EMPATHY AND THE ADOLESCENT SEXUAL OFFENDER: AN EXAMINATION OF THE SPECIFICITY OF EMPATHY DEFICITS AND THE RELATIONSHIP BETWEEN EMPATHY AND DISTORTED THOUGHT

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in the Graduate School of The Ohio State University

By

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The Ohio State University
2005

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ABSTRACT

Adolescent males commit a significant proportion of sexual offenses, and often an offense in adolescence signifies the beginning of a continuing pattern of behavior. A diminished capacity for empathic responding is often considered a fundamental deficit of adult sex offenders, though little research has been conducted in this area with adolescent sexual offenders. This study examined the role of empathy in adolescent sexual offending, investigating offenders' empathy as it related to general, moderately specific, and specific victims. The relationship between various levels of empathy and cognitive distortion, degree of force used in abusive encounters, and the offender's modus operandi was also examined. Similar to findings reported in the adult literature, there is a degree of differentiation in the empathic responding of adolescent sexual offenders. The adolescent offenders in this study did not, overall, have difficulty with empathic responding. In fact, study adolescents experienced more empathy for their own sex abuse victims (i.e., specific empathy) than for a general sex abuse or accident victim. Examination of the cognitive and emotional components of empathy suggests adolescent sexual offenders may have unique difficulty with cognitive processing. The pattern of empathy deficits is suggestive of a protective function for empathy deficits. The notion that measured empathy deficits may reflect distorted thinking patterns is discussed.

Dedicated to my husband

ACKNOWLEDGMENTS

I wish to thank my advisor, Mike Vasey, for his support, flexibility, and willingness to accommodate the unusual circumstances that impacted completion of this project.

I also wish to thank Keith Kaufman for giving me the opportunity to collect study data and giving me access to all of his laboratory resources.

I am grateful for the ongoing support and logistical assistance provided by my good friends, Judy Bomeisl and Toni Fehl.

I thank my husband, Tim, for his ongoing support and encouragement.

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PUBLICATIONS

1. K. Kaufman, J. Holmberg, K. Orts, F. McCrady, A. Rotzien, E. Daleiden, & D. Hilliker, "Factors influencing sexual offenders modus operandi: An examination of victim-offender relatedness and age." Child Maltreatment, 3, 349 – 362, (1998).

FIELDS OF STUDY

Major Field: Psychology

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CHAPTER 1

INTRODUCTION

Sexual abuse and the prevention of sexual abuse are topics that have permeated mainstream consciousness and influenced child rearing practices. Most educators, pediatricians, and parents are familiar with typical symptoms of sexual abuse and are acquainted with prevention techniques, such as talking about sexuality with children, labeling "good" and "bad" touches, and teaching about private body parts. There has also been an emphasis on identifying victims of sexual abuse and providing supportive services for them. Lagging behind prevention and intervention efforts with children and victims is a focus on the sexual offender. Although there is a small but growing body of research on sexual offenders, more detailed information is needed about many variables, including characteristics of the offender, factors related to the offense process, the cycle of abuse over an offender's lifetime, and recidivism, for example.

For many years, adult males were viewed as the primary perpetrators of sexual abuse. Although adult males commit most sexual crimes, victim reports indicate that juveniles are responsible for a large number of sexual assaults. Adolescents are responsible for 30 to 50% of all child molestations and up to 20% of all rapes (Morenz & Becker, 1995). More than one-half of all male victims and about one-quarter of all female victims report sexual abuse by juveniles (Showers, Farber, Joseph, Oshins, &

Johnson, 1983). Historically, sexual offenses by adolescents were unrecognized or minimized. Societal taboos regarding the discussion of sexuality, beliefs that sexuality in childhood and adolescence was nonexistent (Ryan & Lane, 1987), ideas such as "boys will be boys" (Becker, Cunningham-Rathner, Kaplan, 1986), and concerns over stigmatization of young "sexual experimenters" (Groth, 1977) created this climate. True adolescent sexual assaults were viewed as rare and recidivism for this group of offenders was considered quite low (Lewis, Shankok, Pincus, 1979).

An adolescent sexual offense may be a precursor to a lifelong cycle of abuse. Many adult offenders first experience deviant sexual arousal or offend as juveniles, with up to 80% reporting deviant sexual behavior before age 18 (Becker et al.,1986; Abel, Mittelman, & Becker, 1985; Bremer, 1992). Adult offenders often report offense patterns (e.g., victim age or sex, level of aggression, etc.) that are similar to those used in adolescence (Groth, 1977). Recognition that adolescent sexual offending occurs and may signify a behavior pattern that continues into adulthood highlights the importance of the study of adolescent sexual offenders. Understanding the developmental trajectory of the typical offender may aid efforts to classify subgroups of offenders based on characteristics that are relevant to their crimes. This may facilitate the design of idiographic offender treatment programs that target deficits or excesses unique to individual offenders and inform prevention and treatment efforts.

The sexual offender's lack of remorse or empathy for victims is often identified as a fundamental, characterological deficit. This notion is intuitively appealing, as a profound lack of empathy seems a necessary precursor to an abusive act. Empathy deficits are frequently the target of treatment programs, with over 90% of North

American treatment programs targeting empathy in general or specifically for the offender's victims (Knopp, Freeman-Longo, & Stevenson, 1992). Empathy is a complex process that involves the simultaneous processing of information about the self and about another individual. It is an emotional experience intertwined with a perspective-taking process, and the interaction between the affective and cognitive processes leads to an empathic response (Williams, 1990). Some aspects of empathy may be genetically based (Hoffman, 2000). Other facets, however, may be impacted by early experiences with parents and significant others and continually shaped over the course of development. For example, the ability to distinguish the self from others, to accurately identify ones' own emotions and the feelings of others, and to be impacted by the distress of others are shaped by development and necessary for mature empathic capabilities. These precursors to empathy could be derailed by early deprivations, inappropriate modeling, or impaired development.

Despite the intensive treatment focus on empathy deficiencies, there is little empirical research with adolescent offenders in this area. Only one study has specifically measured level of empathy in adolescent sexual offenders, and no differences were found between adolescent sexual offenders and non-delinquent controls on a 4-question measure of empathy (Monto, Zgourides, & Harris, 1998). Empathy has been more extensively studied with adult sexual offenders, although this group has not been found to be generally deficient in empathic capabilities (Fernandez & Marshall,1997; Langevin, Wright, & Handy, 1988; Hayashino, Wurtele, & Klebe, 1995; Marshall, O'Sullivan, & Fernandez, 1996). Findings that sex offenders possess adequate empathic functioning are counterintuitive, as a lack of empathy seems to be a necessary condition for sexual

offending. Most research in this area operationalizes empathy as global construct, present across different situations and with all individuals. Alternative conceptualizations of empathy that consider the impact of situational variables on level of empathy may prove useful.

Marshall, Hudson, Jones and Fernandez (1995) postulate that empathy is a state-like process that fluctuates over the course of time and is influenced by situational context. Under this formulation, offenders may have adequate empathic functioning in some contexts while displaying deficient functioning in other situations. Marshall and colleagues (Marshall & Barbaree, 1990) conceptualize empathy as a stage-like process where both the precursors to empathy (e.g., emotional recognition) and the results of empathy (e.g., helping behavior) play an important role. According to these authors, the empathy process involves four discrete steps, including: (1) *emotion recognition*, (2) *perspective-taking*, (3) *emotion replication*, and (4) *response decision*. Each stage or step stage builds upon earlier stages, and a disruption at any point will impact the progression through the stages and the ultimate experience of empathy. *Emotion recognition*, essentially a precursor to empathy, involves the correct identification of the emotions another individual is experiencing. The second stage, *perspective-taking*, is the cognitive component of the empathy process. It involves one's ability to adopt the perspective of another person, or put oneself in another's place and see the world in a similar fashion. *Emotion replication*, the third stage, is the affective component of the empathy process. It involves the vicarious replication or near-replication of another person's emotional response. The final stage, *response decision*, is an observer's

decision to act or not to act based on his or her feelings. While Marshall and colleagues recognize that various factors may inhibit the expression of concern, this stage is viewed as a behavioral measurement of empathy.

According to this model, empathy is impacted by contexts and situations. The state of the individual, the context in which the individual is responding, and the past experiences or memories of the individual are important. By highlighting the specific stages that are relevant to empathy, this theory facilitates thought as to the nature of empathy deficiencies in some individuals. It provides a framework for interpreting research findings and for examining the relationship between empathy and related constructs (e.g., emotion recognition, cognitions, and social skills). It also provides theoretical directions for considering the primacy of difficulties with empathic responding in the etiology of sexual offending.

Marshall and colleagues (Marshall et al., 1996; Fernandez & Marshall, 1997) developed a questionnaire to assess the first three stages of their model, emotion recognition, perspective-taking, and emotion replication. This measure also taps the contextual aspects of empathy by measuring responses on a general level (i.e., a child accident victim), a moderately specific level (i.e., a child sex abuse victim), and a specific level (i.e., the offender's own victim). Parallel versions of this measure have been used with child molesters and rapists to assess the specificity of empathy impairments.

Studies using Marshall's measure revealed very specific empathy impairments for child molesters and rapists (Marshall et al., 1996; Fernandez & Marshall, 1997). Marshall et al. (1996) administered their empathy measure to 29 incarcerated adult offenders with offenses against unrelated child victims prior to and following a treatment

module designed to increase empathy for their victims of sexual abuse. Pre-treatment empathy scores toward children in general (i.e., accident victims) were similar to those previously obtained from a non-offender control group, although scores toward general sexual abuse victims were more deficient. These offenders displayed the greatest empathy impairments toward their own victims prior to treatment, and only empathy toward offenders' own victims improved with treatment, with offenders being better able to identify their victims' distress and to feel similar distress about their victims following treatment. Similar findings were reported in an unpublished study by Marshall and colleagues (Marshall et al., 1995). Child molesters accurately identified the emotions of the accident victim (i.e., scores were similar to a community control group) but were relatively unable to discern the emotions of the general sexual abuse victim and their own victims.

Specific empathy impairments have also been found with rapists. Fernandez & Marshall (1997) administered Marshall's empathy measure to 27 incarcerated adult rapists and 27 incarcerated nonsexual offenders. Contrary to expectations, rapists displayed higher levels of empathy toward women in general than did incarcerated nonsexual offenders. Looking at the empathy profile for rapists, these offenders displayed the least empathy toward their own victims, followed by general sexual assault victims and accident victims. The rapists in this study had lower mean scores on all three sections (i.e., accident victim, general sexual abuse victim, and own victim) of the empathy measure than did the child molesters described by Marshall et al. (1996). Taken together, these studies by Marshall and colleagues (Marshall et al., 1996; Fernandez &

Marshall, 1997) also suggest that the level of force an offender is willing to use in the commission of a sex crime may to be related to level of empathy, as rapists scored lower on all three sections of the measure than did child molesters.

It is possible that beliefs or cognitions about children or women impact the sex offender's level of empathy, accounting for some of the variations found by Marshall and colleagues. Frequently sex offender beliefs are conservative and traditional, emphasizing control over women and male sexual entitlement (Ward, Keenan, & Hudson, 2000). At least some sexually aggressive men hold hypermasculinized beliefs that under emphasize feelings and emotions and over emphasize control and aggression (Lisak & Ivan, 1995). Beliefs of this nature may inhibit or suppress normal levels of empathy (Beck, 1999), thus facilitating abusive behaviors. However, in addition to maladaptive general beliefs toward women and children, sexual offenders are thought to also maintain specific dysfunctional ideas regarding their own victims. These beliefs, or cognitive distortions, rationalize or minimize the impact of sexual abuse on victims. Instead of true empathy, measured deficits may reflect ingrained patterns of thinking or protective rationalizations that prevent offenders from experiencing shame and guilt and that facilitate abusive behaviors (Abel, Becker, & Cunningham-Rathner, 1994). Measured empathy deficiencies reflect the impact of chronic rationalizations and disordered thinking (i.e., cognitive distortions) on offenders' responses to empathy measures.

The notion that measured empathy deficits reflect post-hoc rationalizations for the offense suggests that distorted cognition and empathy may closely be linked. Cognitive distortions are prevalent among adult sexual offenders and are negatively correlated with

empathy (Hanson & Scott, 1995; Abel, Gore, Holland, Camp, Becker, & Rathner, 1989). For instance, stating that a child enjoyed sexual victimization or was not harmed by it seems to illustrate a lack of empathy for the victim, or at least a lack of awareness of the consequences of the offense. Cognitive distortions may include beliefs about the offender (e.g., the offender is providing love and companionship to the child), the victim (e.g., the victim seduced the offender, the victim wanted or enjoyed sexual contact), or the sexual contact (e.g., sex with children is all right or beneficial to children). Generally, it is accepted that most sexual offenders maintain cognitive distortions and that these beliefs play an important role in the offense process (Johnston & Ward, 1996; Abel et al., 1985; Marshall & Barbaree, 1990).

Most research in this area has focused on the content of distorted cognitions. Abel, Mittelman, & Becker (1985) described seven clinically-based cognitive distortions common to sexual offenders. Offenders often believe children initiate or maintain sexual abuse by asking questions about sex or genitalia, failing to fight back, and keeping quiet about the abuse. Some offenders feel that victims are responsible or at least share responsibility for the abuse because of their action or inaction. Other common misperceptions include beliefs that having sex with children is a way to teach them about sex, that society will condone sex with children in the future, that touching a child's body or genitalia is harmless and different than sex, and that sex with children enhances feelings of closeness and intimacy.

Although nearly all offenders endorse some form of cognitive distortion, there does not appear to be a "typical" set of distortions that are endorsed by most offenders. Langevin (1991) administered the Cognitive Distortion Scale (Abel et al., 1989) to a

group of sexual offenders undergoing pre-trial assessment and found only three out of twenty-eight items with which a proportion of offenders agreed. Less than 25% of the sample agreed with each of these items. Similarly, in a study of adult males undergoing community treatment for a first sexual offense, Neideigh & Krop (1992) found the content of cognitive distortions to be specific and "surface level". These authors asked offenders to respond to an open-ended question about the times they offended, describing the "thoughts, ideas, or beliefs…that might have enabled you to act or might have made you feel less uncomfortable with what you did." Categorizing 357 responses with a card sort, these authors identified thirty-eight representative categories (e.g., "she enjoyed it", "this won't hurt her"). Of the five most representative categories, no more than 25% of the sample gave responses falling into any one category. Twenty-one of the 38 categories contained responses relevant to less than 6% of the perpetrators. Although less than half of this sample endorsed any cognitive distortions on a general pedophilic cognitions scale (Cognitive Distortions Scale, Abel et al., 1989), participants reported an average of 3.5 distorted beliefs when answering the open-ended question. According to Neideigh & Krop's interpretation, these results reflect the extent to which dysfunctional abuse-related thoughts are integrated with the general cognitive make-up of offenders. Instead of endorsing deeper dysfunctional cognitions, offenders hold surface-level beliefs that helped classify their situation as unique or as a "special case".

Adolescent sexual offenders display both general and offense specific cognitive distortions. Based on years of clinical experience with adolescent offenders, Lakey (1995) purports that cognitive distortion is the most important characteristic this group. She emphasizes general criminologic thinking that is enhanced by the more normative

characteristics of adolescent thought. For instance, adolescent sex offender thinking is characterized by "misinformation and strange beliefs and attitudes" (Lakey, 1995). Adolescent sex offenders form an idea or opinion and act on it, without seeking out facts or thinking about the morality or consequences of their behavior (Lakey, 1995). Similar to other adolescents, adolescent sex offenders feel superior, unique, and above the rules of society. In a examination of adolescent sex offenders, non-sex offending delinquents, and a comparison group, Hastings, Anderson, & Hemphill (1997) found that adolescent sexual offenders and non-sex offending delinquents displayed higher level of general cognitive distortion on the Automatic Thoughts Questionnaire-Revised (ATQ-R) than comparison adolescents, though the two offending groups did not differ from each other. Hastings et al. (1997) suggest that dysfunctional thinking may be a general feature of delinquency rather than a specific characteristic of sex offending.

There is additional empirical evidence that cognitive distortion is a general feature of delinquency. Non-sexual offenders maintain rationalizations that are specific to their crimes and perpetuate offending (Liau, Barriga, & Gibbs, 1997; Slaby & Guerra, 1988). Adolescents incarcerated for antisocial or aggressive acts endorse beliefs that aggression is a legitimate response, helps avoid a negative image, increases self-esteem, and that victims deserve aggression or do not suffer (Slaby & Guerra, 1988). Self-serving cognitive distortions are related to antisocial behavior in delinquent and non-delinquent youth, and delinquent adolescents have higher levels of overall cognitive distortion than do nondelinquent adolescents (Gibbs, Barriga, & Potter, 1996).

Although cognitive distortion may be a feature of general delinquent thinking, there is some specificity as to the type of distortion among sex and non-sex offending

adolescents. Some adolescent sexual offenders maintain distortions that are specific to their offense. Kenny, Keogh, & Siedler (2001) asked adolescents charged with a sexual offense and awaiting adjudication about the role of cognitive distortions in each of their offenses. Using a 5-point Likert scale, interviewers coded the importance of cognitive distortions in the offender's recounting of his offense(s). Cognitive distortions were found be a major feature of 58% of the described offenses (scores of 4 or 5 on a 1 – 5 scale), with an additional 38% scoring 3. Distorted beliefs, such as lack of victim resistance was equivalent to consent or the victim wanted sex or the victim wanted sex with the offender because he wanted sex with her were at least moderately important to nearly all adolescents in this study.

Classifying distortions of adolescent non-sexual offenders as overt (e.g., acceptability of aggression and defiance) and covert (e.g., acceptability of lying and stealing), Liau et al. (1997) found a degree of specificity to thinking errors. Covert cognitive distortions were uniquely associated with covert antisocial behaviors (e.g., stealing), while overt cognitive distortions were related to overtly antisocial behaviors, such as fighting. A subsequent study by Barriga, Landau, Stinson, Liau, & Gibbs (2000) further supported the notion of specificity of distortions for externalizing and internalizing behavior problems. Self- serving cognitions (e.g. blaming others, minimizing) were a significant predictor of externalizing problem behavior, and self-debasing cognitive distortions (e.g., catastrophizing, overgeneralizing) accounted for a significant proportion of the variance in internalizing problem behaviors.

Level of cognitive distortions has been positively correlated with the number of years offending (e.g., Hayashino, Wurtele, & Klebe, 1985), suggesting that these beliefs

may be learned and elaborated over time. Cognitive distortions may become more diverse and ingrained, shifting from loosely held, surface-level excuses to more fundamental beliefs that shape behavior (Neideigh & Krop, 1992). It is also possible that general and specific cognitive distortions have different origins. General distorted thinking may predate abusive situations and create the psychological environment for the initial abuse. Sex or victim specific distortions may occur post-offense and reduce guilt or increase the likelihood of future abuse (Abel et al., 1989). Gaining a clearer picture of general and specific cognitive distortions in the adolescent sexual offender is an important step towards unraveling these complicated relationships.

Cognitive distortions may be the force by which normal empathic functioning is disrupted or shaped. It may be that results showing victim specific empathy deficits can be better interpreted from a framework of victim specific distorted thinking patterns. To that end, the present study was designed to provide a better understanding of empathy in adolescent sexual offending, focusing on the specificity of empathic functioning and the relationship between empathy and distorted cognition. This study also examined the impact of empathy level on degree of force used in abusive encounters and the offender's modus operandi. Broadly defined, the goals of this study were to (1) describe the level of empathy among a sample of adolescent sexual offenders, (2) examine the specific empathy profile of adolescent offenders with regard to type of victim (i.e., accident victim, general sexual abuse victim, and own victim) and type of empathy (i.e., cognitive and emotional), (3) describe the level of general and specific (i.e., rape myth) cognitive distortion, (4) examine the relationship between empathy and cognitive distortions and the impact of these variables on a level of force used during victimization and modus

operandi (tactics designed to keep the victim quiet about the abuse). This study was exploratory in nature, primarily due to the very early stage of research in this area with adolescents. For this reason, the sample was divided in half to test the robustness of findings.

CHAPTER 2

METHOD

Participants

Adolescents incarcerated in a state correctional facility for adolescent sexual offenders participated in this study. Baseline data was collected prior to the onset of a new, group treatment program implemented by the staff at this facility. Questionnaires were administered in a small group format by trained research staff. Confidentiality was explained, and participants were assured that all responses would be kept confidential. Research staff read the instructions for all measures to the group and circulated around the room to provide individual assistance when needed. This study examines a small subset of the 13 measures administered during each 4-hour data collection period. Participants were given multiple breaks during data collection and lunch when all measures were completed. The total sample size for this study was 177.

Measures

Child Molester Empathy Measure (Marshall et al., 1996; Fernandez & Marshall, 1997). The Child Molester Empathy Measure assesses empathy in child molesters. This questionnaire measures different levels of empathy, ranging from general to specific. The levels of empathy are reflected in three questionnaire sections designed to measure: (1) empathy toward children or women (general empathy), (2) empathy toward victims of

child molestation or sexual assault (moderately specific), and (3) empathy toward the offender's own victims (specific empathy). This measure was specifically designed for use with sexual offenders, who are asked to rate the degree to which a child described in three different scenarios is experiencing each of 31 different emotional and behavioral responses (0 = not at all, 10 = very much). Additionally, the offender is asked to rate his own emotional response (20 different emotional states) in response to each of the scenarios. Marshall and colleagues report adequate internal consistency (alpha ranging from .79 to .94) and two-week test-retest reliability (.64 to .83; Marshall, O'Sullivan, & Fernandez, 1996) for both versions of this measure. An alternative scoring for this measure examines cognitive and emotional empathy for the offender in reference to the three victim types (Marshall & Maric, 1996). In this study, analyses were conducted using the standard scoring for Marshall's empathy measure (empathy for an accident victim, a general sexual abuse victim, and the offender's victim) and using an alternative scoring in which the offender's report of his own feelings is separated from his estimation of the victim's feeling in each of the three scenarios (i.e., accident victim, sex abuse victim, and own victim). The alternative scoring creates six scores, three for the offender's feeling regarding each of the victims (emotional empathy) and one 'how the victim feels' score for each of the three victims (cognitive empathy).

How I Think (Gibbs, Barriga, & Potter, 1996). The HIT is a 54-item measure designed to assess the level of cognitive distortions in adolescents. Participants rate each item on a 6-point Likert scale, ranging from 'agree strongly' to 'disagree strongly'. Questionnaire items are self-serving statements that reflect four different categories of cognitive distortions, including, self-centered, blaming others, minimizing/mislabeling,

and assuming the worst. In addition to representing a category of distortion, each item reflects one of four externalizing behavior categories derived from symptoms of oppositional-defiant and conduct disorders. These are physical aggression, lying, stealing, and disrespect for rules, laws, or authorities. Thus, there are eight core subscales, including (1) physical aggression, (2) oppositional defiance, (3) lying, (4) stealing, (5) self-centered, (6) minimizing/mislabeling, (7) assuming the worst, and (8) blaming others. Overt and covert aggression subscales can be created by combining the physical aggression and oppositional defiance subscales and the lying and stealing subscales. Two additional scales are designed to screen for suspect responding (anomalous responding subscale) and to provide prosocial filler items (positive filler subscale). The HIT has good reliability, with a one-week test-retest reliability of .91 and internal consistency estimates of .93 and .96 for the total score (Liau, Barriga, & Gibbs, 1998; Barriga & Gibbs, 1996).

Rape Myth (Burt, 1980): The Rape Myth is a self-report measure that assesses level of distorted thinking relative to women and rape. Respondents are asked to rate level of agreement with each of 19 items on a 7 point Likert scale, ranging from 'disagree strongly' (1) to 'agree strongly' (7). This questionnaire examines probable reasons for rape (e.g., inappropriate dress or behaviors), a woman's ability to resist rape, and stereotypes about the type of woman who can be raped. A total score ranging from 0 – 133 is computed by adding item scores together.

Adolescent Modus Operandi Questionnaire (AMOQ; Kaufman, Hilliker & Daleiden, 1996). The AMOQ is a 365-item self-report questionnaire that obtains background information about the offender (e.g., demographic information, criminal

history, and victimization history) and the offender's sexual victimization pattern, or modus operandi. Victimizing behavior is assessed along a time continuum beginning with the offender's targeting and selection of potential victims, through the process of gaining victim's trust and cooperation, and onto efforts at maintaining victim's silence following the sexual crime. Participants rate the frequency of each behavior on a 7-point Likert scale, ranging from 'never' (0) to 'always' (6). Questionnaire sections assess: (1) Luring strategies; (2) Offender access to victims; (3) How offenders gain victims' trust (Trust); (4) Offender grooming behaviors prior to the abuse; (5) Behaviors associated with the sexual contact; (6) Bribes and enticements to gain victim cooperation in sexual activity (Cooperation); (7) Threats and coercion to gain victim cooperation (Threats); and (8) Methods of maintaining the victim's silence regarding the abuse (Quiet). Principal axis factor analysis of the two primary content areas to be used in this study yielded the following scales: (1) Threats: a) Helpless, b) Harm Others, c) Psychopathy, and d) Weapon; (4) Quiet: a) Threat to Others, b) Threat to Harm Victim, c) Give/Withdraw benefits. Factors derived from these factor analyses were consistent with scales developed from previous analysis of the AMOQ in a sample of 179 adolescent sex offenders (see Kaufman, Hilliker, & Daleiden, 1996). Internal consistency estimates (i.e., Cronbach's alpha coefficients) were good to excellent for each of the final scales of the AMOQ. For this study, two subscales of the Quiet scale are used in analyses.

CHAPTER 3

RESULTS

Equivalency testing

A technique described by Rogers, Howard, and Vessey (1993) to determine the statistical equivalence of two groups was used to divide this sample into halves. Essentially, an equivalence interval was constructed around zero, such that a difference between two groups that was small enough to fall into the equivalence interval was deemed clinically nonsignificant. To obtain equivalent samples, SPSS was used to draw repeated, random samples containing approximately 50% of the sample. Each sample contained all subjects in this data set, randomly placed into one of two halves. Eight random samples were drawn and compared on twelve key variables for equivalence (see Table 1). A mean difference of 10% or less between variables in each of the groups was considered equivalent. The sampling producing the most equivalent variables was selected for further analyses. According to Rogers, Howard, and Vessey (1993), there are four possible outcomes for an equivalence test: *equivalent, equivocal, different*, and *different/equivalent*. In each instance, a traditional null hypothesis test was conducted along with an equivalence test, and it was the result of the two tests that determined equivalence. *Equivalence* occurs when there is no traditional statistical difference between the two samples, and there is statistical equivalence (i.e., the equivalence

confidence interval falls within the equivalence criterion). When there is no traditional statistical difference and the samples are not equivalent, the designation of *equivocal* must be made. *Difference* is determined if there is a traditional statistical difference and no equivalence, and *different/equivalent* occurs when there is traditional statistical difference and equivalence. The final division used in this study was deemed equivalent for the following variables: (1) age of offender, (2) age of offender at first offense, (3) age of offender at the first treatment for sexual problems, (4) age of the offender at first treatment for other problems, (5) empathy for offender's own victim, (6) empathy for a general sexual abuse victim, and (7) HIT total. Results were different for number of female victims and empathy for an accident victim and equivocal (i.e., insufficient evidence to determine equivalency) for all other variables. The resulting sample of 177 subjects was broken down into samples of n=89 (Group 1) and n=88 (Group 2). See Table 1 for means, standard deviations, traditional and equivalency test results for each variable.

Demographic information

Group 1: Participants in this group ranged in age from 12 – 20 (mean = 16.28, sd= 1.63). The majority of participants were Caucasian (59.2%) and African-American (27.6%), although about 13% of the sample identified with multiple races. Means and standard deviations of demographic and study variables are presented in Table 1.

Group 2: The average age for participants in this group was 16.14 (ranging from 12 – 20). As with Group 1, the majority of participants were Caucasian (62.5%) and

African-American (27.8%), with about 10% of the sample identifying with multiple races. Means and standard deviations of demographic and study variables are presented in Table 1.

Total Sample: Taken as a whole, the average age for participants in this sample was 16.21 (ranging from 12 – 20). The majority of participants were Caucasian (60.8%) and African-American (27.7%), with about 12% of the sample identifying with multiple races. Means and standard deviations of demographic and study variables are presented in Table 1.

Correlational analyses

Group 1

Correlations between the empathy subscales (traditional scoring, emotional empathy, and cognitive empathy) and HIT (total, overt, covert), Burt Rape Myth, Force, and Quiet scales of the AMOQ were calculated (see Table 2). The three traditionally scored empathy subscales were moderately correlated with each other (ranging from .38 to .55). In general, empathy was negatively correlated with cognitive distortions, as would be expected based on previous research (Hanson & Scott, 1995; Abel et al., 1989). The more general forms of empathy, for a general sex abuse victim and an accident victim, were significantly negatively correlated with the HIT total, HIT overt, HIT covert (sex abuse victim only), and Burt Rape Myth scores. Empathy for the offender's own victim was not significantly associated with either measure. Empathy for an accident victim was significantly and positively associated with all three measures of modus operandi (ranging from .22 to .29), and empathy for the offender's own victim was

positively correlated with Threat/Harm Victim (r = .25) and Give/Withdraw Benefits (r = .25). Empathy for the offender's own victim and an accident victim were positively correlated with force.

Emotional empathy for the offender's own victim was not correlated with the HIT or Rape Myth, whereas emotional empathy for a sex abuse victim was negatively correlated with the HIT total and HIT overt scores, and emotional empathy for an accident victim was not related to cognitive distortion. Emotional empathy for an accident victim was positively correlated with Force (r = .25) and the modus operandi scale of Give/Withdraw Benefits (r = .24). For the offenders own victim, emotional empathy was positively associated with Give/Withdraw Benefits (r = .23).

For a sexual abuse victim, negative correlations between all HIT scales and cognitive empathy obtained statistical significance (ranging from -.48 to -.51). Cognitive empathy for an accident victim was negatively correlated with HIT overt and Rape Myth. Cognitive empathy for the offender's own victim was positively correlated with two modus operandi scales (Threat/Harm, r = .23; Give/Withdraw Benefits, 2 = .22). Cognitive empathy for an accident victim was positively associated with the three modus operandi scales (ranging from .22 - .25). Force was positively related to cognitive empathy for the offender's own victim (r = .34).

Group 2

The three traditionally scored empathy subscales were strongly correlated with each other (ranging from .51 to .78). Empathy for an accident victim was negatively correlated with HIT total, HIT overt, HIT covert, and Burt Rape Myth scores (correlations ranging from-.23 to -.36). In general, empathy was negatively correlated

with cognitive distortions, as would be expected based on previous research (Hanson & Scott, 1995; Abel et al., 1989). Empathy for a sexual abuse victim was significantly correlated with HIT covert and Burt Rape Myth, and empathy for the offender's own victim was negatively associated with Rape Myth. In contrast to Group 1, empathy scored traditionally was not related to force or modus operandi.

Emotional empathy for the offender's own victim and for a sexual abuse victim was negatively correlated with HIT covert and Rape Myth. Relating to an accident victim, emotional empathy was negatively correlated with HIT total, HIT covert, and Rape Myth. Emotional empathy was not correlated with modus operandi or force, a result that differs from Group 1 results.

Cognitive empathy for the offender's own victim and a sexual abuse victim were negatively associated with Rape Myth, whereas cognitive empathy for an accident victim was negatively correlated with all measures of cognitive distortion (HIT total, overt, covert, and Rape Myth). In contrast to Group 1, cognitive empathy was not correlated with modus operandi or force.

Total Sample

Due to the discrepancies between results for Groups 1 and 2, correlations between the empathy subscales (traditional scoring, emotional, and cognitive) and the HIT (total, overt, covert), Burt Rape Myth, Force, and Quiet scales of the AMOQ were calculated for the total sample (see Table 4). In general, empathy was negatively correlated with cognitive distortions, as would be expected based on previous research (Hanson & Scott, 1995; Abel et al., 1989). The three traditionally scored empathy subscales were significantly and moderately correlated with each other (ranging from .48 to .58). The

more general forms of empathy, for a general sex abuse victim and an accident victim, were significantly negatively correlated with the HIT overall, HIT overt, HIT covert, and Burt Rape Myth scores. Empathy for the offender's own victim was significantly associated with Rape Myth (r = -.24) but not with any of the HIT scores. Traditionally scored empathy for the offender's own victim was significantly and positively associated with two measures of modus operandi (Threat/Harm Victim, r = .16; and Give/Withdraw Benefits, r = .19) and empathy for an accident victim was significantly correlated with Give/Withdraw Benefits (r = .19). There was a significant positive correlation between empathy for the offender's own victim and force. Although Rape Myth was positively correlated with all three HIT scales, neither HIT nor Rape Myth was associated with modus operandi.

Emotional empathy for the offender's own victim was negatively correlated with Burt Rape Myth, HIT Total, and HIT Covert. Emotional empathy for a sex abuse victim and an accident victim were negatively correlated with HIT Total, HIT Covert, HIT Overt, and Burt Rape Myth. Cognitive empathy for the offender's own victim was negatively correlated with Burt Rape Myth. Showing similar patterns of relationships, cognitive empathy for a sex abuse victim and an accident victim were negatively correlated with HIT Total, HIT Covert, HIT Overt, and Rape Myth. Emotional and cognitive empathy were unrelated to modus operandi with two exceptions: cognitive empathy for the offender's own victim was positively correlated with Threat/Harm

Victim (r = .22) and Give/Withdraw Benefits (r = .20). Emotional and cognitive empathy for the offender's own victim were positively correlated with Force (r = .16; r = .16).

Empathy Analyses

Due to the different pattern of relationships between the equivalent sample grouping that was identified in the correlational analyses, Group 1, Group 2, and total sample data are presented for all further analyses.

Group 1

Repeated measures ANOVA was used to compare scores across the three sections of the empathy measure using the traditional scoring system. Contrary to findings in the adult sex offender literature (e.g., Fernandez & Marshall, 1997) adolescents in this sample reported higher levels of empathy for their own victims (mean = 345.63) and for a general sexual abuse victim (mean = 350.26) than they did for an accident victim (mean = 310.40), with no difference in the level of empathy for their own and general sexual abuse victims (see Table 5).

Mean emotional empathy scores for adolescents in Group 1 were 126.09 (accident victim), 137.52 (sexual abuse victim) and 145.88 (own victim). Repeated measures ANOVA revealed all three scores to be significantly different from each other, thus these adolescents experienced the most intense feelings relating to their own victim, followed by a general sexual abuse victim and an accident victim. A similar pattern was present for cognitive empathy. Offenders were best able to describe how a general sexual abuse victim (mean=212.74) and their own victims felt (mean =199.75), and these means were significantly higher than the mean for an accident victim (mean = 184.31).

Compared to previously reported data with adult child molesters (Marshall & Maric, 1996), the adolescents in this study have similar levels of emotional and cognitive emotional empathy with one exception. Adolescents in this study reported higher levels of both cognitive and emotional empathy toward their own victims than did Marshall & Maric's (1996) group of adult child molesters (see Table 6). The adolescents in this study were also compared to a previously collected sample of adult non-offenders and adult non-sex offenders (Marshall & Maric, 1996). Adolescents in Group 1 had lower levels of cognitive empathy for a sex abuse victim than did adult non-sex offenders. There were no differences between adolescents and adult non-offenders.

Group 2

Repeated measure ANOVA results were similar to those obtained with Group 1. Contrary to findings in the adult sex offender literature (e.g., Fernandez & Marshall, 1997), adolescent offenders in this study endorsed similar levels of traditional empathy for 'own victim' and 'sexual abuse victim', and the level of empathy for these two subscales was higher than for 'accident victim' (see Table 5).

Mean emotional empathy scores for adolescents in Group 2 were 133.30 ('accident victim'), 140.70 ('sexual abuse victim') and 144.03 ('own victim'). Whereas all three emotional empathy scores differed from each other in Group 1, results of a repeated measures ANOVA revealed that for Group 2 the mean for an 'accident victim' was significantly lower than the means for 'sexual abuse victim' and 'own victim', which did not differ from each other (see Table 5). As with Group 1, the pattern for cognitive

empathy was similar to that found with emotional empathy. The mean for 'accident victim' was significantly lower than the means for 'own victim' and 'sexual abuse victim', which did not differ from each other (see Table 5).

A comparison of Group 2 scores with previously obtained data from adult child molesters (Marshall & Maric, 1996) revealed adolescents in this study to have higher levels of emotional and cognitive empathy for their own victims (see Table 7) and emotional empathy for an accident victim. This group was similar to adult non-offenders in terms of emotional and cognitive empathy, and they displayed lower levels of cognitive empathy toward a sexual abuse victim than did a group of adult non-sex offenders. With the exception of higher levels of emotional empathy for an accident victim than adult child molesters, these results are similar to those obtained with Group 1.

Total Sample

Repeated measures ANOVA was used to compare scores across the three sections of the empathy measure using the traditional scoring system. Similar to Groups 1 and 2, adolescents in this sample reported higher levels of empathy for their own victims and for a general sexual abuse victim than they did for an accident victim, with no difference in the level of empathy for their own and general sexual abuse victims (see Table 5).

Mean emotional empathy scores for adolescents in the Total Sample were 129.70 (accident victim), 139.11 (sexual abuse victim) and 144.95 (own victim). As with Group 1, repeated measures ANOVA revealed all three scores to be significantly different from each other, thus these adolescents experienced the most intense feelings relating to their own victim, followed by a general sexual abuse victim and an accident victim. A similar pattern was present for cognitive empathy. Offenders were best able to describe how a

general sexual abuse victim (mean=214.83) and their own victims felt (mean =205.72), and these means were significantly different from each other and higher than the mean for an accident victim (mean = 189.4). Although the difference between cognitive empathy means for the offender's own victim and the sex abuse victim were not significantly different in Groups 1 and 2, the pattern of results was similar for all three groups (i.e., own victim mean higher than sex abuse victim mean and both were higher than the mean for accident victim).

Compared to a previously collected sample of adult child molesters (Marshall & Maric, 1996), adolescents in this study reported higher levels of both cognitive and emotional empathy toward their own victims and toward and an accident victim, with no differences in the level of empathy toward a sexual abuse victim. Adolescents in this study reported higher levels of cognitive empathy toward an accident victim than did a previously collected sample of adult nonoffenders and less cognitive empathy toward an accident victim than adult non-sex offenders. Adolescents reported lower levels of cognitive empathy toward a sexual abuse victim than did the two adult groups (see Table 8). There were no differences between the adolescents and adult non-offenders and non-sex offenders on emotional empathy. For Group 1, Group 2, and the Total Sample, study adolescents had higher levels of emotional and cognitive empathy for their own victims than did adult child molesters, and all three groups had less cognitive empathy for the general sex abuse victim than did non-sex offenders. Although Group 2 also reported higher levels of emotional empathy for an accident victim than did adult child molesters, all other findings reported for the Total sample are unique to this group.

Cognitive Distortions (HIT and Burt Rape Myth)

HIT scores were analyzed to determine the validity of each participant's responses. Barriga, Gibbs, Potter, and Liau (2001) report that mean scores greater than four on the Anomalous Responding subscale of the HIT are suspect. All participants in this study (Group 1 and Group 2) obtained scores less than 4 on this subscale and were deemed valid for further analyses.

Group 1

HIT scores were analyzed using the total score, the overt and covert behavior subscales, and the primary and secondary distortion subscales. For Group 1, 71% of the sample obtained total scores in the clinical range, with 81% falling into the borderline or clinical categories. Results were similar when comparing the overt and covert subscales, where 85% and 84% of the sample obtained scores in the borderline or clinical range. Primary distortion (self-centered scale) is a general tendency towards self-centeredness, and it stems from the egocentric bias of adolescents (Barriga et al., 2001). Secondary distortions are rationalizations that occur pre- or post-offense and that reduce guilt or negative feelings associated with the offense (Barriga et al., 2001). In Group 1, 81% of scores fell into the borderline or clinical range for the 'self-centered' scale. For the secondary distortions, 76% of 'minimizing/mislabeling', 84% of 'assuming the worst', and 71% of 'blaming others' fell into the borderline or clinical range. Using repeated measures ANOVA to compare means for the overt and covert scales, the mean score for "overt' was significantly higher than the mean score for covert. As shown in Table 9,

there was no difference between 'self-centered' and the secondary distortion scales (see Table 9), although the mean for 'minimizing/mislabeling' was significantly lower than the mean for 'assuming the worst'.

The importance of the empathy (traditional, emotional, and cognitive) as a predictor of cognitive distortion was analyzed with three simultaneous regression equations. Using HIT total as the dependent variable and empathy for offender's own victim, a sex abuse victim, and an accident victim as predictors, three models were tested. The overall equations using traditional empathy (R = .48, SE = .88) and cognitive empathy (R = .52, SE = .85) were significant for Group 1. As shown in Table 10, only empathy for a sexual abuse victim (traditional and cognitive) accounted for a significant proportion of the variance in HIT total (see Table 10).

Similar regression analyses were completed using Rape Myth as a measure of specific cognitive distortion. As with HIT total, the overall equations using traditional empathy (R = .48, SE = .88) and cognitive empathy (R = .52, SE = .85) were significant for Group 1. As shown in Table 10, only empathy for a sexual abuse victim (traditional and cognitive) accounted for a significant proportion of the variance in Rape Myth (see Table 10). Rape Myth was moderately correlated with HIT total (r = .42), HIT covert (r = .43), and HIT overt (r = .40).

Group 2

For Group 2, 71% of the sample obtained HIT total scores in the clinical range, with 82% falling into the borderline or clinical categories. Results were similar when comparing the overt and covert subscales, where 88% and 75% of the sample obtained scores in the borderline or clinical range. On the primary distortion scale ('self-

centered'), 77% of scores fell into the borderline or clinical range. Percentage of scores falling into the borderline or clinical range for secondary distortions are as follows: (1) 77% of 'minimizing/mislabeling', (2) 86% of 'assuming the worst', and (3) 82% of 'blaming others'.

Using repeated measures ANOVA to compare means for the overt and covert scales, the mean score for 'overt' was significantly higher than the mean score for 'covert'. The 'self-centered' distortion scale was significantly higher than the secondary 'minimizing/mislabeling' scale (see Table 9). While there were no other differences between the primary and secondary distortion scales, Group 2 had higher scores for the 'assuming the worst' scale than they did for 'minimizing/mislabeling'. With the exception of the difference between 'self-centered' and 'minimizing/mislabeling', these results are similar to those found in Group 1

The importance of the empathy (traditional, emotional, and cognitive) as a predictor of general cognitive distortion was analyzed with three simultaneous regression equations. Using HIT total as the dependent variable and empathy for offender's own victim, a sex abuse victim, and an accident victim as predictors, three models were tested. The overall equations using traditional empathy ($R = .31$, $SE = .78$) and cognitive empathy ($R = .32$, $SE = .77$) were significant for Group 2. As shown in Table 10, only empathy for accident victim (traditional and cognitive empathy) accounted for a significant proportion of the variance in HIT total (see Table 10). This differs from Group 1 results, where traditional and cognitive empathy for the sex abuse victim accounted for a significant proportion of the variance in HIT total.

Similar regression analyses were completed using Rape Myth as a measure of specific cognitive distortion. All three overall equations (traditional empathy, R = .22, SE = 16.00; emotional empathy, R = .43, SE = 15.88; cognitive empathy, R = .54, SE = 14.80) were significant for Group 2. As shown in Table 11, traditional and cognitive empathy for a sexual abuse victim accounted for a significant proportion of the variance in Rape Myth, similar to Group 1. For Group 2, emotional empathy for the offender's own victim also accounted for a significant proportion of the variance in Rape Myth (see Table 11). Rape Myth was moderately correlated with HIT total (r = .31), HIT covert (r = .36), and HIT overt (r = .24).

Total Sample

HIT scores were analyzed using the total score, the overt and covert behavior subscales, and the primary and secondary distortion subscales. As with Groups 1 and 2, a large proportion of the sample obtained HIT scores that fell into the borderline or clinical range. For the Total Sample, 75% of adolescents obtained total scores in the clinical range, with 82% falling into the borderline or clinical categories. Results were similar when comparing the overt and covert subscales, where 86% and 77% of the sample obtained scores in the borderline or clinical range. On the 'self-centered' scale, 81% of scores fell into the borderline or clinical range. For the secondary distortions, 79% of 'minimizing/mislabeling', 86% of 'assuming the worst', and 79% of 'blaming others' fell into the borderline or clinical range. Repeated measures ANOVAs were conducted to compare means for the overt and covert scales and the primary/secondary distortions scales. As with Groups 1 and 2, the mean score for 'overt' was significantly higher than the mean score for 'covert'. Similar to Group 2, the mean for the 'self-centered' scale

was significantly higher than the mean for 'minimizing/mislabeling' and 'assuming the worst'. The mean for 'assuming the worst' was also significantly higher than the mean for 'blaming others' in the Total sample.

The importance of the empathy (traditional, emotional, and cognitive) as a predictor of general cognitive distortion was analyzed with three simultaneous regression equations. Using HIT total as the dependent variable and empathy for offender's own victim, a sex abuse victim, and an accident victim as predictors, three models were tested. All three overall equations were significant (traditional empathy, R = .36, SE = .84; emotional empathy, R = .24, SE = .88, cognitive empathy, R = .37, SE = .84) for the Total Sample. As shown in Table 10, traditional empathy for a sexual abuse victim and cognitive empathy for a sex abuse victim and the offender's own victim accounted for a significant proportion of the variance in HIT total (see Table 10). Although the overall equation for emotional empathy was significant, none of the beta weights reached significance in this equation (see Table 10). Overall, these results are similar to those obtained with Group 1, although for Group 1 the overall emotional empathy equation did not reach significance and the beta weight for cognitive empathy for the offender's own victim also failed to reach statistical significance.

Similar regression analyses were completed using Rape Myth as a measure of specific cognitive distortion. All three overall equations (traditional empathy, R = .48, SE = 14.91; emotional empathy, R = .33, SE = 16.00; cognitive empathy, R = .51, SE = 14.59) were significant for the total sample. As shown in Table 11, traditional, emotional, and cognitive empathy for a sexual abuse victim and emotional empathy for the offender's own victim accounted for a significant proportion of the variance in Rape

Myth (see Table 11). Results for traditional and cognitive empathy were similar for all three groups. As with the Total sample, emotional empathy for the offender's own victim accounted for a significant proportion of the variance in Rape Myth for Group 2. Rape Myth was moderately correlated with HIT total (r = .36), HIT covert (r = .39), and HIT overt (r = .32).

Level of force

The AMOQ contains six variables that assess level of force used with victims (see Table 12). These variables are on the same metric (a 0 – 6 response scale) and an examination of the response distribution indicated that participants were, overall, using the full range of responses across items. Reliability analyses with the Total Sample indicated that a scale comprised of all 6 items has an alpha of .65 and that the scale alpha decreases to between .56 and .63 with the deletion of any single item (see Table 12). For this reason, the mean of all six items was used to represent whether or not force was typically used during victimization.

Group 1

Simultaneous regression analyses were completed using force as the dependent variable and traditional, emotional, and cognitive empathy for three victims (own, sexual abuse, and accident) as the predictor variables. As the information on the emotional and cognitive scorings was completely redundant with information on the traditional scoring, all three sets of scales were not entered simultaneously into a regression equation. As illustrated in Table 13, two regression equations obtained statistical significance with Group 1. An equation in which traditional empathy scoring variables were entered simultaneously and regressed onto force (R = .35, SE = .87) and an equation in which the

three cognitive empathy variables were entered simultaneously and regressed onto force (R = .35, .87) accounted for a significant proportion of the variance in force. As shown in Table 13, only empathy for the offender's own victim accounted for a significant proportion of the variance in force in these two equations (see Table 10).

Group 2

None of the three regression equations using force as a dependent variable and empathy (traditional, cognitive, or emotional) as independent variables obtained statistical significance.

Total Sample

Similar to Group 1, two equations reached statistical significance. Traditionally scored empathy variables (R = .25, SE = .823) and cognitive empathy variables (R = .26, SE = .83) accounted for a significant proportion of the variance in force. As shown on Table 13, only empathy for the offender's own victim significantly influenced force (see Table 13).

As force was not significantly correlated with HIT (Total or subscales) or Rape Myth, no further analyses of these variables were completed.

Mediational/Moderational Relationship between Empathy and Cognitive Distortions

A planned component of this study was the test of mediational and moderational models of the interrelationships between empathy and cognitive distortions. However, the preliminary conditions of mediation set forth by Baron & Kenny (1986) were not met in this data. The four conditions of mediation include: (1) the predictor variable (empathy) must be correlated with the criterion variable (modus operandi), (2) the predictor variable (empathy) must be correlated with the mediator variable (cognitive

distortions), (3) the mediator variable (cognitive distortions) must be correlated with the criterion variable (modus operandi), and (4) the relationship between the predictor variable (empathy) and the criterion variable (modus operandi) must disappear or diminish when the predictor variable (empathy) and the mediator variable (cognitive distortions) are examined simultaneously, though the mediator variable remains correlated with the criterion variable. In this study, none of the HIT scales were correlated with modus operandi and empathy was not correlated with all three modus operandi scales. Thus, these types of analyses were not completed as a part of this study.

CHAPTER 4

DISCUSSION

The present study is a preliminary examination of a complicated topic, and it was designed to better understand the role of empathy in adolescent sexual offending. This study focused on the patterns of empathy across different types of victims, measuring empathy at various levels of specificity. General empathy was measured in reference to an accident victim, moderately specific empathy related to a sexual abuse victim, and specific empathy assessed thoughts and feelings in reference to the offender's own victim. The relationship between various levels of empathy and cognitive distortion, degree of force used in abusive encounters, and the offender's modus operandi was also examined. Results support the notion that empathy is a multidimensional construct for adolescent offenders and highlight three important dimensions for future consideration, including: (1) the specificity of empathy deficits, (2) the cognitive and emotional components of empathy, and (3) the function of empathy deficits. Similar to findings reported in the adult literature, there is a degree of differentiation in the empathic responding of adolescent sexual offenders. Adult offenders often do not display gross empathy deficits; however, they do report lesser degrees of empathy when asked to think about a general sex abuse victim or their own victims (Marshall, Hamilton, & Fernandez, 2001, Marshall & Maric, 1996, Marshall et al., 1996). Depending on the target of

empathic responding, adolescent offenders also report varying levels of empathy. In addition to specificity of target, examining the cognitive and emotional components of empathy suggests adolescent sexual offenders may have unique difficulty with cognitive processing. Finally, the results for specificity of deficits and the components of empathy indicate that diminished empathy may serve a protective function for offenders, reducing negative feelings and facilitating future abuse.

Overall, the level of empathy reported by adolescent offenders in this study was higher than that reported by adult child molesters and more similar to that of the adult nonoffender (Marshall & Maric, 1996). While adult sexual offenders typically have the most significant empathy impairments toward their own victims, followed by a sexual abuse victim and an accident victim, this sample of adolescents had higher levels of specific and moderately specific empathy than general empathy. That is, they had more empathy for their own victims and for victims of sexual abuse than for an accident victim. This finding applied to the split sample groupings and to the total sample, and it was consistent across the types of empathy (i.e., cognitive, emotional, and traditionally scored). These results indicate that adolescent sexual offenders may have adequate overall levels of empathy, and it may be important to consider individual strengths and weaknesses when designing treatment programs. Identifying those individuals for whom an aspect of empathic functioning is difficult and providing interventions specific to individual needs may be more useful than globally addressing empathy (victim-specific or otherwise) with all adolescent sexual offenders.

Interestingly, these adolescents committed sexual offenses despite adequate empathic functioning, thus contradicting the notion that empathy leads to an appropriate

response decision and action (Marshall et al., 1995). The potential for discrepancies between measured empathy and behavior is an important issue in need of clarification. There are many possible explanations for this discrepancy, and although this issue cannot be definitively addressed within the current study, three potential hypotheses are suggested. It is possible that experience with sex offender treatment programs has "taught" these adolescents to respond in an empathic manner to questionnaire items. Given that offenders in this study reported the highest levels of empathy for their own victims or for sexual abuse victims, this is a distinct possibility. Alternatively, the adolescents in this study may have had a post-offense experience that enhanced empathy. Many intervening experiences occur between the initial identification as a sex offender and incarceration for sex-related crimes. Family reactions, outpatient treatment, or the act of being found guilty of a sex crime may change cognitions regarding the acceptability of abuse. Prior to the onset of this study, 94.4% of the adolescents offended for one or more years, and 73.3% received treatment for a sex-related crime. Although these participants were not enrolled in treatment related to their current incarceration, it is clear that they were not, overall, newly identified offenders.

Another possible explanation is that adequate empathic functioning was interrupted, suppressed, or inhibited at the time of offense. Current findings regarding cognitive empathy and distorted thinking suggest that this is a valuable direction for future research. In the present study, both cognitive and emotional empathy were assessed at three levels of specificity: general (i.e., accident victim), moderately specific (i.e., sexual abuse victim), and specific (i.e., offender's own victim). Whereas the level of emotional empathy toward all three classes of victims (i.e., accident victim, sex abuse

victim, and own victim) reported by adolescents in this study was similar to data previously collected with adult non-sex offenders and non-offenders, differences emerged in the cognitive empathy domain. Adolescent offenders reported lower levels of cognitive empathy for a sexual abuse victim than did the two adult comparison groups. For more general empathy (i.e., accident victim), the adolescents' level of cognitive empathy fell between the levels of non-sex offenders and the non-offending adults (total sample only). Overall, these data suggest that adolescent sex offenders may have an adequate ability to experience feelings similar to that of a specific, moderately specific, and general victim (i.e., emotional empathy), yet they may have unique difficulty with taking the perspective of another individual regardless of relationship to the victim (i.e., cognitive empathy for the total sample results) and particularly at the moderately specific level of empathy. Marshall and colleagues (1995) theorize that emotion replication occurs later in the empathy process than perspective-taking, and that each earlier stage in the empathy model is a building block for subsequent stages. The adolescents in this study had difficulty with lower levels of empathic functioning (perspective-taking) while matching adult non-offenders in their level of emotional empathy (emotion replication). Marshall and colleagues' conceptualization of empathy considers perspective-taking or cognitive empathy to be a lower stage of empathic development than emotional empathy. This conceptualization is similar to that of other researchers (Ward et al., 2000) and if correct, suggests that the adolescents in the current study must have developed an adequate perspective-taking ability in order to obtain the level of emotion recognition that

was reported. If so, adequately developed cognitive empathy or perspective-taking may have been modified or perhaps suppressed by another variable, such as cognitive distortions.

Adolescent offenders in this study endorsed high levels of general and specific cognitive distortion. Some degree of cognitive distortion was present for every participant, and most reported levels that were in the clinical or borderline clinical range. Cognitive distortions have been conceptualized as post-hoc rationalizations for negative behavior (Abel et al., 1989, Marshall et al., 1995). They may reduce guilt or negative feelings engendered by recognition of the harmfulness of abusive behaviors (i.e., an empathic response) and promote re-offending. It is possible that a high level of cognitive distortion interferes with the offender's ability to understand and describe a victim's reaction on a cognitive level. Over time, the impact of distortions on empathy may become more generalized, affecting multiple classes of victims and emotional empathy.

Barriga et al. (2000) suggest that primary distortion (self-centeredness) is a generalized response style and that secondary distortions (e.g., assuming the worst, blaming others) are post-hoc rationalizations that reduce guilt or negative feelings associated with delinquent behavior. Although self-centered and secondary scales were elevated in the present study, there was generally no difference between the two types of scores. It may be that over time and repeated offending there is an elevation of secondary distortion relative to primary distortion, and the impact of distortions on empathy may become more generalized, affecting multiple classes of victims as well as emotional empathy. In the present study, adolescent offenders had less pervasive empathy deficits than the comparison group of adult child molesters, a finding that supports the notion of

generalization of deficits over time. This view corresponds with that of Abel et al. (1989), who suggest that a high level of general distortion predates an abusive behavior, and that victim specific distortions emerge following abusive encounters. Future research that examines the relationship between repeated offending and the classes of cognitive distortion is needed. It is important to determine if measured difficulties with empathy serve a protective function and are more a reflection of distorted thinking than true empathy deficits.

General cognitive distortions, as measured by the HIT, were predicted by traditional and cognitive empathy. This suggests that it may be the cognitive or perspective-taking portion of empathy that is the driving force in the relationship between traditionally scored empathy (comprised of cognitive and emotional empathy) and cognitive distortion. The more general forms of empathy (i.e., sex abuse and accident victim) accounted for a significant proportion of the variance in general cognitive distortion (sex abuse victim only for Group 1 and total sample; accident victim only for Group 2). Cognitive empathy for the offender's own victim accounted for a significant proportion of the variance in cognitive distortion in total sample analyses only. With one exception, the direction of these relationships was as expected, with higher levels of empathy being associated with lower levels of cognitive distortion. Cognitive empathy for the offender's own victim was positively related to HIT total for the total sample. There is no reasonable hypothesis for this finding. As it occurred only in the total sample this finding should be viewed cautiously and is in need of replication.

For cognitive distortions that are sex-abuse specific (i.e., Rape Myth), traditional and cognitive empathy for a general sex abuse victim were significant predictors for all

three groups. For Group 2 and the total sample, emotional empathy for a sex abuse victim and the offender's own victim also accounted for a significant proportion of the variance in Rape Myth. The direction of the relationships between empathy and specific cognitive distortion was as expected; higher levels of empathy were associated with fewer cognitive distortions. Taken together, results from analyses with the HIT and Rape Myth suggest that the more general levels of cognitive empathy are uniquely related to distorted thinking. Specific and moderately specific emotional empathy may have a unique relationship with Rape Myth, although this finding must be replicated as a similar pattern was not found in Group 1.

The finding that cognitive empathy is more closely related to distorted thought than emotional empathy suggests the presence of a pattern of thinking about abusive actions that minimizes guilt and other negative feelings. Cognitive distortions may serve a protective function, shielding young offenders from the consequences of their actions through the impact of cognitive distortions on empathy. Empathy may be reduced or inhibited by the use of distorted thinking, and such a reduction may facilitate abusive encounters, perhaps leading to chronically decreased level of empathic functioning. It seems reasonable to hypothesize that cognitive distortions begin narrowly, with the offender's own victim, and generalize more broadly over time. Victim-specific cognitive empathy for the offender's own victim predicted level of Rape Myth for Group 2 and the Total sample in this study, perhaps indicating an early stage in the formation of relationship between distorted thinking and empathy deficits. However, the issue of empathy inhibition, suppression, and generalization cannot be adequately addressed with the present data, and this is an important direction for future research.

Only traditional and cognitive empathy for the offender's own victim significantly predicted level of force (Group 1 and the Total sample). Interestingly, higher levels of empathy were associated with higher levels of force. This is a surprising result, as appropriate empathic functioning should disrupt harmful behaviors, provided harm is recognized. This finding also contradicts the findings of Marshall & Fernandez (1996), who reported that rapists (who use higher levels of force) had lower levels of empathy than child molesters and that they had the most difficulty with empathy toward their own victims. Several possible explanations for this finding exist. It may be that those adolescents who used more force with their victims had more direct access to information about the negative impact of their behavior and that their concept of empathy was modified by this information. Alternatively, this finding may be related to a suppression of empathy during abusive encounters. Offenders with higher levels of empathy may be more likely to suppress empathy, and thus disinhibition of empathic functioning may increase the likelihood of higher levels of force. Finally, it is possible that results using the force variable are influenced by the scale from which the force measurement was obtained. The AMOQ is a measure of modus operandi, and the six variables comprising the composite force variable were derived from this questionnaire. The items measuring force were from different sections of the AMOQ, representing force used at different points of the abuse cycle, such as gaining a victims cooperation with abuse and keeping the victim quiet about the abuse. It is possible that differences with the use of force across the abuse cycle or issues with the AMOQ have confounded potential links between variables. The AMOQ is a lengthy measure on which adolescents are asked to report on either all of their victims or the class of victims with which they have had the

most contact (e.g., female child, male child, female adolescent, male adolescent, related, non-related). The force variables all came from the section in which participants report on their victim group of most contact. It is possible that the focus on force with the "typical" victim or the length and difficulty of this questionnaire affected the accuracy of results. It may also be that force is more relevant for certain classes of victims (e.g., unrelated victims, adolescent victims), and that grouping the types of offenders together obscured potential findings in this area.

This study was originally designed to compare results of two statistically equivalent sample halves. Although some findings were consistent across sample groupings, some discrepancies did emerge. Some of these discrepancies likely result from imperfections in the procedure by which the two sample halves were created, as the results for the two equivalent samples were different for the number of male victims and for empathy for an accident victim. Additionally, it was not possible to determine equivalence or difference on two variables, number of male victims and Rape Myth. It may be differences on these or other variables create important subgroups of offenders that must be considered. Sex of the offender's "typical" victim is a likely candidate as an important grouping variable, as research has indicated some differences between adult and adolescent offenders who prey on male verses female victims (Hunter et al., 2003; Kaufman et al., 1996). Other variables such as cognitive development, emotional maturity, social skills, and chronicity of offending may account for differences between these two groups.

This study has several limitations, some related to the design and others inherent to the topic of study. The exclusive reliance on pencil and paper measures, particularly

for a construct such as empathy that is multidimensional and complex, is a limitation. A written vignette differs substantively from real world exposure, and it is important to determine if reports on a written empathy measure have a relationship to response decision and behavior. It is also possible that the cognitive aspect of this task interferes with the participants' ability to reflect and report on an emotional state. Additionally, "correct" or empathic responding on the empathy measure is fairly easy to identify, and socially desirable responding may have influenced results. If an adolescent cognitively understands empathic functioning, it is possible to respond in a way that elevates the empathy profile. Although reassurances were made that study information would be kept strictly confidential and would have no impact on future treatment or incarceration, some adolescents may have been inclined to present themselves in a socially desirable manner. Finally, the process of being identified and incarcerated as a sex offender may alter thinking patterns. A large proportion of these offenders received treatment for a prior offense, so they may have been made aware of issues with distorted thinking previously.

The goal of this study was to provide a preliminary examination of empathy and cognitive distortions in adolescent sexual offenders. Despite limitations, this study provides a basis for generating specific research questions that can be used to untangle the complicated relationship between empathy and distorted thought. Future research that builds on the questions of specificity, type, and function of empathy deficits is needed to adequately understand this topic.

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APPENDIX

TABLES

	Group 1 (n=89)		Group 2 (n=88)		Traditional				Equivalence			
							95% CI			90% CI		Decision
	Mean	SD	Mean	SD	z	p	LCL	UCL	Equiv. Crit.[a]	LCL	UCL	
Age												
Current	16.28	1.63	16.14	1.48	0.60	0.28	-0.32	0.60	±1.63*	-0.25	0.53	Equivalent
1st offense	12.51	3.10	12.55	2.62	-0.01	0.46	-0.89	0.81	±1.25*	-0.75	0.67	Equivalent
1st treatment sex problems	14.65	1.87	14.65	1.77	0	0.50	-0.54	0.54	±1.47*	-0.45	0.45	Equivalent
1st treatment other problems	11.39	3.03	11.44	2.65	-0.09	0.46	-1.09	0.99	±1.14*	-0.93	0.83	Equivalent
Male victims	1.38	1.99	1.28	1.93	0.34	0.37	-0.48	0.68	±0.14	-0.38	0.58	Equivocal
Female victims	2.51	4.58	1.64	1.50	1.69	0.05**	-0.14	1.88	±0.25	0.02	1.71	Different
Correctional time	3.66	1.40	3.45	1.40	0.99	0.16	-0.20	0.62	±0.37	-0.14	0.56	Equivocal
HIT total	3.68	0.98	3.52	0.80	1.18	0.12	-0.10	0.42	±0.37*	-0.06	-0.10	Equivalent
Burt Rape Myth	36.88	16.41	37.48	17.29	-0.24	0.41	-5.58	4.38	±3.69	-.4.78	3.58	Equivocal
Empathy												
Own victim	345.63	95.15	355.72	85.54	-0.74	0.23	-36.82	16.64	±34.56*	-32.53	12.35	Equivalent
Accident victim	310.4	65.89	327.81	63.52	-1.78	0.04**	-36.53	1.71	±31.04	-33.46	-1.36	Different
Sex abuse victim	350.26	72.10	357.63	70.04	-0.69	0.25	-28.31	13.57	±35.03*	-24.95	10.20	Equivalent

Table 1: Equivalence test results for Group 1 and Group 2. [a] Equivalence criterion is 10% of the Group 1 mean. [b] The highest p value of 2-one sided tests has been reported. *$p \leq .05$ for equivalency for each one-tailed test. **$p \leq .025$ for traditional test, two-tailed.

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Empathy SAV	1																	
2. Empathy AV	[b].55	1																
3. Empathy OV	[b].38	[b].46	1															
4. Emotional empathy SAV	[b].74	[b].43	[b].29	1														
5. Emotional empathy AV	[b].52	[b].74	[b].33	[b].57	1													
6. Emotional empathy OV	[b].29	[b].39	[b].83	[b].30	[b].30	1												
7. Cognitive empathy SAV	[b].93	[b].50	[b].35	[b].43	[b].37	[a].22	1											
8. Cognitive empathy AV	[b].45	[b].93	[b].42	[a].26	[b].43	[b].36	[b].46	1										
9. Cognitive empathy OV	[b].38	[b].44	[b].97	[a].25	[b].31	[b].69	[b].36	[b].41	1									
10. HIT total	[b]-.47	[a]-.22	-.13	[a]-.22	-.18	-.16	[b]-.51	-.20	-.10	1								
11. HIT covert	[b]-.46	-.18	-.09	-.20	-.15	-.11	[b]-.51	-.17	-.07	[b].98	1							
12. HIT overt	[b]-.47	[a]-.25	-.17	[a]-.23	-.20	-.21	[b]-.49	[a]-.23	-.14	[b].98	[b].91	1						
13. HIT SC	[b]-.46	-.17	-.05	[a]-.23	-.16	-.08	[b]-.48	-.14	-.03	[b].94	[b].93	[b].91	1					
14. HIT MM	[b]-.45	-.21	-.14	-.15	-.16	-.18	[b]-.51	-.20	-.12	[b].94	[b].92	[b].92	[b].84	1				
15. HIT AW	[b]-.46	[a]-.26	-.16	[a]-.22	-.20	-.19	[b]-.49	[a]-.24	-.13	[b].96	[b].93	[b].94	[b].86	[b].88	1			
16. HIT BO	[b]-.43	-.19	-.11	-.21	-.15	-.15	[b]-.46	-.18	-.08	[b].92	[b].89	[b].91	[b].85	[b].83	[b].85	1		
17. Rape Myth	[b]-.44	[a]-.22	-.12	-.19	-.07	-.15	[b]-.48	[a]-.26	-.09	[b].42	[b].43	[b].40	[b].35	[b].43	[b].37	[b].42	1	
18. Force	.17	[a].26	[b].32	.16	[a].25	.21	.13	.20	[b].34	.07	.08	.05	.08	.09	.03	.10	-.05	1

Table 2. Group 1 intercorrelation matrix. Note: SAV = sex abuse victim, OV = own victim, AV = accident victim, SC = self-centered, MM = minimizing/mislabeling, AW = assuming the worst, BO = blaming others. [a] $p \leq .05$, [b] $p \leq .01$.

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Empathy SAV	1																	
2. Empathy AV	[b].61	1																
3. Empathy OV	[b].78	[b].51	1															
4. Emotional empathy SAV	[b].82	[b].60	[b].63	1														
5. Emotional empathy AV	[b].50	[b].77	[b].42	[b].61	1													
6. Emotional empathy OV	[b].63	[b].47	[b].81	[b].59	[b].45	1												
7. Cognitive empathy SAV	[b].95	[b].53	[b].74	[b].60	[b].36	[b].56	1											
8. Cognitive empathy AV	[b].55	[b].92	[b].44	[b].45	[b].45	[b].37	[b].52	1										
9. Cognitive empathy OV	[b].73	[b].45	[b].94	[b].55	[b].33	[b].57	[b].73	[b].41	1									
10. HIT total	-.13	[b]-.27	-.03	-.19	[a]-.21	-.16	-.08	[a]-.25	.06	1								
11. HIT covert	[a]-.22	[b]-.29	-.14	[a]-.27	[a]-.24	[b]-.23	-.16	[a]-.26	-.07	[b].94	1							
12. HIT overt	-.05	[a]-.23	.08	-.11	-.17	-.08	.00	[a]-.22	.16	[b].96	[b].80	1						
13. HIT SC	-.15	[b]-.28	-.04	[a]-.21	-.21	-.17	-.09	[a]-.27	.04	[b].94	[b].92	[b].87	1					
14. HIT MM	-.17	[a]-.26	-.09	-.17	[a]-.24	-.18	-.15	[a]-.22	-.02	[b].92	[b].90	[b].85	.82	1				
15. HIT AW	-.05	[a]-.24	.03	-.15	-.16	-.13	.02	[a]-.23	.13	[b].94	[b].85	[b].94	[b].88	[b].79	1			
16. HIT BO	-.14	[a]-.25	-.01	-.19	-.21	-.11	-.09	[a]-.22	.05	[b].94	[b].86	[b].92	[b].83	[b].86	[b].85	1		
17. Rape Myth	[b]-.52	[b]-.36	[b]-.38	[b]-.37	[a]-.25	[b]-.40	[b]-.52	[b]-.35	[b]-.30	[b].31	[b].36	[a].24	[b].30	[b].32	.20	.34	1	
18. Force	.06	-.01	.17	-.03	-.04	.12	.11	.01	.18	.19	.18	.19	[b].25	.09	.19	.21	.08	1

Table 3. Group 2 intercorrelation matrix. Note: SAV = sex abuse victim, OV = own victim, AV = accident victim, SC = self-centered, MM = minimizing/mislabeling, AW = assuming the worst, BO = blaming others. [a] $p \leq .05$, [b] $p \leq .01$.

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Empathy SAV	1																	
2. Empathy AV	[b].58	1																
3. Empathy OV	[b].57	[b].48	1															
4. Emotional empathy SAV	[b].78	[b].51	[b].45	1														
5. Emotional empathy AV	[b].51	[b].76	[b].38	[b].59	1													
6. Emotional empathy OV	[b].47	[b].42	[b].81	[b].45	[b].38	1												
7. Cognitive empathy SAV	[b].94	[b].51	[b].53	[b].51	[b].37	[b].39	1											
8. Cognitive empathy AV	[b].50	[b].92	[b].43	[b].35	[b].45	[b].36	[b].49	1										
9. Cognitive empathy OV	[b].54	[b].45	[b].96	[b].38	[b].33	[b].61	[b].52	[b].42	1									
10. HIT total	[b]-.32	[b]-.25	-.09	[b]-.21	[b]-.20	[a]-.15	[b]-.33	[b]-.23	-.05	1								
11. HIT covert	[b]-.36	[b]-.24	-.12	[b]-.23	[b]-.20	[a]-.16	[b]-.36	[b]-.21	-.08	[b].96	1							
12. HIT overt	[b]-.27	[b]-.25	-.06	[a]-.18	[b]-.19	-.14	[b]-.27	[b]-.23	-.02	[b].97	[b].86	1						
13. HIT SC	[b]-.32	[b]-.23	-.05	[b]-.23	[b]-.19	-.12	[b]-.31	[b]-.20	-.01	[b].94	[b].92	[b].89	1					
14. HIT MM	[b]-.32	[b]-.24	-.12	[a]-.16	[b]-.20	[a]-.17	[b]-.35	[b]-.22	-.08	[b].93	[b].91	[b].89	[b].83	1				
15. HIT AW	[b]-.28	[b]-.26	-.08	[a]-.19	[a]-.19	[a]-.16	[b]-.27	[b]-.24	-.03	[b].96	[b].90	[b].94	[b].87	[b].84	1			
16. HIT BO	[b]-.31	[b]-.22	-.08	[b]-.20	[a]-.18	-.13	[b]-.31	[b]-.20	-.04	[b].93	[b].88	[b].91	[b].84	[b].84	[b].85	1		
17. Rape Myth	[b]-.47	[b]-.29	[b]-.24	[b]-.27	[a]-.16	[b]-.29	[b]-.49	[b]-.30	[a]-.19	[b].36	[b].39	[b].32	[b].32	[b].37	[b].29	[b].38	1	
18. Force	.11	.12	[b].25	.07	.10	[a].16	.12	.10	[b].26	.13	.13	.12	[a].15	.10	.10	[a].15	.01	1

Table 4. Total sample intercorrelation matrix. Note: SAV = sex abuse victim, OV = own victim, AV = accident victim, SC = self-centered, MM = minimizing/mislabeling, AW = assuming the worst, BO = blaming others. [a] $p \leq .05$, [b] $p \leq .01$.

	Group 1		Group 2		Total Sample	
Empathy Scales	Mean Difference	SE	Mean Difference	SE	Mean Difference	SE
Traditional Empathy						
1. Own victim						
Sex abuse victim	-4.64	10.10	-1.91	5.75	-3.27	5.80
Accident victim	[b]35.23	9.35	[b]27.91	8.13	[b]31.57	6.18
2. Sex abuse victim						
Accident victim	[b]39.86	6.97	[b]29.82	6.28	[b]34.84	4.69
Emotional Empathy						
1. Own victim						
Sex abuse victim	[a]8.35	3.75	3.33	3.15	[a]5.84	2.45
Accident victim	[b]19.78	3.61	[b]10.74	3.60	[b]15.26	2.56
2. Sex abuse victim						
Accident victim	[b]11.43	2.82	[b]7.41	2.64	[b]9.42	1.93
Cognitive Empathy						
1. Own victim						
Sex abuse victim	-12.99	7.70	-5.24	4.46	[a]-9.11	4.45
Accident victim	[a]15.44	7.32	[b]17.17	6.24	[b]-16.31	4.80
2. Sex abuse victim						
Accident victim	[b]28.43	5.75	[b]22.41	5.00	[b]25.42	3.80

Table 5: Empathy subscale mean differences for Group 1, Group 2, and the Total sample.
[a] $p \leq .05$ [b] $\leq .01$

	Group 1			Child Molesters			Non-sex offenders			Non-offenders			Estimate sigma difference			t		
	M	SD	n	M	SD	n	M	SD	n	M	SD	n	CM	NSO	NO	CM	NSO	NO
Emotional Empathy																		
Own victim	145.88	29.79	88	107.50	59.64	34	--	--	--	--	--	--	10.71	--	--	[a]-3.58	--	--
Sex abuse victim	137.52	29.87	88	133.30	41.35	34	146.40	33.88	34	140.90	37.06	34	7.77	6.63	7.10	-.54	1.34	.48
Accident victim	126.09	27.14	88	120.80	18.54	34	127.70	32.95	34	124.00	27.08	34	4.43	6.35	5.47	-1.23	.25	-.38
Cognitive Empathy																		
Own victim	199.75	72.17	88	141.50	95.93	34	--	--	--	--	--	--	18.16	--	--	[a]-3.21	--	--
Sex abuse victim	212.74	54.08	88	209.80	59.07	34	254.10	34.87	34	229.80	45.80	34	11.66	8.31	9.74	.-.25	[a]4.98	1.75
Accident victim	184.31	49.39	88	181.12	44.31	34	190.30	51.91	34	186.7	38.55	34	9.24	10.34	8.45	-..35	.58	.28

Table 6. Comparison of Group 1 empathy means and adult child molesters, non-sexual offender, and non-offenders. [a] $p \leq .05$. CM= child molester group, NSO=non-sex offender group, and NO=non offender group. NSO and NO did not complete an 'own victim' section of the measure.

	Group 2			Child Molesters			Non-sex offenders			Non-offenders			Estimate sigma difference			t		
	M	SD	n	M	SD	n	M	SD	n	M	SD	n	CM	NSO	NO	CM	NSO	NO
Emotional Empathy																		
Own victim	144.03	35.33	88	107.50	59.64	34	--	--	--	--	--	--	10.90	--	--	[a]-3.35	--	--
Sex abuse victim	140.70	28.06	88	133.30	41.35	34	146.40	33.88	34	140.90	37.06	34	7.70	6.54	7.02	-.96	.87	.03
Accident victim	133.30	28.30	88	120.80	18.54	34	127.70	32.95	34	124.00	27.08	34	4.38	6.41	5.54	[a]-2.85	-.87	-1.68
Cognitive Empathy																		
Own victim	211.68	60.40	88	141.50	95.93	34	--	--	--	--	--	--	18.16	--	--	[a]-3.21	--	--
Sex abuse victim	216.92	49.57	88	209.80	59.07	34	254.10	34.87	34	229.80	45.80	34	11.87	7.98	9.47	-.25	[a]4.66	1.36
Accident victim	194.51	45.43	88	181.12	44.31	34	190.30	51.91	34	186.7	38.55	34	9.25	10.13	8.20	-.34	-.41	-.95

Table 7. Comparison of Group 2 empathy means and adult child molesters, non-sexual offender, and non-offenders. [a] $p \leq .05$. CM= child molester group, NSO=non-sex offender group, and NO=non offender group. NSO and NO did not complete an 'own victim' section of the measure.

	Total Sample			Child Molesters			Non-sex offenders			Non-offenders			Estimate sigma difference			t		
	M	SD	n	M	SD	n	M	SD	n	M	SD	n	CM	NSO	NO	CM	NSO	NO
Emotional Empathy																		
Own victim	144.95	32.60	176	107.50	59.64	34	--	--	--	--	--	--	10.51	--	--	[a]-3.56	--	--
Sex abuse victim	139.11	28.94	176	133.30	41.35	34	146.40	33.88	34	140.90	37.06	34	7.42	6.21	6.72	-.78	1.17	.27
Accident victim	129.7	27.88	176	120.80	18.54	34	127.70	32.95	34	124.00	27.08	34	3.81	6.03	5.10	[a]-2.33	-.33	-1.11
Cognitive Empathy																		
Own victim	205.72	66.62	176	141.50	95.93	34	--	--	--	--	--	--	17.20	--	--	[a]-3.73	--	--
Sex abuse victim	214.83	47.59	176	209.80	59.07	34	254.10	34.87	34	229.80	45.80	34	10.74	6.97	8.64	1.90	[a]9.28	[a]4.68
Accident victim	189.40	51.77	176	181.12	44.31	34	190.30	51.91	34	186.7	38.55	34	8.54	9.72	7.68	[a]-3.94	[a]-2.52	[a]-3.66

Table 8. Comparison of Total Sample empathy means and adult child molesters, non-sexual offender, and non-offenders. [a] $p \leq .05$. CM= child molester group, NSO=non-sex offender group, and NO=non offender group. NSO and NO did not complete an 'own victim' section of the measure.

HIT subscales	M	SD	Mean Difference	SE
Group 1				
1. Overt	3.85	.97		
a. Covert	3.53	1.04	[b].32	.05
2. Self-centered	3.67	1.04		
a. Minimizing/mislabeling	3.61	1.05	.06	.06
b. Assuming the worst	3.75	1.05	-.08	.06
c. Blaming others	3.69	1.03	.00	.06
3. Minimizing/mislabeling				
a. Assuming the worst			[a]-.14	.06
b. Blaming others			-.05	.06
4. Assuming the worst				
a. Blaming others			.09	.05
Group 2				
1. Overt	3.75	.87		
a. Covert	3.32	.81	[b].43	.06
2. Self-centered	3.56	.86		
a. Minimizing/mislabeling	3.43	.93	[a].129	.06
b. Assuming the worst	3.59	.87	-.03	.05
c. Blaming others	3.50	.77	.06	.05
3. Minimizing/mislabeling				
a. Assuming the worst			[a]-.16	.06
b. Blaming others			-.06	.05
4. Assuming the worst				
a. Blaming others			.09	.05
Total sample				
1. Overt	3.80	.92		
a. Covert	3.42	.93	[b].38	.03
2. Self-centered	3.62	.95		
a. Minimizing/mislabeling	3.52	.99	[a].09	.04
b. Assuming the worst	3.67	.96	-.06	.04
c. Blaming others	3.59	.91	.04	.04
3. Minimizing/mislabeling				
a. Assuming the worst			[b]-.15	.04
b. Blaming others			-.06	.04
4. Assuming the worst				
a. Blaming others			[b].09	.04

Table 9: HIT mean comparisons for all groups. [a] $p \leq .05$, [b] $p \leq .01$

	Group 1				Group 2				Total Sample			
HIT	B	SE	Beta	t	B	SE	Beta	t	B	SE	Beta	t
Traditional												
Constant	5.80	.54		10.80	4.55	.48		9.44	5.14	.37		14.07
OV	.00	.00	.05	.44	.00	.00	.22	1.33	.00	.00	.17	1.88
SAV	.00	.00	-.51	**-4.37	.00	.00	-.11	-.60	.00	.00	-.34	**-.352
AV	.00	.00	.04	.29	.00	.00	-.32	*-2.42	.00	.00	-.14	-.152
Emotional												
Constant	5.11	.65		4.84	4.52	.48		9.46	4.80	.39		12.34
OV	.00	.00	-.10	-.86	.00	.00	-.05	-.36	.00	.00	-.06	-.71
SAV	.00	.00	-.16	-1.17	.00	.00	-.07	-.47	.00	.00	-.12	-1.19
AV	.00	.00	-.06	-.43	.00	.00	-.15	-1.11	.00	.00	-.11	-1.18
Cognitive												
Constant	5.51	.43		12.74	4.22	.42		10.02	4.90	.31		15.80
OV	.00	.00	.09	.86	.00	.00	.26	1.74	.00	.00	.20	*2.36
SAV	.00	.00	-.55	**-5.08	.00	.00	-.11	-.70	.00	.00	-.36	**-4.12
AV	.00	.00	.01	.07	.00	.00	-.30	*-2.48	.00	.00	-.14	-1.65

Table 10. Results of regression analyses using empathy as predictor variables and HIT Total as the dependent variables. OV = own victim, SAV = sex abuse victim, and AV = accident victim. *p ≤ .05, **p ≤ .01

	Group 1				Group 2				Total Sample			
RAPE MYTH	B	SE	Beta	t	B	SE	Beta	t	B	SE	Beta	t
Traditional												
Constant	69.85	9.09		7.69	85.14	9.35		9.10	76.92	6.42		11.99
OV	.01	.02	.06	.50	.01	.03	.07	.44	.01	.02	.05	.55
SAV	-.11	.03	-.46	**-3.85	-.13	.04	-.52	**-3.23	-.12	.02	-.49	**-5.39
AV	.00	.03	.01	.05	-.02	.03	-.07	-.58	-.01	.02	-.02	-.28
Emotional												
Constant	54.90	10.95		5.01	74.54	9.58		7.79	66.21	7.07	9.37	
OV	-.06	.06	-.11	-.96	-.14	.06	-.28	*-2.26	-.11	.04	-.21	**-2.58
SAV	-.11	.07	-.19	-1.44	-.13	.09	-.21	-1.52	-.02	.05	-.20	*-2.18
AV	.04	.08	.07	.51	.01	.08	.01	.09	.02	.06	.04	.44
Cognitive												
Constant	67.79	7.28		9.31	79.78	8.07		9.88	73.05	5.35		13.65
OV	.01	.01	.12	1.10	.03	.02	.17	1.30	.02	.01	.12	1.54
SAV	-.07	.02	-.48	**-4.35	-.10	.03	-.58	**-4.08	-.08	.01	-.51	**-6.18
AV	-.02	.02	-.09	-.82	-.02	.02	-.12	-1.10	-.02	.01	-.10	-1.34

Table 11. Results of regression analyses using empathy as predictor variables and RAPE Myth as the dependent variables. OV = own victim, SAV = sex abuse victim, and AV = accident victim. *p ≤ .05, **p ≤ .01

Item	M	SD	Min	Max	Item-total Correlation	Cronbach's Alpha (if deleted)
1. Using physical force	.97	1.86	0	6	.41	.61
2. Hurt them	.26	1.00	0	6	.51	.58
3. Victim hurt	.40	1.16	0	6	.31	.63
4. Use physical force	1.26	2.02	0	6	.41	.61
5. Hurt friend/warning	.12	.74	0	6	.37	.63
6. Hurt victim/warning	.45	1.32	0	6	.50	.57

Table 12. Descriptive and reliability information for force variables. Note. These 6 items reflect the use of force at different points in the offense cycle, ranging from finding a victim to keeping a victim quiet about the abuse

	Group 1				Group 2				Total Sample			
Traditional	B	SE	Beta	t	B	SE	Beta	t	B	SE	Beta	t
Constant	-.77	.54		-1.44	.31	.49		.64	-.20	.36		-.54
OV	.00	.00	.26	*2.22	.00	.00	.32	1.9	.00	.00	.27	**2.89
SAV	.00	.00	.00	-.07	.00	.00	-.14	-.75	.00	.00	-.05	-.50
AV	.00	.00	.14	1.07	.00	.00	-.08	-.61	.00	.00	.02	.23
Emotional												
Constant	-.86	.61		-1.42	.48	.47		1.02	-.11	.38		-.30
OV	.00	.00	.15	1.33	.01	.00	.22	1.60	.00	.00	.16	1.83
SAV	.00	.00	.00	.03	.00	.00	-.12	-.79	.00	.00	-.04	-.38
AV	.01	.00	.21	1.57	.00	.00	-.06	-.45	.00	.00	.06	.64
Cognitive												
Constant	-.34	.44		-.78	.16	.43		.37	-.07	.31	-.23	.82
OV	.00	.00	.31	*2.69	.00	.00	.21	1.36	.00	.00	.27	**3.03
SAV	.00	.00	-.02	-.14	.00	.00	.00	-.04	.00	.00	-.03	-.27
AV	.00	.00	.08	.66	.00	.00	-.07	-.59	.00	.00	.00	.05

Table 13. Results of regression analyses using empathy as predictor variables and force as the dependent variable. OV = own victim, SAV = sex abuse victim, and AV = accident victim. *$p \leq .05$, **$p \leq .01$