

5-2017

The Development of Sexually Abusive Behavior in Adolescent Males who have been Sexually Victimized

Brittany S. Sharma
East Tennessee State University

Follow this and additional works at: <https://dc.etsu.edu/honors>



Part of the [Clinical Psychology Commons](#)

Recommended Citation

Sharma, Brittany S., "The Development of Sexually Abusive Behavior in Adolescent Males who have been Sexually Victimized" (2017). *Undergraduate Honors Theses*. Paper 426. <https://dc.etsu.edu/honors/426>

This Honors Thesis - Open Access is brought to you for free and open access by the Student Works at Digital Commons @ East Tennessee State University. It has been accepted for inclusion in Undergraduate Honors Theses by an authorized administrator of Digital Commons @ East Tennessee State University. For more information, please contact digilib@etsu.edu.

The Development of Sexually Abusive Behavior in Adolescent Males who have been Sexually Victimized

By

Brittany S. Sharma

An Undergraduate Thesis Submitted in Partial Fulfillment
of the Requirements for the University Honors College and
Honors-in-Discipline Program

Department of Psychology, College of Arts and Sciences,
East Tennessee State University
Honors Thesis Chair: Jill D. Stinson, PhD

Brittany S. Sharma

Date

Jill D. Stinson, PhD, Thesis Mentor

Date

Ginette C. Blackhart, PhD, Thesis Reader

Date

Megan A. Quinn, DrPH, Thesis Reader

Date

Abstract

The abused-abuser hypothesis posits that a history of sexual victimization may increase the risk of engaging in sexually abusive behavior for some victims. Although many researchers have discovered a higher prevalence of childhood sexual abuse (CSA) in sex offenders in comparison with non-sex offenders, less research has considered how specific characteristics of prior sexual abuse may contribute to how these individuals sexually abuse others. For the present study, archival data were collected from 243 youths receiving residential treatment for sexually abusive behavior and self-reported data were collected from university students with no known history of sexual offending. The present study confirms disproportionately high rates of CSA in the sample of sexually abusive youth, compared to non-sexual abusers. Further, among the sample of sexually abusive youth, we examined the effects of sexual perpetrator characteristics and age of sexual victimization on victim choice, age at first sexual offense, and number of sexual offenses, number of arrests, and sexual victims. Results revealed associations between perpetrator characteristics and victim choice. Additionally, being sexually victimized by a male or a relative was significantly associated with a younger age of onset of sexually abusive behavior and a younger age of sexual victimization suggested a greater number of sexual victims. Implications and future directions will be explored.

DEVELOPMENT OF SEXUALLY ABUSIVE BEHAVIOR IN ADOLESCENT MALES WHO HAVE BEEN SEXUALLY VICTIMIZED

Childhood sexual abuse presents a significant health problem in the United States, as 21% of children experience sexual victimization prior to age 18 (CDC, 2016). Over the past few decades, research dedicated to preventing further sexual victimization has identified factors that influence the development of sexually abusive behavior. Although the majority of victims of sexual violence do not subsequently become perpetrators of sexual abuse, studies have consistently revealed significantly higher rates of childhood sexual abuse reported by individuals who engage in sexually abusive behavior themselves in comparison with non-sexual abusers (Burton, Miller & Shill, 2001; Dhawan & Marshall, 1996; Glasser et. al, 2001; Hanson & Slater, 1988, Seto & Lalumiere, 2010). In fact, research has indicated that on average, sex offenders are 3.36 times more likely to report a history of childhood sexual abuse (Jespersen, Lalumiere, & Seto, 2005). For some victims of sexual abuse, their experiences may contribute to future sexual offending. Despite evidence suggesting a greater prevalence of childhood sexual abuse among sexually abusive samples, empirical research has not yet conclusively identified how characteristics of early sexual victimization contribute to the development of sexually abusive behavior. Therefore, in addition to examining the prevalence of sexual victimization in a sample of persons who have committed sexual offenses, the present study seeks to further investigate how individual experiences of sexual abuse influence later features of sexually abusive behavior.

Social Learning and the Abused-Abuser hypothesis

The high prevalence of sexual abuse in the US has driven the development of several theories attempting to explain why some individuals develop sexually abusive behavior (Hall & Hirshmann, 1991; Marshall & Barabee, 1990; Ward & Beech; 2005). Some investigators have

suggested that poor childhood attachment styles may contribute to sexual offending (Smallbone & Dadds, 2000; Stirpe et. al., 2006), whereas others have implicated cognitive disabilities (Cantor et. al, 2005) or psychopathology as potential explanations for sexually abusive behavior. An alternative approach to explaining the initiation of sexually abusive behavior involves social learning. Social learning theory is a widely known psychological theory that proposes that behavior is learned through observation of others' behaviors, as well as the modeling of those observed behaviors.

Although the study of role of imitation in learning began earlier, social learning theory was introduced by Albert Bandura in the early 1960s. Initial research on social learning theory described the acquisition of conforming behaviors in children, but the theory has been applied to a wider range of behaviors, including aggression and sexual offending. Early experimental studies demonstrated that children observe behaviors of adult models and subsequently adopt those behaviors themselves (Bandura & Hudson, 1961; Bandura, Ross, & Ross, 1961). However, behavior is not always imitated. Whether an individual engages in a particular observed behavior is dependent upon the three components of social learning: Characteristics of the model, the actual observed behavior, and the consequences of the observed behavior.

First, a behavior is more likely to be imitated if the model is someone the individual trusts or to whom they relate. Second, the behavior will more likely be imitated if it is related to other learned behaviors. An individual is less likely to engage in an observed behavior if it contradicts existing behaviors. Third, observed reinforcement and punishment of the model's behavior influences the likelihood that the behavior will be imitated by the observer. For example, if an individual views positive reinforcement following a particular observed behavior, then the behavior is likely to be imitated by the observer. The opposite is true when punishment

follows the observed behavior. Each of these factors contribute to the likelihood of imitation of an observed behavior.

Some research describes the importance of social learning in criminal activity and the development of deviant behavior (Akers et al., 1979; Akers, La Greca, Cochran, & Sellers, 1989; Akers & Lee, 1996; Lee, Akers, & Borg, 2004). The social learning approach was first applied to criminal behavior by Burgess and Akers (1966) and has gained empirical support over the past few decades. Akers identified several social structural variables that influence whether an individual commits a crime or engages in delinquent behavior: *Differential association, differential reinforcement, definitions, and imitation*. The differential association-reinforcement theory posits that:

“The probability that persons will engage in criminal and deviant behavior is increased and the probability of their conforming to the norm is decreased when they *differentially associate* with others who commit criminal behavior or espouse definitions favorable to it, are relatively more exposed in-person or symbolically to *salient criminal/deviant models, define it as desirable or justified* in a situation discriminative for the behavior, and have received in the past and anticipate in the current or future situation *relatively greater reward than punishment* for the behavior” (Lee, Akers, & Borg, 2004, p.18).

Similar to Bandura’s social learning theory, the differential association-reinforcement theory highlights the importance of observation and association of models, internal definitions supporting the behavior, and anticipated consequences following a behavior. This, however, is not the only form of social learning theory that has been applied to explain criminal behavior.

The abused-abuser hypothesis, derived from the social learning theory, is a more recent idea suggesting that a prior history of sexual victimization may increase the risk of engaging in sexually abusive behavior for some individuals. Although the majority of sexual abuse victims do not go on to sexually abuse others, studies have shown that there are still those who do (e.g. Salter et al., 2003), and that for these individuals, the sexual abuse experience may have had a lasting development impact. The abused-abuser hypothesis implicates social learning as a primary contributor in the development of sexually abusive behavior and posits that individuals may learn such behavior by through their own experiences of sexual victimization.

Similar to the acquisition of other behaviors, the likelihood of whether an individual will adopt sexually abusive behavior from their perpetrator also depends on a variety of factors. For example, if the victim of sexual abuse acknowledges satisfaction or physiological arousal (either by the victim or the perpetrator) from the sexual encounter, then he/she may be conditioned to achieve arousal in similar encounters. Children who have experienced sexual abuse may also develop distorted views on sex and may relate the abuse to “normal” behavior to obtain affection (Finkelhor & Browne, 1985). In each case, the victim has learned that the particular sexual encounter may be favorable or beneficial in some way, increasing the likelihood that he/she will engage in the same behavior in the future.

Several factors influence how a victim will interpret the sexual abuse, such as, 1) *The age at which the sexual victimization occurred*: If the victim is of younger age at the time of victimization, then he/she will be more likely to accept the behavior as normal. 2) *The duration of the sexual victimization*: Longer victimization means that the victim will have longer to learn the behavior and experience or observe the rewards associated with the abuse. 3) *The type of acts the perpetrator(s) commit(s)*: Sexual abuse involving penetration may be more traumatic,

making it more likely that the victim will normalize the behavior through cognitive dissonance or need to cope by repeating the behavior themselves. 4) *The modus operandi of the perpetrator(s)*: The greater force that is used during the sexual abuse, the more likely the victim will acknowledge the act, reinforcing learning of the behavior. Additionally, the increased force may require the victim to act out to gain control. 5) *The gender of the perpetrator*: If a victim is sexually abused by a male, then it is likely that greater force was used. The shame associated with being victimized by a male (if the victim is also male) will also increase the risk of coping with the abuse by repeating the behavior. 6) *The relationship of the perpetrator(s) to the youth*: Sexual victimization at the hands of a relative or close individual will increase the likelihood that the victim will imitate the model. (Burton, Miller, & Shill, 2001; Garland & Dougher, 1990).

The above factors may explain how a victim of sexual abuse initiates sexually abusive behavior. Still, not all observed behaviors are imitated. Subsequent empirical research has tested the assumptions of the abused-abuser hypothesis.

Testing the abused-abuser hypothesis

Sexual victimization and subsequent sexually abusive behavior

Most examinations of the abused-abuser hypothesis measure sexual victimization via self-report and involve the comparison of a sex offender sample and a non-sex offender or non-offender sample (Burton et al., 2001; Dhawan & Marshall, 1996; Glasser et. al, 2001; Hanson & Slater, 1988). Perhaps most useful is the latter approach which provides clarification of the association of sexual victimization and specific sex offending behavior rather than an association with criminal activity (Jespersen et al., 2005). Still, other researchers have conducted longitudinal studies assessing future sexual criminal activity of boys who had been sexually

abused (Salter et al., 2003). Despite the approach, the vast majority of studies have consistently revealed higher reported rates of sexual victimization in sex offenders, compared to other non-sex offender and non-offender samples. Past research has primarily relied on adult male sex offender samples, but additional research has begun to assess adolescents who have engaged in sexually abusive behavior in hopes of better understanding the onset of problematic sexual behavior (Seto and Lalumiere, 2010). In fact, individuals under the age of 18 comprise about 25.8% of sex offenders and about one-third of sex offenders who abuse minors (Finkelhor, Ormrod, & Chaffin, 2009). Further, as high as 15% of juvenile sex offenders continue to engage in sex offending behavior as adults (Caldwell, 2002). For this reason, it is important to consider both adults and youth who engage in sexually abusive behavior.

Recently, meta-analytic reviews have provided a more comprehensive view of findings pertaining to the abused-abuser hypothesis. Jespersen and colleagues (2005) conducted a meta-analysis of 17 studies comparing sexual abuse histories of adult sex offenders and non-sex offenders (non-offenders were not included in the study) and found that all but one study reported higher odds of sexual victimization in sex offenders. In studies comparing abuse histories of such samples, it is also important to consider that often, sexual abuse and other types of maltreatment co-occur (Finkelhor, Ormrod, & Turner, 2007). Therefore, additional measures may be necessary to control for the presence of other types of childhood abuse. In their meta-analysis, Jespersen and colleagues (2005) found that physical abuse particularly tended to co-occur with sexual abuse. In order to address this, they also reported that there was a significant difference between histories of sexual abuse and experiences of physical abuse in the two samples, with larger group differences in experiences of sexual abuse. These results not only suggest that those who engage in sexually abusive behavior are more likely to have a history of

sexual abuse, but that their behavior may be more impacted by their experience of sexual abuse than with other types of maltreatment they may have experienced during childhood.

Additionally, in another meta-analysis of 29 studies comparing adolescent sex offenders and non-sex offenders, it was found that adolescent sex offenders were five times as likely to report having a history of sexual abuse (Seto & Lalumiere, 2010). Seto and Lalumiere also found that across the 31 studies comparing adolescent sex offenders to non-offenders, 46% of adolescent sex offenders experienced prior sexual victimization, in comparison with 16% of non-offenders. Both analyses provide evidence that individuals who have engaged in sexually abusive behavior do indeed have a greater prevalence of historical childhood sexual victimization in comparison with those who do not engage in any criminal activity and offenders who do not commit sexual crimes. However, fewer empirical studies have examined how specific characteristics of sexual victimization may impact features of sex offenders' own sexual perpetration against others.

Shared sexual victimization-offense characteristics

The abundance of research findings revealing a higher prevalence of sexual abuse in those who sexually offend against others has led to further investigation into the specific facets of the victimization experience. Researchers have questioned whether characteristics of sex offenders' own sexual abuse may contribute to how they abuse others. Studies have assessed a variety of sexual offense characteristics in those who engage in sexually abusive behavior, such as victim gender, victim age, relationship to the victim, and type of sexual offense. These sexual offense characteristics are then compared to certain aspects of the sex offender's own sexual victimization experiences. For example, some researchers suggest that rates of sexual victimization are higher in sex offenders who abuse against children and males compared to

those who sexually abuse females, peers, or adults (Worling, 1995). In one study of adolescent male sex offenders who were receiving outpatient sexual offender treatment, Worling (1995) found that 75% of the adolescents who had ever sexually abused a male child reported having been sexually abused themselves, compared to 25% of adolescents who had female, peer, or adult victims.

Similarly, in the meta-analysis conducted by Seto and Lalumiere (2010), they found seven studies that directly assessed victim age differences in adolescent sex offenders who offended against children and those who have sexually abused only peers or adults. Results indicated that the adolescent sex offenders with child victims were significantly more likely to have experienced sexual abuse than adolescents with only peer or adult victims. This may be because sex offenders who were sexually abused as children may have been more likely to seek sexual contact with other children during their childhood, perhaps resulting in conditioned arousal of sexual contact with children (Jespersen et al., 2005). This is not to say that all sex offenders who have been sexually abused will victimize children, but there may be an association between being sexually victimized as a child and choosing a child victim. Further, experiences of sexual victimization may also be related to subsequent abuse of a male, rather than only females, as the majority of perpetrators of child sexual abuse are male.

Thus, if victims of sexual abuse have subsequently developed sexually abusive behavior, it is possible that they have learned to engage in specific abusive behaviors related to their own experiences of abuse. Few researchers have examined the relationship between characteristics of sex offenders' own victimization and the way they sexually abuse their victims. Veneziano, Veneziano, and LeGrand (2000) examined victim gender and age, relationship to victim, and specific abusive behaviors in 74 adolescent male sex offenders with a history of sexual

victimization. Odds ratios revealed that the offenders were more likely to choose victims that reflected their own experience of victimization and were more likely to sexually abuse their victims in the same manner they were sexually abused (Veneziano et al., 2000). For instance, adolescents who had been sexually victimized by a male were twice as likely to sexually abuse only male victims. Similarly, if they were victimized younger than the age of 5, the adolescent offenders were twice as likely to victimize children under the age of 5. The same results were found with regard to relationship status of the victim in that adolescents were more likely to have sexually abused a relative when they were victimized by a relative themselves.

Additionally, Veneziano and colleagues (2000) assessed specific sexually abusive behaviors committed by the adolescent sex offenders (e.g., anal intercourse, fondling, and fellatio). Results indicated that adolescents were significantly more likely to engage in the same form of behavior from their own sexual victimization. These findings suggest that adolescent sex offenders may attempt to mirror their own experiences of sexual victimizations with their victims. Indeed, Burton (2003) confirmed this pattern of behavior with regard to gender and relationship to the victim in a study examining 179 sexually victimized adolescent male sex offenders. However, of three types of sexually abusive acts (i.e., fondling, exhibitionism, and penetration), Burton found only one significant association between their own victimization and subsequent sexually abusive actions. An adolescent who was sexually abused by penetration was 4 times more likely to penetrate his victims (Burton, 2003). This particular finding is consistent with the factors influencing the transmission of sexually abusive behavior discussed previously (e.g., type of acts the perpetrator(s) commit(s), and the modus operandi of the perpetrator). The act of penetration is likely to require more force and will be more salient to the victim and

therefore may be more readily internalized and repeated by the victim (Burton et al.; Garland & Dougher, 1990).

Research has begun to address the importance of investigating the characteristics of sex offenders' prior instances of sexual victimization and how they may impact the way in which sex offenders offend against their victims. However, research remains scarce and has only assessed a limited number of variables. Further, the role of sexual victimization in the severity and frequency of sex offending remains unclear. For example, some studies have examined whether a history of childhood sexual abuse may be associated with higher recidivism rates and did not find supportive results (Hanson & Morton-Bourgon, 2004; Nunes et al., 2013). However, Nunes et al. (2013) found that exclusive sexual victimization by a female was associated with higher sexual recidivism rates. Therefore, it may be additionally beneficial to evaluate how characteristics of sexual victimization influence sex offenders' number of criminal arrests and sexual offenses. The possibility of a relationship between features of childhood sexual victimization and sex offenders' number of victims should also be examined to gain a richer view on the impact of experiences of sexual abuse.

The current study

The present study aims to examine the prevalence of childhood sexual abuse among adolescent males who have engaged in sexually abusive behavior and those who have not. Second, I investigate specific characteristics of sexual abuse experiences in the sexually abusive youth who have been sexually victimized, presupposing that this may exhibit a relationship to their own behaviors. My specific hypotheses are as follows:

Hypothesis 1: There will be a greater prevalence of childhood sexual victimization among adolescent males who have engaged in sexually abusive behavior in comparison with adolescent males who have no known history of sexually abusive behavior.

Hypothesis 2: There will be a significant relationship between having a male perpetrator and sexually abusing a male victim.

Hypothesis 3: There will be a significant relationship between having a relative perpetrator and sexually abusing a relative victim.

Hypothesis 4: The age at which the adolescents were sexually victimized will be associated with the age of their own victims, meaning that adolescents will choose to sexually abuse individuals who are in the same developmental age range as they were when they were first victimized.

Hypothesis 5: Those who were abused by a male perpetrator will have a greater number of arrests, sexual offenses, and victims, and will have begun sexually offending against others at a younger age.

Hypothesis 6: Those who were abused by a relative will have a greater number of arrests, sexual offenses, and victims, as well as have begun sexually offending against others at a younger age.

Hypothesis 7: The younger the age at which the adolescent was sexually victimized, the greater number of arrests, sexual offenses, and victims he will have, as well as the younger he will have begun sexually offending against others.

Methods

Sample

The overall sample ($N=529$; 100% male; 84.7% Caucasian; $M = 17.71$) consisted of participants from two larger studies of undergraduate university students with no known history of sexually abusive behavior ($n = 286$) and youth who have engaged in sexually abusive behaviors and received residential treatment in the Southeastern US ($n = 243$). Data from university students were self-reported, while data from the residential youth were collected via archival records and coded by trained graduate and undergraduate research assistants.

The sample of university students with no known history of abusive sexual behavior had an average age of 20.18 ($Range = 16-50$; $SD=4.24$). The majority of students were Caucasian/White ($n = 242$; 84.6%), while 8.4% were Black or of African Heritage ($n=24$), 3.8% were American Indian/Alaska Native ($n=11$), 0.3% were Asian/Pacific Islander/Native Hawaiian ($n = 1$), and the remaining 2.8% were Mixed Race/ Other/ Unknown ($n = 8$).

Within the sample of youth being treated for sexually abusive behavior in a residential facility, length of admission into the facility ranged from two weeks to four years, with an average length of admission of 12.16 months. The mean age at first admission of 14.79 ($Range = 10-17$; $SD=1.6$), and most of the youth were Caucasian ($n = 206$; 84.8%). Those who were Black or of African Heritage comprised 8.6% of the subsample ($n = 21$), and the remaining 6.6% were Mixed Race/ Other/ Unknown ($n = 16$).

Measures

The subsample of university students completed online questionnaires regarding adverse childhood experiences and health behaviors. Archival records of adolescent male clients who were receiving treatment for sexually abusive behavior often included demographic information, childhood trauma and family dysfunction, out of home placements, psychiatric and medical

diagnoses, criminal and sexual histories, and their treatment progress within the residential treatment program. Information was recorded and coded into SPSS by the primary investigator and trained graduate and undergraduate research assistants.

Sexual abuse histories

Youth in residential treatment. Sexual victimization experiences of youth who have engaged in sexually abusive behavior were recorded by trained research assistants and included several characteristics of the abuse, such as the age at which sexual victimization first began, duration of sexual abuse, what type of sexual act was inflicted upon the participant (e.g., fondling, vaginal/anal/oral penetration), and whether the abuse was reported to authorities, investigated, or required medical intervention. Records also contained information about the participant's sexual perpetrator(s). Available characteristics of the perpetrator(s) of sexual abuse included gender and relationship status to the participant.

For the purpose of the study, it was recorded whether or not the participant was sexually abused prior to their admission into the facility, their age at first sexual victimization, and whether their sexual perpetrators were male and/or female, as well as whether they were relatives and/or nonrelatives. Age of first sexual victimization was categorized into the developmental age stages: infancy (0-2), early childhood (3-5), middle childhood (6-10), preadolescence (11-13), and adolescence (14-17). Relative sexual perpetrator included biological parents, step-parents, foster/adoptive parents, siblings, grandparents or other relatives living in the home. Non-relative perpetrators included neighbors, family friends, teachers, acquaintances, strangers, or other individuals with whom the participant was not related. Whether childhood sexual abuse occurred and the previously described characteristics of sexual perpetrators were coded categorically (*No*= 0, *Yes*= 1).

University students. The presence of childhood sexual abuse was measured in undergraduate university students via self-report. Students completed an online survey assessing their adverse childhood experiences. For the purpose of the study, I only included whether students had experienced sexual abuse during their childhoods. Specifically, participants were asked “Before the age of 18, did an adult or person at least 5 years older than you ever touch or fondle you or have you touch their body in a sexual way? Or attempt or actually have oral, anal, or vaginal intercourse with you?” Responses were given in the form of *No* (0) and *Yes* (1).

Sexual offense and criminal histories of youth in residential treatment

Records also indicated residential youths’ sexual offense histories prior to admission into the facility. Information related to their sexual offenses included the participants’ victim characteristics, age at first sexual offense, number of victims, and number of sexual offenses committed. Victim characteristics consisted of whether the participant had ever sexually abused a male victim and/or a female victim, and whether or not the participant had sexually victimized a relative and/or a victim of no relation. Each of these victim characteristics were coded categorically (*No*= 0, *Yes*= 1). Age at first sexual offense was the first known sexual offense the participant committed. Records often indicated reported offenses. However, self-reported disclosures of previously unreported sexual offenses were also used. Additionally, number of arrests (sexual and nonsexual) were included to examine involvement with the juvenile court system.

Analytic Plan

First, I calculated descriptive statistics for the previously discussed variables of interest. Using chi-squared analyses, I compared the reported prevalence of childhood sexual

victimization between youth residing in a treatment facility for sexually abusive behavior and the sample of undergraduate university students with no known history of sexually abusive behavior.

Next, using only the youth who had engaged in sexually abusive behavior, I assessed relationships between characteristics of their sexual victimization and features of their sexual offending behaviors. Pearson's product moment correlations were calculated in SPSS to examine the relationship between having been sexually victimized by a male and choosing a male victim, and being sexually victimized by a relative and subsequent sexual abuse of a relative victim. Further, I ran a correlation to examine the relationship between age at first sexual victimization and the age(s) of the participant's victim(s).

Then, logistic regressions (enter method) and odds ratios (OR) were used to examine the outcomes associated with having been sexually victimized by a male and having been sexually victimized by a relative. Specifically, I examined the relationship between having a male perpetrator and number of arrests, number of sexual offenses, number of victims, and age at first sexual offense. These outcomes were also examined with regard to having a relative perpetrator. For each analysis, the gender (male) or relationship status (relative) of the perpetrator was included in the regression as an outcome. Number of arrests, number of sexual offenses, number of victims, and age at first sexual offense were predictor variables. Finally, a linear regression was conducted to examine the relationships between the age at which the participant was first sexually victimized and the predictor variables previously described. All analyses were run with IBM SPSS Version 23.0.

Results

Sexual victimization characteristics of sexually abusive youth

Of the adolescent males receiving residential treatment for sexually abusive behavior, 42.7% had a relative perpetrator ($n= 100$), 37% had a nonrelative perpetrator ($n= 88$), 54% had a male perpetrator ($n=123$), and 24% experienced sexual abuse by a female ($n=53$), as further described in Table 1. Approximately 36% of adolescents were first sexually victimized between 6 and 10 years of age ($n=73$). Additionally, 28.6% of adolescents experienced their first experience of sexual victimization between the ages of 3 and 5 ($n=61$). Percentages and frequencies of youths in each age category are presented in Table 1. Further, I examined the exact age at which the youth first experienced sexual victimization. The average age of sexual victimization was 3.91 years old ($Range= 0-17$; $SD= 3.52$). The highest percentage of youth were first victimized at the age of 5 ($n= 22$, 17.2%). All ages at first sexual victimization are noted in Table 2.

Sexual offense characteristics of sexually abusive youth

The mean age at first sexual offense was 11.78 years ($Range= 4-17$; $SD= 2.95$), with half of the youths having committed their first sexual offense before the age of 13 and half committing their first sexual offense at the age of at least 13. The highest percentage of youth began sexually offending at age 13 ($n= 47$, 19.9%). For additional information, please refer to Table 3. Almost all of the youths in treatment had committed at least one known sexual offense ($n= 230$, 97.9%). The average number of sexual offenses committed by a participant was 3.41 ($Range= 0-40$, $SD= 4.07$). Most youths had committed one sexual offense ($n= 64$, 27.2%), followed by those who had committed two sexual offenses ($n=62$, 26.4%).

Almost all of the youth in residential care had sexually abused at least one victim ($n=227$, 98.8%), with the average number of sexual victims being 3.01 ($Range= 0-20$, $SD=2.67$). One-quarter of participants had one sexual victim ($n= 59$, 25.4%), while one-quarter had two sexual

victims ($n=59$, 25.4%). Forty-seven participants had sexually abused three victims (20.3%).

Frequencies of sexual offenses and sexual victims are presented in Table 4. With regard to age of victims, the majority of participants had sexually offended against victims between the ages of 6 and 10 ($n= 176$, 76.2%; see Table 5).

Arrest history

Most youth who had engaged in sexually abusive behaviors who were admitted into the residential facility had at least one arrest prior to admission ($n=170$, 70.2%). The average number of arrests was 1.8 ($Range= 0-12$, $SD= 2.19$). The highest percentage of youths were never arrested ($n=72$, 29.8%), followed by those who had been arrested once ($n=31$, 25.2%), and those who had been arrested twice ($n=57$, 23.6%). Additional arrests are presented in Table 4, along with number of sexual offenses and victims.

Prevalence of childhood sexual abuse in both samples

A chi-squared analysis revealed that male youths who have engaged in sexually abusive behavior were significantly more likely to have been sexually victimized during childhood in comparison with university students with no known history of sexually abusive behavior, $\chi^2 (1, N=523) =210.788, p < .001$. Specifically, 63.7% of the youth in residential care ($n= 151$) had experienced childhood sexual abuse, whereas only 4.5% of the university students ($n= 13$) had been sexually abused as children, see *Figure 1*.

Shared sexual abuse-offense characteristics

In an examination of the relationship between gender of sexual perpetrator and gender of subsequent sexual victims, a Pearson correlation revealed a significant relationship between having been sexually victimized by a male and choosing to sexually abuse a male victim ($r=$

.143, $p=.033$), as is depicted in Table 5. There was also a significant correlation between having been sexually victimized by a relative and choosing to sexually abuse a relative ($r=.148$, $p=.024$; see Table 6). These two relationships retained significance even when controlling for female perpetration and nonrelative perpetration in each correlation. Although not hypothesized, it is important to note that significance was also apparent for the relationship between having a nonrelative perpetrator and sexually abusing a nonrelative ($r=.194$, $p=.033$). However, contrary to my hypothesis, there was no significant correlation between developmental age at which the participant was sexually victimized and developmental age of their victims (see Table 7).

Next, I examined how perpetrator characteristics related to arrest and sexual offense characteristics (i.e., number of sexual offenses, sexual victims, and arrests; and age at first sexual offense). Although a logistic regression revealed a significant model for having a male sexual perpetrator, $\chi^2= 20.332$, $R^2= .122$, $p < .001$, the only uniquely significant factor associated with male perpetration was the client's age at first sexual offense. Particularly, being sexually victimized by a male was significantly associated with a younger age at first sexual offense, $B=-.211$, Wald's $\chi^2= 12.906$, $p < .001$ ($OR= .810$). Here, a younger age at first sexual offense is considered any age that falls below one standard deviation of the median (13 ± 1).

Similarly, a significant model emerged for having a relative sexual perpetrator, $\chi^2= 15.375$, $R^2= .091$, $p=.004$, with the only uniquely significant factor associated with relative perpetration being age at first sexual offense. Specifically, being sexually victimized by a relative was also significantly associated with a younger age of first sexual offense, $B=-.185$, Wald's $\chi^2= 11.378$, $p=.001$ ($OR= .831$). Number of sexual offenses, arrests, and victims did not seem to be associated with either male sexual perpetration or relative sexual perpetration.

Detailed results of each logistic regression can be found in Table 8.

Finally, the linear regression model was significant for exact age of first sexual victimization, $F(4,116) = 3.144$, $p = .016$, $R^2 = .099$, but the only significant factor associated was number of sexual victims. Specifically, the younger the age at which participants experienced their first sexual victimization, the greater number of victims they subsequently sexually abused, $B = -.314$, $t = -2.039$, $p = .044$. Age at first sexual offense and number of sexual offenses and arrests were not associated with the participant's age at first sexual abuse (see Table 9 for details).

Discussion

The current study had two research goals. The first was to examine the prevalence of childhood sexual abuse in a group of male youths who are receiving residential treatment for sexually abusive behavior compared to a group of males who have not engaged in such behavior. I also conducted further investigation of the sample of sexually abusive youth, examining how characteristics of their own experiences of sexual abuse may contribute to how some subsequently sexually offend against others. Not surprisingly, results indicated that sexually abusive individuals do indeed experience disproportionately high rates of childhood sexual abuse compared to those who do not sexually offend. Specifically, 67.5% of sexually abusive youth experienced sexual victimization at some point during their childhood, whereas only 4.5% of the sample of university students did. These results are consistent with previous research examining childhood sexual abuse among sexual offenders and non-offender comparison samples (Burton et al., 2001; Dhawan & Marshall, 1996; Glasser et al., 2001; Hanson & Slater, 1988; Jespersen et al., 2005; Seto & Lalumiere, 2010).

Further examination of the sample of youth in residential treatment revealed that for some, their experiences of sexual abuse may relate to how they sexually offend against others

later on. Supporting the second hypothesis, I found that prior sexual victimization by a male was significantly correlated with sexually abusing a male victim. Further, having a relative sexual perpetrator was significantly correlated with subsequent sexual abuse of a relative, providing support for Hypothesis 3. These results are consistent with previous research investigating the relationship between characteristics of offenders' sexual victimization and their later sexual victim choice (Burton, 2003; Veneziano et al., 2000). However, I did not find a significant correlation between the age at which participants were first sexually victimized and the age of their victims, suggesting that perhaps characteristics of sexual perpetrators may be more salient in the minds of the victims than age at which they experienced the abuse and therefore may contribute more to victim choice. It is also possible that sexual abusers may choose victims of different ages based on situational factors rather than age preference. For example, adolescent sexual abusers may be more likely to abuse those who they can control or have easy access to. Therefore, the age of victims may more likely reflect situational factors at the time of the offense.

Additionally, I hypothesized that being sexually victimized by either a male or a relative would be associated with more negative outcomes, such as a younger age at first sexual offense, and a greater number of arrests, sexual offenses, and victims. Both logistic regression models were significant, but only age at first sexual offense was significantly associated with having either a male perpetrator or relative perpetrator, only partially supporting my hypotheses. Specifically, being sexually victimized by a male or a relative was significantly associated with a younger age of onset of sexually abusive behavior. However, number of arrests, sexual offenses, and victims were not associated with either having a male perpetrator or a relative perpetrator. Researchers have found that having a male or relative sexual perpetrator may increase the

likelihood of engaging in sexually abusive behavior for some victims (Burton et al., 2001; Garland & Dougher, 1990). Specifically, when male youth are sexually abused by a male, it is likely that more force was used during the act, and victim shame may result from the male-male sexual interaction. Both of these may contribute to heightened traumatization and a need to cope with that trauma, which may present as early problematic sexual behavior. Additionally, when youth are sexually abused by a family member, they may be more prepared to normalize such behavior, as the abuse was inflicted by someone they trusted or with whom they could relate. Victims may even identify the sexual encounter as a common expression of affection (Finkelhor & Browne, 1985). Therefore, being sexually abused by a male or a relative may relate to an earlier age of onset of sexually abusive behavior as a result of a strong need to cope with experiences of trauma or a readiness to normalize the behavior. However, more research is needed to consider these speculations.

My last hypothesis was also only partially supported. A significant linear regression model suggests that the age at which a youth first experiences sexual victimization is significantly associated with having a greater number of sexual victims once they have begun engaging in sexually abusive behavior. However, contrary to my hypothesis, age at first sexual victimization was not associated with age at first sexual offense, number of arrests, or number of sexual offenses. There may be a several reasons why I found a significant relationship between age at first sexual victimization and number of victims. For example, a younger age at sexual victimization may suggest that the sexual abuse occurred for a longer period of time, especially if it was a relative that was sexually victimizing the youth (Fischer & McDonald, 1998). Relative perpetration at a younger age and of a longer duration is evidence of poorer sexual boundaries within the home and may even result in sibling sexual abuse for some victim-abusers. Therefore,

the victim may choose to sexually abuse others within the home, giving them access to more victims.

None of the assessed characteristics of sexual abuse (e.g., male/relative perpetrator and age at victimization) related to number of arrests or number of sexual offenses. These findings might suggest that these variables do not affect the frequency with which the participants sexually abuse others or the frequency with which they are generally involved in the juvenile court system, whether as a result of sexual offending or other types of criminal activity. It is also possible that other factors may contribute to the lack of significant findings. Given that almost all youth in the sample have engaged in sexually abusive behavior (or other forms of criminal activity) and 30% were not ever arrested, it is likely that referral to the criminal justice system may not be the preferred course of action for juveniles who engage in problematic behaviors. This may explain why number of arrests was not associated with any characteristics of sexual abuse.

Limitations

This study is not without limitations. Studies using self-report and archival data should be interpreted with caution, as not all data retrieved using these methods are always accurate. Incomplete records or records with missing data pertaining to variables of interest may limit the certainty of these findings. Further, interpretation of the results of the study is limited, as the goal was not to establish a causal relationship between experiencing sexual victimization and subsequently sexually abusing others. In fact, the majority of victims of sexual abuse never sexually abuse others. In a longitudinal study assessing 224 male victims of sexual abuse, Salter and colleagues (2003) found that only 12% of the victims had subsequently sexually abused others. Although experience of sexual victimization does not result in sexually abusive behavior

for most people, there are some victims of sexual abuse that do go on to sexually offend against others. Therefore, it is still important to consider what characteristics of their sexual abuse may contribute to the increased likelihood of engaging in such behavior in the future for these victims.

Conclusion

The prevalence of childhood sexual abuse in the US is very troubling, particularly among samples of those who engage in problematic sexual behavior. For a relatively small percentage of victims of sexual abuse, their experiences may increase the likelihood at which they, themselves, will engage in sexually abusive behavior in the future. Additionally, for some victim-abusers, it seems that characteristics of their own sexual abuse (e.g., gender and relationship status of their sexual perpetrators, age at first sexual victimization) may contribute to how they sexually offend against others. Research assessing the relationship between experiences of sexual abuse and later sexual offending is scarce, meaning there is opportunity for future research to be conducted. Examination of more sexual abuse-offense characteristics is needed, such as duration of sexual abuse, type of sexual act inflicted upon the victim and subsequent specific sexual behaviors, specific perpetrator relationships (e.g., mother, father, sibling), age of perpetrator, and number of perpetrators, among many others. Implications of future findings could suggest more targeted treatment plans for sexually abusive youth who have been sexually victimized and preventative interventions for victims of sexual abuse altogether.

References

- Akers, R. L., La Greca, A. L., Cochran, J., & Sellers, C. (1989). Social learning and alcohol behavior among the elderly. *Sociological Quarterly, 30*, 625-638.
- Akers R. L. & Lee G. (1996). A longitudinal test of social learning theory: adolescent smoking. *Journal of Drug Issues, 26*(2), 317-343.
- Akers, R. L., Krohn, M. D., Lanza-Kaduce, L., & Radosevich, M. (1979). Social learning and deviant behavior: a specific test of a general theory. *American Sociological Review, 44*(4), 636-655.
- Bandura, A., & Hudson, A. C. Identification as a process of incidental learning. *Journal of Abnormal and Social Psychology, 63*(2) 311-318.
- Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through imitation and aggressive models. *Journal of Abnormal and Social Psychology, 63*(8), 575-582.
- Burton, D. L. (2003). Male adolescents: sexual victimization and subsequent sexual abuse. *Child and Adolescent Social Work Journal, 20*(4), 277-296.
- Burton, D. L., Miller, D. L., & Shill, C. T. (2002). A social learning theory comparison of the sexual victimization of adolescent sexual offenders and nonsexual offending male delinquents. *Child Abuse and Neglect, 26*, 893-907.
- Caldwell, M. F. (2002). What we do not know about juvenile sexual reoffense risk. *Child Maltreatment, 7*, 291-302.

- Cantor, J. M., Blanchard, R., Robichaud, L. K., & Christensen, B. K. (2005). Quantitative reanalysis of aggregate data on IQ in sexual offenders. *Psychological Bulletin, 131*, 555–568.
- Centers for Disease Control and Prevention, Kaiser Permanente. The ACE Study Survey Data [Unpublished Data]. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2016.
- Dhawan, S., & Marshall, W. (1996). Sexual abuse histories of sexual offenders. *Sexual Abuse: A Journal of Research and Treatment, 8*, 7–15.
- Finkelhor, D., Brown, A. (1985). The traumatic impact of child sexual abuse: a conceptualization. *American Journal of Orthopsychiatry, 55*(4), 530-541.
- Finkelhor, D., Ormrod, R., & Chaffin, M. (2009). Juveniles who commit sex offenses against minors. *Juvenile Justice Bulletin, 1-11*.
- Finkelhor, D., Ormrod, R. K., & Turner, H. (2007). Polyvictimization and trauma in a national longitudinal cohort. *Development and Psychopathology, 19*, 149–166.
- Fischer, D. G. & McDonald, W. L. (1998). Characteristics of intrafamilial and extrafamilial child sexual abuse. *Child Abuse & Neglect, 22*(9), 915-929.
- Garland, R., & Dougher, M. (1990). The abused/abuser hypothesis of child sexual abuse: A critical review of theory and research. In J. Fierman (Ed.), *Pedophilia: Biosocial dimensions* (pp. 488–509). New York: Springer.

- Glasser, M., Kolvin, I., Campbell, D., Glasser, A., Leitch, I., & Farrelly, S. (2001). Cycle of child sexual abuse: Links between being a victim and becoming a perpetrator. *British Journal of Psychiatry, 179*, 482–494.
- Hall, G. C. N., & Hirschman, R. (1991). Toward a theory of sexual aggression: A quadripartite model. *Journal of Consulting and Clinical Psychology, 59*, 662–669.
- Hanson, R. K., & Morton-Bourgon, K. (2004). *Predictors of sexual recidivism: an updated meta-analysis (User report # 2004-02)*. Ottawa, ON: Public Safety and Emergency Preparedness Canada.
- Hanson, R. K., & Slater, S. (1988). Sexual victimizations in the history of sexual abusers: A review. *Annals of Sex Research, 1*, 485–499.
- Jespersen, A. F., Lalumiere, M. L., & Seto, M. C. (2009). Sexual abuse history among adult sex offenders and non-sex offenders: A meta-analysis. *Child Abuse and Neglect, 33*, 179-192.
- Lee, G., Akers, R. L., & Borg, M. J. (2004). Social learning and structural factors in adolescent substance abuse. *Western Criminology Review, 5*(1), 17-34.
- Marshall, W. L., & Barbaree, H. E. (1990). An integrated theory of the etiology of sexual offending. In W. L. Marshall, D. R. Laws, & H. E. Barbaree (Eds.), *Handbook of sexual assault: Issues, theories, and treatment of the offender* (pp. 257–275). New York: Plenum Press.

- Nunes, K. L., Hermann, C. A., Malcom, J. R., & Lavoie, K. (2013). Childhood sexual victimization, pedophilic interests, and sexual recidivism. *Child abuse & Neglect, 37*, 703-711.
- Salter, D., McMillan, D., Richards, M., Talbot, T., Hodges, J., Bentovim, A., Hastings, R., Stevenson, J., & Skuse, D. (2003). Development of sexually abusive behaviour in sexually victimised males: A longitudinal study. *The Lancet, 361*, 471–476.
- Seto, M. C., & Lalumiere, M. L. (2010). What is so special about male adolescent sexual offending? A review and test of explanations through meta-analysis. *Psychological Bulletin, 136*(4), 526-575.
- Smallbone, S. W. (2006). Social and psychological factors in the development of delinquency and sexual deviance. In H. E. Barbaree & W. L. Marshall (Eds.), *The juvenile sex offender* (2nd ed., pp. 105–127). New York: Guilford Press.
- Stirpe, T., Abracen, J., Stermac, L., & Wilson, R. (2006). Sexual offenders' state-of-mind regarding childhood attachment: A controlled investigation. *Sex Abuse, 18*, 289-302.
- Veneziano, C., Veneziano, L., & LeGrand, S. (2000). The relationship between adolescent sex offender behaviors and victim characteristics with prior victimization. *Journal of Interpersonal Violence, 15*(4), 363-374.
- Ward, T., & Beech, A. (2005). An integrated theory of sexual offending. *Aggression and Violent Behavior, 11*, 44–63.

Worling, J. R. (1995). Sexual abuse histories of adolescent male sex offenders: Differences on the basis of the age and gender of their victims. *Journal of Abnormal Psychology, 104*, 610–613.

Table 1

Details of sexual perpetrators and age of sexual abuse of youth

Sexual Perpetrator	<i>N</i>	<i>n</i>	%
Male	227	123	54.2
Female	222	53	23.9
Relative	234	100	42.7
Nonrelative	236	88	37.3
Development age range of sexual abuse	<i>N</i>	<i>n</i>	%
Infant-2 years old (Infancy)	213	18	8.5
3-5 years old (Early Childhood)	213	61	28.6
6-10 years old (Mid Childhood)	205	73	35.6
11-13 years old (Preadolescence)	183	26	14.2
14-17 years old (Adolescence)	190	8	4.2

Note: *N*= number of clients with available information on each variable

Table 2

Details regarding exact age of clients' first experiences of sexual victimization

Exact age at first sexual victimization	<i>n</i>	%
0	8	6.3
1	4	3.1
2	6	4.7
3	16	12.5
4	10	7.8
5	22	17.2
6	18	14.1
7	9	7
8	5	3.9
9	5	3.9
10	10	7.8
11	3	2.3
12	6	4.7
13	3	2.3
14	2	1.6
15	1	0.8
Total	128	100
Unknown	15	

Note: Unknown due to incomplete files or incomplete information regarding variable

Table 3

Age at first sexual offense

Age at first sexual offense	<i>n</i>	%
4	2	0.8
5	7	3
6	11	4.7
7	5	2.1
8	16	6.8
9	8	3.4
10	14	5.9
11	25	10.6
12	29	12.3
13	47	19.9
14	36	15.3
15	22	9.3
16	10	4.2
17	4	1.7
Total	236	100
Unknown/Missing*	7	

*Unknown/Missing due to incomplete files or no sexual offense

Table 4

Details of sexual offense and criminal characteristics of sexually abusive youth

# sexual offenses	<i>n</i>	%	# of arrests	<i>n</i>	%	# of sexual victims	<i>n</i>	%
0	5	2.1	0	72	29.8	0	5	2.2
1	64	27.2	1	61	25.2	1	59	25.4
2	62	26.4	2	57	23.6	2	59	25.4
3	32	13.6	3	20	8.3	3	47	20.3
4	25	10.6	4	12	5	4	24	10.3
5	15	6.4	5	4	1.7	5	13	5.6
6	8	3.4	6	3	1.2	6	9	3.9
7	8	3.4	7	5	2.1	7	5	2.2
8-18	13	5.6	8	3	1.2	8	3	1.3
20-40	3	1.3	10-12	5	1.9	9-20	8	3.4
Total	235	100	Total	242	100	Total	232	100
Unknown	8		Unknown	1		Unknown/Missing*	11	

*Missing due to no sexual offense committed.

Table 5

Frequencies of victim ages

Developmental age range of victims	<i>N</i>	<i>n</i>	%
Infant- 2 years old	232	23	9.9
3- 5 years old	232	107	46.1
6- 10 years old	231	176	76.2
11- 13 years old	233	93	39.9
14- 17 years old	233	36	15.5

Note: *N*= number of clients with available information on variable

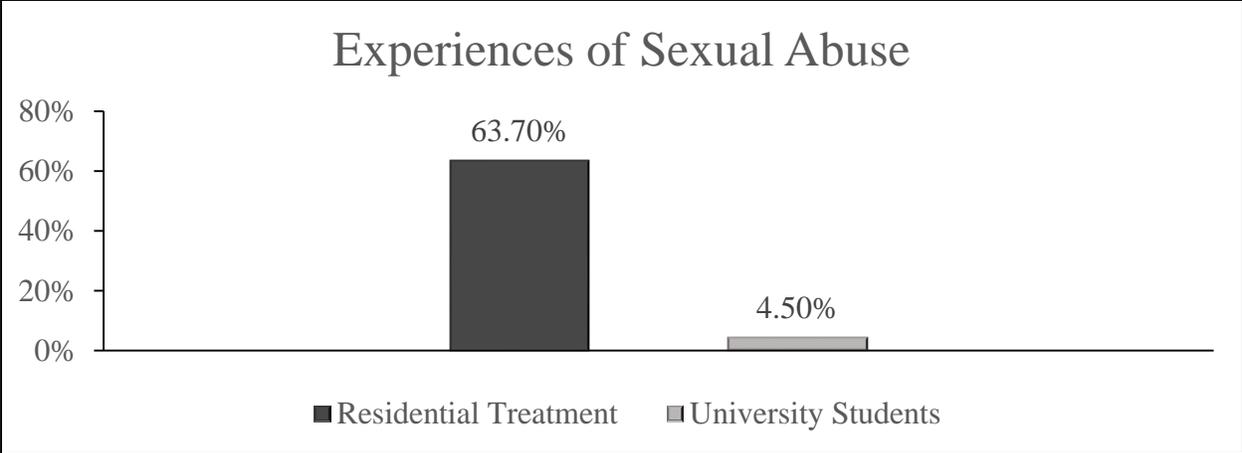


Figure 1: Prevalence of CSA in sexually abusive youth and those who have not engaged in sexually abusive behavior.

Table 6

Gender of perpetrator/victim correlation

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. Male Perpetrator	-			
2. Female Perpetrator	.145*	-		
3. Male Victim	.143*	0	-	
4. Female Victim	-0.034	0.063	-0.308**	-

* $p < .05$, ** $p < .01$

Table 7

Relationship status of perpetrator/victim correlation

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. Relative Perpetrator	-			
2. Nonrelative Perpetrator	0.022	-		
3. Relative Victim	.148*	-0.05	-	
4. Nonrelative Victim	-0.052	.194**	-.325**	-

* $p < .05$, ** $p < .01$

Table 8

Age of sexual victimization and age of victims correlation

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
1. Infant-2 sex abuse	-										
2. 3-5 sex abuse	.395**	-									
3. 6-10 sex abuse	-0.021	.180**	-								
4. 11-13 sex abuse	0.019	-0.055	.201**	-							
5. 14-17 sex abuse	-0.056	0.058	0.058	.294**	-						
6. Vics infant to 2	-0.03	.264**	-0.041	-0.019	0.109	-					
7. Any vics ages 3 to 5	-0.033	0.132	0.061	-0.139	0.077	.158*	-				
8. Any vics ages 6 to 10	0.023	-0.033	0.062	0.06	-0.01	0.049	-0.034	-			
9. Any vics ages 11 to 13	0.041	0.097	0.117	0.058	0.01	-0.004	0.01	-0.008	-		
10. Any vics ages 14 to 17	0.128	.164*	0.045	0.046	0.046	0.02	-0.078	-0.102	.142*	-	
11. Adult sex off vics	0.01	0.042	0.014	0.04	0.005	0.104	-0.039	-0.113	-0.019	0.068	-

Note: "Vics"= victims

* $p < .05$, ** $p < .01$

Table 9

Logistic Regression Results

	<i>B</i>	<i>S.E.</i>	<i>Wald's</i> χ^2	<i>p</i>	<i>OR</i>	<i>95% C.I.</i>
Male Perpetration						
Age at first sexual offense*	-0.211	0.059	12.906	0.000	.810	[0.722 - 0.909]
Total arrests (sexual and non)	0.108	0.067	2.631	0.105	1.114	[0.978- 1.27]
Number of sexual offenses	0.083	0.076	1.186	0.276	1.087	[0.936- 1.262]
Number of sexual victims	-0.105	0.096	1.198	0.274	.901	[0.747- 1.086]
Relative Perpetration						
Age at first sexual offense*	-0.185	0.055	11.378	0.001	0.831	[0.747- 0.926]
Total arrests (sexual and non)	0.025	0.065	0.153	0.696	1.026	[0.903- 1.164]
Number of sexual offenses	0.005	0.045	0.014	0.904	1.005	[0.921- 1.098]
Number of sexual victims	0.008	0.074	0.012	0.913	1.008	[0.873-1.165]

*Significant relationship

Table 10

Linear Regression Results

	<i>B</i>	<i>S.E</i>	<i>β</i>	<i>t</i>	<i>p</i>	<i>95.0% C.I for B</i>
Age at first sexual victimization						
Age at first sexual offense	0.237	0.124	0.193	1.908	0.059	[-0.009- 0.483]
Number of sexual offenses	0.15	0.08	0.209	1.878	0.063	[-0.008- 0.308]
Total arrests (sexual and non)	-0.037	0.134	-0.025	-0.277	0.782	[-0.302- .0228]
Number of sexual victims*	-0.314	0.154	-0.246	-2.039	0.044	[-0.619- -0.009]

*Significant relationship