The Effect of Poly-Victimization and Caregiver Attachment on Disclosure of Illegal Sexual Behavior

by

Megan E. Harrelson, B.A.

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Approved by

Barry Burkhart, Chair, Professor of Psychology
Frank Weathers, Professor of Psychology
Apryl Alexander, Assistant Clinical Professor of Psychology

Abstract

This study examined the relationships between poly-victimization (i.e., cumulative types of victimization), caregiver attachment, and disclosure of illegal sexual behavior in adolescent males detained in sex offender treatment. Disclosure is a key component of sex offender treatment, however, little is known about the processes that influence disclosure of illegal sexual behavior. Poly-victimization was expected to predict caregiver attachment, as well as moderate the relationship between caregiver attachment and disclosure. The average number of victimizations experienced by participants was 10.75 and approximately one third of participants had experienced poly-victimization across all six victimization aggregates (Conventional Crime, Child Maltreatment, Physical, Sexual, Peer/Sibling, and Indirect). Regression analyses revealed that caregiver attachment mediated the relationship between poly-victimization and disclosure of illegal sexual behavior. Findings emphasize the importance of assessing for multiple types of victimization in adolescents with illegal sexual behavior, as well as adopting a trauma-informed approach during their treatment. Clinical implications are discussed.

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ABSOP Accountability Based Sex Offender Program

Introduction

Adolescents adjudicated for illegal sexual behavior account for approximately 35% of juvenile arrests, 17% of sexual crimes, and 36% of sex offenses committed against children in the United States (Finkelhor, Ormrod, & Chaffin, 2009; Reitzel & Carbonell, 2006). When adolescents are adjudicated for sexual offenses, many are mandated to receive psychological treatment for their illegal sexual behavior (Bonner, 2008). Adolescents who complete comprehensive treatment programs have lower rates of sexual recidivism compared to those who do not undergo treatment for illegal sexual behavior (Bonner, 2008; Borduin, Schaeffer, & Heiblum, 2009; Caldwell, 2007; Reitzel & Carbonell, 2006).

Treatment of illegal sexual behavior is predicated, at least in part, upon the full disclosure of illegal sexual behavior as either a precondition to, or a natural part of, the psychotherapy process (Baker, Tabacoff, & Tornusciolo, 2001; Salter, 1988; Ware & Mann, 2012). Disclosure consists of a full and accurate description of the events that occurred before, during, and after the illegal sexual behavior (Salter, 1988; Ware & Mann, 2012). Disclosing illegal sexual behavior is correlated with accepting responsibility for one's actions and treatment readiness (Ware & Mann, 2012). To date, most research on disclosure of illegal sexual behavior has focused on adult offender populations. Adults who disclose their illegal sexual behavior early in treatment are seen as more successfully engaged in treatment and are found to have better treatment outcomes than those who withhold offense-related information (Levenson & Macgowan, 2004; Schneider & Wright, 2004). Adults who withhold disclosure are labeled 'noncompliant,' which can result in further punitive outcomes (e.g., probation violations for failing to cooperate with treatment) (Levenson & Macgowan, 2004; Schneider & Wright, 2004; Ware & Bright, 2008). Adults who disclose their illegal sexual behavior in a therapeutically

positive manner are also found less likely to reoffend than those who withhold disclosure (Langton, Barbaree, Hankins, Arenovich, Mcnamee, Peacock, et al., 2008; Nunes, Hanson, Firestone, Greenberg, & Bradford, 2007). Although previous literature is predominately directed toward adult offenders, adolescent treatment programs also require disclosure of illegal sexual behavior as a precondition to treatment (Nunes et al., 2007). Similar to adult findings, adolescents who disclose their illegal sexual behavior are seen as more compliant with treatment, while withholding disclosure is viewed as a barrier to successful treatment completion (Jensen, Shafer, Roby, & Roby, 2015; Nunes et al., 2007).

Many adolescents adjudicated for illegal sexual behavior have histories of childhood victimization that precede their illegal sexual behavior (Burk & Burkhart, 2003; Chaffin, 2008; Levenson, Willis, & Prescott, 2014; Seto & Lalumière, 2010). The most common types of victimization studied in this population are sexual abuse, physical abuse, and neglect (Seto & Lalumière, 2010; Smallbone, 2006). Childhood victimization is associated with psychological distress in some adolescents, including hyperarousal, anxiety, and post-traumatic stress (Marini et al., 2013; Seto & Lalumière, 2010; Smallbone, 2006). The psychological burdens created by exposure to victimization can also lead to maladaptive coping behaviors, including reenactments of sexual abuse and sexualized coping (Burk & Burkhart, 2003; Finkelhor & Browne, 1985). The effects of childhood victimization, thus, permeate these adolescents' psychosocial development and can profoundly impact their interpersonal relationships.

Victimization and Attachment

Another consequence of childhood victimization is disrupted caregiver attachment (Bowlby, 1969; Burk & Burkhart 2003; Main, 2000). Disrupted attachment occurs when caregivers cannot adequately meet children's need for safety (Ainsworth, 1972; Bowlby, 1969;

Burk & Burkhart, 2003). If children are kept safe from victimization, they are more likely to develop secure caregiver attachments that are characterized by self-worth and positive caregiver relationships (Bowlby, 1969; Rice, 1990; Rosenthal & Kobak, 2010). In contrast, victimized children view their caregivers as unreliable sources of safety (Ainsworth, 1972; Bowlby, 1969; Burk & Burkhart, 2003). Children with disrupted caregiver attachments are found to have low self-esteem, as well as general distrust in their caregivers (Burk & Burkhart, 2003; Grossman & Grossman 1990; Main, 2000; Marshall, Hudson, & Hodkinson, 1993).

As children enter adolescence, caregiver attachment functions as a paradigm for extra-familial relationships (Ainsworth, 1972; Rice, 1990; Rosenthal & Kobak, 2010). Adolescents often replicate early attachment patterns with teachers, coaches, and other adults who fulfill a caregiver role (Rice, 1990). Adolescents with secure caregiver attachments are found to have prosocial relationships based on mutual trust and vulnerability (Gulone & Robinson, 2005; Rice, 1990). By contrast, adolescents with disrupted caregiver attachments recreate earlier dysfunctional patterns in their extra-familial relationships (Knox, 2015; Loding, 2007; Main, 2000). Relationships often elicit distress in adolescents with disrupted attachments because they cannot trust that their attachment figures will meet their need for safety (Knox, 2015; Linder et al., 2002; Loding, 2007; Main, 2000). Relationships also can serve as reminders of past victimization or maltreatment (Ainsworth, 1972; Finkelhor et al., 2005; Rice, 1990). Therefore, these adolescents are more likely to alienate themselves from others to prevent interpersonal distress (Knox, 2015; Linder et al., 2002; Loding, 2007; Main, 2000). Consequently, disrupted attachment due to victimization can hinder the development of extra-familial relationships because victimized adolescents were never provided reliable security from their caregivers (Burk & Burkhart, 2003; Grossman & Grossman 1990; Rosenthal & Kobak, 2010).

Poly-Victimization

Although previous research has examined the influence of specific childhood victimizations (e.g., childhood abuse, bullying, or neglect) on attachment, victimizations often do not occur in isolation but rather exist as components of poly-victimization (Finkelhor, Ormrod, Turner & Hamby, 2005; Higgins & McCabe, 2001). Poly-victimization, or experiencing multiple types of victimization, is relatively common with 66% of adolescents ages ten to 17 reporting exposure to two or more victimization types, 30% to five or more types, and 10% to eleven or more types over their lifetime (Turner, Finkelhor & Ormrod, 2010). Moreover, poly-victimization is associated with increased risk for subsequent victimizations (Finkelhor et al., 2011). Poly-victimized adolescents are more vulnerable to internalizing and externalizing symptoms than non-victimized peers (Finkelhor et al., 2005; Finkelhor, Ormrod & Turner, 2007; Finkelhor, Ormrod, & Turner, 2009). Poly-victimization has also been found to predict distress and trauma symptoms beyond victimization severity and duration alone (Finkelhor et al., 2009; Turner et al., 2010). With greater accumulated victimization types, severity (e.g., presence of a weapon, physical harm) and duration (i.e., one time or repeated) of victimization no longer contribute unique variance to psychological adjustment (Finkelhor et al., 2007; Finkelhor et al., 2011; Turner et al., 2010).

The developmental histories of delinquent populations are characterized by higher rates of victimization compared to non-delinquent peers (Dixon et al., 2005; Pareda, Abad, & Guilera, 2015; Stimmel, Cruise, Ford, & Weiss, 2014). Pareda et al. (2015) found that the average number of victimization types for youth in juvenile detention facilities was almost twice that found in the national population (Pareda, Guilera, & Abad, 2014). Further, Pareda et al. (2015)

also found that 65% of juvenile offenders had experienced nine or more types of victimization in their lifetimes, compared to 10.6% of peer-aged youth in a community sample (Finklhor et al., 2009). Given the high incidence of victimization found in juvenile offenders, along with the abuse histories common in adolescents with illegal sexual behavior, many adolescents with illegal sexual behavior have likely experienced poly-victimization. Little is known, however, about the prevalence of poly-victimization on adolescents with illegal sexual behavior and how this affects the formation of relationships with attachment figures.

Poly-victimization and Attachment

Attachment disruptions are likely exacerbated by poly-victimization. Youth who suffer different types of victimization experience frequent disappointment from their caregivers, which reinforces their unmet need for safety (Cohen et al., 2012; Kerr et al., 1999; Marshall et al., 1993). Poly-victimized adolescents have been found to have more anxiety toward unfamiliar relationships, decreased trust in others, and greater social alienation than adolescents with fewer victimizations (Cohen, 2012; Loding, 2007). For poly-victimized adolescents with illegal sexual behavior, inappropriate sexual behavior may accompany disrupted attachment (Burk & Burkhart, 2003; Marshall, 2010). In addition to the distrust and alienation that are typical in adolescents with disrupted attachment, these adolescents use sexual behavior as a coping mechanism to meet their needs for comfort and security (Burk & Burkhart, 2003; Marshall, 2010; Marshall et al., 1993; Seto & Lalumière, 2010). When attachment figures discover this illegal sexual behavior, they may abandon their relationships with these adolescents, and exacerbate the emotional distress of their disrupted attachments (Burk & Burkhart, 2003; Marsa et al., 2004; Marshall, 2010; Marshall et al., 1993).

Disrupted attachment may also inhibit disclosure of illegal sexual behavior in poly-victimized adolescents. Although disclosing illegal sexual behavior is believed to predict successful treatment outcomes, this disclosure requires vulnerability and trust on the part of the adolescents that may not have developed in their early attachment relationships (Marini et al., 2013; Salter, 1988; Seto & Lalumière, 2010; Ware & Mann, 2012). Because of their heightened attachment disruptions, poly-victimized adolescents with illegal sexual behavior may not trust that the object of their disclosure (e.g., therapist) will respond in a manner that upholds their safety (Marini et al., 2013; Seto & Lalumière, 2010). Moreover, these adolescents may withhold disclosure for fear of re-victimization or retribution (Cohen et al., 2012; Finkelhor et al., 2005; Kerr et al., 1999). If this is the case, then requiring adolescents to disclose their illegal sexual behavior without first attending to their disrupted attachments may increase their risk for negative treatment outcomes (Baker, Tabacoff, & Tornusciolo, 2001; Ford et al., 2012; Greenwald, 2002). Despite these treatment implications, no research exists currently that examines the influence of poly-victimization and attachment on disclosure in adolescents with illegal sexual behavior.

Goals and Hypotheses

The present study was designed to 1) measure the prevalence of poly-victimization in adolescents with illegal sexual behavior, 2) examine the effect of poly-victimization on caregiver attachment in adolescents with illegal sexual behavior, and 3) investigate the extent to which poly-victimization and caregiver attachment predict disclosure of illegal sexual behavior in male adolescents adjudicated for illegal sexual behavior. Poly-victimization was expected to predict caregiver attachment in adolescents with illegal sexual behavior. Previous research indicates that childhood victimization can disrupt the development of secure caregiver attachment in

adolescence. Because poly-victimization constitutes the culmination of multiple types of victimization, poly-victimization was expected to predict less secure caregiver attachment. Poly-victimization and caregiver attachment were also hypothesized to predict disclosure of illegal sexual behavior. Because poly-victimized adolescents were expected to withhold disclosure of illegal sexual behavior out of fear of re-victimization, poly-victimization was hypothesized to moderate the relationship between attachment and disclosure of illegal sexual behavior. Specifically, poly-victimized adolescents with disrupted attachments were expected to disclose their illegal sexual behavior less than lesser-victimized adolescents with secure attachments.

Method

Participants

Data were collected from 65 adolescent boys who were court-ordered to attend an Accountability Based Sex Offender Program (ABSOP) in Alabama. Average participant age was 15.74 years (1.54 years) with 56.3% identifying as European American, 35.9% identifying as African American, 6.3% identifying as Hispanic, and 1.6% identifying as multiracial. Two participants were excluded from the analyses for their inability to read at a 4th grade level as determined by a measure of academic performance.

Setting

Beginning in 1999, the state of Alabama passed legislation requiring that all adolescents adjudicated for a sexual offense receive treatment. In order to meet state requirements, the Department of Youth Services (DYS) sought partnerships with organizations willing to provide comprehensive psychological services to adolescents with illegal sexual behavior, including the Department of Psychology at Auburn University and the School of Social Work at the University of Alabama (Burkhart, Peaton, & Sumrall, 2009). Together, the Accountability Based Sex

Offender Program (ABSOP) was established and has continued to develop and evolve into a second iteration referred to as ABSOP-II. Guided by principles of community safety, holism, and empiricism, the goal of the ABSOP-II program is to conduct comprehensive assessment and best-practice treatment for each adolescent with illegal sexual behavior. Assessment facilitates the identification of each adolescent's therapeutic goals and needs as well as his individual strengths and weaknesses. In residential treatment, adolescents are exposed to a multimodal treatment approach including individual and group-based therapy, education, dormitory activities, and shared community activities (e.g., music, art, and sports). Residential and treatment staff are trained to implement the Children and Residential Experiences (CARE) model, which is designed to provide services in the best interest of the child and to promote treatment that is developmentally focused, family involved, relationship based, competence centered, trauma informed, and ecologically oriented (Holden, Endres, Gabarino, Gibson, & Holden, 2009). The ABSOP-II treatment model also utilizes components of the Good Lives Model (Yates, Prescott, & Ward, 2010) to emphasize positive psychology and rehabilitation.

ABSOP-II is capable of housing over 60 adjudicated male adolescents with illegal sexual behavior but is only one program contained within the Mt. Meigs Complex in Montgomery, Alabama. The facility also includes a general juvenile correctional facility and a specialized chemical addictions program. Given the distinct needs, presenting concerns, and developmental considerations of adolescents with illegal sexual behavior compared to the general juvenile offenders, the two populations are housed separately on campus.

Procedure

All adolescents participated in a six to 12-hour comprehensive psychological evaluation, including a semi-structured clinical interview administered by trained graduate clinicians and a

battery of self-report measures administered by undergraduate research assistants. Participants were informed that although the psychological evaluation was a necessary part of their treatment protocol, the inclusion of their data in the present study was voluntary. Data were eligible for use once the Alabama Department of Youth Services provided written consent and each participant verbally assented to study participation. Participants were also reminded before each evaluation phase that their responses were confidential and that they could withdraw from research participation at any time. Participant data were excluded from the study if an adolescent did not assent during the clinical interview. Approval for the data informing the current study was obtained from an Institutional Review Board at a southeastern university.

Measures

Clinical Interview. Demographic data were collected via a 90-minute semi-structured interview that obtained general demographic information (e.g., date of birth, ethnicity), sexual developmental history (e.g., age of first sexual experiences, age of first masturbation), an assessment of living conditions (e.g., family structure, history of abuse), and a history of delinquency and illegal sexual behavior. The interview was conducted by graduate clinicians who were supervised by the director of ABSOP-II.

Disclosure of illegal sexual behavior was obtained from the clinical interview question, "Have you ever committed a sex offense?" This question provided participants with the opportunity to disclose the illegal sexual behavior that led to their ABSOP-II commitment. Responses were dummy coded by graduate clinicians as no disclosure (0) or disclosure of the illegal sexual behavior (1), depending upon the details provided by participants. Accounts that were consistent with file information or only missing minor details were considered disclosures, while accounts characterized by denial, significant minimization, or failure to mention

significant details of the illegal sexual behavior were not considered disclosures of illegal sexual behavior (Ware & Mann, 2012).

The present study attempted to uphold interrater reliability for disclosure of illegal sexual behavior through account verification and supervision. During the interview, clinicians transcribed accounts of illegal sexual behavior verbatim. These accounts were then verified through comparison to police reports or court documents of the illegal sexual behavior. Coding decisions were also discussed at clinical supervision meetings to ensure that all clinicians agreed with their supervisor as to whether or not participants disclosed their illegal sexual behavior.

Juvenile Victimization Questionnaire for Children (JVQ-R2). The JVQ-R2 was developed as a comprehensive, developmental approach to assess crime, child maltreatment, and other kinds of victimization over a child's lifetime (Finkelhor et al., 2005; Finkelhor et al., 2009). The JVQ-R2 obtains reports on 34 forms of youth victimization that cover five general areas: Conventional Crime, Child Maltreatment, Peer and Sibling Victimization, Sexual Victimization, Physical Victimization, and Indirect Victimization (Finklehor et al., 2005). Some items assess relatively common but lower severity victimizations (e.g., theft of personal property), while other items assess infrequent and higher severity victimizations (e.g., witnessing an explosion). The JVQ-R2 has a Cronbach's alpha of .80, test-retest reliability of .95 (.77-1.00), and a Cohen's Kappa of .63 for the child self-report version (Finkelhor, Hamby, Ormrod, & Turner, 2005). Convergent validity is supported by moderate correlations between the JVQ-R2 and measures of trauma symptoms (Finkelhor et al., 2005).

Poly-victimization was defined as having experienced more than one type of victimization over the lifetime (Finkelhor et al., 2009). Overall, higher JVQ-R2 scores indicated more accumulated victimization types than lower JVQ-R2 scores (Finkelhor et al., 2009; Turner

et al., 2010). The mean accumulated victimization types for youth from a community sample ranges from 3.7 to 4.9, respectively (Finkelhor et al., 2009). Because juvenile offenders are found to have experienced more types of victimization than peer-aged youth in the community, poly-victimization rates were expected to be higher in the current sample than those found in the national sample (Finkelhor et al., 2009; Pareda et al., 2015).

Inventory of Parent and Peer Attachment (IPPA). The IPPA is a 28-item self-report measure of caregiver (i.e., adolescent to caregiver) and peer (i.e., adolescent to peer) attachment (Armsden & Greenberg, 1987). The measure uses five-point Likert-scale responses (1 = *almost never true* to 5 = *almost always true*) and yields a total score, as well as three subscale scores: Trust (mutual understanding and respect), Alienation (feelings of isolation and alienation), and Communication (extent and quality of communication). The IPPA has shown acceptable psychometric properties with Cronbach's alphas of .72 to .91 and a test-retest reliability of .91 for caregiver attachment (Armsden & Greenberg, 1987; Gullone & Robinson, 2005). Convergent validity is supported for the IPPA with positive correlations to measures of self-esteem and parental bonding (Gullone & Robinson, 2005). Given that this study examined caregiver attachment in adolescents with illegal sexual behavior, only scores from the caregiver scales were used in analyses. For the present study, higher total scores of caregiver attachment indicated higher levels of attachment security.

Results

Descriptive Analyses. In the present sample, 87.2% of participants were adjudicated for illegal sexual behavior. Approximately 34% of participants were adjudicated for first-degree sex offenses, 29.1% were adjudicated for second-degree sex offenses, and 24.2% were adjudicated for non-registration offenses (e.g., Sexual Misconduct, Indecent Exposure). Although the

remaining 12.8% of participants were adjudicated for nonsexual charges (e.g., Violation of Aftercare, Harassment), they were included in the sample because they had engaged in illegal sexual behavior as a part of their adjudication. No significant relationships were found between adjudication and poly-victimization [$F(17, 62) = .49$, $p = .943$], caregiver attachment [$F(17,62) = 1.39$, $p = .182$], and disclosure of illegal sexual behavior [$F(17,62) = 1.31$, $p = .231$]. Zero-order correlations with all demographic characteristics and with the outcome variables were performed and no significant relationship were found between demographic and poly-victimization, caregiver attachment, and disclosure of illegal sexual behavior. During the pre-treatment clinical interview, 70.3% of participants disclosed that they had engaged in the illegal sexual behavior that led to their ABSOP-II detainment.

Approximately 92.2% of participants reported experiencing at least one of the 34 types of childhood victimization on the JVQ-R2. The mean number of victimization types experienced by adolescents in the sample was 10.75 (ranging from 0-34). When the 34 types of victimization were collapsed into the six aggregate categories, participants' responses indicated that most had experienced at least one type of conventional crime, childhood maltreatment, physical victimization, peer or sibling victimization, sexual victimization, and/or indirect victimization (Table 1). The percentage of participants who experienced victimization from multiple aggregates was also examined. The majority of participants (89.1%) reported experiencing victimization from two or more categories and 30.6% of participants reported experiencing victimization in all six aggregates (Table 1).

Attachment. A simple linear regression analysis was used to test the relationship between poly-victimization and caregiver attachment. Poly-victimization was found to predict participant attachment and explained 16.2% of the variance in IPPA ratings of caregiver attachment (R^2 =

.403, $F(1,62) = 41.13$, $p < .001$). Specifically, more types of victimization experienced in childhood predicted less secure caregiver attachment ($\beta = -2.54$, $p < .001$).

Multiple linear regressions were also used to examine the predictability of poly-victimization beyond each victimization aggregate. When entered individually, all victimization aggregates predicted IPPA ratings of caregiver attachment (Table 2). When poly-victimization was added to each model, Conventional Crime was the only aggregate that contributed unique variance to caregiver attachment (see Table 3). Overall, the current results support the hypothesis that childhood poly-victimization predicts the security of the caregiver attachment bond in adolescents with illegal sexual behavior.

Disclosure. Sequential logistic regression analyses were used to test the hypothesis that childhood poly-victimization and caregiver attachment predict disclosure of illegal sexual behavior at the beginning of treatment. Block 1 contained poly-victimization, which is a continuous variable with higher values indicating more types of victimization experienced in childhood. Caregiver attachment was added in block 2, which is also a continuous variable with higher values indicating more secure caregiver attachment. An interaction term of poly-victimization and caregiver attachment was added to block 3 to test whether there was a moderation effect between poly-victimization and attachment in predicting disclosure (0 = no disclosure, 1 = disclosure). Odds ratios were also examined to determine the likelihood of disclosure, given the variables in each block.

The first block was significant [model $x^2(1, n = 63) = 5.29$, $p = .021$] and correctly classified 71.4% of the cases. Poly-victimization significantly predicted disclosure ($R^2 = .081$, Wald = 4.86, $p = .027$) indicating that for every one additional type of victimization experienced in childhood, participants were 9% less likely to disclose their illegal sexual behavior. Block two

was also significant [model x^2 (2, n = 63) = 7.31, p = .007] and correctly classified 76.2% of participants. Caregiver attachment (R^2 = .181, Wald = 6.22, p = .013) significantly predicted disclosure, indicating that for each point increase in IPPA scores, participants were 4% more likely to disclose illegal sexual behavior. Poly-victimization was no longer a significant predictor of disclosure in block 2. Block three was not significant (model x^2(3, n = 63) = .283, p = .595). The interaction between poly-victimization and caregiver attachment did not significantly predict disclosure (R^2 = .185, Wald (3, 63) = .281, p = .596). Caregiver attachment and poly-victimization were also not significant predictors of disclosure in block 3 (See Table 4).

Results from these analyses did not support the hypothesis that caregiver attachment had a moderation effect on relationship between poly-victimization and disclosure of illegal sexual behavior. Rather, findings demonstrate a mediation effect of caregiver attachment on poly-victimization and disclosure of illegal sexual behavior. The relationship between poly-victimization and caregiver attachment was significant, as was the relationship between poly-victimization and disclosure. Caregiver attachment also significantly predicted disclosure of illegal sexual behavior (R^2 = .181, Wald (3, 63) = 10.33, p = .001). When controlling for caregiver attachment, poly-victimization no longer predicted disclosure of illegal sexual behavior. Therefore, caregiver attachment mediated the relationship between poly-victimization and disclosure of illegal sexual behavior.

Discussion

The current study sought to investigate the processes that influence adolescent disclosure of illegal sexual behavior in the treatment setting. Specifically, poly-victimization and caregiver attachment were identified as characteristics that could impair disclosure at the beginning of treatment for adolescents adjudicated for illegal sexual behavior. As hypothesized, higher levels

of childhood poly-victimization predicted less secure caregiver attachment in participants. Contrary to the initial hypothesis, caregiver attachment fully mediated the relationship between poly-victimization and disclosure of illegal sexual behavior. The prevalence of poly-victimization was also examined in the sample, given that it has not yet been studied in adolescents adjudicated for illegal sexual behavior.

Participants in the present study reported high rates of childhood victimization, with approximately 92% reporting exposure to at least one aggregate category of victimization (Conventional Crime, Child Maltreatment, Physical Victimization, Peer and Sibling Victimization, Sexual Victimization, or Indirect Victimization) as measured by the JVQ-R2. Most participants reported experiencing relatively common and low severity victimizations (i.e., conventional crime and indirect victimization), which is consistent with poly-victimization research in both undergraduate (Elliott et al., 2009; Howell & Miller-Graff, 2014) and juvenile offender (Cruise & Ford, 2011; Pareda et al., 2014; Pareda et al., 2015) populations. Findings also demonstrate the diversity of victimizations experienced by adolescents with illegal sexual behavior. Although the most common victimizations studied in this population are sexual abuse, physical abuse, and neglect (Bonner, 2008; Burk & Burkhart, 2003; Higgins & McCabe, 2001; Loding, 2007), adolescents in the current sample had experienced a wide variety of victimizations in their lifetime including property crimes and witnessing violence in their homes and communities.

The first set of regression analyses revealed that childhood poly-victimization significantly predicted adolescent caregiver attachment. Participants who had experienced more types of victimization in childhood reported more disrupted attachment with their caregivers than adolescents who had experienced fewer types of victimization. Moreover, poly-victimization was

found to better predict caregiver attachment than most aggregate categories of victimization. Even though each aggregate accounted for a significant proportion of the variability in caregiver attachment when examined in isolation, the Conventional Crime aggregate was the only aggregate that contributed a small, but unique, proportion of variance in caregiver attachment when poly-victimization was added to the model. This is inconsistent with previous poly-victimization studies and may be the product of the present sample size. Further research is needed to determine whether the Conventional Crime aggregate's unique contribution to caregiver attachment can be replicated in other studies. In most cases, the aggregate categories of victimization accounted for no variability beyond that already accounted for by poly-victimization. Overall, these findings suggest that poly-victimization is associated with disrupted caregiver attachment in adolescence, particularly in adolescents with illegal sexual behavior. Results are also consistent with past research indicating that exposure to multiple types of victimization is a better predictor of psychological adjustment than exposure to one specific type of victimization (Elliott et al., 2009; Finkelhor et al., 2007; Finkelhor et al., 2009).

The second set of regression analyses revealed that caregiver attachment fully mediated the relationship between poly-victimization and disclosure of illegal sexual behavior. When examined in isolation, poly-victimization predicted disclosure. However, the significance of this relationship was lost when caregiver attachment was examined alongside of poly-victimization. These results found that the variance in disclosure that is accounted for by poly-victimization is mediated by caregiver attachment. In the present sample, many victimized participants reported having secure attachments with their caregivers. Secure caregiver relationships protect against the interpersonal distress elicited by a victimization history (Howell & Miller-Graff, 2014; Kerr et al., 1999). When these adolescents disclosed victimizations to their caregivers, their concerns

were likely met with support (Kerr et al., 1999). Therefore, adolescents with secure attachments are more capable of disclosing their illegal sexual behavior to a therapeutic setting because they have been conditioned to view adults as sources of empathy and security (Ainsworth, 1972; Kerr et al., 1999; Rosenthal & Kobak, 2010). The present results are consistent with studies examining therapeutic disclosure of trauma. Specifically, research conducted by Cohen et al. (2012) found that children and adolescents with less secure attachments had more difficulty therapeutically disclosing trauma than those with more secure caregiver relationships. Therefore, poly-victimization influences disclosure of illegal sexual behavior, insofar as it disrupts adolescent caregiver attachment.

Implications for Clinical Practice

The current findings suggest that many adolescents with illegal sexual behavior have experienced a considerable degree of childhood victimization across a broad range of categories. This finding has several implications for the professionals who are responsible for assessing and treating adolescents with illegal sexual behavior. First, it emphasizes the importance of assessing for multiple types of victimization beyond physical and sexual abuse and neglect (Elliott et al., 2009; Finkelhor et al., 2007). Over 80% of adolescents in the present sample reported experiencing property, peer and sibling, and indirect victimizations, whereas only 47% reported experiencing sexual victimization and 46% reported a history of child maltreatment. This demonstrates that there are a multitude of other types of traumatic experiences that warrant treatment consideration in this population than concentrating on sexual victimization and child maltreatment in isolation (Pareda et al., 2009). Moreover, professionals must be aware of the impact that cumulative lifetime victimization can have on adolescent adjustment, even if some of those experiences are relatively common and perceived as low severity events (Elliott et al.,

2009; Finkelhor et al., 2009; Finkelhor et al., 2010). Therefore, assessing for multiple types of victimization provides an accurate depiction of an adolescent's trauma history, as well as his relative stability at the beginning of treatment for his illegal sexual behavior.

The observed relationship between poly-victimization, caregiver attachment, and disclosure indicates that the interpersonal distress elicited by disrupted attachment influences disclosure of illegal sexual behavior. Many sex offender rehabilitation programs require clients to disclose their illegal sexual behavior before they can officially begin treatment (Baker et al., 2001; Ware & Mann, 2012). Adolescents and adults who withhold disclosure can be punished for their "failure to accept responsibility" and are often required to remain in treatment until they disclose their illegal sexual behavior (Nunes et al., 2007; Ware & Mann, 2012). Although disclosure is believed to reflect treatment readiness and engagement, these results suggest that adolescents who do not disclose illegal sexual behavior or minimize significant aspects of their illegal sexual behavior are not resisting treatment. Rather, adolescents likely fail to disclose because they have been conditioned to view adults as sources of instability. They then wait to disclose their illegal sexual behavior until they trust that the object of their disclosure will maintain their safety (Cohen et al., 2006; Cohen et al., 2012). Therefore, disclosure of illegal sexual behavior is an unreliable indicator of treatment progress because of the interpersonal barriers created by disrupted caregiver attachment. Instead, all adolescents should participate in treatment and be permitted to disclose their illegal sexual behavior when they develop secure bonds with their therapists.

The present findings also highlight the importance of implementing a trauma-informed therapeutic approach with adolescents with illegal sexual behavior. The prevalence of poly-victimization in this sample suggests that clinicians and counselors who work with these

adolescents should be familiar with all major categories of victimization, given that those who have experienced one type of victimization have likely experienced other forms as well (Elliott et al., 2009; Finkelhor et al., 2009; Pareda et al., 2014; Turner et al., 2010). Additionally, the relationship between poly-victimization and caregiver attachment suggests that adolescents who have experienced multiple types of victimization will have more difficulty developing a secure attachment with their clinicians (Cohen et al., 2006; Cohen et al., 2012). These adolescents have been repeatedly victimized and have learned that their caregivers cannot adequately protect them from harm (Cohen et al., 2006; Burk & Burkhart, 2003). They may not trust that their clinicians have their best interest in mind and may alienate themselves from the therapeutic relationship to avoid re-victimization (Cohen et al., 2012). To alleviate distress, clinicians should devote extra sessions to fostering rapport with adolescents with illegal sexual behavior before officially implementing an evidenced-based therapeutic model (Cohen et al., 2006; Cohen et al., 2012). Therapy should also target emotional and psychological issues from past trauma before treating maladaptive sexual behavior (Cohen et al., 2006; Levenson et al., 2014). Once trauma is addressed, adolescents may be more willing to discuss their illegal sexual behavior and engage in treatment (Levenson et al., 2014).

Finally, these findings emphasize the importance of incorporating family therapy into treatment for adolescents with illegal sexual behavior. Family therapy in this population often involves teaching self-regulation strategies to the family (e.g., noting physiological arousal, thought stopping, having empathy), discussing situations in which the adolescent exhibited maladaptive behavior (sexual and nonsexual), and role-playing different outcomes using the self-regulation strategies (Keiley, 2002b; Keiley, 2007; Keiley, Zaremba-Morgan, Datubo-Brown, Pyle, & Cox, 2015). Family therapy has been found to decrease externalizing and internalizing

symptoms for adolescents with illegal sexual behavior for up to one year after termination (Keiley et al., 2015). For adolescents who have experienced poly-victimization, family therapy provides a unique opportunity to rebuild disrupted caregiver attachments (Keiley et al., 2015). During these sessions, adolescents and their family members learn and experience the altering of affective interactional patterns (Keiley, 2007; Keiley et al., 2015) Through facilitated discussion among family members and in vivo practice, families are able to confront their attachment disruptions and rebuild the caregiver-child bond (Keiley et al., 2015). Over time, adolescents learn to trust and effectively communicate with their caregivers (Keiley, 2007; Keiley et al., 2015). Likewise, caregivers are taught strategies that enable them to create a safe and secure environment at home (Keiley et al., 2015). Family therapy arms both caregivers and adolescents with strengthened attachment bonds, which may enable poly-victimized adolescents to view their caregivers as allies in their recovery and maintain treatment gains.

Limitations

The present study has several limitations. First, the clinical interview used in data collection is not the first time participants were asked to disclose their illegal sexual behavior. The accountability-based sex offender program where data were collected is the final step in a long sequence of legal proceedings. Most adolescents in this study disclosed their illegal sexual behavior to caregivers, detectives, juvenile probation officers, and triers of fact before entering treatment. It is possible that some participants were more willing to disclose their illegal sexual behavior at pre-treatment because they had grown accustomed to disclosing their illegal sexual behavior to several other entities. Had this been the first opportunity for participants to disclose their illegal sexual behavior, more variability in disclosure may have been observed.

A second limitation is that analyses focused solely on the types of victimizations experienced by participants. Even though victimization type has been found to predict psychological distress in adolescence, other components of early childhood trauma could influence long-term adjustment (Finkelhor et al., 2007; Pareda et al., 2015; Turner et al., 2015). Specifically, victimization severity and frequency may interact with victimization type to elicit interpersonal difficulty with attachment figures. By not controlling for these victimization characteristics, we cannot be sure which aspect of participants' reported poly-victimization (i.e., type, severity, frequency) are contributing to their attachment security and disclosure of illegal sexual behavior.

A third limitation to the present study is the use of multiple raters to gather disclosure of illegal sexual behavior. Although precautionary measures were taken to ensure the reliability of each code (disclosure v. no disclosure), variability may still exist between raters. For example, some participants may have felt more comfortable disclosing their illegal sexual behavior because of a rater's interpersonal style. Likewise, some participants may have failed to disclose due to their raters' stimulus value (e.g., age or gender). Therefore, data likely contain some variance in disclosure that is unrelated to the variables measured in this study.

Future Research

Future studies assessing poly-victimization, caregiver attachment, and disclosure are necessary to replicate the present findings and extend them to other aspects of the sex offender treatment process. Although this study highlights the potential impact of poly-victimization on assessment and treatment of adolescents with illegal sexual behavior, a longitudinal study would be useful for examining the therapeutic outcomes for this population. Following participants throughout treatment would provide an opportunity to explore the relationships between poly-

victimization and treatment length, responsiveness, and maintenance of treatment gains for adolescents with illegal sexual behavior. Poly-victimization would also likely impact the therapeutic process, given the observed predictive relationship with relational attachment. Adolescents who experienced poly-victimization could have more difficulty completing treatment, which could negatively influence their risk for recidivism. Therefore, a longitudinal treatment study would provide more detailed information to the type of treatment that could evoke the best outcome for poly-victimized adolescents with illegal sexual behavior.

Additional research is also needed to explore how best to define and measure attachment. Even though attachment is most commonly associated with biological parents, adolescents often have other relatives, adults, and peers with whom they are securely attached (Rice, 1990). These attachment relationships have also been found to mitigate the negative consequences of aversive childhood experiences (Howell & Miller-Graff, 2014). Future studies should examine the extent to which secure secondary attachments influence assessment and treatment of adolescents with illegal sexual behavior.

Finally, this study only examined two factors that influence disclosure of illegal sexual behavior. Given that many other factors might have influenced the present findings (e.g., sexual offense characteristics, non-victimization adverse life experiences, psychological stressors), future studies should control for these variables. Future research should also examine these factors, in addition to poly-victimization, to determine their influence on the treatment for adolescents adjudicated for sex offenses.

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Appendix

Table 1

Frequency Distribution of Student Demographic Characteristics

Aggregates	N	%
Conventional Crime	51	81%
Child Maltreatment	29	46%
Physical Victimization	57	90.5%
Peer/Sibling Victimization	54	85.7%
Sexual Victimization	30	46.8%
Indirect Victimization	58	92.1%
Participants with Victimizations across Aggregates		
0 Aggregates	5	6.5%
1 Aggregates	1	1.6%
2 Aggregates	1	1.6%
3 Aggregates	9	14.5%
4 Aggregates	11	17.7%
5 Aggregates	17	27.4%
6 Aggregates	18	30.6%

Table 2

Contribution of the aggregate categories of victimization on caregiver attachment

	Caregiver Attachment		
Variable	*B*	*SE B*	*β*
Physical Assault	-5.15	1.17	-.49**
Conventional Crime	-7.91	2.97	-.32*
Child Maltreatment	-12.72	2.02	-.63**
Peer and Sibling	-9.48	2.34	-.46**
Sexual Victimization	-7.29	3.13	.027*
Witnessing Victimization	-5.72	1.43	-.46**

$^*p < .05$. $^{**}p < .01$.

Table 3

Contribution of the aggregate categories of victimization on caregiver attachment when controlling for poly-victimization

	Caregiver Attachment		
Variable	*B*	*SE B*	*β*
Physical Assault	-2.14	2.02	.204
Conventional Crime	-6.98	3.42	.285*
Child Maltreatment	-6.65	3.46	-.329
Peer and Sibling	-5.24	3.20	.107
Sexual Victimization	-.06	2.98	-.003
Witnessing Victimization	-2.60	.59	.134

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

Table 4

Summary of Hierarchical Regression Analysis for Variables Predicting Disclosure of Illegal Sexual Behavior (N = 63)

Variable	Model 1				Model 2				Model 3			
	Wald	*p*	Odd's Ratio	95% CI	Wald	*p*	Odd's Ratio	95% CI	Wald	*p*	Odd's ratio	95% CI
Poly-Victimization	4.86	.027*	.91	.84 - .99	.00	.987	1.00	.89 – 1.12	.236	.63	1.08	.80 – 1.44
Attachment					6.22	.013*	1.04	1.01 - 1.07	3.30	.06	1.05	.99 – 1.11
Poly-Victimization x Attachment									.281	.18	1.00	.99 – 1.00

Note: Poly-victimization and Caregiver Attachment were centered at their means.

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