) studied the histories of 1,025 adult males with paraphilias. They found that for the 457 reporting nonincestuous pedophilic interests, the average age of onset was between 18 and 22 years of age. Others have obtained similar findings: that chronic or pedophilic offenders generally report the onset of their offending in the late teens or early adult years. The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (4th Edition) criteria for diagnosing a pedophile, however, require that the offender be at least 16 years of age

and at least 5 years older than the child (American Psychiatric Association, 1994).

The early development of sexual deviance and its role in offending has been less well studied. Juvenile sex offenders have been found to report a wider variety of sexually deviant interests than do comparable adult sex offenders (Zolondek, Abel, Northey, & Jordan, 2001). Although phallometric assessment of juvenile sex offenders has been rare, those studies that have undertaken this task have found a relationship between offense history and phallometrically measured preference for pre-pubescent stimuli. Hunter, Goodwin, and Becker (1994), for example, found that juvenile sex offenders (mean age 15 years) with male victims were more responsive to child stimuli than those with female victims. Seto, Lalumiere, and Blanchard (2000) found that adolescent sex offenders (mean age 16 years) with male or both sex victims showed a greater erectile response to pedophilic stimuli. These were small studies that did not examine sexual recidivism among the adolescent offenders. Kenny, Keogh, and Seidler (2001), however, found that compared to juvenile first offenders, sexual recidivists obtained significantly higher scores on a self-report measure of deviant sexual fantasies involving a variety of offense types, particularly when associated with cognitive distortions. So there does appear to be some relationship between victim selection, recidivism, and the presence of sexual deviance among juvenile sex offenders.

One of the most resilient findings in the research on juvenile sex offenders, however, is that they comprise a heterogeneous group. The difficulty with identifying sexual deviance in teen offenders is that teen sexual behaviors are so varied, and juvenile sexual offenders are so heterogeneous, that offenses against young children committed by younger teens serves as a poor proxy for pedophilic deviance. Even though some teens that commit this type of offense will probably develop into lifelong pedophilic offenders, the NIBR data show that for the majority of these offenders, there is a strong trend toward desisting pedophilic offending as the offender age increases just a few years. Concluding then, that sexual assault of a young child by an offender in their early teens indicates developing high-risk sexual deviancy or pedophilia does not appear warranted.

ADULT RISK FACTORS AND ADOLESCENT RISK ASSESSMENT

If juvenile sexual offending arises from some constellation of internal traits, then those traits should be manifested in the form of risk factors. If those traits

are stable from childhood through adulthood then risk factors for adult sexual offenders should more or less apply to juvenile sexual offenders. An obvious strategy to assessing the risk for continued sexual offending in juveniles, then, is to look to the adult literature for well-established risk factors and determine the degree to which they apply to a particular juvenile. After all, if the juvenile continues sexual offending, they will become a member of the adult offender cohort from which these factors were derived.

In the often-cited study, Hanson and Bussiere (1998) found a number of factors to consistently predict adult sexual reoffense. These included (a) young age, (b) multiple prior charges, (c) an early onset of offending, (d) clear evidence of sexual deviancy (including a history of male or child victims, or established through psycho-physiological assessment), (e) indications of antisocial personality traits (such as an Anti-Social Personality diagnosis, anger problems, and interpersonal conflicts), and (f) a variety of types of crimes (termed *criminal versatility*). Other studies have reached similar results. Although this list is not exhaustive, these factors surely tap into the traits that drive most persistent sexual offending in adults.

When we attempt to apply these factors to juvenile offenders, however, we consistently encounter difficulties related to the development of juvenile offenders' careers. The first two of these factors present obvious difficulties; all juvenile offenders would meet the definition of "young age." In addition, juvenile offenders are dealt with in human service agencies and juvenile courts, making juvenile arrest and conviction records less comparable to adult records. The first delinquency adjudication based on a sexual offense may have been preceded by many incidents of sexual assault that were disposed of informally or may be the first sexual offense if the juvenile has many other delinquent behaviors. This makes the record of charged sexual offenses a poorer proxy for repeated sexual offending behaviors with a juvenile than is the case with adult criminal records. The remaining factors tap into traits that are subject to developmental changes during adolescence.

The Age-Crime Association

Research with adult offenders has consistently demonstrated an inverse relationship between age and recidivism potential. The effect is most evident among sexual offenders when offenders younger than 25 are compared to those who are older (Hanson & Thornton, 1999; Quinsey, Harris, Rice, & Cormier, 1998). In general, the highest rates of violent crime in the adult literature are associated with

offenders between the ages of 18 and 25. Should juvenile offenders be considered to be entering into their highest risk period from ages 18 to 25? If so, violent offenses committed in the early to mid-teen years may foreshadow a more serious period of violent offending yet to come. An answer to this question can be inferred from data on violent offending and age.

Data from the Federal Bureau of Investigation Uniform Crime Reporting Program have shown recently that violent offending rates peak in the late teens and drop off precipitously over the next 10 years. The rate of violent offending at the peak age of 17 to 19 is 50% greater than the rate for 25-year-olds (Snyder, 2000). Although there are some variations, this relationship between age and the incidence of offending has been seen across cultures and at various historical times (Hirschi & Gottfriedson, 1983). There has been some disagreement about whether this peak in offending in the teen years represents a peak in the number of individuals involved in crime or simply in the number of crimes committed by the same individuals at different ages. Over the past two decades, however, evidence has mounted that the peak in offense rates among adolescents reflects a temporary increase in the number of individuals involved in crime (Farrington, 1983; Wolfgang, Thornberry, & Figlio, 1987). Although chronic adult offenders often begin offending as juveniles, the majority of juvenile offenders do not appear to continue their offending careers into adulthood. Furthermore, some studies have shown that the severity of the offending behavior does not necessarily foreshadow chronicity. For example, in a longitudinal study of New Zealand children, Moffitt (1991) found that parent and teacher ratings of the severity of antisocial behavior varied greatly over time. With the exception of a small (5%) subgroup of boys that were both consistent and extreme in their behavior, the severity of the antisocial behavior accounted for relatively little of the stability of antisocial behavior in the sample.

Versatility and Specialization in Juvenile Offending

There is general agreement in the field that the most persistent juvenile offenders begin their offending early, engage in a wider variety of offending behavior, and offend more frequently than less intractable offenders (Moffitt, 1993). Several researchers have observed a significant negative correlation between age of first arrest and offending versatility (Loeber & LaBlanc, 1990; Nagin & Farrington, 1992). That is, younger onset offenders tend to have engaged in a wider variety of types of offenses. This has often led to the assumption that a single trait accounts for both factors.

Recently, Piquero, Paternoster, Mazerolle, Brame, and Dean (1999) examined the relationship between these variables in more detail. Using data from the second Philadelphia Birth Cohort Study (Tracy, Wolfgang, & Figlio, 1990), they examined offense patterns for 3,655 offenders as they moved from age 10 through age 20. They tested the assumption that an early onset of offending and offense versatility are both products of a latent trait (such as low self-control). They examined the issue of whether offense versatility may be a function of the current age of the offender, rather than the age the offender began their offending careers. They found that delinquents that had an earlier age of onset had greater offense versatility in their records. However, when they controlled for age, this effect disappeared. In brief, Piquero et al. (1999) found that all offenders of a specific age range engaged in similar levels of offense versatility. Furthermore, they found a consistent pattern of decreasing versatility (increasing specialization) as the offenders aged, regardless of their age of onset. The finding suggests that age appears to bring about a decline in criminal versatility; offenders tend to develop a "specialization" in a few types of offenses as they get older.

If juvenile offenders become more specialized in their offending as they age, then the prediction of persistent sexual offending is predicated on the proposal that they will specialize in sexual offending rather than *out of* sexual offending. Although studies of young adult offenders have found that a history of criminal versatility predicts sexual reoffense, these offenders fall into the age groups that Piquero et al. found to have already become more specialized in their offending. In the recidivism studies cited here, the high proportion of juvenile sexual offender's that reoffend with nonsexual offenses compared to those that sexually reoffend suggests that many juvenile sexual offender's may specialize out of sexual offending even while persisting in other offenses. It may be that more versatile young teen sexual offenders (under age 15) are less apt to persist in sexual offending than more specialized or slightly older sexual offenders. The data are suggestive of a developmental process that undermines the utility of criminal versatility as a predictor of continued sexual offending in juvenile sexual offenders. In fact, taken on its face, the data indicate that criminal versatility in juvenile sexual offenders may reduce the risk of future sexual offending, though not other types of offending. At the same time, more versatile offenders may be more likely to engage in violent crimes and more difficult to treat;

both factors that would be considered to increase the risk for sexual recidivism in adult sexual offenders.

Studies of Juvenile General Recidivism Risk in Juveniles

Risk factors for continued serious and violent juvenile offending, which include sexual offending, have been studied in some detail. In one of the more thorough reviews of the issue, Lipsey and Derzon (1998) conducted a meta-analysis of the impact of 793 risk factors drawn from 66 reports. Among other analyses, they compared risk factors found in juveniles ages 6 to 11 with those for ages 12 to 14, ranked according to the strength of their predictive relationship with serious or violent offending at ages 15 through 25. This includes, but is not limited to, sexual offenses. Of the seven factors that were the strongest predictors for the 6 to 11 age group, only three (a history of general offenses, aggression, and male gender) appeared in the list of nine strongest predictors for the older age group. Among the nine strongest predictors in the 12 to 14 age group, only those related to a history of general criminality and violence are consistently found in studies of adult male sexual or violent offenders.

That adolescence is a time of enormous change and transition is undisputed. In part because these transitions are generally studied in nonoffending populations, the degree to which these transitions affect sexual offending behavior is not well understood. In a study of factors relevant to decision making in delinquent populations, Fried and Reppucci (2001) assessed 56 youths held in a detention center for their ability to attend to long-range consequences, ability to resist peer influences, and ability to assess risk. They found a curvilinear relationship with age for each of these factors. Younger teens (12 and younger) and older teens (older than 18) were similar but juveniles in the mid-teens (14 to 17) were less capable in each area.

The decision-making transitions of adolescence are accompanied by changes in peer culture, relationships, social skills, and interpersonal sensitivity. How these transitions affect delinquent behavior is poorly understood. In one of the few studies examining the issue, Warr (1998) found that the well-established relationship between marriage and desisting from crime could be explained by the effect marriage has on other peer relationships. Whether offenders that marry are pulled away from criminal peers by the demands of marriage, or whether some development in social maturity both draws them into marriage and away from criminal friends, is an issue that is debated. Gottfriedson and Hirschi (1990), for example, argue that a low self-control determines the quality of a vari-

TABLE 3: Factors Reported to Be Predictive of Sexual Reoffense in Juvenile Sexual Offender Populations

<i>Source</i>	<i>Age Range (M)</i>	<i>Predictive Factors/(protective factors)</i>
Worling and Cruwen (2000)	12 to 19 (15.5)	Self-reported delinquent behavior ^a Multi-Phasic Sex Inventory Child Molestation Total score [indicating deviant fantasies, grooming, etc.]
Boyd (1994)	13 to 16(nr)	Older age at first arrest Family socioeconomic status ^a Intrafamily violence ^a Younger victim age
Auslander (1998)	13 to 18 (15.0)	(Higher PCL:YV F1 score) [indicating more callous/unemotional traits]
Ageton (1983)	nr	Involvement with delinquent peers ^a Past charged crimes vs. Persons ^a
Kahn and Chambers (1991)	(14.7)	Blaming the victim for the offense Use of verbal threats in the offense (Denial of the occurrence of the offense)
Langstrom, Grann, and Lindblad (2000)	15 to 20 (18.13)	Male victim Assault in a public location
Sipe, Jensen, and Everett (1998)	11 to 18 (18.0)	Prior sexual offense adjudication
Rasmussen (1999)	7 to 18 (14.0)	Large number of victims Large number of female victims
Smith and Monastersky (1986)	10 to 16 (14.1)	(Unhealthy sexual attitudes) Lack of depression Willing to discuss offenses non-defensively (Index offense of rape) ^a Stranger victim (Victim more than 4 years younger than offender) ^a
Kenny, Keogh, and Seider (2001)	13 to 21 (15.7)	Social skills deficits ^a Learning problems ^a Deviant sexual experiences ^a
Schram, Milloy, and Rowe (1991)	8 to 18 (14.5)	Prior sexual offense adjudication's ^a Truancy history ^a Thinking errors ^a

NOTE: Reported factors are limited to those with significance of .10 or better. nr = not reported.

a. Factor not specific to sexual reoffending.

ety of social relationships, whereas Sampson and Laub (1993) argue that ties to conventional institutions act as "turning points" that determine whether the offender moves further into or out of a criminal lifestyle. Warr's (1998) finding that the decrease in exposure to delinquent peers followed the transition into marriage suggests that the offenders were at least partly changed by the marriage.

If juvenile sexual offenders, like other delinquents, are influenced by factors that vary through the teen years, then the variables that measure those factors would have to be defined differently for delinquents of varying ages. Factors that influence sexual offending for a 13-year-old may operate differently for a 17-year-old. Some factors (particularly related to peer influences) may operate similarly for 12- and 18-year-olds but differently for 15-year-old offenders. To date, the predictive power of the age at the most recent offense has not been formally studied in juveniles. Studies that hope to develop tools to reliably assess sustained risk, however, may need to operationalize

variables differently for juveniles who have offended at different ages.

Juvenile Sexual Recidivism Risk Factors

Although many studies have examined the ways in which juvenile sex offenders differ from other juveniles, only a handful of studies have attempted to identify factors that distinguish juvenile sexual offenders that persist in offending from those that do not. Table 3 contains a summary of 10 such studies. As can be seen, results are often conflicting. For example, Boyd (1994) found that having victims of younger age predicted reoffense, whereas Smith and Monastersky (1986) found that having significantly younger victims was a protective factor. Several others have findings that conflict with the adult literature, such as Auslander's (1998) finding that a higher score on Factor 1 of the Psychopathy Checklist for young offenders was protective and Boyd's (1994) finding that an older age at first arrest predicted sexual reoffense.

Most of the factors that predict juvenile sexual offending were not specific to sexual offending but also predicted general offending. Evidence that a few factors may, however, indicate a relatively higher risk of sexual reoffense specifically has begun to emerge. Although difficult to assess from history alone, sexual deviance assessed clinically or through questionnaires may prove to be a reliable indicator of relatively increased risk. In addition, high frequency or violent sexual offending may represent a relatively greater risk. The results are far from conclusive, and much work would need to be done before a specific juvenile could be reliably assigned to a reoffense probability range, as many SVP laws require.

ISSUES IN JUVENILE SEXUAL OFFENDER RISK ASSESSMENT

In the effort to assess adult offenders level of risk, recent advances have relied on identifying several discrete variables that can be assembled into an actuarial risk instrument (Epperson et al., 1999; Hanson & Thornton, 1999). The success of these endeavors has relied heavily on static risk factors that remain fairly stable throughout the person's lifetime. With juvenile sex offenders, however, many of the same factors are more dynamic. In addition, the heterogeneity of the population makes even stable factors less reliable proxies for the latent trait that may drive persistent sexual offending. Too often, juvenile sex offenders assault very young victims without developing a life pattern of pedophilic offending. Too often, their criminal versatility may lead to adult specialization in nonsexual offending. Too often, they simply desist from offending altogether. It is most likely, however, that within the general population of juvenile sexual offenders, there is a subgroup that will ultimately become lifelong sexual offenders. Recent work in the area of identifying typologies of juvenile sex offenders may be a more promising strategy for identifying this group.

Becker and Kaplan (1988) have suggested that adolescent sex offenders follow one of three pathways: (a) a complete desisting pathway, (b) a continued nonsexual delinquency pathway, or (c) a continued sexual offending pathway. Their model is based on clinical observations. More recently, there have been empirically derived typologies.

Langstrom, Grann, and Lindblad (2000) identified five clusters of juvenile sex offenders based solely on prior offense characteristics. Two clusters (Cluster 1 had offended against an unknown male child victim in a public area and Cluster 2 had engaged in exhibitionism only) were more likely to reoffend with a sex-

ual offense than the other clusters. Although the other clusters included offenders who had offended against male child victims, unknown victims, and public area offenses, none had these factors in combination as did Cluster 1. Unfortunately, only nine individuals from Clusters 1 and 2 were available for follow-up (two from Cluster 1 and seven from Cluster 2), thus limiting the utility of the results.

Worling (2001) identified four subtypes of 112 juvenile sex offenders based on California Psychological Inventory scores. There were no significant differences between subtypes with respect to victim age, gender, or relationship. When the four subtypes were collapsed into two groups, significant differences in general and violent recidivism were found, but there was no significant difference between the groups in sexual recidivism specifically.

Selecting those most likely to engage in a specific behavior out of a population in which that behavior is rare is particularly difficult. If the behavior is sufficiently uncommon, the odds can become too long for any but the most robust methods to overcome.

One recently developed method, however, has proven successful in identifying high-risk individuals in a low base-rate population. As part of the MacArthur Violence study, Monahan and his colleagues (2000) developed a risk assessment tool called the "Iterative Classification Tree" for use with psychiatric patients, a group with a base rate for violence similar to that of juvenile sexual recidivism. Using this tool, the authors partitioned a sample of mentally ill patients into subgroups on the basis of risk-relevant factors. The tool allows many different factors to be combined by assessing a series of risk factors in a decision tree format. At a 20-week follow-up, the prevalence of violence within the study sample was 18.7%, but the tool was able to identify a subgroup that had a violence rate of 53%, nearly triple the base rate. Thus the tool was able to identify a very high-risk subtype in a sample that had a base rate comparable to that found in 10-year studies of juvenile sexual recidivism.

CONCLUSION

Although typology studies have not provided a breakthrough in risk assessment, the approach holds promise. It may be that a typology of juvenile sexual offenders will lead to the kind of precision in risk prediction that SVP laws require and that more conventional actuarial approached cannot provide. The combination of heterogeneity, age-related transitions in significant areas, and low sexual reoffense base rates means that it may never be possible to identify a list of discrete risk factors in a tool (such as Hanson

and Thornton's Static-99, or Epperson et al.'s MnSOST-R) that can reliably predict the high probability of sexual reoffense that SVP laws require. Combinations of associated factors that reliably identify an offender subtype may, but this would require a significant departure from the approaches to the task used so far.

The ideal risk assessment method would involve a typology of well-established offense career trajectories. Methods that reliably place a particular juvenile into one of the trajectories would necessarily have to use factors defined in terms of the age or developmental stage of the youth. The same factor may indicate a different career typology if it occurs at age 13 than if it occurs at age 17. Ideally, the method would include a way to assess significant "turning points" that may alter the career trajectory of a youth. The most effective typology classification strategy may be a version of the Iterative Classification Tree approach. The first step of this approach would be to identify risk factors that are sensitive to age or developmental changes. This would almost certainly require longitudinal studies of significant numbers of sexually offending youths.

Unfortunately, many states have passed laws to manage the assumed risk juvenile sex offenders pose without waiting for these issues to be illuminated through research. Mandatory registration laws may inhibit affected juveniles from entering into college and other conventional institutions that may provide a transition to more a conventional lifestyle for the young offender. Although the primary purpose of these laws is to enhance public safety, the public safety benefit of these laws has been questioned (Association for the Treatment of Sexual Abusers, 2000). If the most dangerous youths could be consistently and reliably identified, these laws may be justified. To reach that end, there are still many questions to be answered.

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