# SEXUAL VIOLENCE: LONGITUDINAL, MULTIGENERATIONAL EVIDENCE FROM THE NATIONAL YOUTH SURVEY
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# EXECUTIVE SUMMARY

## Background

In the last twenty-five years, much of Western society, particularly law enforcement agencies and clinicians, have recognized the destructive effects of the sexual assault of women. Recent media focus on high profile sexual offenses has highlighted to the public incidents of sexual offending in a wide range of offender-victim relationships, including strangers, neighbors, and family members. These have helped to fuel contentious public dialogue about the severity of convicted sex offenders' sentences, the degree to which the offenders may be rehabilitated, and where they might live when they are allowed to rejoin general society.

Though research on clinical and adjudicated samples provides an important perspective on sexual assaulters, this perspective may be skewed as all of the subjects in these samples share a common trait – they have been caught. This is serious problem because the vast majority of sex offenders are never convicted and thus remain unidentified. It is estimated that only 10-25 percent of sexual assaults are reported to the police, and that only about half of these result in a conviction.

Most individuals who actually commit an act that an official statute has labeled as an offense are never arrested. Of those who are arrested, a large percentage are not convicted despite having committed a statutory offense. Further, many of those who are convicted are allowed to plead guilty to a lesser charge and are therefore never charged with or convicted of a specific sex offense. As a result, individuals who are finally convicted represent only a relatively small percentage of those who commit a sex act that is illegal where they live. The FBI believes that their own data on rape reflects the greatest underreporting of all the crimes they measure. Koss reviewed independent survey studies, and estimates that the actual rate of rape is likely six to ten times the current estimates of the Bureau of Justice Statistics' National Crime Survey (NCS; now called the National Crime Victimization Survey, NCVS) estimates.

Despite this, little self-report, prospective, longitudinal research has been conducted on the etiology and long-term trajectories of sex offenders within a normal, non-clinical, population. The current study was designed to address this gap in our knowledge by conducting analyses on the reports of sexual assaulters who were part of a nationally-representative sample that was surveyed longitudinally, over 26 years.

## Theoretical Perspective

A wide variety of theoretical perspectives have been used to attempt to describe and explain sexually deviant behaviors (ranging from paraphilias to rape), including biological, sociobiological, cognitive, social cognitive, psychoanalytical, psychosocial, affective, and feminist theories. None of these theories alone, however, have been shown to adequately explain sexual violence. The theoretical framework used for this study relies primarily on the integrated theory of Elliott et al. (1979; 1985; 1989), which combines elements of social disorganization, strain, social control, and social learning theories.

According to the integrated theory, social and demographic background variables influence the opportunities of youth to attain academic, occupational, and other goals. As a

result, some individuals enter adolescence with weak bonds to social institutions and weak personal beliefs or weak commitment to conventional, conforming or law abiding behavior. Other individuals, particularly from disadvantaged social backgrounds may enter adolescence with strong bonds to conventional society, but the experience or anticipation of failure (strain) weakens those bonds. Still other individuals enter adolescence with strong conventional bonds, experience and anticipate success, and maintain strong conventional bonds throughout adolescence. Those individuals with low levels of conventional bonding are more likely to develop unconventional or delinquent bonding, especially in the peer group, and are more likely to engage in more frequent and more serious problem behavior than individuals with weaker unconventional bonds and stronger conventional bonds. Past tests of the integrated theory have generally confirmed these predictions for a variety of problem behaviors, but the theory has not been fully tested for sexual violence. The integrated theory was also augmented by items related to feminist theory.

## The Current Study

Applying the integrated theory in conjunction with a life-course perspective raises questions that have yet to be addressed in research on sexual violence. Overall, the goals of the present study were to examine data from the National Youth Survey Family Study (NYSFS; formerly the National Youth Survey) to assess the prevalence of sexual assault in a nationally-representative sample, to capitalize on the longitudinal, prospective design of the study to examine sexual assault from a life course perspective, and to examine the patterns of behavior among the NYSFS original respondents who were sexual assaulters in adolescence and young adulthood with the behaviors of their children at the same age. This sort of sample and analysis facilitates providing a larger context within which to view the results of clinical studies of institutionalized or adjudicated samples.

## Specific Objectives of the Study

- Objective 1: To study developmental patterns of initiation, continuity, and suspension of engagement in sexually assaultive behaviors in the original respondents.

- Objective 2: To study sequencing of initiation and suspension of sexual assault relative to other interpersonal violence, other delinquent and criminal behaviors, and potential risk factors for initiation and suspension, in the original respondent generation.

- Objective 3: To study the cormorbidity of sexual assault with other problem behaviors, specifically, other interpersonal violence, (a) developmentally, (b) intergenerationally, and (c) including comparisons of comorbidity developmentally and intergenerationally across sociodemographic subpopulations.

- Objective 4: To study the long-term trajectories of the original respondents as they age from adolescent and young adult sexual assaulters into middle adulthood.

- Objective 5: To examine the contexts in which the reported sexual assaults (both perpetration and victimization) occurred, including how often the perpetrators were under the influence of drugs and alcohol and the relationship of the perpetrators to the victims.

## Method

The current dataset includes all eleven waves of the National Youth Survey Family Study (NYSFS), a longitudinal, prospective study of multiple birth cohorts who were aged 11-17 when first interviewed in 1976. Additionally, the parents of these original respondents were interviewed in the eleventh wave of data collection. Finally, the original respondents' children who are aged eleven or older were invited to participate in two waves of data collection.

## Subjects

- *Original respondents*. We interviewed 1,263 original respondents in wave 10 and 1,171 in wave 11. Of the total number of original participants, this results in rates of 73% and 68% in waves 10 and 11, respectively.

- *Spouses/partners*. In Wave 11, we interviewed 843 spouses/partners, which was 87.7% of known spouses/partners.

- *Parents*. In Wave 11, we interviewed 872 parents, which was 70% of the known parents.

- *Offspring of the original respondents*. In Wave 11, we interviewed 801 children of the original respondents who were aged 11-17 and 453 children of the original respondents who were aged 18 and older. In wave 12, we interviewed only the children of the original respondents. In wave 12, we were able to interview 702 children aged 11 to 17 and 595 of the adult children. These reflect 72% and 74% of the known children in waves 11 and 12, respectively.

## Measurement

- *Sexual Assault and Victimization Items*. In all eleven waves of the study, original respondents were asked to answer the question, "In the last year, how many times have you had (or tried to have) sexual relations with someone against their will." A distinction is made between persons reporting any sexual assault and those reporting particularly serious sexual assaults (based upon number of assaults reported and details provided in follow-up questions that were asked from Waves 6-10. In Waves 6-11, to assess sexual victimization, subjects were asked, "How many times in the last year have you been sexually attacked, or raped (or an attempt made to do so)?" Follow-up questions were asked in Wave 6-10.

    - Parents, Youth Offspring, and Adult Offspring were also asked the stem questions in the Wave 11 interview, and the two Offspring groups were asked the stem question with follow-up questions in the Wave 12 interview.

- *Other Self-Reported Delinquency and Criminality*. Felony assault, felony theft, and minor delinquency are used as scales based on the aggregation of individual items. The format of the questions for each wave and for each type of respondent is identical to the format used for the sexual assault items.

- *Other Predictor Variables*. The following scales measure the constructs that will be used as predictor variables in predictive models. All of the scales have been demonstrated to be reliable and valid in past work with the NYS data set: Exposure to Delinquent Peers, Attitudes toward Deviance, Normlessness (Family and Peer), Attitudes toward Sexual Assault and Interpersonal Violence, Social Isolation/Loneliness (Family and Peer, Labeling/Emotional Problems (Family and Peer), Problem Alcohol Use, First Sexual Experience, Current Sexual Experience.

## Selected Results

Objective 1

- There was a clear increase in age of onset (of a perpetrator's first sexual assault) from age 11 (the youngest age in the study), peaking at age 16, and then decreasing until the last onset at age 25.

- By age 20, 88% of respondents who were going to become sexual assaulters had already done so.

- For males, the most common perpetrators (90%) the age of onset curve shows a relatively high and constant level from age 11 to 20, with the decline not beginning until after age 20.

- 5.7% of the sample reported ever committing a sexual assault, and 2.4% were categorized as serious sexual assaulters.

- Respondents who were non-white males of lower socioeconomic status (SES: lower, working, and middle class) were more likely to report committing a sexual assault than working and upper class white males, and their rates of offending tended to be more consistent across the life course from adolescence into adulthood.

- Evidence for continuity of sexual assault behavior was modest, but the effect that was found was enhanced by exposure to delinquent friends.

Objective 2

- Sexual assault was generally initiated last after felony assault, felony theft, minor delinquency, and marijuana use.

Objective 3

- Exposure to delinquent friends is the one, major, statistically significant predictor of sexual assault over the life course, particularly for males.

- Parent generation felony assault and original respondent generation sexual assault predicted some felony assault, felony theft, and robbery in the offspring generation.

Objective 4

- For the whole sample, adolescent sexual assault and felony theft, and normlessness in the family context predicted perpetrating sexual assault in young adulthood.

- For males only, significant adolescent predictors of young adult sexual assault perpetration included sexual assault, felony theft, family labeling as "sick," and marginally significant predictors included tolerant attitudes toward deviance, social isolation from the peer group, and peer labeling as non-conforming.

Objective 5

- Of the respondents who reported perpetrating a sexual assault, more than half (61%) reported drinking alcohol before committing the sexual assault. Only one fourth reported using drugs, but notably, they were also drinking.

- Of the sexual assault perpetrators in the original respondent generation, 19% reported succeeding in forcing sexual penetration while 81% reported that they tried but did not succeed in forcing sexual penetration.

- The most common specified means of forcing sexual assault were verbal persuasion/threats (44%) and hit/slapped/mild roughness (25%). Seven percent of attackers reported drugging or getting their victim drunk to facilitate the attack.

- When victims reported having been sexually attacked or raped, 49% of the original respondent generation reported forced sexual penetration, 15% reported serious injury, and 17% reported being threatened with a weapon.

- 77% of the original respondents who reported being sexually attacked or raped did not report the incident to the police. Their reasons for not reporting were that the police can't or won't help (37%), and that it was a private/personal matter (32%).

- In the offspring generation, however, 43% reported the attack to the police and 29% reported that the police had made an arrest in the case.

- The sexual assault victims in the offspring generation were much more likely to identify their attacker as an acquaintance (38%) compared with their parents, the original respondents, who reported being victims of acquaintances 8.3% of the time.

- Similarly, offspring generation offenders reported attacking friends 42% of the time while original respondent offenders reported attacking friends 23% of the time.

- While 17% of offspring victims reported being threatened with a weapon, none of the original respondent victims reported threats with a weapon.

## Discussion

Overall, results of this study contribute to our understanding of sexual violence by providing longitudinal and intergenerational information on sexual assaulters aged 11 to 43 who were part of a non-clinical, nationally-representative sample. Specifically, across the analyses of this study, we found that being male, being of a lower SES, prior engagement in sexual assault and other offenses, problem alcohol use, attitudes tolerant of deviance, exposure to delinquent peers, social isolation from the peer group, and labeling as sick and non-conforming were all related to engagement in sexual assault. Items assessing misogynistic attitudes toward sexual assault and the justifiability of interpersonal violence in adolescence were related to engagement in sexual assault in adolescence. Overall, exposure to delinquent peers (in addition to prior engagement in sexual assault) was one of the most significant predictors of sexual assault over the life course, but particularly so for males.

Not unexpectedly, the victims were overwhelmingly female, and the perpetrators were overwhelmingly male. In this nationally-representative sample, 5.7% of respondents reported ever committing a sexual assault, and 2.4% of the sample were categorized as serious sexual assaulters. Generally, involvement in sexual assault bears similarity to involvement in other forms of serious violent behavior, such as aggravated assault and robbery. Specifically, the sexual offenders in this representative sample were primarily male, and the onset of this form of serious violence typically occurred during adolescence and the shape of the age-specific hazard curve for any sexual assault looked quite similar to that for other serious violent offenses.

An important difference between sexual assault and other problem behavior is the maturation effect (the point at which new onset of this type of offense drops off dramatically), which was significantly later for serious sexual assaults than what has been shown using the current dataset for aggravated assaults, robberies or any sexual assault generally. While the hazard rate for these other forms of violence or any sexual assault began to drop dramatically after age 16 or 17, the decline for serious sexual assaults did not begin until age 21.

We found differences in the nature of sexual assault among older and younger perpetrators. When the reports of perpetrators aged 11-20 were compared with those aged 21 to 42, we found evidence that the older perpetrators, who were likely persistent offenders, used more serious methods to subdue their victims. Specifically, over three-quarters of the younger group reported using verbal persuasion/threats and hitting/slapping/mild roughness, whereas the older group reported in addition to these, beating/choking, overpowering physically, drugging or getting drunk, and threat of or use of weapon. Additionally, the younger group reported no stranger rapes, while the older group reported that 19% were sexual assaults on strangers.

Problem alcohol use was found to be related to sexual assault in two types of analysis: Problem alcohol use in adolescence marginally significantly predicted sexual assault in young adulthood, and in follow-up questions, 61.4% of respondents reported drinking before sexually assaulting their victims. In contrast, however, problem drug use in adolescence was not a significant predictor of sexual assault in young adulthood. Moreover, though 31% of respondents reporting both drinking and doing drugs before engaging in sexual assault (they are included in the 61.4%), none reported taking drugs exclusively.

No respondents who reported sexual assault perpetration reported having been arrested for the offense. This is not surprising given that when 22 victims of sexual assault in the original respondent generation were asked if they had reported the incident to the police, over three-quarters reported they did not, with the most commonly reported responses being that the police couldn't or wouldn't help and that it was a personal, private matter. In the offspring generation, however, 43% reported the attack to the police and 29% reported that the police had made an arrest in the case.

The model predicting suspension of sexual assault perpetration showed that exposure to delinquent peers, being male, being white, and simply getting older were all predictive of suspension of engagement in sexual assault. Generally and not surprisingly, when we sought variables related to continuity in sexual offending, prior engagement in sexual assault and greater exposure to delinquent peers predicted future engagement in sexual assault. When we examined sequencing of problem behaviors, sexual assault was generally initiated last after felony assault, felony theft, minor delinquency, and marijuana use, confirming that perpetrators begin with relatively minor offenses and gradually work their way toward more serious offenses like sexual assault.

Information collected while the youth were aged 11-20 accounted for about thirty-five percent of the variance in subsequent sexual assault when the youth were 21-30. The results for males only were the strongest: Sexual assault, felony theft, and family labeling as "sick" (e.g., messed up, needs help, are often upset, have a lot of personal problems) were statistically significant predictors, and attitudes tolerant of deviance, social isolation from the peer group, and peer labeling as the reverse of conforming (e.g., the opposite of :well liked, a good citizen, likely to succeed, and gets along well with other people) were marginally significant predictors.

We found that the ever-prevalence rates for the original respondents differed greatly from those of the other two generations studied. Fewer than one percent of the parents of the original respondents the of offspring of the original respondents reported ever engaging in sexually assaultive behavior. In the case of the grandparent generation, this is just as likely due to the long recall time period as to generational differences. In the case of the offspring generation, this could be due to increased awareness of the heinous nature of the offense which could potentially lead the younger generation to commit sexual assault less often. Alternatively, we cannot discount the possibility that a younger generation of sexual assaulters may know exactly the horrific nature of their crimes, but they may also be more wary than were their parents to disclose such personal information. Regardless of the reason, reports of violent crime among the offspring generation in general were significantly lower than reports from their parents 25 years earlier.

Though due to these low levels of sexual assault in the grandparent and offspring generations, we could not find a direct connection linking sexual assault across the generations, there is a direct connection of serious problem behaviors that include sexual assault across the generations. Felony assault in the parent generation predicted sexual assault in the offspring generation, two generations later, and original respondent sexual assault did predict felony assault, felony theft, and robbery, which are clearly problematic on their own, and which could potentially be precursors to later sexual assault.

# INTRODUCTION AND LITERATURE REVIEW

In the last twenty-five years, most segments of Western society, particularly law enforcement agencies and clinicians, have recognized the harmful effects of the sexual assault of women (e.g., Furby, Weinrott, & Blackshaw, 1989; Weinrott, 1996; Hanson & Bussiere, 1998). In particular, media focus on high profile sexual offenses has highlighted to the public the wide range of offender-victim relationships involved in sexual offending, including strangers, neighbors, and family members. These reports have fueled contentious public dialogue about the severity of convicted sex offenders' sentences, the degree to which the offenders may be rehabilitated, and where they might live when they are allowed to rejoin general society.

To address the issues of whether offenders may be rehabilitated and if they are ever "safe" to return to general society, or if, given enough time, they will always offend again, a great deal of clinical research has focused on the topic (e.g., Basile, 2003; Barbaree, Blanchard, & Langton, 2003; Smith & Monastersky, 1986; Worling & Curwen, 2000), and numerous treatment services have been developed for sexual offenders (e.g., Barbaree, Hudson, & Seto, 1993). Though research on clinical and adjudicated samples provides an important perspective on sexual assaulters, this perspective may be skewed as all of the subjects in these samples share a common trait – they have been caught. This is serious problem because prevalence data gathered via self -reports of perpetration and victimization have been compared to conviction rates, yielding the conclusion that the vast majority of sex offenders are never convicted and remain unidentified (Barbaree, et al., 1993). It is estimated that only 10-25 percent of sexual assaults are reported to the police (Ouimet, 1998, cited in Proulx, et al., 2000; Bachman, 1998), and that only about half of these result in a conviction. Arrest data reflect a variety of factors besides commission of offenses, including administrative policies, surveillance priorities, availability of witnesses, and even the luck of the offender (Kitsuse & Cicourel, 1963; Morris & Hawkins, 1970; Geerken, 1994; Elliott, 1995).

Most technical offenders – that is, most individuals who actually commit an act that an official statute has labeled as an offense – are never arrested. Of those who are arrested, a large percentage are not convicted despite having committed a statutory offense. Further, many of those who are convicted are allowed to plead guilty to a lesser charge and are therefore never charged with or convicted of a specific sex offense. As a result, individuals who are finally convicted represent only a relatively small percentage of those who commit a sex act that is illegal where they live (Ellis, 1979). The FBI believes that their own data on rape reflects the greatest underreporting of all the crimes they measure (Federal Bureau of Investigations, 1982, reported in Hudson & Ward, 1997). Koss (1992, reported in Hudson & Ward, 1997) reviewed independent survey studies, and estimates that the actual rate of rape is likely six to ten times the current estimates of the Bureau of Justice Statistics' National Crime Survey (NCS; now called the National Crime Victimization Survey, NCVS) estimates. Despite this knowledge, little self-report, prospective, longitudinal research has been conducted on the etiology and long-term trajectories of sex offenders within a normal, non-clinical, population (see Barbaree, et al., 1993; Weinrott, 1996).

Theoretical Perspectives

A wide variety of theoretical perspectives (including sociobiological, cognitive, psychoanalytical, psychosocial, social cognitive, affective, and feminist theories) have previously been used to attempt to describe and explain sexually deviant behaviors (ranging from paraphilias to rape). Attachment theory, developed by Bowlby (e.g., 1969) and refined by Ainsworth (e.g., Ainsworth, 1989) has been used to argue that the inability to form secure attachments to parents and then to peers may be a risk factor for criminality in general, and sex offenders in particular (Marshall et al., 1993). Freund's theory of courtship disorder (Freund, et al., 1983; Freund, et al., 1997; Freund & Watson, 1990; Freund, 1988; Freund and Seto, 1998) asserts that in human males, voyeurism, exhibitionism, frotteurism, and preferential rape are all expressions of a common underlying disturbance that manifests itself in different phases of courtship. According to this theory, voyeurism is a distortion of the finding phase, exhibitionism and obscene telephone calling are distortions of the affiliative phase, frotteurism is a distortion of the tactile phase, and rape is a distortion of the copulatory phase.

Freud's psychodynamic theory argues that all sexually deviant behaviors are theoretically and etiologically similar and that they represent a single type of pathology – specifically a form of character disorder (Lanyon, 1991) and may be motivated by aggression, sexuality, or sadism (Cohen, Garofolo, Boucher, & Seghorn, 1971). Erikson's psychosocial theory has also been used with mixed results to examine whether sex offenders would differ from their non-offending peers in the degree to which they had resolved their normal psychosocial crises (Miner & Dwyer, 1997). Social learning theory has been used to argue that learning begins prior to experience, and thus youth may observe a model and receive reinforcement for early imitative or reactive behaviors, which then lead to a patterned response of sexually abusive behavior (Ryan and Lane, 1997). Other social cognitive theories (see Geer, Estupinan, & Manguno-Mire, 2000, for a review; Vallient, Gauthier, Pottier, &Kosmyna, 2000; Dalton, Blain, & Bezier, 1998) have been used to examine sex offenders for deficits in emotion (particularly anger) regulation, social skills, moral reasoning, and the establishment and maintenance of social relationships.

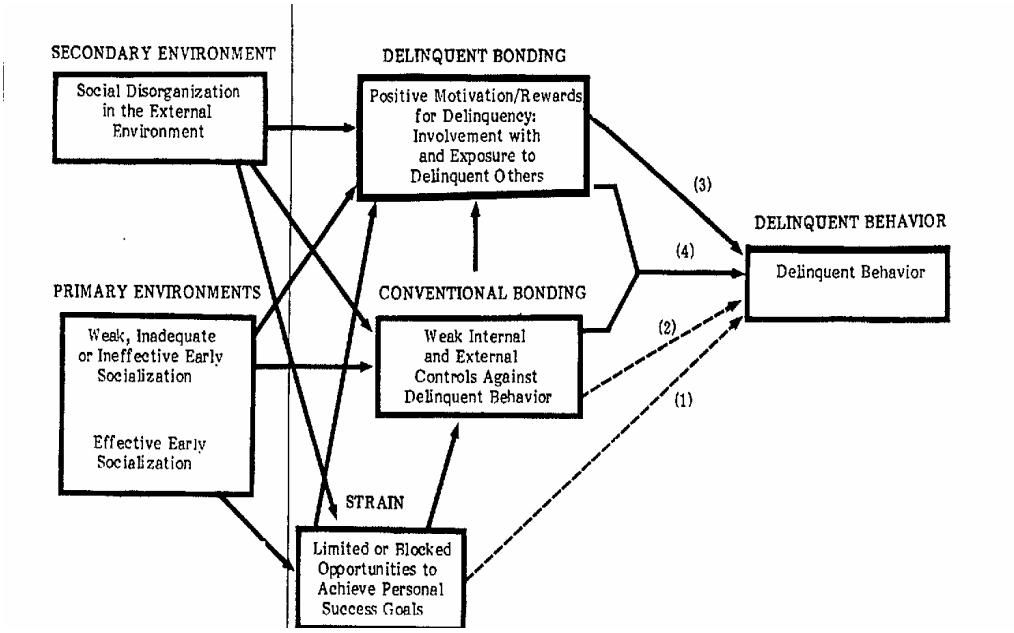
Cognitive distortions have also been examined among sexual offenders (Abel, et al., 1986; Scully, 1988; Prentky, et al., 1989; Marshall & Moulden, 2001; Marshall, 2003). Abel et al., (1986) noted that though there was no evidence that the offenders' cognitive distortions were responsible for their behavior, instead the distortions developed into rationalizations that helped to explain and justify their deviant behaviors, ranging from exhibitionism and frottage to rape (e.g., "If I touch a woman on a bus and she does not yell or scream, it means she is really enjoying the experience and wants me to continue to touch her," "If a woman goes to a bar, it means she wants to have intercourse with any man there"). Scully connected sexual offenders' cognitive distortions to reflexive role taking and offenders' self-perceptions. When asked how their victims would describe them, "deniers descriptions were consistent with justifications they used to neutralize their behavior" (Scully, 1988). Prentky et al. (1989), through their study of the extent of violent fantasies in men having committed serial versus single sexual homicides, found that 86% of multiple sexual murderers reported having violent fantasies, while only 23% of single murderers reported having those types of fantasies. They concluded that these fantasies, or cognitive distortions, are an important "presumptive drive mechanism for sexual sadism and sexual homicide." In another study of the cognitive distortions of sexual offenders, Marshall and

Moulden (2001) found a negative relationship between empathy and hostility toward women in rapists, especially when compared to non-sexual offenders and victims.

Family theories have also been used to examine the behavior of sexual offenders (see Ryan and Lane, 1997; see also Craissati, et al., 2002). Specifically, hypothesized characteristics of families of sexually abusive youth are emotional impoverishment, lack of appropriate affect, distorted attachments, and a history of disruptions in care and function. Ryan and Lane (1997) further presented typologies of abusive youth's families, including exploitative, rigid/enmeshed, chaotic/disengaged, the "perfect" family (i.e., family initially appears functional, though this is dispelled through deeper analysis), and the previously adequate family (i.e., a previously functional family that becomes dysfunctional because of new dynamics). Craissati and colleagues (2002) found that the affectionless control style of parenting, in which parenting is inconsistent, indifferent, and/or neglectful, was the most common parental bonding style among sex offenders. Romito et al. (2001) took a different approach and found that violence by at least one parent toward a child increased that child's risk of being involved in an abusive relationship with an intimate partner later on in life.

Early feminist writings on sexual violence in the 1970s were primarily concerned with demystifying rape and with identifying prominent misconceptions about rape, and this work was used to inspire much psychological research on the topic. This research corroborated earlier feminist research, finding that rape attitudes are related to attitudes toward women, attitudes toward violence, and exploitative attitudes toward male-female relationships (Ward, 1995). Current feminist perspectives used in criminological research can be broken down into three major categories: (1) Feminist empiricism (the most conservative, which accepts the value of the scientific method and seems to correct "bad science" that arises from ignoring women or misrepresenting their experiences; (2) Feminist standpoint theories (which go beyond critiquing empirical practice to challenge mainstream criminology's empirical assumptions and assumes that the perspective of the researcher influences what is known); and (3) Feminist postmodernism (an outgrowth of positivism, and which questions whether knowledge or truth are actually "knowable," reject the idea that there is a universal definition of justice, emphasize alternative discourses, and examine the effects of language and symbolic representation) (Flavin, 2001). Regardless of the theoretical perspective taken, "at the core of feminist views on sexual assault is the belief that men assault women (both sexually and physically) because they have opportunities and support for doing so, or because doing so is an extension of men's violence in general, or because men gain 'masculinity points' for such displays" (Mustaine & Tewksbury, 2002). Thus, sexual assault is a way for one class of people (i.e., men) to instill fear and demonstrate control over a second class of people (i.e., women). This perspective has been borne out in empirical research on sexual assault and the motivation of the perpetrators (Mustaine & Tewksbury, 2002). Additional feminist discussion has revolved around language and individuals' interpretations of the meaning of the phrase, "no means no" (Philadelphoff-Puren, 2004). However, beyond trying to advance our understanding of sexual assault, feminist theory also impacts perspectives on the justice system. That is, there is a great deal of frustration and dissatisfaction with the perceived "phallogocentrism" of the law and the narrow regime of truths that strain and invalidate women's knowledge, which has escalated to the point where some have suggested that women by-pass the legal system altogether and take matters public in a different way, such as outing rapists on the internet (Carrington & Watson, 1996).

Figure 1: The Integrated Theory




None of these theories alone, however, can adequately explain sexual violence. The theoretical framework used for this study relies primarily on the integrated theory of Elliott et al. (1979; 1985; 1989), which combines elements of social disorganization, strain, social control, and social learning theories, as well as some feminist theory. According to the integrated theory, diagrammed in Figure 1, taken from Elliott, et al. (1989), social and demographic background variables (primary and secondary environment) influence perceived and objective opportunities to attain academic, occupational, and other goals, and may also be associated with differences in socialization. As a result, some individuals enter adolescence with weak bonds to social institutions (external controls) and weak personal beliefs or commitment to conventional, conforming or law abiding behavior (internal controls). Other individuals, particularly from disadvantaged social backgrounds may enter adolescence with strong bonds to conventional society, but the experience or anticipation of failure (strain) attenuates those bonds. Still other individuals enter adolescence with strong conventional bonds, experience and anticipate success, and maintain strong conventional bonds throughout adolescence. With weak conventional bonding, individuals become more susceptible to the development of external bonds to unconventional, deviant, or delinquent peers. To the extent that a person associates with others who engage in problem behavior (including interpersonal violence, problem and illicit drug use, theft, violence, and other illegal behavior), one has more opportunity to learn (i.e., learning theory) about opportunities for problem behavior, ways of engaging in (and getting away with) problem behavior, and reasons or rationalizations for problem behavior. As a result, individuals with low levels of conventional bonding are more likely to develop unconventional or delinquent bonding, especially in the peer group, and as a result of this unconventional bonding, possibly in interaction with conventional bonding (paths 3 and 4 in Figure 1), are more likely to engage in more frequent and more serious problem behavior than individuals with weaker unconventional bonds and stronger conventional bonds. The influences of strain and social control thus operate, according to the theory, primarily indirectly, through their influences on peer group bonding,

although for some specific types of problem behavior (for example mental health problems) the influences of strain and conventional bonding may be more direct (paths 1 and 2).

Tests of the integrated theory have generally confirmed these predictions (Elliott, et al., 1985; Elliott, et al., 1989; Menard & Elliott, 1990; Menard & Elliott, 1994; Menard & Huizinga, 1994; Roitberg & Menard, 1995) for a variety of problem behaviors. An exception is that gender appears to influence illegal behaviors (but not alcohol use, illicit drug use, or mental health problems) directly. Males have higher rates of illegal behavior than females, but there is little or no apparent difference in the etiology of illegal behavior for males and females. The present study uses the integrated theory as the primary theoretical framework; however, the integrated theory is augmented with scales assessing perpetrators' attitudes toward sexual violence and interpersonal violence.

Following is a literature review on classifications of sexual offenders, a discussion of identifying offenders, and of recidivism.

Sex Offending: Classifications

The study of sexual offending is exceptionally complex due to the heterogeneity of behaviors involved (e.g., Becker, 1998; Brown & Kolko, 1998; Rightland & Welch, 2001; Murphy, Haynes, & Page, 1992). Sexual offenses range from relatively minor instances of unwanted gestures to more serious sexual assaults that may involve physical violence.[1] The meaning and seriousness of the behaviors also range with the ages of the perpetrators and victims. The perpetrators also vary from those who exhibit a few relatively minor anomalous behaviors, to those with sadistic fantasies and marked delusions (Hudson & Ward, 1997). Rarely do perpetrators fit neatly into one offender category (e.g., exhibitionism or pedophilia) without overlap into other categories (e.g., sexual assault) (Abel & Rouleau, 1990). As a result of these complexities, we provide brief descriptions of the different classifications of sexual offenses.

*Paraphilias/Hands-Off Offenses.* Sexual deviation varies from highly private sexual behaviors generally conducted outside of public awareness (e.g., fetishes) to sexual behaviors that occur in public but are considered nonthreatening to others (e.g., transvestitism) to sexual behaviors that are considered damaging to victims because they are carried out against the victim's will (e.g., forcible rape; Abel, Rouleau & Cunningham-Rather, 1986). Paraphilic behaviors are defined by mental health professionals as anomalous sexual behaviors that are obsessive and compulsive, and that interfere with relationships and intimacy. As most of the paraphilias do not involve direct contact between the perpetrator and a victim, these offenses are referred to as "hands-off" offenses.[2]

[1] The classifications used in this work are based upon the cultural norms of Western nations, specifically those of the United States. Because of cultural differences in definitions of family roles, coercion, consent, secrecy, and norms about age discrepancies, cultural constructions of child abuse, incest, and rape differ (Lefley, 1999).

[2] The *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* of the American Psychiatric Association (1994) defines the paraphilias as: "recurrent, intense sexually arousing fantasies, sexual urges, or behaviors generally involving: (1) nonhuman objects; (2) the suffering or humiliation of oneself or one's partner; or (3) children or other non-consenting persons…Additionally, the behavior, sexual urges, or fantasies cause clinically significant distress in social, occupational, or other important areas of functioning" (pp. 522-523).

Those paraphilias discussed as the most common in the DMS-IV include: (1) *exhibitionism* (sexual excitement associated with exposing one's genitals in public); (2) *voyeurism* (sexual excitement by watching an unsuspecting person); (3) *frotteurism* (sexual excitement from touching or fondling an unsuspecting person); (4) *pedophilia* (sexual attraction to pre-pubescent children); (5) *sexual masochism* (sexual excitement from being the recipient of the threat or administration of pain); (6) *sexual sadism* (sexual excitement from threatening or administration of pain); and (7) *tranvestic fetishism* (sexual excitement from wearing the clothing of the opposite sex). Other paraphilias include *telephone scatalogia* (obscene telephone calling), *fetishism* (sexual excitement from the use of an inanimate object or a specific part of the body), and *preferential rape* (a preference for coercive sexual activity among non-sadists, defined by lower relative importance of physical pain, injury, and suffering) (Freund, 1988; Freund and Seto, 1998).

*Sexually Abusive Behavior: Rape/Sexual Assault.* Sexually abusive behavior is "any sexual interaction with person(s) of any age that is perpetrated (1) against the victim's will; (2) without consent; or (3) in an aggressive, exploitative, manipulative, or threatening manner" (Ryan and Lane, 1997). The behaviors are heterogeneous, as they may be characterized by one or more of a wide array of behaviors or multiple paraphilias.

Rape is typically defined both by the nature of the sexual assault itself and by the age of the victim (most commonly set by legal statute at 16 years of age; Hudson & Ward, 1997). Most states and the federal code have dropped the term *rape* and substituted *aggravated sexual assault, abusive sexual assault, etc.* (Janus, 2003). Similar gradation was already in use for other violent offenses, allowing for aggravating offenses such as use of a weapon. Most sexual assault statutes now focus on the force or threat of force by the offender and have dropped the necessity of having corroborating witnesses (Bachman, 1998).

Rape may include any sexual act perpetrated with violence or by force, although legal definitions often include penetration: oral, anal, or vaginal and digital, penile, or objectile (Ryan and Lane, 1997). Rape, as defined by the National Crime Victimization Survey (NCVS), is:

> Forced sexual intercourse and includes both psychological coercion as well as physical force. Forced sexual intercourse means vaginal, anal, or oral penetration by the offender(s). This category also includes incidents where the penetration is from a foreign object such as a bottle (Bachman & Saltzman, 1995).

Sexual assault, as defined by the NCVS, includes a wide range of victimizations that generally involve (unwanted) sexual contact but not sexual intercourse. Rape and other sexual assault victimizations, as measured by the NCVS, can include male as well as female victims (Bachman & Saltzman, 1995).

Offense and Recidivism

Ideally, it would be possible to identify all sexual offenders in such a way that all of those who had committed sex offenses were known, and that all of their hands-on and hands-off offenses were known. However, this is not possible given the limitations of current instruments

and methods, and thus we are left with imperfect measures of identifying sexual offenders and those who recidivate.

There are several ways to identify sexual offenders in order to assess the prevalence and frequency of sexual offences. First, offenders can be identified because they have been arrested and/or convicted for an offense ranging from voyeurism or exhibitionism to sexual assault. They may also be identified through therapy sessions of their own or of their victims. These are the only ways that specifically identified sex offenders are likely to come to the attention of legal or mental health authorities.

Prevalence rates and individual offending rates are best computed from data that do not target sexual assaulters via arrest or treatment, but via confidential surveys of representative samples of the population. These surveys (e.g., National Crime Victimization Study) may use self-report questionnaires of victimization, which gather information on offenses and offenders from the perspective of victims. Still other offenders are identified via self-report measures of engagement in sexual offenses; one notable survey of this variety is the National Youth Survey (Elliott et al., 1989), from which the data for the analyses that follow are drawn. The National Youth Survey is the longest prospective, self-report survey of crime and delinquency currently available.

Sex offender recidivism has been defined in several ways by the legal, law enforcement, and mental health research communities. First, it may be a reconviction for the same type of sexual aggression for which they initially came to the attention of the authorities. Second, it may be a reconviction for any type of sexual aggression or any type of sexual offense. Third, it may be a reconviction for any violent offense. Fourth, it may be a reconviction for any criminal offense. Moreover, it may not involve conviction at all, but rather it may be for arrest for any of the above offenses, regardless of whether or not a conviction resulted. Finally, it may not involve the legal authorities at all, but rather may be defined simply as the commission of any of the above offenses. For example, Fehrenbach, Smith, Monastersky, and Deisher (1986) described a study of 305 adolescent sexual offenders who had been referred to a clinic for hands-on offenses such as rape and indecent liberties, and hands-off offenses such as exhibitionism, voyeurism, obscene phone calls, and other inappropriate acts. In 57.6% of cases, the study found substantial evidence that the offender had committed at least one sexual offense prior to the referral offense. Of those with a prior sexual offense, 23% had committed both the same type and a different type of sexual offense. Only 5% of repeat offenders reportedly committed only a completely different type of sexual offense.

## The Current Study: The Dataset

The current dataset includes all eleven waves of the National Youth Survey (NYS; now referred to as the National Youth Survey Family Study; NYSFS), a longitudinal, prospective study of multiple birth cohorts who were aged 11-17 when first examined in 1976. Additionally, the parents and spouses of these original respondents were invited to participate in separate interviews. Finally, all of the original respondents' children who are aged eleven or older were invited to participate in two waves of data collection. Previous reports were limited to fewer

waves of the study (e.g., Ageton, 1983 used the first five waves, and Grotpeter & Elliott, 2002 presented preliminary analyses from the first nine waves).

Previous Work on Sexual Assault with the National Youth Dataset

Previous analysis of the developmental progression of serious violent offenses (aggravated assault, robbery and rape) in the first eight waves of the NYS showed that aggravated assault preceded robbery in 85 percent of the cases, and that robbery preceded rape in 72 percent of cases. In that dataset, rape appeared to be the end-point in the violence continuum (Elliott, 1993). Serious violent offenders are very versatile offenders, that is, they do not specialize in violent crime (Elliott, 1995). Leading up to the time in which an offender committed his first serious violent offense (SVO), there was a general tendency for the variety of minor offenses to increase in the year prior to the onset of a SVO, but annual variety scores remained relatively constant after onset. Second, the frequency of minor offending tripled over the 3 year period prior to onset of SVO, and this trend continued after the SVO onset, although the increase was not as dramatic. NYS data reveal that models predicting minor delinquency suggest a common etiology for minor delinquency, alcohol use, and serious violence.

In 1983, Ageton published *Sexual Assault among Adolescents*, which examined the first five years of data from the National Youth Survey. The youth in the Sexual Abuse Project (SAP), were aged 11-17 in the first time period examined, 13-19 in the second time period examined (wave three of the NYS), and were fifteen through twenty-one years of age in the fifth wave, the third year of data examined. Specifically, potential sexual assaulters were broadly identified as those who reported having: "(1) Had or tried to have sexual relations with someone against their will; (2) Pressured or pushed someone such as a date or friend to do more sexually than they wanted to do; or (3) Physically hurt or threatened to hurt someone to get them to have sex with you?"

Results from Ageton's study indicated that in each year from 1978 to 1980, the prevalence of female sexual assault victimization was five to eleven percent (Ageton, 1983). There were no significant race or social-class differences, and no consistent age trends emerged. The prevalence rates were dramatically higher than those prevalence rates obtained from official arrest data (Uniform Crime Reports) and self reports of victimization from another nationally-representative sample (National Crime Victimization Survey; NCVS; formerly referred to as the National Crime Survey; NCS). The latter source, despite also being a self-report measure and thus potentially expected to yield prevalence rates similar to those in this project, asked respondents only about forcible rape, not more broadly-defined sexual assaults as did the SAP. Also, at that time, the NCVS asked about sexual assault only as a follow-up question to a broader screening question that asked whether the respondent had been assaulted. If the respondent did not report any (general) assault, the question about (specifically) sexual assault was not asked (Eigenberg, 1990). The NCVS was subsequently redesigned to address this flaw, and now asks a screening question, not just a follow-up, about whether the respondent has been sexually assaulted (U.S. Department of Justice, 1989). Most of the sexual assaults reported to be committed by adolescent males in this sample were determined by Ageton (1983) to be spontaneous events that occurred in the context of a date. The victims were typically girlfriends or dates of approximately the same age as the offender, and fewer than fifteen percent of the

victims in any one year were unknown to the offender. Most of the assaults occurred in the offenders' or victims' houses. The offenders reported viewing their own sexual excitement and the behavior and physical appearance of the victim as instrumental in causing the assault. Many of the offenders reported they had been drinking or taking drugs prior to the assault, and the primary type of force or pressure used was verbal.

When offenders were compared with non offender controls in order to examine predictors of engaging in later sexual assault, results indicated that both groups were very similar demographically, the offenders were more likely to be from families that experienced significantly more crises such as divorce and extended unemployment. Additionally, offenders were found to be more estranged from their parents and less attached to school than were the controls. However, the strongest findings were that the sexual assault offenders had significantly higher exposure to delinquent peers and received support from these friends for unconventional, delinquent acts, including sexual aggression. The offenders themselves were also more involved in general delinquency than were the non-sexually assaulting controls. Overall, the data suggest that the explanation for sexual assault is not particularly different from that for other types of illegal behavior committed by adolescents. Specifically, sexual assaulters tend to engage in a pattern of behaviors more similar to generally delinquent peers than they do to peers who engage primarily in hands-off sexual offenses (i.e., paraphilias, such as exhibitionism or voyeurism (Grotpeter & Elliott, 2002).

## The Current Study: Research Goals and Objectives

Applying the integrated theory in conjunction with a life-course perspective raises questions that have yet to be addressed in research on sexual violence, and which are only beginning to be addressed for some other problem behaviors. In sum, the goals of the present study were to examine the NYSFS data to assess the prevalence of sexual assault and victimization in a nationally-representative sample, to capitalize on the longitudinal, prospective design of the study to examine sexual assault from a life course perspective, and to examine the patterns of behavior among the NYSFS original respondents who were sexual assaulters in adolescence and young adulthood with the behaviors of their children at the same age. This sort of sample and analysis facilitates providing a larger context within which to view the results of clinical studies of institutionalized or adjudicated samples.

*Objective 1: To study developmental patterns of initiation, continuity, and suspension of engagement in sexually assaultive behaviors in the original respondents.*

Past research with the first nine waves of NYS data (Elliott, 1994; Grotpeter & Elliott, 2002) has yielded preliminary information on onset and continuity in sexually assaultive behaviors. Specifically, results show a clear increase in onset from age 11 (the earliest age of youth in the study), peaking at age 16, and then decreasing by age 26. By the time the respondents in the sample reached age 20, most (88%) of those who were going to become sexual assaulters during the period of the study had already done so. However, most of the subjects were in their 20s at the time of the last survey (Wave 9), and it is currently unknown if those subjects would continue to offend into their 30s and older. Additionally, with only data through Wave 9, it was impossible to detect sexual assaulters who began their careers after the age of 33. The two new waves of data allow us to begin to answer to these questions. The

available longitudinal evidence does not currently indicate sexual offenders continue their offending career into middle adulthood, despite the common perception that sexual offenders continue to offend for life. It will be important to examine that hypothesis, and to adjust the state of knowledge on age of onset, continuation, and suspension of sexual offending accordingly.

*Objective 2: To study sequencing of initiation and suspension of sexual assault relative to other interpersonal violence, other delinquent and criminal behaviors, and potential risk factors for initiation and suspension, in the original respondent generation.*

Past work with the NYS data, as stated earlier, has shown what was known about the sequencing of sexual violence in the context of other violent and delinquent behaviors. The addition of two new waves of data a decade later should aid in providing clearer results on the sequencing of problem behaviors. Additionally, if any new sexual offenders were to be identified, we would have nine waves of predictive data for them, including information on hands-off offenses, which could not be used as a predictors in earlier models due to the collection of that data only in waves six through nine. It is also important to make a distinction between predictors for initiation and predictors for continuity versus suspension (Nagin & Farrington, 1992; Smith & Brame, 1994), and we will examine other potential predictor variables, such as exposure to delinquent peers, attitudes favorable toward deviant behavior, social isolation, and normlessness. In addition to these previously used predictor variables, we will include variables available but unanalyzed from prior waves on satisfaction with current sexual experiences, and the context in which they had their first sexual experience, and the degree to which they looked back on that experience as positive or negative.

*Objective 3: To study the cormorbidity of sexual assault with other problem behaviors, specifically, other interpersonal violence, (a) developmentally, (b) intergenerationally, and (c) including comparisons of comorbidity developmentally and intergenerationally across sociodemographic subpopulations.*

A life course developmental perspective suggests that there may be changes in comorbidities between problem behaviors and influences on problem behaviors over the life course (Menard, et al., 1993; Menard, 1995; Nagin & Farrington, 1992; Sim & Vuchinich, 1996). The prospective and retrospective reports of the original respondents, along with the retrospective accounts of their spouses and parents will be used in conjunction with the prospective and retrospective accounts of their children to examine sexual assault in the context of other criminal and interpersonal violence from a multigenerational perspective. Specifically, we asked the children of the original respondents the identical questions we asked the original respondents themselves at the same age, that is age 11 and older. We will make these pure intergenerational comparisons, and we will also examine the child generation in the context of the self-reported sexually assaultive behaviors of both parents and grandparents (when available).

*Objective 4: To study the long-term trajectories of the original respondents as they age from adolescent and young adult sexual assaulters into middle adulthood.*

Related to the Objective 1, we will study the long-term outcomes for those adolescent and young adult sexual assaulters, that is, the degree to which they continue to engage in a criminal lifestyle, as previous analyses suggest, or if they follow a different developmental

trajectory to engage in a conventional lifestyle. Available attitudinal and behavior variables will be used as predictors to model the long-term outcomes.

*Objective 5: To examine the contexts in which the reported sexual assaults (both perpetration and victimization) occurred, including how often the perpetrators were under the influence of drugs and alcohol and the relationship of the perpetrators to the victims.*

In the sixth through tenth waves of responses from the original respondents, and in the second wave of responses from their children, the NYSFS asked respondents follow-up questions to gain insight into the context of the most recent sexual assaults reported. Included in these items was whether or not the respondent had been drinking or using drugs before the incident, and the respondent's relationship to the victim. These items will be used to provide descriptive information on the relationship between the perpetrators and their victims, and also on the involvement of drugs and alcohol in the reported incidents.

Additionally, in the eighth and ninth waves of data collected, respondents were specifically asked about pressuring or forcing a date or a spouse/partner to have intercourse, and also if a date or a spouse/partner had forced them to have intercourse. It is anticipated that the number of respondents who endorse these items may be low because these items were only asked in two later waves of data collection (i.e., when the respondents were older and past the age when most sexual assaults were reported), but at a minimum these will be useful for descriptive analyses.

In sum, the strengths in our present knowledge about sexual assault include knowledge about: (a) the prevalence of sexual assault among adolescents and young adults in the national population; (b) the sequencing of sexual assault relative to other forms of interpersonal violence among a nationally-representative cohort that was adolescent-aged in 1976; and (c) cross-sectional comorbidity of sexual assault with other delinquent behaviors and hands-off sexual offenses.

Areas in which our knowledge may be substantially improved by the results of this study include: (1) developmental patterns among sexual assaulters, with attention to sociodemographic differences in initiation, continuation, and suspension; (2) comparisons of patterns of comorbidity across the life course for present-day adults, and across generations between present-day adults and their children, to see whether patterns of comorbidity are relatively stable or changing across the life course and across generations; (3) testing theoretically informed models of sexual assault that incorporate risk factors for sexual assault in correct temporal order and examine whether the influences on sexual assault are consistent developmentally, across the life course, and intergenerationally, over time, or whether the current generation of adolescents and young adults has a different configuration of influences on sexual assault than their parents; (4) long-term trajectories of adolescent and young adult sexual offenders, that is, the degree to which they continue to offend in middle adulthood or they suspend those behaviors; and (5) the context in which sexual assaults occur, such as the relationship between the perpetrator and victim, and whether the perpetrator was using alcohol or drugs, based on the confidential self-reports of a nationally-representative sample.

# METHOD

## Study Design and Samples

### Original Respondents

The NYSFS study design currently involves a multiple cohort sequential design (Baltes, et al., 1979) with eleven waves of data collected over a 26-year period. The survey sample is based on a probability sample of households in the continental United States selected using a multistage, cluster sampling design. The sample was drawn in late 1976 and contained 2,360 eligible youth respondents aged 11-17 at the time of the initial interview. Of these, 1,725 (73%) agreed to participate in the study, signed informed consents and completed interviews in the initial survey. An age, sex, and race comparison between nonparticipating eligible youth and participating youth indicates that the loss rate from any particular age, sex, or racial group appears to be proportional to that group's representation in the population in 1976. Further, with respect to these characteristics, participating youth appear to be representative of the total 11 through 17 year old youth population in the United States as established by the U.S. Census Bureau in 1976.

The original sample was: 47% male and 53% female; 0.5% American Indian, 1.0% Asian/Pacific Islander, 15.1% black, and 4.4% Hispanic. The initial interviews were conducted in a face-to-face format in a private setting, usually in the respondent's home. Later waves of the survey were conducted worldwide, including in prisons and jails, usually in a private face-to-face setting, though some interviews in later waves and all Wave 9 (1993) interviews were conducted by telephone following strict privacy procedures. Formal examination of in-person and telephone interviews for the NYS sample has indicated no effects of interview modality.

*Sample Retention.* The NYS Staff attempted to re-contact and interview each of the original 1,725 respondents in each of the first four (annual) follow-up surveys. Overall completion rates over the first three waves were above 94 percent, 87% for wave 5. At wave 5, NYS researchers also attempted to identify, contact, and interview the youth who had refused at the time of the initial interview. This was done because most of the initial refusals were "parent refusals" and it was hoped that as the youth themselves reached the age of majority or became older teenagers, the parents and the youth would be willing to participate in the survey. This effort resulted in identifying all original "refusal households", documenting that the same family lived in the household continuously since 1976, and then obtaining consents and interviews with the eligible youth in such households. The identified households contained 193 youth who would have been eligible in 1976, of which 131 agreed to participate in the survey and completed wave 5 interview schedules. This "initial loss sample" was also interviewed in waves 6 and 8. Although not a probability sample of refusals, this sample provides information about survey effects and is, in fact, part of the originally selected sample.

A comparison of participants and non-participants in each survey after wave 1 revealed some selective loss by sex (W4), race (W2 and W3), class (W2 and W3), age (W5), and residence (W2 and W3). There did not appear to be any selective loss relative to self-reported levels of delinquency. In fact, the direction of the observed differences indicates that those lost tended to be slightly less delinquent than those participating each year. While the comparison of

participants and non-participants revealed some small but significant differences, a comparison of those participating in each survey with the total sample on the first survey revealed no significant differences by age, race, class, place of residence, or level of delinquency. There was also no significant difference in W1-W9 by gender; however, there was a slight disproportionate loss of males in Wave 10 (48). The selective loss has thus been very small and has not had a major influence on the underlying distribution on these variables (as established on the first survey). It appears that the representativeness of the sample with respect to these variables has not been affected in any serious way by respondent loss. Between waves 5 and 6 (1984), we identified 15 "hard refusals" and removed them from our active sample list. For wave 6, the active sample was thus 1710. During waves 6 and 7, we identified 14 subjects who were deceased, further reducing our active sample to 1696. During wave 8, we identified another 6 subjects who had died, reducing the sample to 1690. At the start of wave 9, we removed from the sample 103 cases we had been unable to locate or who had refused to participate for several waves, although not asking to be dropped from the study. This provides an active sample list of 1587. At the end of wave 9, an additional 4 subjects had died and an additional 14 cases were identified whom we had not found for several waves, leaving an active sample of 1569 for the start of wave 10. Based on the original sample size of 1725, completion rates were 87% for wave 6, 80% for wave 7, 83% for wave 8, and 78% for wave 9. Data for waves 10 and 11 were collected in 2002-2003. In wave 10 it was found that an additional 19 subjects had died, resulting in an active sample size of 1550 and 81% of these remaining respondents (73% of the original sample) were interviewed in W10. Lower rates of completion in waves 7 and 9 reflect budgetary constraints that limited the ability to either mount a full field effort from the beginning of the study (wave 7) or to conduct face-to-face interviews in situations where respondents lacked access to a telephone or were willing to be interviewed in person but not by telephone (wave 9).

*Attrition rates.* Compared to other major longitudinal studies, NYSFS attrition rates appear quite reasonable. With regard to participation rates, de Leeuw & van der Zouwen (1988) indicate that average participation rates are approximately 75% for face-to-face and 69% for telephone surveys, and de Leeuw and Heer (2002) and Groves et al. (2004) offer evidence that there have been substantial increases over time in rates of nonresponse and refusal to participate in surveys, both in the United States and internationally. With regard to attrition, Bachman, et al., (1971) report a 27 percent attrition rate over 4 years in the Youth in Transition Project; Cordray and Polk (1983) describe 4 studies with attrition rates of 22% to 55% over 12-15 years, and Newcomb and Bentler (1988) report a 55 percent attrition rate in an 8 year study. Moreover, there is evidence that the departure from randomness of the attrition in the NYSFS has little or no impact on substantive findings (Brame & Paternoster, 2003; Elliott, et al., 1989; Jang, 1999; Lackey, 2003; Menard & Elliott, 1993).

*Wave 10 and 11 sample demographic characteristics.* Of the 1,550 members of the active sample, we were able to interview 1,263 or 81% in wave 10 and 1,171 or 76% in wave 11. Of the total number of original participants, this results in rates of 73% and 68% in waves 10 and 11, respectively. For wave 10, the 1,263 participants included 620 males (49.1%) and 643 females (50.9%). At wave 11, the 1,171 participants included 569 males (48.6%) and 602 females (51.4%). Regarding ethnicity, at wave 10, 79.7% of the sample identified themselves as Anglo/White, 1.0% American Indian, 0.6% Asian/Pacific Islander, 13.6% African American,

and 4.0% Hispanic/Latino. At wave 11, the sample was 79.9% Anglo/White, 0.8% American Indian, 0.7% Asian/Pacific Islander, 13.6% African American, and 3.7% Hispanic/Latino. The age range at wave 10 was 35 to 44, with an average age of 39.12, and the age range at wave 11 was 36 to 45, with an average age of 40.31.

Spouse/Partner, Parent, and Child Samples

In addition to the original NYSFS respondents, the ongoing data collection includes interviews with the current "spousal partners" (either married or living together), the children of the original respondents aged 11 and older in 2003, and the parents of the original respondents. We originally projected that there would be 1,176 spouses, 1,643 parents, and 1,904 children of the original respondents. After conducting the original respondent interviews at wave 10, these numbers were revised to reflect the following known family members: 961 spouses (82% of the projected total), 1,245 parents (78% of the projected total), and 1,752 children (92% of the projected total).

At Wave 11, we interviewed 843 spouses/partners, which was 87.7% of known spouses/partners and 71.7% of originally projected spouses/partners. Of the 843, 389 were male (46.1%) and 454 were female (53.9%). Ethnicity reports indicated 81.4% Anglo/White, 0.5% American Indian, 1.2% Asian, 12.1% African American, and 3.4% Hispanic/Latino. The spouses' ages ranged from 20 to 62, with an average age of 40.8.

Also at Wave 11, we interviewed 872 parents, which was 70% of the known parents and 53% of the projected number of parents. Of the 872, 335 were male (38.5%) and 535 were female (61.5%). Ethnicity reports indicated 86.6% Anglo/White, 0.5% American Indian, 0.3% Asian, 8.6% African American, and 2.5% Hispanic/Latino. The parents' ages ranged from 49 to 88 with an average age of 66.7. Note that the parents interviewed could have been the stepparents of the original respondents.

Finally, at Wave 11, we interviewed 801 children of the original respondents who were aged 11-17 and 453 children of the original respondents who were aged 18 and older. These 1254 children of the original respondents reflect 71.6% of the known children and 65.8% of the projected number of children.

Of the 801 adolescent children, 402 were male (50.2%) and 399 were female (49.8%). Ethnicity reports indicated that 77.9% were Anglo/White, 1.3% were American Indian, 0.3% were Asian, 13.6% were African American, and 4.2% were Hispanic/Latino. Ages ranged from 11-18 with an average age of 14.2. In a small number of cases (3), 18 year old children were inadvertently given the youth interview.

Of the 453 adult children, 202 were male (44.6%) and 251 were female (55.4%). Ethnicity reports indicated that 70.9% were Anglo/White, 0.7% were American Indian, 21.9% were African American, and 7.1% were Hispanic/Latino. Ages ranged from 17 to 42 with an average age of 20.8. In a small number of cases (2), 17 year old children were inadvertently given the adult interview. The children interviewed included stepchildren of the original respondents.

In wave 12, we interviewed only the children of the original respondents. One adult child died between wave 11 and wave 12. In wave 12, we were able to interview 702 children aged 11 to 17 and 595 of the adult children. These 1,297 children are 74% of the known children and 68% of the originally projected number of children.

Of the 702 adolescent children, 363 were male (51.7%) and 339 were female (48.3%). Ethnicity reports indicated that 77.7% were Anglo/White, 1.0% were American Indian, 0.3% were Asian, 14.7% were African American, and 4.6% were Hispanic/Latino. The age range was 11 to 18 with an average age of 14.8. At wave 12, adolescent children who turned 18 after wave 11 were administered the adolescent interview.

Of the 595 adult children, 271 were male (45.5%) and 324 were female (54.5%). Ethnicity reports indicated that 71.4% were Anglo/White, 0.3% were American Indian, 0.2% were Asian, 21.7% were African American, and 5.5% were Hispanic/Latino. The age range was 18 to 45 with an average age of 21.0.

The sample is not necessarily representative of parents, partners, or children in the general population, but it is (with the exception of initial loss and attrition effects) a probability and representative sample of parents, partners, and children of individuals born in the 1959-1965 period.

The logic of maintaining sample representativeness across generations requires that all members of the replacement generation be assessed as they reach adolescence. For some children, this is not possible. Some (about 27%) of the children born to the NYSFS respondents will have already *passed* age 18 by the proposed start date. However, because NYSFS assessed young adults in later waves, it is possible to compare levels of problem behavior (specifically, sexual assault and other forms of interpersonal violence) in these older children with levels in their parents at the same age. Other children will not reach adolescence during the course of the grant. It is necessary, however, that there will not be any systematic bias in the selection of adolescents to be interviewed, particularly if a factor like divorce represents both a reason why adolescents are harder to track and to interview, and a potential risk factor for increased problem behavior. For this reason, we pursued all children born to the respondents who reached an interviewable age by 2003, the first year for child interviews.

## Measurement

The NYSFS historically has tapped a very broad domain of sociodemographic, social psychological, attitudinal, and behavioral data as exemplified in publications dealing with causes, correlates, and epidemiological patterns of crime, domestic and nondomestic violence perpetration and victimization, alcohol and illicit drug use and problem use, mental health problems, and sexual behavior (e.g., Ageton, 1983; Elliott, et al., 1985; Elliott, et al., 1989; Elliott, 1987; Elliott, 1994; Elliott & Morse, 1989; Esbensen & Elliott, 1994; Menard & Elliott, 1994; Mihalic & Elliott, 1997; Roitberg & Menard, 1995; Wofford, et al., 1994). Detailed discussion of the measurement space of the NYSFS is available in Elliott, et al., 1989; however, much of this extensive measurement is beyond the scope of the current study.

Within the broad category of sexual assault, items were asked about sexual assault in a variety of contexts, including perpetration and victimization, assault of victims in general and victims familiar to the perpetrator, and follow-up items designed to gather more detailed information on the incidents.

Tables 1 and 2 list the items used to measure sexual assault in the past and current waves of the NYS/NYSFS, for each group of respondents. Table 1 provides data from prior waves (Waves1 through 9) of the NYS collected on the original respondents that was available for creating longitudinal models. These data include sexual assault and sexual victimization, as well as potential predictors of sexual assault, such as attitudes toward sexual violence, and other sexually deviant behaviors, such as exhibitionism and voyeurism. Table 2 specifies the sexual assault data and some of the predictor variables from the NYSFS that were available for the original respondents, their parents, their spouses, and their adolescent and adult children in the 2002-2004 data collections.

It is important to note that though eleven waves of data have been collected on the original respondents, there is variability in the number of "data points" available for each item. That is, some items were measured at each wave, and thus there are eleven data points of responses, and other items were only measured in earlier or later waves and have fewer data points of responses. For other items, specifically criminal and delinquent behavior, retrospective items for each of the previous two years were asked during the waves that occurred every three years (waves 6 through 9), in order to complete the annual time line, and thus for these items, there are 8 additional data points - 19 overall.

Self-Reported Delinquency and Criminality

Respondents were asked to report on their involvement in a variety of delinquent and criminal behaviors during all waves of data collection. For each wave of the study, subjects were thus asked to recall events from the past year and report a number of times they engaged in that behavior. In the first five waves of the study, this resulted in data from five consecutive years. Waves six to nine were collected at three-year intervals, and in each of those waves, three questions were asked. First, respondents were asked to report a number by recalling one year past as in all prior waves. Subjects were also asked to report on two years prior and three years prior, to fill in the years between data collections. For these two and three year recall items, subjects were not asked to report a specific number, but instead were asked to report the frequency of their participation using a 4 point scale: (1) never, (2) 1-2 times, (3) 3-11 times, and (4) 12 or more times. In Waves 10 and 11 for original respondents, and for each wave of parent, spouse, and child respondents, subjects were asked to provide the number of times in the past year they engaged in each of the presented behaviors. ***For all waves and intervening years, prevalence of a behavior is indicated by any non-zero response to an item.***

*Sexual Assault Items*. In all eleven waves of the study, original respondents were asked to answer the question, "In the last year, how many times have you had (or tried to have) sexual relations with someone against their will." Prior work with the NYS on serious assaultive behavior (aggravated assaults, robberies and sexual assaults) distinguished between those reporting any assaults of these types and those reporting more serious assaults, based on follow-

Table 1

Availability of Previously Collected NYS Data, by Wave and Year; *Never Previously Analyzed Items Appear in Italics*

| **WAVE** | **W 1** | **W 2** | **W 3** | **W 4** | **W 5** | **W6R** | **W6R** | **W 6** | **W7R** | **W7R** | **W 7** | **W8R** | **W8R** | **W 8** | **W9R** | **W9R** | **W 9** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Referent Year** | **1976** | **1977** | **1978** | **1979** | **1980** | **1981** | **1982** | **1983** | **1984** | **1985** | **1986** | **1987** | **1988** | **1989** | **1990** | **1991** | **1992** |
| **Respondent Age** | 11-17 | 12-18 | 13-19 | 14-20 | 15-21 | 16-22 | 17-23 | 18-24 | 19-25 | 20-26 | 21-27 | 22-28 | 23-29 | 24-30 | 25-31 | 26-32 | 27-33 |
| **Perpetration of Sexual Assault** | | | | | | | | | | | | | | | | | |
| Forced against will | X | X | X | X | X | x | x | X | x | x | X,L | x | X | X | x | x | X |
| -Follow-up Questions | | | | X | X | | | X | | | X | | | X | | | X |
| ***Pressured/Threatened Someone*** | | | | | | | | *X* | | | *X* | | | *X* | | | *X* |
| *-Follow-up Questions* | | | | | | | | *X* | | | *X* | | | *X* | | | *X* |
| *Pressured/Threat. Date/Friend* | | | | | | | | | | | | | | | | | *X* |
| *Follow-up Questions* | | | | | | | | | | | | | | | | | *X* |
| *Pressured/Threatened Partner* | | | | | | | | | | | | | | *X* | | | *X* |
| *-Follow-up Questions* | | | | | | | | | | | | | | *X* | | | *X* |
| **Crime/Delinquency** | | | | | | | | | | | | | | | | | |
| Other Interpersonal Violence | X | X | X | X | X | x | x | X | x | x | X | x | X | X | x | x | X |
| Other Criminal/Delinq. Behavior | X | X | X | X | X | x | x | X | x | x | X | x | X | X | x | x | X |
| **Paraphilias/Hands-Off** | | | | | | | | | | | | | | | | | |
| Obscene Phone Calls | X | X | X | X | X | x | x | X,L | x | x | X,L | x | X | X,L | x | x | X |
| Voyeurism, Exhibitionism | | | | | | | | X,L | | | X,L | | | X,L | | | X,L |
| Use of Pornography | | | | | | | | X,L | | | X,L | | | X,L | | | X,L |
| **Victimization** | | | | | | | | | | | | | | | | | |
| Sexual Victimization-General | X | X | X | X | X | | | X | | | X | | | X | | | X |
| *Sexual Victimization – Partner* | | | | | | | | | | | | | | *X* | | | *X* |
| Other Violent Victimization | X | X | X | X | X | | | X | | | X | | | X | | | X |
| **Other Predictors** | | | | | | | | | | | | | | | | | |
| ***Early Sexual Experiences*** | | | | | | | | *X* | | | *X* | | | *X* | | | *X* |
| *-Forced or Voluntary* | | | | | | | | *X* | | | *X* | | | *X* | | | *X* |
| *-Satisfaction* | | | | | | | | *X* | | | *X* | | | *X* | | | *X* |
| *Current Sexual Experience* | | | | | | | | *X* | | | *X* | | | *X* | | | *X* |
| *-Frequency* | | | | | | | | *X* | | | *X* | | | *X* | | | *X* |
| *-Satisfaction* | | | | | | | | *X* | | | *X* | | | *X* | | | *X* |
| Attitudes toward Deviance | X | X | X | X | X | | | X | | | X | | | X | | | X |
| Normlessness (Family/Peer) | X | X | X | X | X | | | X | | | X | | | X | | | X |
| Trouble from Alcohol | | X | X | X | X | | | X | | | X | | | X | | | |
| Isolation from Family/Peers | X | X | X | X | X | | | | | | | | | | | | X |
| Labeling (Family/Peer) | X | X | X | X | X | | | X | | | X | | | X | | | X |
| Attitudes toward IP Violence | | X | X | X | X | | | | | | | | | | | | |
| Attitudes toward Sexual Assault | | X | X | X | X | | | | | | | | | | | | |
| Exposure to Delinquent Peers | X | X | X | X | X | | | X | | | X | | | X | | | X |

X=Directly assessed ("in the past year…"); x=Retrospectively assessed (in 1983, asked "In 1981, …" and "In 1982, …"); L=Lifetime prevalence

Table 2
New Sexual Assault and Violence Items, Waves 10 (2002) to 12 (2004)

| **Wave** | **Wave 10** | **Wave 11** | **Wave 12** |
|---|---|---|---|
| **Year of Interview** | **2002** | **2003** | **2004** |
| **Referent Year** | **2001** | **2002** | **2003** |
| **Original Respondent** | | | |
| Commit Sexual Assault and other Interpersonal Violence | | | |
| -Ever? | | X | |
| -# times last year | X | X | |
| -Follow-up items | X | | |
| Victim of Sexual Assault and other Interpersonal Violence | | | |
| -Ever? | | X | |
| -# times ever | | X | |
| -# times last year | X | X | |
| -Follow-up items | X | | |
| **Parents of Original Respondents** | | | |
| Commit Sexual Assault and other Interpersonal Violence | | | |
| -Ever? | | X | |
| -Age first? | | X | |
| -Age last? | | X | |
| Victim of Sexual Assault and other Interpersonal Violence | | | |
| -Ever? | | X | |
| -# times last year | | X | |
| -# times ever | | X | |
| **Spouses/Partners of Original Respondents** | | | |
| Commit Sexual Assault and other Interpersonal Violence | | | |
| -Ever? | | X | |
| -Age first? | | X | |
| -Age last? | | X | |
| Victim of Sexual Assault and other Interpersonal Violence | | | |
| -Ever? | | X | |
| -# times last year | | X | |
| -# times ever | | X | |
| **Adolescent and Adult Children of Original Respondents** | | | |
| Commit Sexual Assault and other Interpersonal Violence | | | |
| -Ever? | | X | |
| -Age first? | | X | |
| -Age last? | | X | |
| -# times last year | | X | X |
| -Follow-up items | | | X |
| Victim of Sexual Assault and other Interpersonal Violence | | | |
| -Ever? | | X | |
| -# times last year | | X | X |
| -# times ever | | X | |
| -Follow-up Items | | | X |
| Exposure to Delinquent Peers | | X | X |
| Normlessness | | X | X |
| Isolation from Family/Peers | | X | X |
| Attitudes toward Deviance | | X | X |

up information about injury levels and weapons used (Elliott, 1994). In a similar way, a distinction is made between persons reporting any sexual assault and those reporting particularly serious sexual assaults.

This distinction is based on follow-up items to the sexual assault questions obtained in Waves four through nine (but not intervening years between survey years), and also in Wave 10 for the original respondents and in the second wave of data collection for the children (aged 11 and up) of the original respondents. These follow-up questions gather detailed information on the most recent reported incidents. These items ask subjects to report the outcome (forced intercourse or tried but did not succeed), the means used (e.g., verbal threats, mild roughness, beaten/choked, overpowered physically, or drugged or got drunk), whether or not the victim was physically hurt and if so, to what degree, whether or not others were involved and if so, how many, whether or not the respondent had been drinking or using drugs before the incident, and the respondent's relationship to the victim. Reported sexual assaults involving a completed forced intercourse, or the use of physical force, or injury, whether completed or not, were classified as "Serious Sexual Assaults (SSAs)" and persons reporting these types of assaults were classified as "Serious Sexual Assaulters." Those assaults that were not completed and involved no physical force, alcohol/drugs or injury, were included, together with SSAs , in a general category called "Sexual Assaults (SAs)" and persons reporting either SSAs or SAs were classified as "Sexual Assaulters."

In the first three waves of data collection, and also in the current eleventh, respondents were not asked these follow-up questions. Following the procedure utilized in other reports on serious violent offenders (Elliott, 1994; Elliott et al., 1986), persons who reported two or more sexual assaults in any one of these waves (1-3) was classified as a Serious Sexual Assaulter, and those who reported only one assault in any one of those waves was considered a Sexual Assaulter.[3] Additionally, in the sixth through ninth waves, subjects were also asked a series of questions designed to assess respondent involvement in pressuring, threatening, and assaulting dates and partners.

Based upon the first nine waves of data, 90 individuals were identified as Sexual Assaulters, and of those, 41 were identified as Serious Sexual Assaulters. Thus, 5.7% of the original sample has been identified as sexual assaulters and 2.4% as serious sexual assaulters. When only males are considered, 8.8% of males were identified as sexual assaulters and 4.0% were identified as serious sexual assaulters.

In the eleventh wave of data collection, the parents and spouses of the original respondents were asked if they had "ever had or tried to have sexual relations with someone against their will" and if so, how old they were the first and most recent times they had done this. Additionally, in the spouse interview but not the parent interview, if the respondents indicated yes to that first question, they were then asked if they had "ever gotten someone to do sexual

[3] In the fourth and fifth waves of data collection, the follow-up items were asked for the most recent incident, and thus up to one incident could be validated as a Serious Sexual Assault. In the sixth through ninth waves of data collection, these follow-up items were asked for the last three incidents, and up to three incidents could be validated as Serious Sexual Assaults. In the retrospectives years of data collection for the sixth through ninth waves, all responses were considered serious.

things with you by force or by threatening them," and if so, how old they were the first and most recent times they had done this.

Further, in the Wave 11, the (adolescent and adult) children of the original respondents were asked if they had "ever had or tried to have sexual relations with someone against their will," and if yes, how old they were the first time they did this, and then how many times they had done so in the past year. If they did not indicate that they had done this in the past year, they were asked how old they were when they last did this. In Wave 12, they were asked to report how many times in the last year they had "had or tried to have sexual relations with someone against their will." If they indicated they had, then the respondents were asked a series of follow-up questions that were previously described for the original respondents.

*Other Self-Reported Delinquency and Criminality*. Felony assault, felony theft, and minor delinquency are used as scales based on the aggregation of several items. The format of the questions for each wave and for each type of respondent is identical to the format used for the sexual assault items.

Felony assault is the aggregation of aggravated assault, sexual assault, and gang fights[4]. In instances in which it is desirable to use felony assault in the same analysis with sexual assault, sexual assault will be omitted from the felony assault scale to avoid overlap. Felony theft is the aggregation of: (1) motor vehicle theft; (2) broken into a building; (3) stole something worth greater than $50; and (4) bought stolen goods. Minor delinquency was measured using an aggregation of: (1) bought stolen goods; (2) carried a hidden weapon; (3) stolen something worth less than $5; (4) been paid for sexual relations; (5) sold marijuana; (6) hit parents; (7) hit someone at work/school; (8) hit anyone else; (9) been loud, rowdy; (10) sold hard drugs; (11) motor vehicle theft; (12) stolen things worth $5 to $50; and (13) begged for money.

## ***Sexual and Violent Victimization***

Self-reported victimization is assessed in all waves for all respondents, using the same one-year retrospective method employed with the self-report of delinquency items above. These items were not assessed in the intervening years (i.e., two year and three year retrospectives) of waves six through nine. Similar to the self-report of delinquency, all non-zero responses are used to indicate prevalence.

To assess sexual victimization subjects were asked, "How many times in the last year have you been sexually attacked, or raped (or an attempt made to do so)?" The violent victimization scale includes: (1) sexual victimization; (2) being attacked by a parent; (3) being attacked by someone else; and (4) being attacked with a weapon. Because of the overlap with sexual victimization, the remaining violent victimization items will be used as single items.

[4] Aggravated assault: "How many times in the last year have you attacked someone with the idea of seriously hurting or killing him or her?" Gang fights: "How many times… have you been involved in gang fights?" Over 60% of gang fights involved a weapon or an injury requiring medical attention and were thus considered aggravated assaults.

Additionally, in the eighth, ninth, and tenth, waves, the original respondents were asked whether or not they had been sexually victimized by a date, spouse, or partner. Follow-up questions were included, designed to assess the severity of the assault, the relationship to the assaulter, what form of pressure or force was used, and whether or not the assaulter succeeded in forcing sex.

In the eleventh wave, the original respondents and their parents, spouses, and (adolescent and adult) children were asked if they had ever "been sexually assaulted or raped, or an attempt made to do so," and if they had, they were asked how many times this had happened in the past year, and how many times it had ever happened to them. In the twelfth wave, the adolescent and adult children of the original respondents were asked the same screener question and follow-up questions as the original respondents were asked in Waves 8-10 (described above).

***Hands-Off Sexual Offenses/Paraphilias***

For original respondents obscene phone calls were measured in all eleven waves and all eight retrospective years, in the same format as the sexual assault and other delinquency items. Respondents are asked, "How many times in the last year have you made obscene telephone calls, such as calling someone and saying dirty things?" Parents, spouses/partners, and children of the original respondents are also asked about obscene phone calls in each of their waves of data collection. Prevalence will be measured for each of the waves.

Two hands-off offenses (i.e., paraphilias), exhibitionism and voyeurism, were measured only in the sixth through ninth waves for the original respondents only, when respondents were 18-24 through 27-33 years old. At each of these waves, a question was asked in which respondents were asked whether or not they had ever engaged in these behaviors, and if so, whether or not it had been in the past year, and if so, how many times in the past year. Because it cannot be clarified how many times it had occurred in prior years or in which prior years it had occurred, only prevalence variables were created, and only for each of waves six, seven, eight, and nine. To measure exhibitionism, respondents were asked, "How many times in the past year have you purposefully exposed (displayed) the sexual parts of your body to strangers?" To measure voyeurism, respondents were asked, "How many times in the past year have you purposefully and secretly watched others who were dressing or engaging in sexual acts?"

In Wave 12, the adult children of the original respondents (i.e., those over 21) were also asked to report ever prevalence and age of first and most recent engagement in voyeurism ("purposely and secretly watched others as they undressed or engaged in sexual acts"), exhibitionism ("purposely exposed (displayed) the sexual parts of your body to strangers"), and soft- and hard-core pornography usage ("looked at magazines or internet websites, or watched movies featuring nudity but not sexual activity," "looked at X-rated magazines or internet websites or watched X-rated movies that show people engaging in sex?"). Additionally, the respondents were asked if they had been victims of voyeurism ("anyone purposely and secretly, without your consent, watched you as you undressed or engaged in sexual acts") and exhibitionism ("a stranger purposely exposed (displayed) the sexual parts of their body to you").

*Other Predictor Variables*

The following scales measure the constructs that will be used as predictor variables in predictive models. All of the scales have been demonstrated to be reliable and valid in past work with the NYS data set.

*Exposure to Delinquent Peers.* This scale measures the extent to which an individual is bonded to deviant or delinquent friends. This measure of peer group delinquency measures how many of the respondents' friends have engaged in a set of 10 illegal acts.[5] These items were asked of the original respondents in all eleven waves, and of their children in both waves of their data collection.

*Attitudes toward Deviance.* Belief, an indicator of internal bonding to society in general, measures the extent to which an individual believes it is morally wrong for someone of the same age to commit a variety of illegal (assault, theft, drug use) or rule violating (cheating on tests/taxes) acts. Respondents were presented with eight statements and asked to indicate the degree to which they believed these acts were wrong (e.g., "How wrong is it for someone your age to …purposely damage or destroy property that does not belong to him or her," " …to hit or threaten to hit someone without any reason."). Scores for each item could range from 1 (Not wrong at all) to 4 (Very wrong). These items were asked in all waves of the data collection for all respondents (i.e., original respondents, parents, spouses/partners, and children).

*Normlessness (Family and Peer).* Family normlessness and peer normlessness are also indicators of internal bonding, but differ from the previous instrument as they measure bonding to a specific context. Normlessness in the family and peer contexts indicates the extent to which a respondent in a particular context believes it is necessary or acceptable to engage in socially disapproved behavior (e.g., lying, cheating, breaking rules) to achieve desired goals within that context. The family and peer scales are composed of four items each, that ask respondents the degree to which they agree with the presented items (e.g., "Making a good impression is more important than telling the truth to friends," "Sometimes it's necessary to lie to your parents in order to keep their trust."). Scores for each item could range from 1 (Strongly disagree) to 5 (Strongly agree). These items were asked of the original respondents and their children in all waves of data collection.

*Attitudes toward Sexual Assault and Interpersonal Violence.* In the second through fifth waves of data collection, the original respondents were asked to respond to items designed to assess their attitudes toward sexual assault (3 items) and their attitudes toward interpersonal violence (4 items). The items assessing attitudes toward sexual assault include "Women ask to be sexually assaulted," "A women can't be assaulted against her will," and "Women are curious about sexual assault." The items assessing attitudes toward interpersonal violence included, "It is alright to beat someone up," "Hitting another person is acceptable," "It is alright to beat up another person if he started it," and "It is sometimes necessary to fight." Scores for each scale could range from 1 (Never) to 4 (Often).

[5] Items asked respondent to indicate, during the last year, how many of their close friends had "purposely damaged or destroyed property that did not belong to them," "stolen something worth less than $5," "broken into a vehicle or building to steal something." Scores for each of the 10 items could range from 1 (None of them) to 5 (All of them).

*Social Isolation/Loneliness (Family and Peer).* This scale was designed to measure what Weiss (1973) refers to as social and emotional isolation, loneliness stemming from the frustration of needs for belongingness and social connectedness to primary groups, the absence of close friendships, or psychological deficits in these relationships. Past research has linked isolation and loneliness to a number of adolescent problems such as drug addiction, suicide, prostitution, alcoholism, sexual exhibitionism, and delinquency (for research on social isolation and delinquency with the current sample, see Elliott, et al., 1989). The Social/Loneliness scale used in this research is a ten-item scale with items reflecting perceived isolation from one's family and peers, and general feelings of loneliness in each of these social contexts. Sample items include, "I feel like an outsider with my family," "I don't feel that I fit in well with my friends," "I feel close to my friends." Separate scales are examined for family and for peers, and scores for each item could range from 1 (Strongly disagree) to 5 (Strongly agree). These items were asked of the original respondents in the first five waves of data collection, and in the tenth wave. Children of the original respondents will be asked these items in the first wave of their data collection.

*Labeling/Emotional Problems (Family and Peer).* The emotional problems scale is a sixteen-item subscale from a modified version of the Klein, et al. (1978) Negative-Labeling scale. The items in the general scale are descriptive phrases (e.g., have a lot of personal problems, do things that are against the law, are often upset) and respondents were asked how much they think parents and peers would agree or disagree with each of these descriptions of them. Four item scales measured two constructs each for family and peers. The constructs measured were bad (e.g., delinquent, unruly) and sick (e.g., emotional problems). This scale reflects the degree to which respondents perceive that parents and peers view them as having emotional problems. It is a measure of *perceived* labeling by parents and peers as a person with emotional problems. It is not a direct measure of self-reported emotional problems. In past work with the NYS, this scale has been found to be highly related to social isolation, and because of this, the social isolation measures were no longer used after the fifth wave of data collection (Elliott, et al., 1989). These items were asked in all waves of data collection for all respondents (i.e., original respondents, parents, spouses/partners, and children of the original respondents).

*Problem Alcohol Use.* Beginning in Wave 3 for the original respondents, a scale measuring problem use of alcohol was obtained. This measure was patterned after the problem use of alcohol measure developed initially by Cahalan (1970) and modified by Jessor and Jessor (1977). These scales involved six items, reflecting negative consequences of alcohol use. The general form of the questions was: "How many times in the last year have you had problems with your family because of your use of alcohol?" Different life areas were reflected in each item (friends/spouse/girlfriend/boyfriend, physical fights, physical health, arrests by police). Responses ranged from "never" to "more than six times" and only respondents reporting some alcohol or drug use were asked these questions. These and similar items were asked of the parents, spouses/partners, and the children of the original respondents.

*First Sexual Experience*. In the sixth through ninth waves, the original respondents were asked to report the age at which they first began to engage in sexual intercourse, whether their first sexual intercourse experience was forced or voluntary, and the degree to which they looked back upon the experience as positive or negative.

*Current Sexual Experience*. In the sixth through ninth waves, the original respondents were asked to report whether or not they had had sexual intercourse in the past year, and if so, the frequency with which they had intercourse. Follow-up questions also addressed whether or not their sexual partner(s) were their spouses, partners, or others, and also the degree to which the respondents were satisfied with their sexual relationships.

# RESULTS

As the first step in data analysis, basic coding and scaling work for those items specific to this project was completed. The results are organized by the specific objectives named in the introduction of this report.

Objective 1: To study developmental patterns of initiation, continuity, and suspension of engagement in sexually assaultive behaviors in the original respondents

Objective 2: To study sequencing of initiation and suspension of sexual assault relative to other interpersonal violence, other delinquent and criminal behaviors, and potential risk factors for initiation and suspension, in the original respondent generation.

Objective 3: To study the cormorbidity of sexual assault with other problem behaviors, specifically, other interpersonal violence, (a) developmentally, (b) intergenerationally, and (c) including comparisons of comorbidity developmentally and intergenerationally across sociodemographic subpopulations.

Objective 4: To study the long-term trajectories of adolescent and young adult sexual assaulters as they age into middle childhood for the original respondents

Objective 5: To examine the contexts in which the reported sexual assaults (both perpetration and victimization) occurred, including how often the perpetrators were under the influence of drugs and alcohol and the relationship of the perpetrators to the victims.

OBJECTIVE 1

**The goal of Objective 1 is to study developmental patterns of initiation, continuity, and suspension of engagement in sexually assaultive behaviors in the original respondents**

The first question to address is what percentage of the samples self-reported engaging in sexual assault. Regarding the original respondent generation, no new offenders were identified, (though some continued to report offending), and so though some of the following results reflect these updates (e.g., age-specific prevalence rates) some of the following results are unchanged from Grotpeter and Elliott (2002; e.g., ever-prevalence).

Original Respondents

Results (shown in Table 1A1 through 1A4) indicate that 5.7% (*n*=90) of the NYS sample reported perpetrating any sexual assault, and 2.4% of the sample (*n*=41) reported perpetrating a serious sexual assault, known as a cumulative or ever prevalence rate. As shown in Table 1A2, of those who reported committing a sexual assault, 90.0% were men, and of the serious sexual assaulters, 90.2% were men. Table 1A3 shows the percentages of males, by ethnicity, who reported committing a sexual assault or a serious sexual assault. Specifically, of white males, 8.9% reported committing any sexual assault, and 3.1% reported committing a serious sexual assault. Prevalence rates for African American males were higher with 13.3% reporting any sexual assault, and 8.6% a serious sexual assault. Finally, of males of all other ethnicities combined[6], 11.4% reported committing any sexual assault, and 3.8% reported a serious sexual assault. Finally, Table 1A4 shows sexual offending varies by social class. Nearly 13 percent (12.8%) of lower socioeconomic status (SES[7]; results in lower, working, and middle class classifications) males reported committing a sexual assault and 5.6% reported committing a serious sexual assault; while working- and middle-class males reported prevalence rates similar to each other, each approximately half of the prevalence rates reported by lower SES males.

Table 1A1
Cumulative Prevalence of Sexual Offenses: National Youth Survey
*(Total Possible N for Waves 1-11=1725)*

| Sexual Offense | % Yes (# Yes) | % No (# No) |
|---|---|---|
| Ever Committed a Serious Sexual Assault | 2.4% (41) | 97.6% (1684) |
| Ever Committed a Sexual Assault | 5.7% (90) | 94.3% (1485) |

[6] All other ethnicities were combined due to smaller percentages in the sample and a much smaller total number of sexual offenders.

[7] Socioeconomic status background was measured as the socioeconomic status (middle SES, lower SES, working SES) of the parents of the original respondents in the first wave of the survey using the Hollingshead two-factor index of social position, a measure of SES used in prior research involving the National Youth Survey (Elliott, et al., 1989, provide further discussion of this measure).

Table 1A2
Cumulative Prevalence of Sexual Offenses:
by Sex

| Sexual Offense | % Male (# Male) | % Female (# Female) |
|---|---|---|
| Ever Committed a Serious Sexual Assault | 90.2% (37) | 9.8% (4) |
| Ever Committed a Sexual Assault | 90.0% (81) | 10.0% (9) |

Table 1A3
Cumulative Prevalence of Sexual Offenses:
Males, by Ethnicity

| Sexual Offense | % of White Males (# of White Males) | % of African Am. Males (# of African Am. Males) | % of Other Ethnicity Males (# of Other Ethnicity Males) |
|---|---|---|---|
| Ever Committed a Serious Sexual Assault | 3.1% (22) | 8.6% (13) | 3.8% (2) |
| Ever Committed a Sexual Assault | 8.9% (57) | 13.3% (19) | 11.4% (5) |

Table 1A4
Cumulative Prevalence of Sexual Offenses:
Males, by Socioeconomic Status

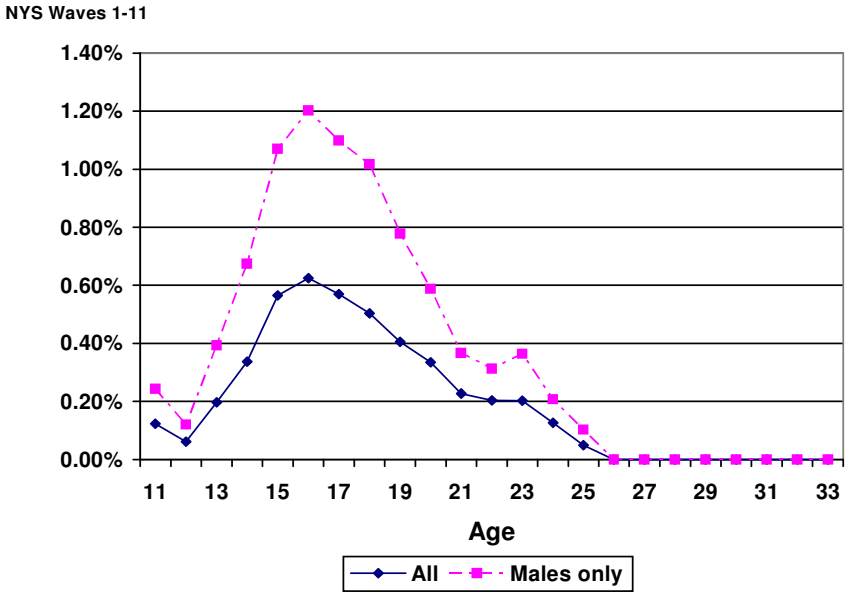
| Sexual Offense | % of Lower SES Males (# of Lower SES Males) | % of Working SES Males (# of Working SES Males) | % of Middle SES Males (# of Middle SES Males) |
|---|---|---|---|
| Ever Committed a Serious Sexual Assault | 5.6% (24) | 2.6% (7) | 2.5% (5) |
| Ever Committed a Sexual Assault | 12.8% (49) | 6.3% (15) | 7.9% (15) |

Next, onset of sexual assault and serious sexual assault were examined. Individuals' responses were examined to determine the first wave in which they reported engaging in sexually assaultive behavior or serious sexually assaultive behavior. Additionally, respondents were asked a single retrospective question during Wave 7 in which they were asked to report the earliest age in which they engaged in sexually assaultive behaviors. This response was considered in creating Figure 1, which shows the hazard rates for age of onset of sexual assault for all subjects and for males only.[8] Specifically, the area under the curve represents the total number of sexual assaulters, and the height of the curve indicates the percentage of the NYS sample respondents who began

[8] The earliest onset date from these two sources was used as the age of onset in Figure 1.

offending at the indicated age.[9] Because the youngest respondents were aged 11 in the first wave of the study, we used ages 11 or earlier as the initial age of onset interval. The hazard rate shows a clear increase in onset from age 11, peaking at age 16, and then decreasing until the last onset at age 25. By the time the respondents in the sample reached age 20, most (88%) of those who were going to become sexual assaulters during the study had already done so. After age 25, the hazard rate is close to zero, at least to age 43. The majority of sexual assaulters (69%) initiate their sexual offending in adolescence (prior to age 18).

Figure 1: Onset of Sexual Assault
Hazard Rate* by Age



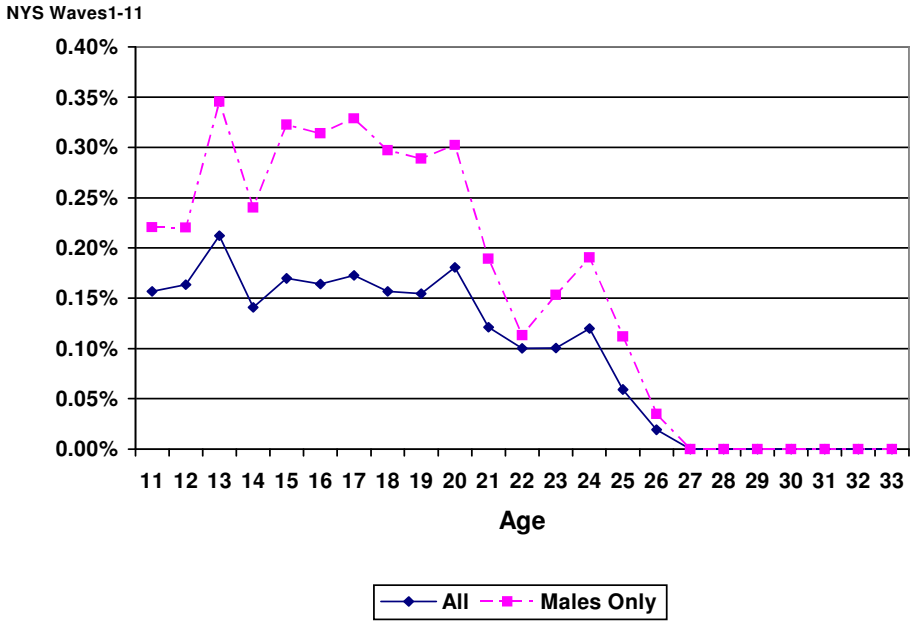

*3-Year Running Averages

Figure 1 also shows the same hazard rate computed only for the males in the sample, as they represent approximately 90% of the sexual offenders. The pattern for males is similar to the whole sample, but is somewhat more dramatic, with a much higher rate in the peak year and a much steeper decline in the late teens. By age 17, 70 percent of males ever involved in a sexual assault have initiated this behavior.

Figure 2 shows the hazard rate for the onset of serious sexual assaulters in the whole sample and for male serious sexual assaulters. The onset pattern for serious sexual assaulters appears quite different from the pattern for sexual assaulters generally. Specifically, the age of onset curve does not show the steep upward trend from age 11 to 16, but instead shows a relatively high and constant level from 11 to 20, with the decline not starting until after age 20. The onset rate for serious sexual assault is essentially constant over the adolescent years and does not decline until the early 20's. The proportion of serious sexual assaulters (total and males) who initiate their sexual assaults prior to age 18 (59%) is also smaller than for sexual assaulters generally.

[9] Due to the relatively low level of occurrence of sexual assault in a representative sample, three year moving averages were used to create Figures 1 and 2 in order provide a smoother curve.

Figure 2: Onset of Serious Sexual Assault
Hazard Rate* by Age




* 3-Year Running Averages

Next, age-specific prevalence rates[10] were computed. Figures 3 through 5 show the number of NYS participants who reported committing a sexual assault or a serious sexual assault for each age in which subjects participated in the study. Because there were a smaller number of participants providing age-specific estimates for the earliest and oldest ages, those aged 11 and 12 were combined into one group, and those aged 31 to 33 were combined into another group. No respondents were interviewed between the ages of 33 and 36, thus there are no known assaulters during that age range. Assaulters aged 40-43 (from waves 10 and 11) are noted next.

Figure 3 shows the age-specific prevalence rates for sexual assault for the total sample, Figure 4 shows the breakdown for males by the two largest ethnic groups in the sample, and Figure 5 shows the breakdown for males by SES. The rates portrayed in the figures show the percentages of the specific subpopulations who reported sexually offending at specific ages.

In general, the overall prevalence of sexual assault between 11 and 17 is close to 1 percent (from 0.6 to 1.6). It drops to approximately 0.5 percent between 17 and 24, and again to about 0.2 from 25 to 31. Prevalence rates for non-white (e.g., African American, Hispanic, Native American) males are substantially higher than those for white males, and while the rates for whites appear to decline after age 17, those for non-white men tend to be more consistent across the life course from early adolescence through the 20's. There is thus evidence for a greater continuity in sexual assault into the adult years for non-white men than white men. Similarly, prevalence rates are also generally

[10] Age-specific prevalence rates are prevalence rates computed for each age of the study respondents, resulting in prevalence rates for children under the age of 12, age 13, age 14, etc.

higher for lower SES than working or middle SES males, and there is more continuity of sexual offending for lower SES males.

Figure 3: Age-Specific Prevalence Rates for Sexual Assault:
NYS Waves 1-11

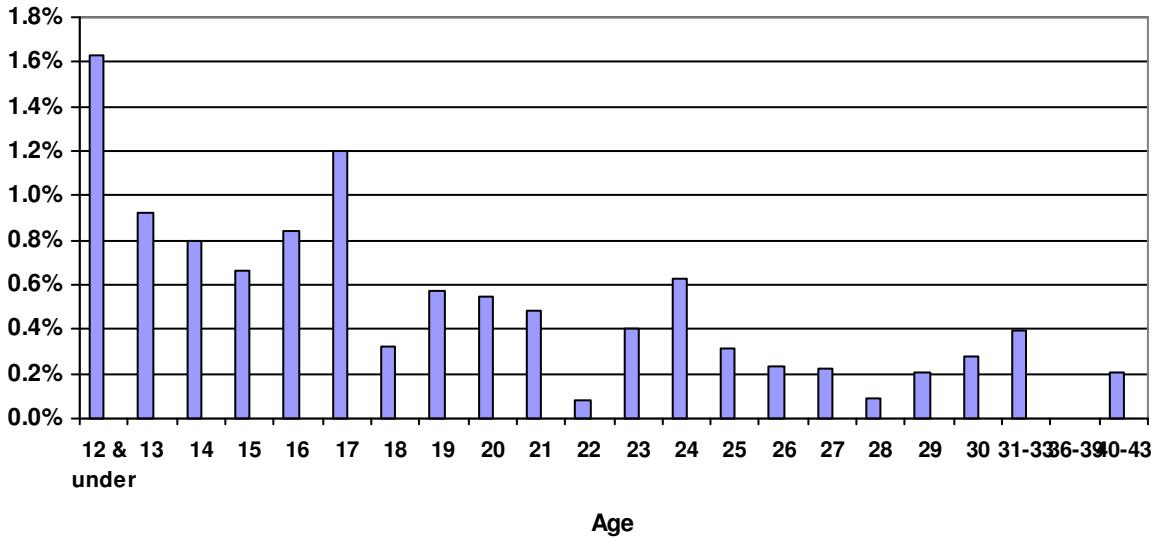



Figure 4: Age-Specific Prevalence Rates for Sexual Assault:
NYS Waves 1-11, Males, by Ethnicity

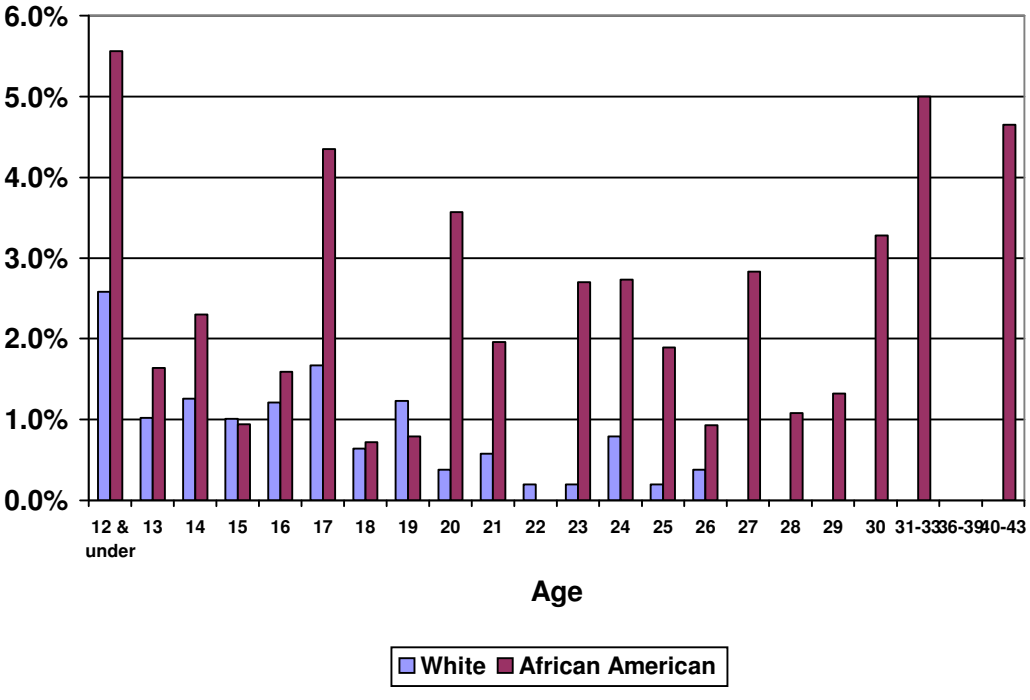
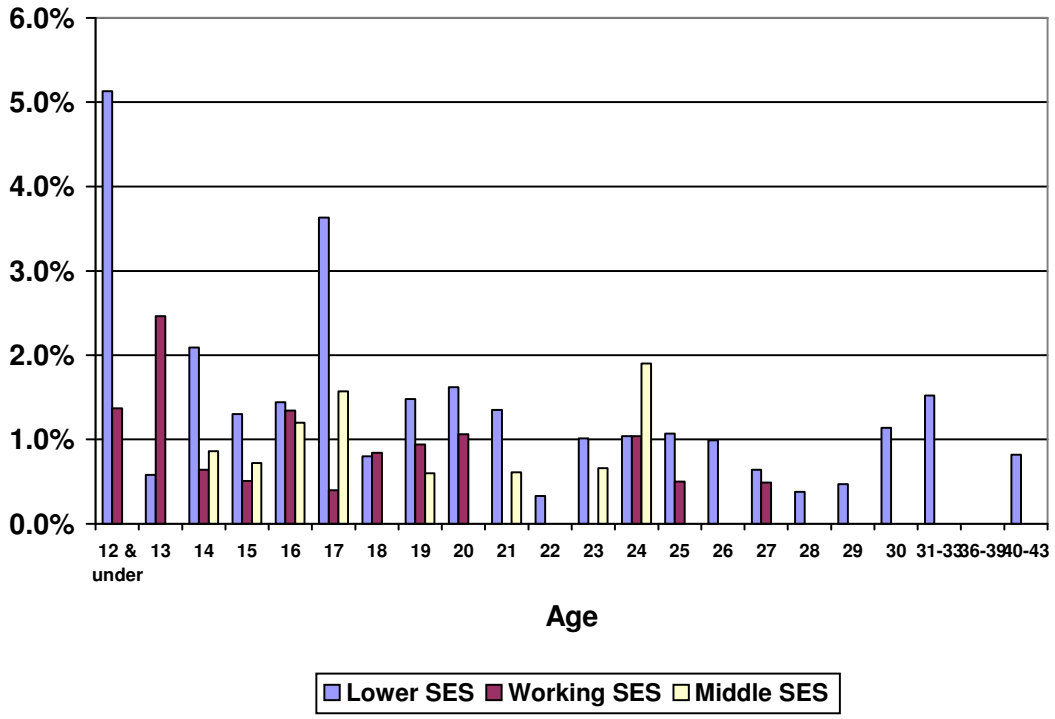


Figure 5: Age-Specific Prevalence Rates for Sexual Assault:
NYS Waves 1-11, Males, by Socioeconomic Status




Parents of the Original Respondents

Because the data on the parents of the original respondents were not collected longitudinally, we cannot provide nearly as much detail on offending as we could on the original respondents. Of the 872 parents of the original respondents, seven (0.8%) males reported ever having "had or tried to have sexual relations with someone against their will," compared with 5.7% in the original respondent generation. In recognition of the small size of this sample and thus its limited degree to which it can be generalized to the population as a while, we will report simple descriptive results. Moreover, it is highly likely that the retrospective method used with the parents resulted in lower prevalence rates than they would have been had the parents been assessed annually (as the original respondents were assessed). That is, the longer the time period between behavior and assessment, especially for a presumably negative experience, the greater the likelihood is that estimates will be low (e.g., Grotpeter, 2008).

Consistent with the data from the original respondents that sexual assault onset is somewhat later than for other violent offenses, follow-up questions indicated that the age they *first* did this ranged from 16 to 23, with a mean age of 19.3 years. Similarly consistent with the original respondents that the sexual assaulters continued perpetrating later in their criminal careers than other violent offenders, the ages the parents gave when asked how old they were when they last sexually assaulted someone ranged from 18 to 45 with an average age of 25.6 years.

Children of the Original Respondents

When we examined the responses of the children of the original respondents, we received unexpected results: Of the 801 adolescent (aged 11 to 17) children and 453 adult children of the original respondents (aged 18 and older) only three endorsed the sexual assault item. The average age of onset was 9.5 years, and the average age of most recent assault was 16.3 years. Greater detail on this would violate confidentiality agreements. Because of the lack of subjects in this subsample, analyses will focus instead on examining other delinquent behaviors of the children of the original respondent generation, comparing the children of sexual assaulters to the children of non-assaulters.

## Event History Analysis

Next, we used discrete time event history analysis (Allison, 1984; Hosmer and Lemeshow, 1999; Yamaguchi, 1991) to model sociodemographic and other influences on the patterns of initiation and suspension of sexual assault, using risk factors identified in the analysis for other objectives. Event history analysis is a family of methods that links regression analysis and the analysis of transition matrices of data that include measurements at several periods. In event history analysis, the concern may be with describing, predicting, and explaining either the timing or the occurrence of qualitative changes like initiation and suspension of behavior. Event history analysis allows the use of either age or chronological time as the underlying time continuum, and the use of other time variables as an independent variable, so that both historical and developmental trends may be examined. For data involving series of more than five but fewer than twenty measurements, with relatively long intervals between measurements (as opposed to continuous measurement across time), discrete time event history analysis models are appropriate, and can be estimated using logistic regression (for proportional odds) or complementary log-log models (for proportional hazards) that can be calculated using standard statistical packages.

### Initiation and Suspension

In order to measure patterns in initiation and suspension of engaging in sexual assault, a discrete time event history analysis was conducted, using ordinal logistic regression estimated with complementary log-log models. Two separate models were constructed for predicting initiation and suspension. Age was used as the underlying time continuum, and sex and ethnicity were used as non-time-varying coefficients. Tolerant attitudes toward deviant behavior, exposure to delinquent peers, and status were measured at each wave. The status variable was constructed using prevalence rates at each wave to calculate for each respondent at each wave whether or not their behavior in that wave represented initiation, continuity, suspension, resumption, or not yet initiated. The status variable was then used to construct the dependent variables initiation and suspension. A pooled cross-sectional dataset was then constructed.

The model predicting initiation was significant, though the model $R^2$ was modest, .03 (McFadden), and among the variables used to predict initiation, only being male was

significant.[11] The model predicting suspension was significant, with a model $R^2$=.15 (McFadden). Exposure to delinquent peers, sex (male), and ethnicity (white), and simply becoming older all significantly predicted suspension of sexually assaultive behavior (see Table 1b1). Attitudes tolerant of deviance did not significantly predict suspension of sexually assaultive behavior.

Table 1b1
Ordinal Logistic Regression Model Predicting Suspension of Sexual Assault
Model $R^2$=.15, $p$=.000

| Predictor | Estimate | Standard Error | Statistical Significance |
|---|---|---|---|
| Attitudes tolerant of deviance | .000 | .005 | .984 |
| Exposure to delinquent friends | .033 | .004 | .000 |
| Sex-Male | .374 | .049 | .000 |
| Ethnicity-White/Anglo | -.271 | .045 | .000 |
| Age (adolescence) | .317 | .128 | .014 |
| Age (young adulthood) | .318 | .129 | .014 |
| Age (Adulthood) | .321 | .135 | .018 |

## Continuity

To address continuity in sexual assault behavior over time, engagement in sexual assault in one year was used to predict engagement in sexual assault in the following year. In order to keep the time consistent at one year between prediction and potential recidivism, this analysis could only be conducted for four sets of waves of data: (1) Wave 1 predicting Wave2; (2) Wave 2 predicting Wave 3; (3) Wave 3 predicting Wave 4; and (4) Wave 4 predicting Wave 5. Three years elapsed between Wave 5 and 6, and each of the subsequent waves through Wave 9. Twenty- six years elapsed between Waves 9 and 10, and though only one year elapsed between Waves 10 and 11, there were no sexual assault cases in Wave 11 to predict.

For each of the four predictions, a logistic regression analysis was conducted using backward stepwise elimination. In each analysis, prevalence of sexual assault in the earlier wave, attitudes tolerant of deviant behavior, and exposure to delinquent friends were used as predictors of prevalence of sexual assault in the later wave. For the first model, predicting continuity from Wave 1 to Wave 2, the overall model $R^2$ was significant, and sexual assault at Wave 1 was a significant predictor of sexual assault at Wave 2 (see Table 1c1).

[11] The same result was found when using age as a continuous variable from 11 to 44, or when age was split into 4 categories (adolescence: 11-17; young adulthood: 18-24); adulthood: 25-33; and middle adulthood: 36-44).

Table 1c1
Logistic Regression Model Predicting Wave 2 Sexual Assault
From Wave 1 Sexual Assault and Exposure to Delinquent Peers
Model $R^2$=.18, $p$=.000

| Predictor | Beta | Standard Error | Statistical Significance | Exp (B) |
|---|---|---|---|---|
| Prior sexual assault | 0.255 | 0.62 | .000 | 51.25 |

For the second model, predicting continuity from Wave 2 to Wave 3, the overall model $R^2$ was again significant, but sexual assault at Wave 2 was not a significant predictor of sexual assault at Wave 3 (see Table 1c2). Exposure to delinquent peers, however, was significant.

Table 1c2
Logistic Regression Model Predicting Wave 3 Sexual Assault
From Wave 2 Sexual Assault and Exposure to Delinquent Peers
Model $R^2$=.08, $p$=.002

| Predictor | Beta | Standard Error | Statistical Significance | Exp (B) |
|---|---|---|---|---|
| Exposure to delinquent friends | 0.061 | 0.036 | .001 | 1.13 |

For the third model, predicting continuity from Wave 3 to Wave 4, the overall model $R^2$ was marginally significant, and examination of the coefficients showed that Wave 3 sexual assault was a significant predictor of Wave 4 sexual assault.

Table 1c3
Logistic Regression Model Predicting Wave 4 Sexual Assault
From Wave 3 Sexual Assault and Exposure to Delinquent Peers
Model $R^2$=.03, $p$=.06

| Predictor | Beta | Standard Error | Statistical Significance | Exp (B) |
|---|---|---|---|---|
| Prior sexual assault | 0.089006 | 1.101 | .011 | 16.689 |

The fourth model, predicting continuity from Wave 4 to Wave 5 was statistically significant, and both sexual assault and exposure to delinquent peers in Wave 4 significantly predicted sexual assault in Wave 5.

Table 1c4
Logistic Regression Model Predicting Wave 5 Sexual Assault
From Wave 4 Sexual Assault and Exposure to Delinquent Peers
Model $R^2$=.31, $p$=.000

| Predictor | Beta | Standard Error | Statistical Significance | Exp (B) |
|---|---|---|---|---|
| Prior sexual assault | 0.201571 | 0.746 | .000 | 131.938 |
| Exposure to delinquent friends | 0.345279 | 0.036 | .001 | 1.125 |

It is important to note that the standardized beta coefficients were relatively weak, and thus the prediction is not particularly strong. However, the results do provide modest support for continuity in sexual offending from wave to wave, particularly in the last waves studied, when the respondents were aged 14-20 to 15-21, and that this continuity was related to respondents reporting exposure to delinquent peers. It may be that the stronger prediction in the last wave studied here (predicting Wave 5 from Wave 4) is due to a smaller number of persistent offenders, as the majority of offending occurred in the earliest waves. Thus, those who were persistent in offending at a later age may have been more committed to engaging in sexual assault.

## OBJECTIVE 2

We next turn to consider the sequencing of sexual assault among other problem behaviors. To address this, the wave at which the respondent first reported engaging in each of six specific problem behaviors (sexual assault, felony assault minus the sexual assault items, felony theft, hard drug use, marijuana use, and minor delinquency) was established as their wave of initiation. Sexual assault was then paired against each of the other problem behaviors, with comparisons made at each wave using initiation data to determine which of the following categories fit the pairing at the wave: (0) Neither behavior ever initiated; (1) Both behaviors initiated in the first wave; (2) Both behaviors initiated in same wave in the second wave or later; (3) Sexual assault initiated in a wave prior to the other problem behaviors; and (4) the other problem behavior initiated in a wave prior to sexual assault.

For each comparison that was made to determine sequence, first only those cases in which the respondent at some point initiated both behaviors were selected. For example, when comparing initiation of sexual assault with felony assault, analyses were conducted only on those respondents who at some point engaged in sexual assault and also at some point engaged in felony assault.

Result indicated that in every pairing except sexual assault and hard drug use, the average wave of initiation was later for sexual assault than it was for the other problem behaviors (see Tables 2-1 through 2-5). These results are largely consistent with prior work using these data (e.g., Elliott, 1994) and are not particularly surprising given the serious nature of sexual assault. That is, offenders generally begin their careers with relatively minor offenses, progressing to more serious offenses such as assault and then possibly more serious offenses such as armed robbery, sexual assault or homicide.

Table 2-1
Sexual Assault vs. Felony Assault

| Sequence | Number of respondents |
|---|---|
| Both Initiated Wave 1 | 5 |
| Both Initiated together Wave 2 or later | 2 |
| Sexual Assault Initiated First | 9 |
| Felony Assault Initiated First | 12 |

Table 2-2
Sexual Assault vs. Felony Theft

| Sequence | # of respondents |
|---|---|
| Both Initiated Wave 1 | 6 |
| Both Initiated together Wave 2 or later | 5 |
| Sexual Assault Initiated First | 6 |
| Felony Theft Initiated First | 15 |

Table 2-3
Sexual Assault vs. Minor Delinquency

| Sequence | Number of respondents |
|---|---|
| Both Initiated Wave 1 | 10 |
| Both Initiated together Wave 2 or later | 1 |
| Sexual Assault Initiated First | 3 |
| Minor Delinquency Initiated First | 24 |

Table 2-4
Sexual Assault vs. Marijuana Use

| Sequence | Number of respondents |
|---|---|
| Both Initiated Wave 1 | 0 |
| Both Initiated together Wave 2 or later | 0 |
| Sexual Assault Initiated First | 1 |
| Marijuana Use Initiated First | 2 |

Table 2-5
Sexual Assault vs. Hard Drug Use

| Sequence | Number of respondents |
|---|---|
| Both Initiated Wave 1 | 2 |
| Both Initiated together Wave 2 or later | 2 |
| Sexual Assault Initiated First | 15 |
| Hard Drug Use Initiated First | 6 |

## OBJECTIVE 3

**The goal of Objective 3 is to study the cormorbidity of sexual assault with other problem behaviors, specifically, other interpersonal violence, (a) developmentally, (b) intergenerationally, and (c) including comparisons of comorbidity developmentally and intergenerationally across sociodemographic subpopulations.**

### A: Comorbidity of sexual assault with other problem behaviors: Developmentally

A multilevel longitudinal analysis (Raudenbush & Bryk, 2002) was conducted to examine the relationship of sexual assault perpetration with the sociodemographic variables age, gender, ethnicity, and socioeconomic status background (SES), the theoretical variables belief that it is wrong to violate the law and exposure to delinquent/criminal friends, and prior felony assault perpetration (including, but not limited to, prior sexual assault). Based on past research, belief and exposure are two of the stronger predictors of illegal behavior, although belief appears to be more important in predicting substance use than in predicting non-substance-related forms of illegal behavior (Elliot, et al., 1989). Both belief and exposure can be found as elements of different variants of strain, social control, and learning theories (Menard, 2005). Prior felony assault was included based on the expectations that (a) individuals who are likely to commit sexual assaults are likely to have committed prior serious crimes against persons, and (b) those prior offenses are unlikely to have been limited to only sexual assaults (see Elliott, 1994).

Age was measured as age at last birthday. Gender was coded as male or female. Because of the small number of minority group members other than African Americans, coupled with the low rate of offending for sexual assault, ethnicity was coded simply as majority or minority, with most of those classified as minority being African American. Socioeconomic status background was measured as noted earlier in Objective 1, resulting in middle SES, lower SES, and working. Belief that it is wrong to violate the law was measured using a seven-item scale, including questions about how wrong the respondent thought it was to commit a variety of criminal and delinquent acts ranging from minor to serious theft, sale of illicit drugs, and assault. Exposure to delinquent friends was measured using an eight-item scale, including questions about how many of one's friends had committed a variety of criminal and delinquent acts, parallel to the belief scale, but with an added item asking how many of the respondent's friends had encouraged the respondent to break the law. For the present analysis, only items that were consistent across the eleven waves of the NYSFS were used, and hence items involving cheating (on school tests in adolescence, on income tax in adulthood) and substance use (alcohol in adolescence, cocaine later in adulthood) were omitted from the scales.

Preliminary investigation of the relationships indicated that there was a statistically nonsignificant linear (no statistically significant departure from linearity) relationship between sexual assault and age; a statistically significant relationship of sexual assault with parental socioeconomic status, with specifically middle class respondents reporting higher rates of sexual assault than either working of lower SES respondents; a statistically significant relationship of sexual assault with ethnicity, with ethnic minority respondents (particularly African American) reporting higher rates of sexual assault than ethnic majority respondents; and gender, with males having much higher rates of sexual assault than females. Exposure to delinquent friends and

prior cumulative frequency of felony assault were both positively and statistically significantly correlated with sexual assault, and belief that it is wrong to violate the law was negatively and statistically significantly correlated with sexual assault. There was one particular outlier respondent who claimed 52 sexual assaults in one year; this outlier's data were eliminated from the multilevel longitudinal analyses and are not included in Tables 3a1 and 3a2, which present preliminary analysis results below.

Table 3a1
Sociodemographics and Sexual Assault: Means and Standard Deviations

| **Variable** | **Level** | **Mean, Standard Deviation** | **Significance** | **N** |
|---|---|---|---|---|
| Age | 11-43 | | n.s. | |
| Gender | *Male* | M=*0.016,* sd=*0.210* | .000 | 7,487 |
| | Female | *M*=0.002, *sd*=0.078 | | 6,867 |
| Ethnicity | White | *M*=0.007, *sd*=0.149 | .000 | 11,447 |
| | Nonwhite | M=*0.019,* sd=*0.204* | | 2.907 |
| SES | Middle | M=*0.014,* sd=*0.205* | .009 | 5,962 |
| | Working | *M*=0.006, *sd*=0.121 | | 4,258 |
| | Lower | *M*=0.005, *sd*=0.115 | | 3,375 |

Table 3a2
Correlations between Continuous Variables and Sexual Assault

| **Variable** | **Pearson Correlation** | **Significance** | **N** |
|---|---|---|---|
| Belief that it is wrong to violate the law | -.036 | .000 | 14,314 |
| Exposure to delinquent and/or criminal friends | .062 | .000 | 14,242 |
| Felony assault | .055 | .000 | 14,363 |

In the multilevel longitudinal analysis, several models were compared, including a baseline model with a random intercept term, a full model with cross-level interactions involving both gender and ethnicity, a full model with cross-level interactions involving only gender, and a reduced model in which statistically nonsignificant relationships were eliminated based on either or both robust standard error estimate or ordinary (non-robust) standard error estimates.

Table 3a3
Final HLM Model Predicting Engagement in Sexual Assault

| Predictor Variable | Coefficient | Standard Error | Significance |
|---|---|---|---|
| Age | -0.0002 | 0.0003 | .n.s |
| Gender | -0.0097 | 0.0029 | .001 |
| Ethnicity | 0.0105 | 0.0064 | .100 |
| SES | 0.0065 | 0.0039 | .102 |
| Belief that it is wrong to violate the law | -0.0011 | 0.0012 | n.s. |
| Exposure to delinquent and/or criminal friends | 0.0036 | 0.0010 | .001 |
| Felony assault | 0.0024 | 0.0044 | n.s. |
| Random (within-person) effect | n/a | n/a | .000 |

The results indicate first that exposure to delinquent/criminal friends is the single consistently statistically significant predictor of sexual assault, and that it is predictive of sexual assault for males but not for females (as would be expected, given the rarity of sexual assault by females). Net of exposure to delinquent friends, belief, and age appear to have no impact on sexual assault. Ethnicity and socioeconomic status background produce mixed results, and it may be safest to conclude that they may have a marginally significant association with sexual assault, with higher rates of sexual assault for minority (nonwhite) as opposed to majority (white) ethnic group members, and for respondents with middle class as opposed to working or lower SES backgrounds. The level of explained variation does not appear to be high, the reduction in total error variance from the baseline random intercept model is less than one percent. The random (within-person) effect (the random intercept) is statistically significant, suggesting that the other variables in the model are not adequate to explain all of the individual differences in sexual assault perpetration.

B: Comorbidity of sexual assault with other problem behaviors: Intergenerationally

The original goal of this objective was to compare the patterns of comorbidity of sexual assault with other problem behaviors for the original respondent generation and their offspring at the same age (11 to 17 years old). However, an extremely small number of youth and adult offspring reported engaging in sexually assaultive behavior. Thus, we are unable to conduct any analyses of the comorbidity of sexual assault with other problem behaviors in the offspring generation.[12] In order to still address intergenerational issues, we changed the analyses to examine the degree to which participation in interpersonal violence in the parent generation and engagement in sexually assaultive behavior in the original respondent generation predicted a variety of problem behaviors in the offspring generation.

[12] Further, it is impossible to conduct a case study analysis of the sexual assaulters from the offspring generation without violating human subjects requirements.

Specifically, in the parent generation, variables were constructed that represented ever-prevalence (i.e., ever participation) of engagement in felony assault behaviors: (1) Aggravated assault (two questions, i.e., "attacked someone with the idea of seriously hurting or killing them" and "hit or beaten someone up so badly that they probably needed a doctor"); (2) Gang fights (i.e., "been involved in gang fights"); and (3) Sexual assault ("had or tried to have sexual relations with someone against their will"). In part to address the relatively small number of parents who reported engaging in these behaviors (i.e., aggravated assault: *n*=31, gang fights: *n*=20; sexual assault: *n*=20), the items were combined into a single felony assault scale (*n*=56).[13]

In the original respondent generation, a variable was constructed to represent ever-prevalence of engagement in sexual assault. Additionally, a variable that indicated the respondents who were classified as serious sexual assaulters was constructed, and separate analyses were conducted using this variable as a predictor or outcome when appropriate. It was never the case that the results from the analyses with the serious sexual assaulters yielded differences in significant predictors, and thus because the former group was larger (i.e., *n*=90) than the latter group (*n*=41), the serious sexual assault variable was not used further.

In the offspring generation, because there were so few sexual assaulters (likely due to both generational difference and the fact that only two waves of data were collected on the offspring generation), we used the following scales: (1) Felony assault (including aggravated assault, gang fights, and sexual assault); (2) Felony theft; (3) Robbery; (4) Marijuana use, (4) Hard drug use; (5) Non-contact sexual offending (i.e., obscene phone calls only for the youth offspring, and exhibitionism, voyeurism, pornography use, and obscene phone calls for the adult offspring generation); and (6) Minor delinquency (i.e., all other delinquent and criminal behaviors about which the respondents were queried, e.g., status offenses, cheating in school or on taxes, joyriding). In Wave 11, the offspring respondents were asked to indicate if they had ever engaged in each of the given behaviors, and in Wave 12, they were asked how many times in the past year they had engaged in each of the given behaviors. The two questions were combined into a simple ever-prevalence variable, and then combined into a scale, and finally the ever-prevalence for the scale was computed.

A preliminary logistic regression analysis was conducted to examine the relationship between parent generation felony assault (as a single variable, and as two variables: sexual assault and also felony assault not including sexual assault) and original respondent generation sexual assault. Results were not significant using either form of parent generation variables.

Next, logistic regression models were constructed in order to examine the prediction of problem behaviors in the offspring generation by felony assault in the parent generation (i.e., the grandparents of the offspring generation) and sexual assault in the original respondent generation (i.e., the parents of the offspring generation). For the initial models, the predictors, original respondent sexual assault and parent felony assault, were entered in the same step to predict: (1) Felony assault (ever prevalence=185, representing 12.5% of offspring respondents); (2) Felony

[13] Preliminary analyses were conducted using the individual items in order to be ensure that we would not be missing any nuance by not using parent-generation sexual assault as a specific predictor, and results indicated that there were no significant results for sexual assault alone, and that the felony assault scale as a whole was a better predictor of problem behavior in the offspring generation.

Theft (ever prevalence=240, 16.2%); (3) Robbery (ever prevalence=71, 4.8%); (4) Marijuana Use (ever prevalence=422, 28.5%); (5) Drug Use (ever prevalence=345, 23.3%), (6) Non-contact sexual offenses (ever prevalence=670, 45.3%); and (7) Minor delinquency (ever prevalence=1366. 92.3%).

There were no significant results for marijuana use, hard drug use, non-contact sexual offenses, and minor delinquency. However, the models were significant for the prediction of offspring engagement in felony assault, felony theft, and robbery. Statistics from the logistic regression models are tabled in Table 3b1, Table 3b2, and Table 3b3.

***Felony assault, robbery, and felony theft***. The models predicting offspring engagement in felony assault, felony theft, and robbery from their parent's engagement in sexual assault and their grandparents' engagement in felony assault were all statistically significant at a level greater than .01. Specifically, as shown in Table 3b1, both grandparent felony assault and parent sexual assault significantly predicted offspring engagement in felony assault. Specifically, if an original respondent engaged in sexually assaultive behavior, their offspring were more likely to engage in felony assault compared with their peers whose parents were not sexual assaulters. Similarly, when the grandparent generation engaged in felony assault, the grandchild generation was more likely to engage in felony assault compared with those whose grandparents did not engage in felony assault. Additionally, as shown in Table 3b2 both grandparent felony assault and parent sexual assault significantly predicted offspring engagement in robbery. In particular, this means that if an original respondent engaged in sexually assaultive behavior, their offspring were more likely to engage in felony theft compared with their peers whose parents were not sexual assaulters. Similarly, when the grandparent generation engaged in felony assault, the grandchild generation was more likely to engage in felony assault compared with those whose grandparents did not engage in felony assault. Finally, as shown in table 3b3, only parent sexual assault significantly predicted offspring engagement in felony theft, whereas prediction from the older generation failed to reach significance. Specifically, this means that if an original respondent engaged in sexually assaultive behavior, their offspring were more likely to commit robbery compared with their peers whose parents were not sexual assaulters. Similarly, when the grandparent generation engaged in felony assault, the grandchild generation was more likely to commit robbery compared with those whose grandparents did not engage in felony assault.

A word of caution should be noted: Though the predictors were highly statistically significant, all beta coefficients, however, were weak. Further, though the overall models were all highly statistically significant, the model $R^2$s were not very high, and thus the amount of variance predicted was rather low. This may be due in part to the rather small numbers of offspring who engaged in the problem behaviors studied here, and thus most respondents had values of "0" entered for the behaviors, thus there is not a great deal of variance to be explained by the models.

Table 3b1
Logistic Regression Model Predicting Offspring Felony Assault
From Original Respondent Sexual Assault and Parent Felony Assault
Model $R^2$=.02, $p$=.001

| Predictor | Beta | Standard Error | Statistical Significance | Exp (B) |
|---|---|---|---|---|
| Original Respondent Sexual Assault | .076 | .297 | .005 | 2.307 |
| Parent Felony Assault | .086 | .314 | .001 | 2.848 |

Table 3b2
Logistic Regression Model Predicting Offspring Felony Theft
From Original Respondent Sexual Assault and Parent Felony Assault
Model $R^2$=.013, $p$=.004

| Predictor | Beta | Standard Error | Statistical Significance | Exp (B) |
|---|---|---|---|---|
| Original Respondent Sexual Assault | .086 | .268 | .001 | 2.540 |
| Parent Felony Assault | .025 | .345 | .379 | 1.354 |

Table 3b3
Logistic Regression Model Predicting Offspring Robbery
From Original Respondent Sexual Assault and Parent Felony Assault
Model $R^2$=.03, $p$=.001

| Predictor | Beta | Standard Error | Statistical Significance | Exp (B) |
|---|---|---|---|---|
| Original Respondent Sexual Assault | .087 | .383 | .001 | 3.482 |
| Parent Felony Assault | .076 | .427 | .004 | 3.371 |

OBJECTIVE 4

**The goal of Objective 4 is to study the long-term trajectories of the original respondents as they age from adolescent and young adult sexual assaulters into middle adulthood.**

We examined the longitudinal relationship between problem behavior, attitudinal variables, and engaging in sexually assaulting behavior. Problem behavior included sexual assault, felony assault, felony theft, robbery, minor delinquency, problem alcohol use, marijuana use, and hard drug use. Attitudinal variables included exposure to delinquent peers, attitudes toward deviance, normlessness (family and peer), social isolation (family and peer), labeling (family and peer), attitudes toward sexual violence and intimate partnership violence, and first and current sexual experience.

Specifically, we identified those variables when they were available at each of three age ranges: Adolescence (11 to 20), Young Adulthood (21-29), and Middle Adulthood (30-42). Then, we used the behavioral and attitudinal variables in Adolescence to predict Sexual Assault in Young Adulthood, and then used the variables in Young Adulthood to predict sexual assault Middle Adulthood, and then finally, we used the variables in Adolescence and Young Adulthood to predict sexual assault in Middle Adulthood. We also used sexual assault in the earlier age ranges (i.e., adolescence and young adulthood) to predict sexual assault, felony assault, felony theft, robbery, and problem alcohol and drug use in later age ranges (i.e., young adulthood and middle adulthood). Prevalence of sexual assault in Adolescence, Young Adulthood, and Middle Adulthood were 60, 27, and 4, respectively.

First, all of the behavioral variables were recoded to indicate prevalence, that is, whether or not the respondent ever engaged in that behavior during each of the three age ranges studied. The variables and the available age ranges are provided in Table 4-1.

Table 4-1
Behavioral Variables Coded for Prevalence in each Age Range

| **Variable** | **Adolescence** | **Young Adulthood** | **Middle Adulthood** |
|---|---|---|---|
| Sexual Assault | X | X | X |
| Felony Assault | X | X | X |
| Felony Theft | X | X | X |
| Robbery | X | X | X |
| Minor Delinquency | X | X | X |
| Obscene Phone Calls | X | X | X |
| Problem Drug Use | X | X | X |
| Problem Alcohol Use | X | X | X |
| Other Paraphilias (exhibitionism, voyeurism, use of pornography | | X | X |

Next, each of the attitudinal variables were prepared as scales. The variables, the available age ranges, and the meaning of a higher number are provided in Table 4-2.

Table 4-2
Attitudinal Variables Used as Continuous Variables in each Age Range

| **Variable** | **High Equals** | **Adolescence** | **Young Adulthood** | **Middle Adulthood** |
|---|---|---|---|---|
| Exposure to Delinquent Peers | Exposure to more delinquent peers | X | X | X |
| Attitudes toward Deviance | Belief that it is more wrong to engage in delinquent behavior | X | X | X |
| Normlessness – Family/Peer | More normlessness | X | X | X |
| Attitudes toward Sexual Assault and Interpersonal Violence | Greater feelings that women are responsible for rape and that interpersonal violence is justifiable | X | | |
| Social Isolation – Family/Peer | Lower feelings of isolation from family and friends | X | X | |
| Labeling – Family/Peer | Greater belief that family and friends who label them Good, Bad, or Sick | X | X | X |
| Ist Sexual Experience | First sexual Experience more negative | | X | X |
| Satisfaction with Current Sex Life | More satisfied with current sex life | | X | X |

We first computed bivariate correlations between the prevalence of sexual assault and all of the potential predictor variables (i.e., prevalence of other problem behaviors and attitudinal scales) within Adolescence. Overall, every variable included was significantly related to prevalence of sexual assault, with varying levels of statistical meaningfulness (see Table 4-3).

Results showed significant correlations between sexual assault and felony assault[14], felony theft, robbery, minor delinquency, making obscene phone calls, problem alcohol use, problem drug use, attitudes toward deviance, exposure to delinquent peers, normlessness in the family and peer contexts and both combined, attitudes toward sexual assault, attitudes toward interpersonal violence, social isolation from family and peers and overall, labeling as conforming by family and peers and overall, labeling as "bad" by family and peers and overall, and labeling as "sick" by family and peers and overall. In most instances, attitudinal beliefs measured for difference contexts had very similar relationships with prevalence of sexual assault, and thus when we create the logistic regression model we will conduct the logistic regression analyses using both options (i.e., overall and individual contexts).

[14]which one would expect because sexual assault is included in the felony theft scale

Table 4-3
Significant Bivariate Correlations with Sexual Assault Within the Same Age Ranges

| Variable | Adolescence | Young Adulthood | Middle Adulthood |
|---|---|---|---|
| Felony assault | *r=.29*<br>*p=.000* | *r=.32*<br>*p=.000* | *r=.21*<br>*p=.000* |
| Felony theft | *r=.20*<br>*p=.000* | *r=.15*<br>*p=.000* | *r=.18*<br>*p=.000* |
| Robbery | *r=.20*<br>*p=.000* | *r=.24*<br>*p=.000* | *r=.17*<br>*p=.000* |
| Minor delinquency | *r=.07*<br>*p=.004* | *r=.09*<br>*p=.001* | *r=.07*<br>*p=.010* |
| Making obscene phone calls | *r=.12*<br>*p=.000* | *r=.12*<br>*p=.000* | *r=.19*<br>*p=.000* |
| Problem alcohol use | *r=.09*<br>*p=.000* | *r=.04*<br>*p=.14* | *r=.09*<br>*p=.005* |
| Problem drug use | *r=.10*<br>*p=.000* | *r=.05*<br>*p=.11* | *r=.07*<br>*p=.12* |
| Attitudes towards deviance | *r=.08*<br>*p=.001* | *r=.09*<br>*p=.000* | |
| Exposure to delinquent peers | *r=.18*<br>*p=.000* | *r=.18*<br>*p=.000* | *r=.15*<br>*p=.000* |
| Normlessness in the family context | *r=.13*<br>*p=.000* | *r=.08*<br>*p=.003* | |
| Normlessness in the peer context | *r=.14*<br>*p=.000* | *r=.11*<br>*p=.000* | |
| Normlessness in both family and peer contexts | *r=.14*<br>*p=.000* | *r=.10*<br>*p=.000* | |
| Attitudes toward sexual assault | *r=.09*<br>*p=.000* | | |
| Attitudes toward interpersonal violence | *r=.16*<br>*p=.000* | | |
| Social isolation from family | *r=.05*<br>*p=.04* | | |
| Social isolation from peers | *r=.09*<br>*p=.000* | | |
| Social isolation overall | *r=.08*<br>*p=.001* | | |
| Labeling as conforming by family | *r= -.07*<br>*p=.004* | *r= -.08*<br>*p=.001* | |
| Labeling as conforming by peers | *r= -.08*<br>*p=.001* | *r= -.05*<br>*p=.05* | |
| Labeling as conforming overall | *r=.08*<br>*p=.001* | *r=.07*<br>*p=.004* | |
| Labeling as “bad” by family | *r=.16*<br>*p=.000* | *r=.13*<br>*p=.000* | |
| Labeling as “bad” by peers | *r=.17*<br>*p=.000* | *r=.14*<br>*p=.000* | |
| Labeling as “bad” overall | *r=.17*<br>*p=.000* | *r=.14*<br>*p=.000* | |
| Labeling as “sick” by family | *r=.08*<br>*p=.002* | *r=.09*<br>*p=.000* | |
| Labeling as “sick” by peers | *r=.08*<br>*p=.002* | *r=.11*<br>*p=.000* | |
| Labeling as “sick” overall | *r=.08*<br>*p=.001* | *r=.09*<br>*p=.000* | |
| Hands-Off Offenses | | *r=.05*<br>*p=.08* | |

We next computed the bivariate correlations within Young Adulthood. Most correlations were significant or marginally significant with varying levels of statistical meaningfulness (see Table 4-3). Results showed significant correlations between sexual assault and felony assault, felony theft, robbery, minor delinquency, making obscene phone calls, problem alcohol use, problem drug use, attitudes toward deviance, exposure to delinquent peers, normlessness in the family and peer contexts and both combined, labeling as conforming by family and peers and overall, labeling as "bad" by family and peers and overall, labeling as "sick" by family and peers and overall, and hands-off offenses. Quality of first sexual experience, and satisfaction with current sex life were not significantly correlated with prevalence of sexual assault in young adulthood. Again, attitudinal beliefs measured for difference contexts had very similar relationships with prevalence of sexual assault, and thus when we create the logistic regression model we will conduct the logistic regression analyses using both options..

Finally, we computed the bivariate correlations within Middle Adulthood (see Table 4-3). Variables with nonsignificant correlations with prevalence of sexual assault in middle adulthood included attitudes toward deviance, normlessness in the peer context, and peer labeling as conforming, "bad," and "sick. Results showed significant or marginally significant correlations between sexual assault and felony assault, felony theft, robbery, minor delinquency, making obscene phone calls, problem alcohol use, problem drug use, and exposure to delinquent peers.

Logistic regression analyses were conducted using the early age variables (i.e., Adolescence) to predict sexual assault at later ages (i.e., Young Adulthood and Middle Adulthood). When the attitudinal variables that were assessed in two context were used, the results for these models were uniformly poorer than the models that used the beliefs combined across contexts, and so the scales were used that measured belief in specific contexts.

First, logistic regression analyses were conducted using the Adolescence variables as predictors of prevalence of sexual assault in Young Adulthood. The initial model with all variables included in it was significant and the overall model $R^2$ (Nagelkirk) was .36. However, only two predictors were significant, sexual assault and felony theft (normlessness in the peer context was marginally significant).

Highly non-significant predictors (significant greater than .40) were gradually removed from the equation, resulting in a final model with an overall model $R^2$ of .35 ($p$=.000). Sexual assault and felony theft were statistically significant, while problem alcohol use and normlessness in both the family and peer contexts were marginally significant. Though the overall model and these individual predictors were significant, the resulting calculated standardized Betas were moderate in size. See Table 4-4 for the standardized betas, standard error, statistical significance, and odds ratios for the predictors in the final model.

Table 4-4
Logistic Regression Model Predicting Sexual Assault in Young Adulthood
From Adolescent Behavioral and Theoretical Predictors
Model $R^2$=.35, $p$=.000

| Predictor | Beta | Standard Error | Statistical Significance | Exp (B) |
|---|---|---|---|---|
| Sexual Assault | 0.167 | 0.491 | .000 | 19.787 |
| Felony Theft | .0.227 | 0.573 | .004 | 5.293 |
| Problem Alcohol Use | 0.243 | 1.001 | .10 | 5.907 |
| Attitudes Toward Deviance | 0.110 | 0.075 | .17 | 1.110 |
| Normlessness (Family) | -0.188 | 0.189 | .09 | 0.724 |
| Normlessness (Peer) | 0.178 | 0.204 | .10 | 1.399 |
| Attitudes toward Interpersonal Violence | -0.123 | 0.064 | .17 | 0.912 |
| Social Isolation (Peer) | -0.104 | 0.156 | .26 | 0.839 |
| Peer Labeling (Conforming) | -0.120 | 0.276 | .15 | 0.674 |
| Family Labeling (“Bad”) | 0.074 | 0.128 | .36 | 1.125 |
| Family Labeling (“Sick”) | 0.094 | 0.130 | .24 | 1.164 |

Because the overwhelming majority of the sexual assaulters were male, we conducted the logistic regression again using only the males in the sample. The initial model with all variables included in it was significant and the overall model $R^2$ (Nagelkirk) was .40. Adolescent sexual assault and felony assault were again the only significant predictors, but attitudes toward deviance was marginally significant. See Table 4-5 for the standardized betas, standard error, statistical significance, and odds ratios for the predictors in the final model.

Table 4-5
Logistic Regression Model Predicting Sexual Assault in Young Adulthood
From Adolescent Behavioral and Theoretical Predictors
Males Only
Model $R^2$=.39, $p$=.000

| Predictor | Beta | Standard Error | Statistical Significance | Exp (B) |
|---|---|---|---|---|
| Sexual Assault | 0.187 | .516 | .000 | 16.485 |
| Felony Theft | 0.355 | .814 | .001 | 13.754 |
| Problem Alcohol Use | 0.145 | 1.107 | .27 | 3.381 |
| Attitudes Toward Deviance | 0.159 | .084 | .06 | 1.168 |
| Normlessness (Family) | -0.182 | .231 | .12 | 0.699 |
| Normlessness (Peer) | 0.171 | .254 | .15 | 1.439 |
| Attitudes toward Interpersonal Violence | -0.122 | .074 | .13 | .894 |
| Social Isolation (Peer) | -0.165 | .184 | .08 | .721 |
| Peer Labeling (Conforming) | -0.153 | .316 | .06 | .556 |
| Family Labeling (“Sick”) | 0.145 | .128 | .04 | 1.304 |

Highly non-significant predictors (significant greater than .40) were gradually removed from the equation, resulting in a final model with an overall model $R^2$ of .39 ($p$=.000). Results showed that for males, sexual assault, felony theft, and family labeling as "sick" were statistically significant predictors, and attitudes toward deviance, social isolation from the peer group, and peer labeling as the reverse of conforming were marginally significant predictors.

The analyses were repeated using only the data for females in the sample, but the model was not significant, and individual predictors appeared to be unrelated to the results. This is most likely due to the very small number of female offenders, and thus the analyses lacked necessary power.

Next, logistic regression analyses were conducted using the Young Adulthood variables as predictors of Middle Adulthood. The model $R^2$ was nonsignificant, and no individual predictors were significant or even marginally so. Next the Adolescent variables were used as predictors of sexual assault in Middle Adulthood. Again, the model was nonsignificant and no individual predictors were significant nor marginally significant. This result is not a surprise given that the prevalence of sexual assaulters in Middle Adulthood was so low, and thus power was lacking for this analysis.

## OBJECTIVE 5

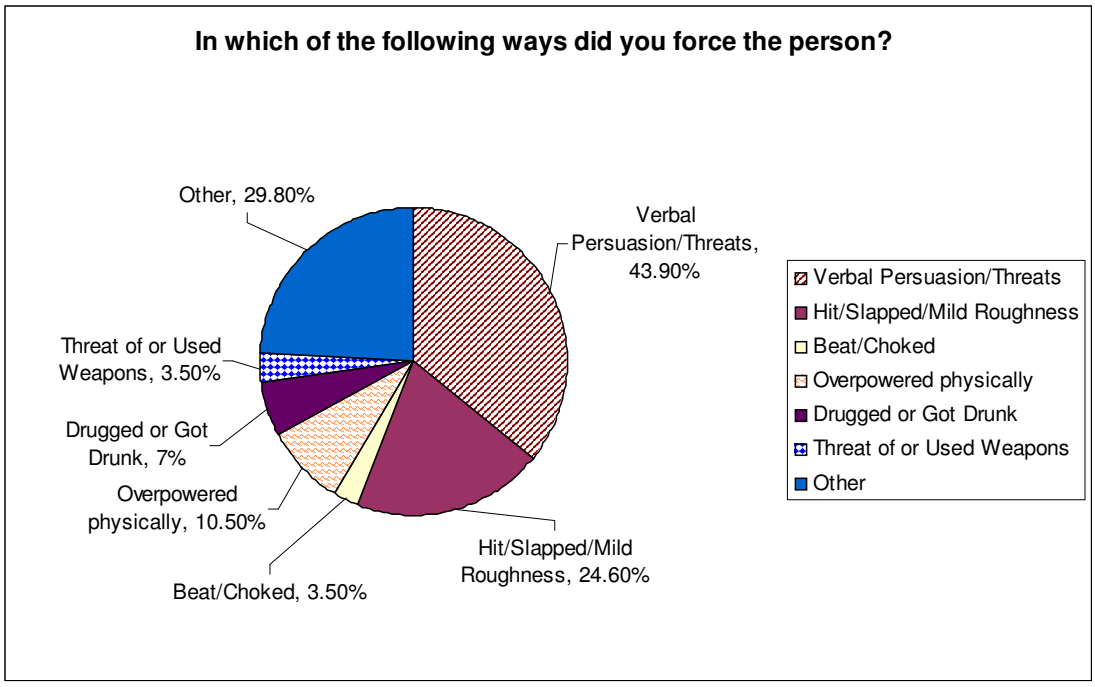
**The goal of Objective 5 is to examine the contexts in which the reported sexual assaults (both perpetration and victimization) occurred, including how often the perpetrators were under the influence of drugs and alcohol and the relationship of the perpetrators to the victims.**

Follow-up questions that asked respondents to elaborate upon the sexual assaults they perpetrated or were victimized by were asked of the original respondents in waves six through ten, and of their adolescent and adult children in wave twelve. Several distinctions are made in the results presented next. It is important to note that these individual events do not represent all of the offenses reported by the perpetrators over the course of this study. Follow-up questions in waves four and five were reported in the introduction to this report (see results reported from Ageton, 1983), and the follow-up questions reported here were only asked in waves six and later.

Additionally, the exact follow-up questions were different year to year, and so the number of respondents who answered the presented questions varied. To address this, raw numbers were provided in addition to percentages, and in those cases in which there were fewer than 12 responses, we did not present the data. Further, the following tables represent responses that may include up to three responses by the same respondent in a given year, as respondents were asked about "the last time" they committed a sexual assault, and then about "the next to last time," and "the time before that."

Tables 5A1 through 5A4 all refer to the follow-up questions answered by perpetrators of sexual assault. Descriptive information is provided for those follow-up items that refer to sexual assault as it was defined across all waves of the study, answered by the original respondents in waves six through ten and by the adolescent and adult offspring in wave twelve, "how many times in the last year have you had or tried to have sexual relations with someone against their will?" (Table 5A1). It was necessary to combine the responses of the adult offspring with those of the original respondents because there were only two incidents reported from the former category. In comparison, additional follow-up questions were asked of respondents after a question asking how many times in the last year they had pressured a date or friend to do more sexually than they wanted to do (Table 5A2). In addition, those two sets of responses were combined and then split out by the age of the respondent: Age eleven to 20 (Table 5A3) and age 21 and older (Table 5A4).

As Table 5A1 indicates, of 57 sexual assaults about which the original respondents and their adult offspring were queried, one fifth reported that they actually succeeded in forcing sexual penetration, while four fifths reported that they tried but did not succeed. Most respondents reported using only verbal threats, though a substantial number reported using "mild roughness" and "other" (unknown) means.




Most respondents reported that they did not hurt the victim, though three reported leaving the victim bruised. Most (98.2%) reported that they were the only perpetrator; only one respondent reported additional perpetrators were involved in the assault. More than half reported drinking alcohol before committing the sexual assault, and only one fourth reported using drugs, but, notably, only when also drinking. Finally, the respondents reported a variety of relationships with the victims, including stranger, acquaintance, and friend, and less commonly, family member, boyfriend/girlfriend, and other (unknown).

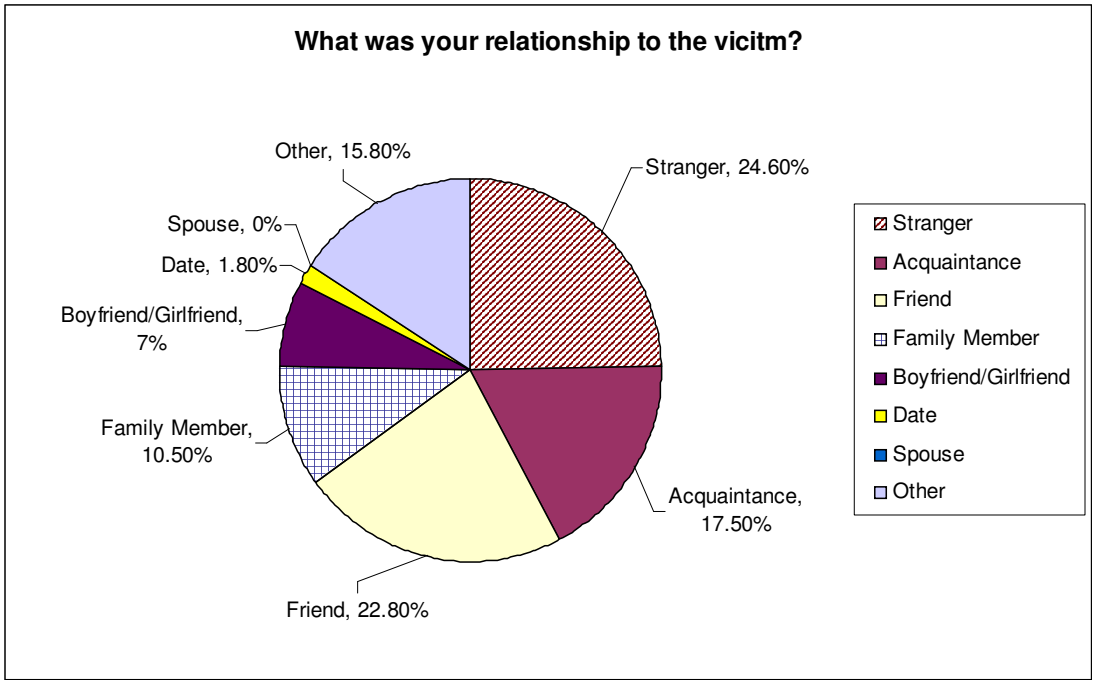


Table 5A1
Descriptive Characteristics of Sexual Assaults from Follow-up Questions
Longitudinal Sexual Assault Items, Waves 6 to 12

| Outcome? | | |
|---|---|---|
| Forced | 19.3% | (11/57) |
| Tried but didn't succeed | 80.7% | (46/57) |

| Means? | | |
|---|---|---|
| Verbal Persuasion/Threats | 43.9% | (25/57) |
| Hit/Slapped/Mild Roughness | 24.6% | (14/57) |
| Beat/Choked | 3.5% | (2/57) |
| Overpowered Physically | 10.5% | (6/57) |
| Drugged or Got Drunk | 7.0% | (4/57) |
| Threat of or Used Weapon | 3.5% | (2/57) |
| Other | 29.8% | (17/57) |

| Hurt the Victim? | | |
|---|---|---|
| No | 94.5% | (54/57) |
| Yes, Bruised | 5.3% | (3/57) |

| Others Involved? | | |
|---|---|---|
| No | 98.2% | (56/57) |
| Yes | 1.8% | (1/57) |

| Who was Victim? | | |
|---|---|---|
| Stranger | 24.6% | (14/57) |
| Acquaintance | 17.5% | (10/57) |
| Friend | 22.8% | (13/57) |
| Family Member | 10.5% | (6/57) |
| Boyfriend/Girlfriend | 7.0% | (4/57) |
| Date | 1.8% | (1/57) |
| Spouse | 0.0% | (0/57) |
| Other | 15.8% | (9/57) |

| Drinking or Drugs? | | |
|---|---|---|
| No | 38.6% | (22/57) |
| Yes, Drinking Only | 38.6% | (22/57) |
| Yes, Drugs Only | 0.0% | (0/57) |
| Yes, Drinking and Drugs | 22.8% | (13/57) |

| Where did Assault Occur? | | |
|---|---|---|
| Victim's House or Apartment | 57.1% | (8/14) |
| Respondent's House or Apartment | 28.6% | (4/14) |
| Bar/Club | 22.8% | (2/14) |

| Arrested? | | |
|---|---|---|
| No | 100.0% | (14/14) |

Table 5A2

Descriptive Characteristics of Sexual Assaults from Follow-up Questions
Pressuring Date/Friend/Spouse, Waves 6 to 9

| Outcome? | | |
|---|---|---|
| Forced | 46.2% | (18/39) |
| Tried but didn't succeed | 51.3% | (21/39) |

| Means? | | |
|---|---|---|
| Verbal Persuasion | 87.2% | (34/39) |
| Hit/Slapped/Mild Roughness | 12.8% | (5/39) |

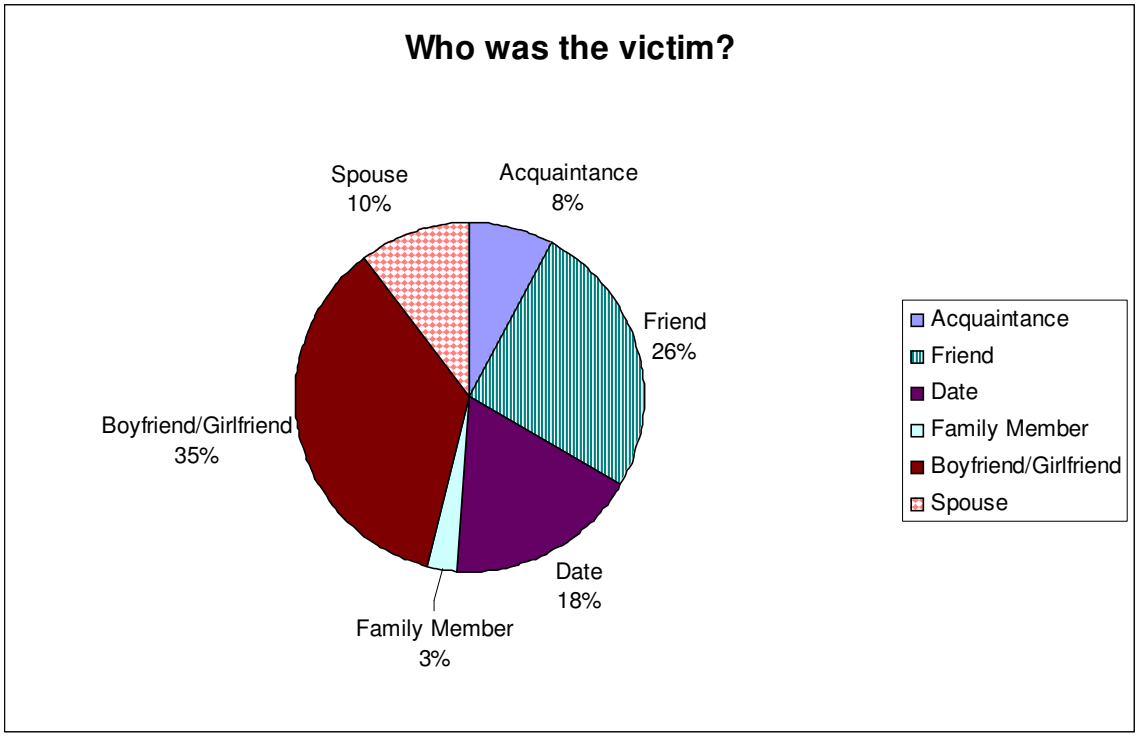
| Hurt the Victim? | | |
|---|---|---|
| No | 97.4% | (38/39) |
| Yes, Bruised | 2.6% | (1/39) |

| Others Involved? | | |
|---|---|---|
| No | 97.4% | (38/39) |
| Yes | 2.6% | (1/39) |

| Who was Victim? | | |
|---|---|---|
| Acquaintance | 7.7% | (3/39) |
| Friend | 25.6% | (10/39) |
| Date | 17.9% | (7/39) |
| Family Member | 2.6% | (1/39) |
| Boyfriend/Girlfriend | 35.9% | (14/39) |
| Spouse | 10.3% | (4/39) |

| Sex of Victim | | |
|---|---|---|
| Male | 12.8% | (5/39) |
| Female | 87.2% | (43/39) |

Table 5A2 reflects sexual assaults of a potentially different nature in that respondents were specifically asked to respond about sexually pressuring a friend or date. Though it is possible that some responses overlap with incidents from the responses in Table 5A1, based on the results for their relationship with the victim, it appears that these reflect different incidents, incidents that the respondents did not report when asked generally about having or trying to have sexual relations with someone against their will. Of the thirty-nine incidents reported, just under half reflect completed sexual intercourse. The means of pressuring the dates or friends in these instances were entirely verbal persuasion (87%) and hitting or slapping (13%). The vast majority of perpetrators again reported that they did not hurt their victims (97%), but left one bruised. Similarly, nearly all reported acting alone (97%). The question specifically asked about people "such as dates or friends" and the reports of victim relationships reflected this: A quarter were friends, and 18% were dates, but an additional 36% were boyfriends or girlfriends, 10% were spouses, and 8% were acquaintances. Most of the victims (87%) were females.




Next, the results for both questions were combined and then split out by the age of the respondent into adolescents (age 11 to 20) and adults (age 21 and older). We elected to use age 21 as a cutoff rather than the potentially more desirable (from a legal perspective) 18 because the original respondents were aged 18 to 24 in the first year of the follow-up questions, and thus there were no cases under age 18. The combining of the two questions was necessary because if individual question had been used, there would have been too few respondents under age 21 to report here. The drawback to this is that there may be overlap in the responses as respondents may have answered both questions about the same event.

Adolescents elaborated on nineteen incidents, and the results are reported in Table 5A3. Over two thirds reported that they only tried to assault someone, but did not succeed, and that they used primarily verbal means. All but one reported that they did not hurt the victim, and all

reported they were the only perpetrator involved. Over forty percent reported their victim was a "friend," and over a quarter reported trying to assault an acquaintance. Almost two thirds reported they had been drinking. Notably, none reported doing drugs before the assault.

Those assaulters aged 21 and older reported on 75 incidents (results are reported in Table 5A4). Again, over two thirds reported that they only attempted an assault, and did not succeed in forcing sex. The means were more diverse than those reported by the adolescents, though they were driven by verbal persuasion and threats (61%) and hitting, slapping, and mild roughness (23%). Additionally, there were a few reports of beating and choking, physically overpowering the victim, drugging or getting the victim drunk, threatening to use a weapon or actually using a weapon. Similar to the other ways these results have been broken out, nearly all of the adult respondents reported that their victim was not hurt and that they acted alone. Nearly one-fifth reported their victims were strangers, but over half reported their victims were friends, spouses, boyfriends or girlfriends, or dates. Moreover, ten percent reported they victimized family members. Almost ninety percent reported their victims were female. Just under 60% reported drinking before the incident, and thirty percent using drugs while drinking before the incident. None reported being arrested.

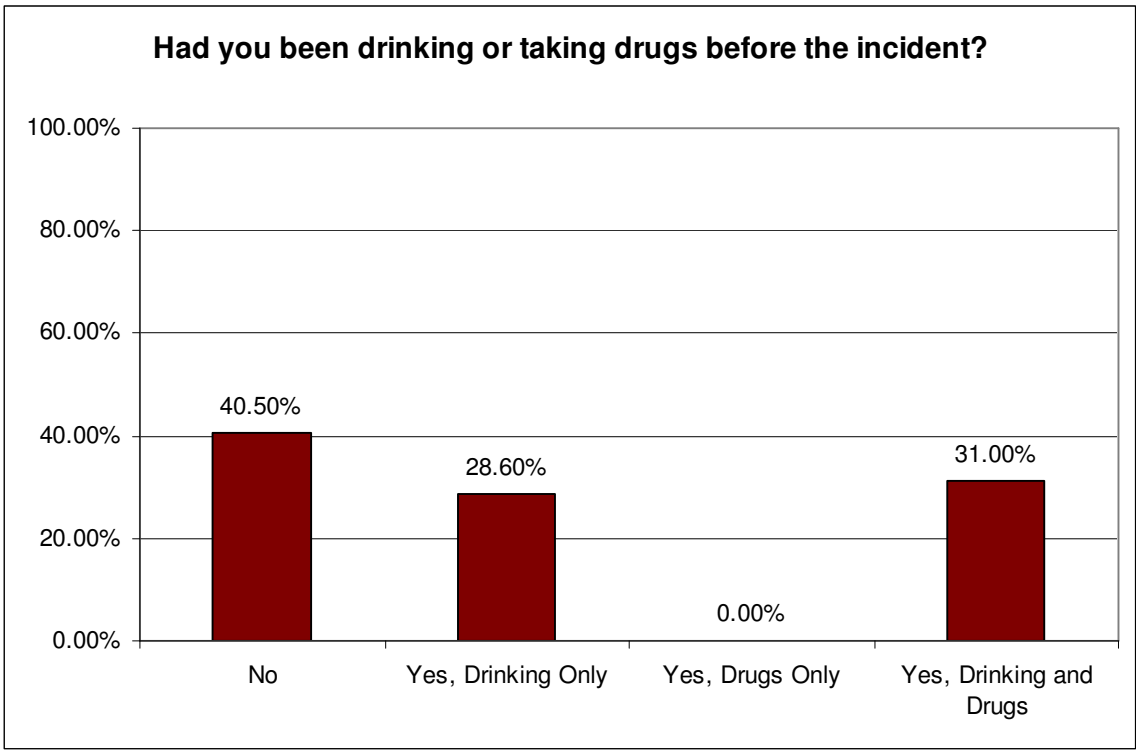


Table 5A3
Descriptive Characteristics of Sexual Assaults from Follow-up Questions
Longitudinal Sexual Assault Items and Pressure Date/Friend/Spouse,
Respondents aged 11-20, Waves 6 to 12

| Outcome? | | |
|---|---|---|
| Forced | 31.6% | (6/19) |
| Tried but didn't succeed | 68.4% | (13/19) |

| Means? | | |
|---|---|---|
| Verbal Persuasion/Threats | 68.4% | (13/19) |
| Hit/Slapped/Mild Roughness | 10.5% | (2/19) |
| Other | 21.1% | (4/19) |

| Hurt the Victim? | | |
|---|---|---|
| No | 94.7% | (18/19) |
| Yes, Bruised | 5.3% | (1/19) |

| Others Involved? | | |
|---|---|---|
| No | 100.0% | (19/19) |
| Yes | 0.0% | (0/19) |

| Who was Victim? | | |
|---|---|---|
| Stranger | 0.0% | (0/19) |
| Acquaintance | 26.3% | (5/19) |
| Friend | 42.1% | (8/19) |
| Date | 5.3% | (1/19) |
| Family Member | 0.0% | (0/19) |
| Boyfriend/Girlfriend | 10.5% | (2/19) |
| Other | 15.8% | (3/19) |

| Drinking or Drugs? | | |
|---|---|---|
| No | 38.5% | (5/13) |
| Yes, Drinking Only | 61.5% | (8/13) |
| Yes, Drugs Only | 0.0% | (0/13) |
| Yes, Drinking and Drugs | 0.0% | (0/13) |

Table 5A4
Descriptive Characteristics of Sexual Assaults from Follow-up Questions
Longitudinal Sexual Assault Items and Pressure Date/Friend/Spouse,
Respondents aged 21 to 42, Waves 6 to 12

| Outcome? | | |
|---|---|---|
| Forced | 30.7% | (23/75) |
| Tried but didn't succeed | 68.0% | (51/75) |

| Means? | | |
|---|---|---|
| Verbal Persuasion/Threats | 61.3% | (46/75) |
| Hit/Slapped/Mild Roughness | 22.7% | (17/75) |
| Beat/Choked | 2.7% | (2/75) |
| Overpowered Physically | 5.3% | (4/75) |
| Drugged or Got Drunk | 5.3% | (4/75) |
| Threat of or Used Weapon | 2.7% | (2/75) |
| Other | 17.3% | (13/75) |

| Hurt the Victim? | | |
|---|---|---|
| No | 97.3% | (73/75) |
| Yes, Bruised | 2.7% | (2/75) |

| Others Involved? | | |
|---|---|---|
| No | 97.3% | (73/75) |
| Yes, 1 | 2.7% | (2/75) |

| Who was Victim? | | |
|---|---|---|
| Stranger | 18.7% | (14/75) |
| Acquaintance | 9.3% | (7/75) |
| Friend | 21.3% | (16/75) |
| Date | 9.3% | (7/75) |
| Family Member | 9.3% | (7/75) |
| Boyfriend/Girlfriend | 18.7% | (14/75) |
| Spouse/Partner | 5.3% | (4/75) |
| Other | 8.0% | (6/75) |

| Sex of Victim | | |
|---|---|---|
| Male | 12.1% | (4/33) |
| Female | 87.9% | (29/33) |

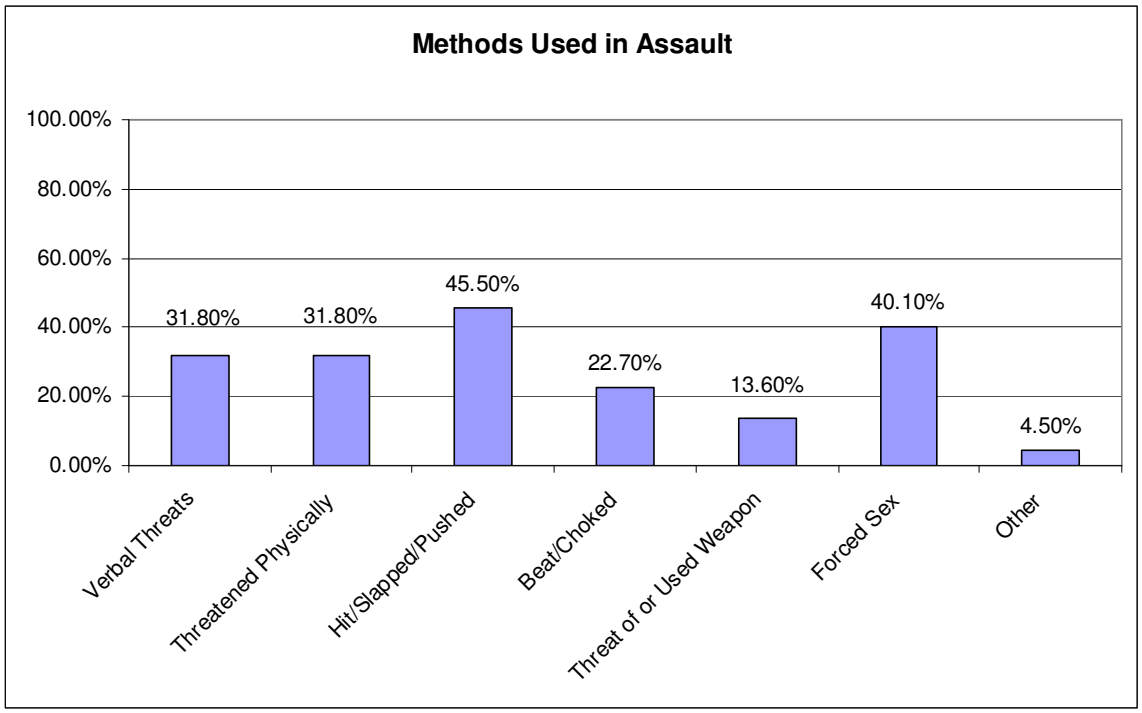
| Drinking or Drugs? | | |
|---|---|---|
| No | 40.5% | (17/42) |
| Yes, Drinking Only | 28.6% | (12/42) |
| Yes, Drugs Only | 0.0% | (0/42) |
| Yes, Drinking and Drugs | 31.0% | (13/42) |

| Arrested? | | |
|---|---|---|
| No | 100% | (12/12) |

Victimization

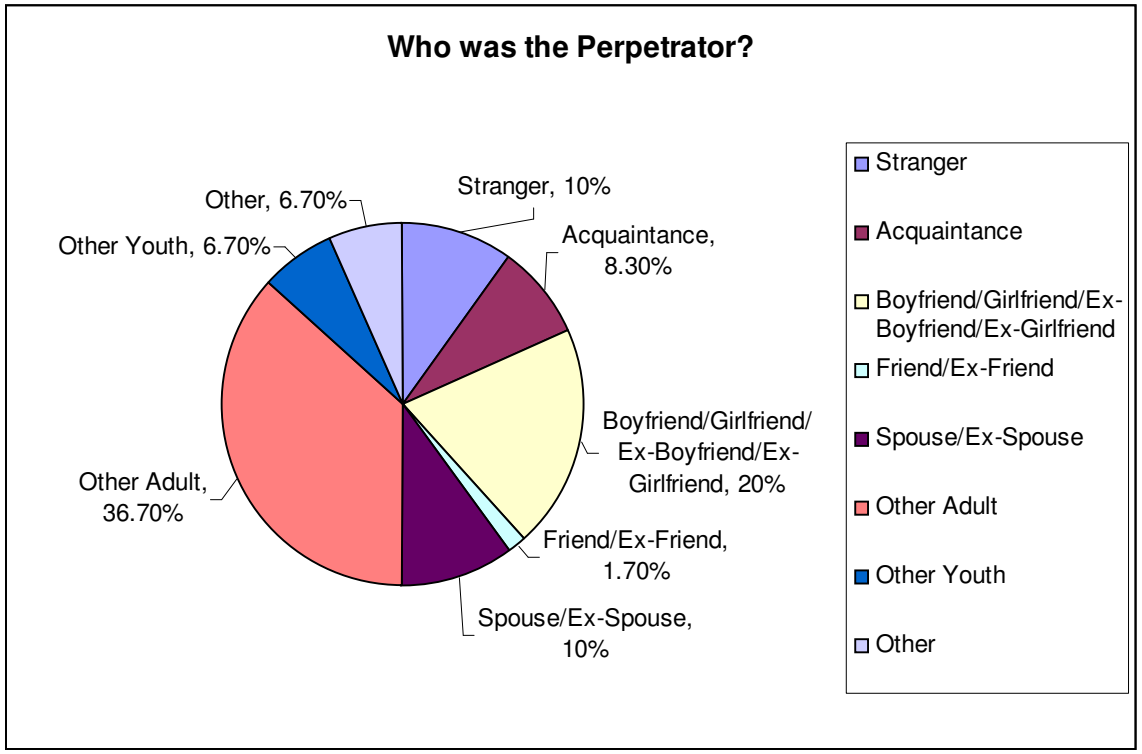
Tables 5B1 through 5B3 refer to the follow-up questions answered by victims of sexual assault. Descriptive information is provided in three ways. First, follow-up responses by the original respondents following the question, "how many time in the past year have you been sexually attacked or raped, or an attempt made to do so?" are presented (Table 5B1). Second, follow up responses by the children of the original respondents to the same question are presented (Table 5B2). Third, follow-up responses by the original respondents following the question, "how many times in the past year did a date or friend pressure you to do more sexually than you wanted to do?" are presented (Table 5B3).

In waves six through ten, the original respondents indicated how often in the past year someone had sexually assaulted them or had attempted to do so. The follow-up questions reported in Table 5B1 revealed that of 60 respondents, 17% reported being threatened with a weapon, 15% reported being seriously injured, and just under 50% reported that sexual relations had been forced. A smaller subset of twenty respondents answered additional questions only asked during two waves. It is at this point the victims reports begin to differ from the perpetrator reports. Victims could report as many perpetrator methods as applied, which resulted in 32% reporting that their attackers used verbal threats and another 32% reported physical threats. Additionally, 46% reported being hit, slapped, or pushed, 23% reported being beaten or choked, and 40% reported forced sex.




Over half of the victims reported being physically hurt, including being knocked down, bruised, cut or bleeding, being knocked unconscious, and requiring medical attention. The vast majority reported only one attacker per incident, and all reported their attackers were male. The respondents reported their attackers were approximately half White and half non-white, including African American, Hispanic, and Native American.

The victims reported that approximately a third of their attackers were boyfriends or ex-boyfriends, or spouses or ex-spouses. Unidentified other adults, made up another third, and the remainder included strangers, acquaintances, friends, and unidentified others.




The most common location for the assault was the victim's home or apartment, though they also mentioned someone else's home (not the perpetrator's), other buildings, alleys, and vehicles. Over three-quarters of victims noted that they had not reported the assault to the police. The reasons given varied greatly, but the two most common stated reasons were that it was a private, personal matter, and that the police could or would not have been able help them. Those who did report the assault to the police stated they did so in order to prevent their attacker from attacking someone else. Data from the National Crime Victimization Survey indicate that traditionally, the most common predictor of whether or not a person will report a crime is their age, with those over 21 being more likely to report crimes than those under 21, not personal characteristics nor perceived lack of concern by the police department (Skogin, 1976).

Table 5B1

Descriptive Characteristics of Sexual Victimization from Follow-up Questions
Longitudinal Sexual Assault Items, Original Respondents, Waves 6 to 10

| Threatened with a weapon? | | |
|---|---|---|
| No | 83.3% | (50/60) |
| Yes | 16.7% | (10/60) |

| Seriously Injured? | | |
|---|---|---|
| No | 85.0% | (51/60) |
| Yes | 15.0% | (9/60) |

| Forced Sexual Relations? | | |
|---|---|---|
| No | 50.8% | (30/59) |
| Yes | 49.1% | (29/59) |

| Weapon Used? | | |
|---|---|---|
| No | 90.9% | (20/22) |
| Yes, gun | 9.1% | (2/22) |

| Means? | | |
|---|---|---|
| Verbal Threats | 31.8% | (7/22) |
| Threatened Physically | 31.8% | (7/22) |
| Hit/Slapped/Pushed | 45.5% | (10/22) |
| Beat/Choked | 22.7% | (5/22) |
| Threat of or Used Weapon | 13.6% | (3/22) |
| Forced Sex | 40.1% | (9/22) |
| Other | 4.5% | (1/22) |

| Hurt the Victim? | | |
|---|---|---|
| No | 47.3% | (9/19) |
| Yes, Knocked Down | 36.8% | (7/19) |
| Yes, Bruised | 52.6% | (10/19) |
| Yes, Cut/Bleeding | 21.2% | (4/19) |
| Yes, Unconscious, required medical attention | 15.8% | (3/19) |

| Others Involved? | | |
|---|---|---|
| No | 81.8% | (18/22) |
| Yes, 1 | 4.5% | (1/22) |
| Yes, 2 | 4.5% | (1/22) |
| Yes, 3 | 4.5% | (1/22) |

Table 5B1 (continued)

| Sex of Perpetrator | | |
|---|---|---|
| Male | 100% | (22/22) |

| Race of Perpetrator | | |
|---|---|---|
| White | 40.9% | (9/22) |
| Non-White (African Am, Hispanic, Am Indian) | 59.1% | (13/22) |

| Who was Perpetrator? | | |
|---|---|---|
| Stranger | 10.0% | (6/60) |
| Acquaintance | 8.3% | (5/60) |
| Boyfriend/Girlfriend/Ex-Boyfriend/Ex-Girlfriend | 20.0% | (12/60) |
| Friend/Ex-Friend | 1.7% | (1/60) |
| Spouse/Ex-spouse | 10.0% | (6/60) |
| Other Adult | 36.7% | (22/60) |
| Other Youth | 6.7% | (4/60) |
| Other | 6.7% | (4/60) |

| Where did Assault Occur? | | |
|---|---|---|
| Victim's House or Apartment | 42.9% | (6/14) |
| Someone else's House or Apartment | 22.8% | (2/14) |
| Other Buiilding, Alley | 22.8% | (2/14) |
| Vehicle | 28.6% | (4/14) |

| Report to Police? | | |
|---|---|---|
| No | 77.2% | (17/22) |
| Yes | 22.7% | (5/22) |

| Why not? | | |
|---|---|---|
| Private/Personal Matter | 31.6% | (6/19) |
| Police can't/won't help, police bias | 36.8% | (7/19) |
| Afraid of reprisal by offender | 10.5% | (2/19) |
| Didn't want to get offender in trouble | 15.8% | (3/19) |
| Blame self, want to forget | 15.8% | (3/19) |
| Attempt only | 10.5% | (2/19) |
| Other | 15.8% | (3/19) |

| Why yes? | | |
|---|---|---|
| Illegal, Punish offender, recover property | 15.8% | (3/19) |
| Prevent recurrence | 42.1% | (8/19) |

Table 5B2
Descriptive Characteristics of Sexual Victimization from Follow-up Questions
Longitudinal Sexual Assault Items, Adult Children of Original Respondents, Wave 12

| Weapon used? | | |
|---|---|---|
| No | 100% | (21/21) |
| Yes | 0% | (0/21) |

| Hurt the Victim? | | |
|---|---|---|
| No | 42.8% | (9/21) |
| Yes | 57.1% | (12/21) |

| Others Involved? | | |
|---|---|---|
| No | 71.4% | (15/21) |
| Yes | 28.6% | (6/21) |

| Who was Perpetrator? | | |
|---|---|---|
| Stranger | 23.8% | (5/21) |
| Acquaintance | 38.1% | (8/21) |
| Friend | 9.5% | (2/21) |
| Family Member | 14.3% | (3/21) |
| Boyfriend/Girlfriend/ Ex-Boyfriend/Ex-Girlfriend | 4.8% | (1/21) |
| Co-worker | 9.5% | (2/21) |

| Reported to Police? | | |
|---|---|---|
| No | 57.1% | (12/21) |
| Yes | 42.8% | (9/21) |

| Police Caught Perpetrator? | | |
|---|---|---|
| No | 38.1% | (8/21) |
| Yes | 28.6% | (6/21) |
| Don’t Know | 19.0% | (4/21) |

Table 5B3

Descriptive Characteristics of Sexual Victimization from Follow-up Questions
Pressured by Date/Friend/Spouse, Original Respondents, Waves 6 to 10

| Threatened with a weapon? | | |
|---|---|---|
| No | 97.2% | (141/145) |
| Yes | 2.7% | (4/145) |

| Seriously Injured? | | |
|---|---|---|
| No | 100% | (145/145) |
| Yes | 0.0% | (0/145) |

| Forced Sexual Relations? | | |
|---|---|---|
| No | 76.6% | (111/145) |
| Yes | 23.4% | (34/145) |

| Means? | | |
|---|---|---|
| Verbal Persuasion/Threats | 93.5% | (58/62) |
| Hit/Slapped/Pushed | 6.5% | (4/62) |
| Forced Sex | 22.7% | (23/62) |

| Hurt the Victim? | | |
|---|---|---|
| No | 95.2% | (59/62) |
| Yes | 3.2% | (2/62) |

| Others Involved? | | |
|---|---|---|
| No | 98.3% | (61/62) |
| Yes, 1 | 1.6% | (1/62) |

| Sex of Perpetrator | | |
|---|---|---|
| Male | 50% | (31/62) |
| Female | 50% | (31/62) |

| Who was Perpetrator? | | |
|---|---|---|
| Stranger | 1.6% | (1/62) |
| Acquaintance | 16.1% | (10/62) |
| Date | 12.9% | (8/52) |
| Friend | 30.6% | (19/62) |
| Family Member | 1.6% | (1/62) |
| Boyfriend/Girlfriend/ Ex-Boyfriend/Ex-Girlfriend | 33.9% | (21/62) |
| Other | 3.2% | (2/62) |

The children of the original respondents were asked about sexual assault victimization in wave twelve, and the results are reported in Table 5B2. Of the twenty-one events described, no respondents reported that their attackers used a weapon, but over half (57%) reported they were hurt in the incident. Over a quarter stated that more than one attacker was involved, and the most frequent relationship to the attacker that was cited as that of acquaintance. Almost a quarter reported their attacker was a stranger, and 14% identified a family member. Of these 21, 43% reported the attack to the police, and 29% reported the police caught their attacker. Thirty-eight percent reported the police did not catch their attacker and 19% did not know if the attacker had been caught.

In the sixth through tenth waves, the original respondents were also asked to report if someone like a friend or date had pressured them to do more sexually than they wanted to do. Results are reported in Table 5B3. Of the 145 respondents who endorsed this response, only 3% reported their attacker had used a weapon, and none reported they had been seriously injured. Over three fourths reported their attacker had forced sexual relations. Additional questions were asked in two waves, and so 62 respondents elaborated further on the attack. The vast majority reported their attackers used verbal persuasion and threats (94%), that they were not hurt (95%), and that they had only one attacker. Half of reported attackers were male, one third were boy-or girlfriends, and almost one third were friends.

# DISCUSSION

Overall, results of this study contribute to the literature on sexual assault by providing longitudinal and intergenerational information on sexual assaulters aged 11 to 43 who were part of a non-clinical, nationally-representative sample. For the 90 sexual assaulters identified, we computed demographic information, including ever-prevalence and age-specific prevalence rates as well as hazard rates. We examined factors related to initiation, suspension, and continuity in sexual offending. Additionally, we assessed intergenerational and longitudinal factors in offending. Further, we also studied the long-term trajectories of adolescent sexual offenders as they aged into young adult sexual offenders, to identify those predictors in adolescence that were related to offending in young adulthood. Finally, we provided descriptive information on a variety of sexual offenses from the perspective of perpetrators and victims.

## Results from a Theoretical Perspective

The results of this study provide support for applying the integrated theory of Elliott et al. (1979; 1985; 1989) to the study of sexual assault. Specifically, across the analyses of this study, we found that being male, being of a lower SES, prior engagement in sexual assault and other offenses, problem alcohol use, attitudes tolerance of deviance, exposure to delinquent peers, social isolation from the peer group, and labeling as sick and non-conforming were all related to engagement in sexual assault. These variables are all related to low levels of conventional bonding and early involvement in delinquent and criminal behavior. Additionally, items were examined that augment the integrated theory with feminist theory. Not unexpectedly, the sex of the victims were overwhelmingly female, and the sex of the perpetrators were overwhelmingly male. Items assessing misogynistic attitudes toward sexual assault and the justifiability of interpersonal violence in adolescence were related to engagement in sexual assault in adolescence. Because these items were only asked in adolescence, they could not be assessed longitudinally, but the cross-sectional analysis was significant.

A notable nonsignificant predictor was sexual experience. Specifically, neither the degree to which the respondents viewed their first sexual experience as positive, nor the respondents' satisfaction with their current sex lives was related to engagement in sexually assaultive behavior, which indicates that the sexual assaults reported here were not motivated by the disappointing sex lives of the perpetrators. Additionally, hands-off offenses (i.e., paraphilias) were, in this study, largely unrelated to sexual assault, the only marginally significant relationship shown was in a simple bivariate statistic in young adulthood.

Overall, to some degree, involvement in sexual assault looks like involvement in other forms of serious violent behavior, such as aggravated assault and robbery. Specifically, as with serious violent offenses generally, the onset of this form of serious violence typically occurred during adolescence and the shape of the age-specific hazard curve for any sexual assault looked quite similar to that for other serious violent offenses.

However, there are important differences between sexual assault and other forms of serious violent behavior. An important difference between sexual assault and other problem behavior is the maturation effect (the point at which new onset of this type of offense drops off

dramatically), which was significantly later for serious sexual assaults than what has been shown using the current dataset for aggravated assaults, robberies or any sexual assault generally. While the hazard rate for these other forms of violence or any sexual assault began to drop dramatically after age 16 or 17, the decline for serious sexual assaults did not begin until age 21. Moreover, the age-specific prevalence rates for lower SES and minority offenders did not decline substantially after age 17 as they did for violent offenders (see Elliott, 1994). These rates, for both serious and any sexual offending, remained quite high across the period of young adulthood. In addition, the first reported commission of sexual assault occurred later than first commission of other offenses including felony assault, felony theft, marijuana use, hard drug use, and minor delinquency. Related to this, when first engagement in sexual assault, felony assault, felony theft, delinquency, marijuana use, and hard drug use were considered, sexual assault was always the last act initiated. That is, sexual assault was the last of those behaviors to be initiated, indicating that people did not begin their criminal careers with a sexual assault, but rather it was a behavior engaged in only after other criminal and delinquent behavior had already begun. Finally, another important difference in sexual assault as compared to other forms of violence is that sexual assaults were much more likely to involve solo perpetrators. Over 98 percent of sexual assaults reported involved single perpetrators (for comparable co-offending rates for other offenses see Warr, 2002, Reiss, 1986 and Erickson and Jensen, 1977).

## Results Compared with Earlier Studies

Overall, results of the present study are consistent with prior work in some respects but not others. Consistent with other studies, ever-prevalence of sexual assault through age 43 was quite low - about 6 percent for any reported sexual assault and under three percent for those considered serious sexual assaulters. Over 90 percent of perpetrators were male. Perpetrators were also disproportionately from lower SES and minority groups. The peak year of onset for any sexual assault was age 16, similar to that reported earlier by Green (1999). Finally, most reported sexual assaults *as described by the perpetrators* failed to achieve penetration, involved "mild" forms of physical force that did not hurt or injure the victim, were solo assaults (did not involve accomplices), involved alcohol use prior to the assault, and involved family or acquaintances as victims - all findings consistent with earlier studies of sexual assault offenders. Sexual assaulters also tended to be more isolated and lonely than other youth (Fisher, 1999; Seidman et al., 1994)

There are also some findings that are substantially different from those reported in other studies. In many cases the differences can be attributed to differences in study design, i.e., a prospective, national representative general population with over 20 years of follow-up compared to clinical or incarcerated samples with short follow-ups or long-term retrospective recall. Specifically, our data do not suggest such as high a rate of early onset as reported elsewhere; less than 14 percent of either group of sexual assaulters initiated sexual offending before age 12. Further, the FBI (1981) estimates that about 20 percent of reported forcible rapes involve adolescent perpetrators. Our estimate suggests a much higher proportion of self-reported sexual assaults/rapes involve adolescent offenders. This could reflect a lower law enforcement reporting rate by victims of adolescent perpetrators or differences in the definitions of sexual assault as used in this study and rape as defined in legal statutes and reported to the FBI.

## Other Significant Results

Characteristics of Sexual Assault

The two most common methods that perpetrators of sexual violence reported using on their victims, accounting for two thirds of cases was "verbal persuasion and threats," and "hit/slapped" or "mild roughness,"[15] and in 95% of incidents, the perpetrators reported that the victim was not hurt. As appalling as this may be to advocates, it is crucial to note that these reports are the reported perspective of the perpetrator. If more serious methods were actually used, there could be several reasons for this minimization of their actions and their effects on the victims. First, they could realize what a heinous offense sexual assault is and they did not want to reveal the true scope of their offense in front of an interviewer. Second they may truly believe that this is all that they did and may truly believe the victim was not hurt. Another possibility is that because many of the offenses were against acquaintances, friends, family members, partners, or dates, who may be caught off guard by their friend/family member's behavior, that less violent measures were not required to subdue the victims. In support of this, those items designed to assess date and relationship rape revealed that verbal persuasion and hitting/slapping/mild roughness accounted for all methods used.

In the case of dates and acquaintances, the perpetrators reported more instances of succeeding in forced sex (46%) versus the general question in which the perpetrator and victim may share any relationship (19%). Interestingly, however, in the original respondent generation, the most common relationship the perpetrators reported they had with the victim was that of stranger (25%).

When the reports of perpetrators aged 11-20 were compared with those aged 21 to 42, we found evidence that the older perpetrators, who were likely persistent offenders, used more serious methods to subdue their victims. Specifically, over three-quarters of the younger group reported using verbal persuasion/threats and hitting/slapping/mild roughness, whereas the older group reported in addition to these, beating/choking, overpowering physically, drugging or getting drunk, and threat of or use of weapon. Additionally, the younger group reported no stranger rapes, while the older group reported that 19% were sexual assaults on strangers.

Because different follow-up questions were asked in different waves, only twelve respondents were asked if they had been arrested, but those twelve reported no arrests. This is not surprising given that when 22 victims of sexual assault in the original respondent generation were asked if they had reported the incident to the police, over three-quarters reported they did not, with the most commonly reported responses being that the police couldn't or wouldn't help and that it was a personal, private matter. In the offspring generation, however, 43% reported the attack to the police and 29% reported that the police had made an arrest in the case.

When the perspective of the victims was considered, a somewhat different story was told than that of the perpetrators. In the original respondent generation, seventeen percent reported

[15] It is important to note that "mild roughness" was a an option for means of forcing the victim from the first wave of follow-up questions, wave 6, which means that the item was selected for inclusion in approximately 1980. And because the study is longitudinal, the items must remain the same over time. As horrifying as this term may be to advocates, changing the term would result in losing the ability to compare items longitudinally.

being threatened with a weapon (9% reported a gun), fifteen percent reported being seriously hurt, and 49% reported that sex was actually forced. In the offspring generation, no weapon use was reported, but 57% reported being seriously hurt. The means reported (note that victims could reports more than one method) by the original respondents indicated a third of perpetrators had used verbal persuasion and another third threatened the victims physically. Nearly half reported being hit, slapped, or pushed, and nearly a quarter reported being beaten or choked. All perpetrators reported were male.

Problem alcohol use was found to be related to sexual assault in two types of analyses: Problem alcohol use in adolescence marginally significantly predicted sexual assault in young adulthood, and in follow-up questions, 61.4% of respondents reported drinking before sexually assaulting their victims. In contrast, however, problem drug use in adolescence was not a significant predictor of sexual assault in young adulthood. Moreover, though 31% of respondents reporting both drinking and doing drugs before engaging in sexual assault (they are included in the 61.4%), none reported taking drugs exclusively.

Initiation, Continuity, Suspension, Sequencing

The model predicting initiation of sexual assault yielded little new information -- the only significant predictor was being male. One possible explanation for this minimal finding is that many of the sexual assaulters reported their first assault in the first wave of data collection, and the analysis could only be conducted on those who had not yet initiated in wave 1 (as a minimum of wave 1 data were required as predictors), leaving fewer assaulters available for analysis. The model predicting suspension was more informative, yielding the result that exposure to delinquent peers, being male, being white, and simply getting older were all predictive of suspension of engagement in sexual assault.

We next examined continuity of sexually assaultive behavior by using prior engagement in sexual assault, attitudes toward deviance, and exposure to delinquent friends in one wave as predictors of sexual assault in the next wave. Generally and not surprisingly based on prior work in violence and sexual violence in particular, prior engagement in sexual assault predicted future engagement in sexual assault. Greater exposure to delinquent peers was also weak predictor in some wave predictions. Attitudes tolerant of deviance were not predictive of sexual assault in future waves. This is consistent with Elliott, et al. (1989), which reported that attitudes tolerant of deviance was predictive of substance use, but not non-substance abuse offenses).

An examination of sequencing of sexual assault with other problem behaviors yielded the result that respondents who committed sexual assaults reported first committing felony assault, felony theft, minor delinquency, and marijuana use in waves prior to the first time they committed sexual assault. This is largely consistent with the work of Elliott (1994) which found that sexual assault was generally initiated late in the sequence of violent offenses.

Overall, exposure to delinquent peers was one of the most significant predictors of sexual assault over the life course, but particularly so for males. Longitudinal prediction of sexual assault yielded the result that exposure to delinquent and criminal friends is the single consistently statistically significant predictor or sexual assault, but that it was predictive only for males, not females. One exception was in the logistic regression analyses that used adolescent

variables to predict sexual assault in young adulthood, where exposure to delinquent peers was not significant.

Intergenerational Analyses

We found that the ever-prevalence rates for the original respondents differed greatly from those of the other two generations studied, though this may be due to a variety of reasons. Fewer than one percent of the parents of the original respondents the offspring of the original respondents reported ever engaging in sexually assaultive behavior. There are a variety of potential explanations for this difference. First, it is possible that the very long-term recall required of the parents of the original respondents led to underreporting of engagement sexual assault. Under-reporting is even more likely given the serious, personal nature of the crime (Grotpeter, 2008). Second, it is possible that far fewer people committed sexual assault in the older generation, however, this could also be reflective of differences in understanding and thus labeling and interpreting of behavior. On the face of the results, there is a possibility that, similar to trends reported for violent crime in recent years, sexual assault has decreased as a behavior. This could be due to increased awareness of the heinous nature of the offense which could potentially lead the younger generation to commit sexual assault less often. However, this same awareness may also have negative impact on the quality of data collected – that is, we cannot discount the possibility that a younger generation of sexual assaulters may know exactly the horrific nature of their crimes, but they may also more cynical and thus less trustful than their parents were of researchers with privacy certificates from the federal government and they could be less likely to disclose such personal information. Regardless of the reason, reports of violent crime among the offspring generation in general were significantly lower than reports from their parents 25 years earlier.

The intergenerational analyses were originally designed to compare sexual assaulters across generations. However, because there were so few assaulters in the grandparent and offspring generations, the analyses were changed to use felony assault (including sexual assault) in the grandparent generation and sexual assault in the parent (original respondent) generation to predict a variety of offenses in the offspring generation. There were three key findings: both grandparent felony assault and parent sexual assault predicted engaging in felony assault and robbery in the offspring generation, while sexual assault in the parent generation predicted felony theft in the offspring generation. These results indicate that though there is not a direct connection linking sexual assault across the generations, there is a direct connection of serious problem behaviors that include sexual assault across the generations. That is, though we could not test whether sexual assault in the parent generation predicted sexual assault in the offspring generation (due to nearly nonexistent prevalence in the offspring generation), it did predict felony assault, felony theft, and robbery, which are clearly problematic on their own, and which could potentially be precursors to later sexual assault. It is also important to note that felony assault in the grandparent generation predicted problem behavior two generations later.

Longitudinal Prediction

Given the low base rate of sexual assault even among the original respondents, our success in predicting sexual assault behavior was relatively good. Information collected while the youth were aged 11-20 accounted for about thirty-five percent of the variance in subsequent sexual assault when the youth were 21-30. The strongest predictors in this lagged analysis were

prior engagement in sexual assault and felony theft, though problem alcohol use and normlessness in the family and peer contexts (e.g., "Making a good impression is more important than telling the truth to parents." "You have to be willing to break some rules if you want to be popular with your friends.") were marginally significant. When the analyses were repeated using only the males in the sample, a new set of predictors emerged. Specifically, sexual assault, felony theft, and family labeling as "sick" (e.g., messed up, needs help, are often upset, have a lot of personal problems) were statistically significant predictors, and attitudes tolerant of deviance, social isolation from the peer group, and peer labeling as the reverse of conforming (e.g., the opposite of :well liked, a good citizen, likely to succeed, and gets along well with other people) were marginally significant predictors. Parallel analyses could not be conducted for females due to power issues.

## Study Limitations

As is often the case in research, this study has some important limitations that must be taken into account in interpreting our findings. It is our contention that the use of self-reported involvement in sexual assaults provides a new source of data that has many advantages over the use of official arrest or conviction records. It is well established that a relatively small percentage of rapes and sexual assaults are reported to the police and official record studies; in this study 90 percent of persons reporting one or more serious sexual assaults were never arrested for a sexual assault. Self report data capture a much larger portion of the actual rapes and sexual assaults actually occurring in the general population. It has also been demonstrated that the seriousness of self-reported violent acts is comparable to that of offenses included in arrest records (Elliott, 1994). That said, it must also be noted that we believe self reports of serious sexual assaults are under reported. How much is not clear. This is a problem for all self reports, both offender reports such as those used in this study and victimization reports like those used in the National Crime Victimization Survey. We thus view our estimates of the prevalence of sexual offending as conservative estimates at best and it is possible they involve more substantial underestimates. If it were the case that the under reporting was substantial and a result of selective reporting, the generalization of the findings presented here would be problematic. However, neither of these two parameters has yet been established.

It is also true that in several of the analyses presented the number of cases is quite small and this reduces our confidence in these findings. These findings, particularly for serious sexual assaulters, should be considered tentative. Because serious sexual assaults are relatively rare in the American youth population, very large sample sizes would be required to generate sufficient samples of sexual assaulters for more robust analyses. Still, sample sizes were sufficient for most of the analyses presented, and it is our belief that future research will benefit from general population studies with both self-report and official measures of serious sexual offending such as the National Youth Survey. Unfortunately, relatively few general population studies include both types of offending measures and relatively few even include sexual offending in the set of criminal acts being investigated.

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