

# Non-Sexual Delinquency in Juvenile Sexual Offenders: The Mediating and Moderating Influences of Emotional Empathy

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**Abstract** The theoretical linkage of empathy to sexually aggressive and antisocial behavior is reviewed, and assessment conducted on the role of emotional empathy in the non-sexual delinquent behavior of juvenile sexual offenders. In examination of developmental antecedents of empathy, self-reported parental attachment and positive fathering experiences were found to be positively associated with emotional empathy, while reported exposure to violence against females was inversely related. As hypothesized, emotional empathy was found to have both mediating and moderating influences on risk of engagement in non-sexual delinquency. Emotional empathy was found to be negatively associated with non-sexual delinquency and to partially mediate the positive influences of exposure to violence against females and hostile masculinity. Emotional empathy was also found to function as a moderator of hostile masculinity, with high empathy levels associated with an attenuated positive effect of hostile masculinity on non-sexual delinquency, and low levels with an accentuated effect. Possible mechanisms for this moderating influence are discussed, along with clinical implications of the findings and directions for future research.

**Keywords** Empathy · Juvenile · Sexual · Offender

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## Introduction

Deficits in empathy have long been assumed to play a critical role in sexual offending and are a focus of clinical intervention in the vast majority of treatment programs for juvenile and adult sexual offenders (Hunter & Longo, 2004; Barbaree, Marshall, & McCormick, 1998). While enhancement of victim empathy is a mainstay in the treatment of sex offenders, empathy as a construct and its relationship to sexual offending remains an issue of considerable theoretical and empirical ambiguity. Much of this controversy centers on how empathy specifically influences antisocial behavior (Regehr & Glancy, 2001). In the present article, we assess such a relationship by focusing on the potential mediating and/or moderating role of empathy. We also analyze developmental risk and protective factors that may underlie individual differences in empathy levels.

## The construct of empathy

A number of theorists have argued that empathy is a multi-dimensional construct that includes both cognitive and emotional aspects (Thornton & Thornton, 1995; Duan & Hill, 1996; Covell & Scalora, 2002). The former involves the capacity to process information and make critical decisions (Geer, Estupinan, & Manguno-Mire, 2000). The latter refers to experiential empathy, or the vicarious generation of emotional feelings in the observer similar to those of the victim (Eisenberg et al., 1988; Eisenberg et al., 1994). For both forms of empathy, its appropriate expression requires a prerequisite level of social skill and competency (Covel & Scalora, 2002; Hudson & Ward, 2000).

It has been contended that empathy has both trait and state-like qualities (Trobst, Collins, & Embree, 1994; Eisenberg, 2000). As a trait, it is assumed that empathy is a component

of the individual's personality and relatively constant in its expression across situations and time. Like other personality traits, it is thought that there are individual and group differences in the extent to which it is manifest. As reviewed below, this has been the basis for a number of studies comparing measured level of empathy in sex offenders, and other forensic populations, to non-offending controls. As a state-like quality, it is thought that empathy can be enhanced or diminished in a given circumstance by any number of variables, including mood, needs, and specific stimulus cues (Hudson & Ward, 2000). Finally, it has been suggested that empathy can be both individual and situation specific (Fernandez & Marshall, 2003; Marshall, Hudson, Jones, & Fernandez, 1995). In this regard, it is postulated that individuals who are generally empathic in most situations may not have empathy for given individuals under specific circumstances.

### Empathy in sex offenders

Several investigators have examined hypothesized empathy deficits in sex offenders. While there are mixed findings regarding adult sex offenders' relative capacity for general empathy, the preponderance of studies suggest that the population is deficient in victim empathy compared to community controls (Fisher, Beech, & Browne, 1999; McGrath, Steven, & Konopasky, 1998; Hanson & Karl, 1995). Pithers (1999) has demonstrated that victim empathy may be further diminished in adult sex offenders by contextual cues that elicit moods precursory to past offenses.

Fernandez and Marshall (2003) suggest that instead of possessing general empathy deficits, rapists suppress empathy toward their own victim. They believe that empathy suppression is related to cognitive distortions justifying sexually aggressive behavior in a given circumstance. In related studies of adult rapists, it has been found that empathy is inversely related to deviant sexual arousal and hostility toward women (Marshall & Moulden, 2001; Rice, Chaplin, Harris, & Coutts, 1994). Bernat, Calhoun, and Adams (1999) offer that cues of victim distress do not inhibit sexual arousal in rapists, and that this lack of inhibition is related to an absence of empathy for victims and endorsement of negative, hostile attitudes toward women.

While empathy deficits appear to be associated with aggressive personality traits, empathy may also serve as a moderator of hostile masculinity and other risk factors (Malamuth, 2003). Dean and Malamuth (1997) found that adult males who were otherwise at elevated risk for sexual aggression were less likely to engage in such behavior when they also scored high on an index of empathy and compassion. Conversely, low empathy combined with other risk factors predicted greater sexual aggression. Interestingly, data suggested that both high and low empathy at-risk men showed accentuated levels of imagined sexual

aggression. Therefore, high empathy appeared to suppress or inhibit the acting-out of aggressive fantasies and impulses in otherwise predisposed individuals.

Other recent research suggests that deficits in trait empathy are linked to non-sexual criminal offending in adult sex offenders, and that deficits in emotional empathy predict violent non-sexual offending (Smallbone, Wheaton, & Hourigan, 2003). An association between violence and empathy deficits has been found in other adult forensic populations, as well. Nussbaum et al., (2002) observed that violent criminal offenders showed less empathy than non-violent offenders. Bovasso, Alterman, Cacciola, and Rutherford (2002) found that low empathy scores were associated with violent crimes in a substance-dependent sample.

More limited study has been conducted on empathy deficits in juvenile sex offenders. Burke (2001) found that adolescent male sex offenders scored significantly lower than non-offending controls on an overall index of empathy. Lindsey, Carlozzi, and Eells (2001) found that juvenile sex offenders scored lower than non-sex offending delinquent youth on emotional empathy (empathic concerns). In contrast, Monto, Zgourides, Wilson, and Harris (1994) did not find significant differences between juvenile sex offenders and non-offenders on an empathy measure. However, in a subsequent study Monto and associates found support for the link between measured empathy and relevant sexual offense variables (Monto, Zgourides, & Harris, 1998). Deficits in empathy have also been found in youth diagnosed with ADHD, and those with conduct disorder (Braaten & Rosen, 2000; Cohen & Strayer, 1996).

### Analyzing mediation and moderation

Although the literature reviewed above has revealed various associations between empathy and aggression, researchers have not systematically analyzed whether such relationships reflect moderation, mediation, or both. Researchers from various disciplines have emphasized the importance of analyzing mediation and moderation (e.g., Baron & Kenny, 1986). For example, in referring to the analysis of mediation, (Mirowsky, 1999) indicates that it is "...the single most valuable procedure for explaining associations. The technique is to sociological research what anatomical dissection is to biological research." (p. 106). Mediators reflect the "generative mechanisms" or "processes" through which the identified variable influences the outcome. In other words, mediators concern how an effect came about. In contrast, a moderator is a third variable that affects the direction and/or strength of a relation between two variables. In other words, the relationship between one variable and another is at least partially \*conditional\* upon the presence of the moderator (i.e., in statistical analyses revealed in interaction effects).

To illustrate the distinction, consider a study focusing on an intervention designed to change people's levels of aggression: If the intervention generally changed participants' level of empathy and that correspondingly changed their levels of aggression, then empathy was a mediator of the relationship between the intervention and aggression. However, if initial levels of empathy were used as a "group differences" variable to classify people (Low vs. High empathy) and this distinguished who changed and who didn't (but change in the dependent variable of aggression was due to something other than changes in empathy) then empathy was only a moderator. It is possible, though, for a variable to function within a model as both a mediator and a moderator (Shadish & Sweeny, 1991). For instance, an intervention may change people's empathy levels and thereby change their aggressive behavior (i.e., the change in empathy is therefore a mediator of the relationship between intervention and aggressive behavior) but this intervention may only work for those who initially had low levels of empathy (i.e., initial levels of empathy was a moderator of the effectiveness of the intervention).

#### Developmental risk and protective factors

In addition to examining the potential mediating and moderating role of empathy as it relates to aggressive and antisocial behavior, we also studied several antecedent factors that may critically affect individual differences in empathy levels.

#### *Attachment and parental investment*

Developmentally, it is believed that empathy is linked to parental attachment and may be impacted by the quality of parental relationships. Mikulincer et al., (2001) review the theoretical premises of the relationship between empathy and attachment and report the results of a series of studies designed to test these assumptions. These studies showed that self-reports of attachment anxiety and avoidance in male and female college students were inversely related to empathy, and that attachment anxiety was positively related to stimulus-generated level of personal distress. Their results furthermore suggest that empathic reactions could be enhanced by "priming" students with stimuli that connoted secure attachment to supportive others. The authors discuss attachment anxiety as a chronic trait that can lead to anticipation of rejection and avoidance of intimacy.

Marshall and colleagues have discussed support for the theorized relationship between intimacy deficits and sexual offending in a number of articles, including its link to attachment problems (Marshall, 1993; Seidman, Marshall, Hudson, & Robertson, 1994; Marshall et al., 1996; Cortoni

& Marshall, 2001). Barbaree et al. (1998) theorize that developmental problems in forming intimate relationships, and low empathy, can become part of a social disability syndrome that leads to deviant sexual interests and behavior. Support has also been found for an association between attachment anxiety, low social competency, and delinquent and violent behavior in adolescents (Allen et al., 2002; Marcus & Gray, 1998). While insecure attachment is associated with diminished empathy, social avoidance, and aggression, paternal investment has been found to predict enhanced empathy in boys, and thus may serve as a protective factor (Bernadett-Shapiro, Ehrensaft, & Shapiro, 1996).

#### *Child maltreatment and exposure to violent and antisocial behavior*

It has been theorized that childhood abuse experiences, particularly wherein there was little familial/social support, may contribute to empathy deficits in sex offenders (Barbaree et al., 1998; Roys, 1997; Lisak & Ivan, 1995). However, to date, there is limited empirical support for this association. Empathy has also been studied in relationship to exposure to media violence against women. Linz, Donnerstein, and Penrod (1988) found that long-term exposure of adult males to violent and sexually degrading depictions of women in film was associated with diminished empathy and negative affective responses to rape victims. While reported "in vivo" exposure to interparental violence, particularly father-initiated, has been found to be a predictor of mental health problems and criminal offending in young adults (Fergusson & Horwood, 1998), no studies could be found that specifically examined the effects of such exposure on victim and general empathy.

There is growing evidence that exposure of at-risk young adolescent males to antisocial peers can contribute to the emergence of conduct problems in later adolescence and adulthood (Dishion, McCord, & Poulin, 1999). It is believed that such relationships form a basis for "deviancy training" (Dishion, Spracklen, Andrews, & Patterson, 1996). While the exact mechanisms for transmission of antisocial behavior through negative peer relationships are still being researched, it has been theorized that they involve social reinforcement for delinquent behavior and attitudes, and the imparting of deviant values.

Recent research supports the contention that deviant peer interactions may play a role in reinforcing negative stereotypic attitudes toward females. Capaldi, Dishion, Stoolmiller, and Yoerger (2001) found that engagement in hostile conversation about women in at-risk adolescent males predicted later, adult aggression toward female partners. These researchers propose that mutual engagement in hostile talk about females is common in friendships between

antisocial males, and that these conversations shape the youths' attitudes and approaches to conflict in their romantic heterosexual relationships. Repeated exposure of at-risk males to anti-social peers and adults may therefore inculcate these youth with pejorative attitudes that diminish empathy and respect for females, and justify violent behavior.

#### On-going juvenile sex offender typology research

The authors are engaged in on-going research directed at understanding developmental pathways leading to sexual aggression in juveniles, and its differential manifestation (Hunter, Figueredo, Malamuth, & Becker, 2003; Hunter et al., 2004). The conducted research is in support of developing a juvenile sex offender typology.

Research conducted to date includes examination of the influence of three developmental risk factors on personality and offending behavior: *childhood maltreatment* (including physical and sexual abuse), *exposure to violence against females*, and *exposure to male-modeled anti-social behavior*. Studied personality constructs include: *hostile masculinity*, *psychosocial deficits*, and *egotistical-antagonistic masculinity*. The hostile masculinity construct closely resembles that studied by Malamuth in relationship to sexual aggression in young adult males (Malamuth, 1998; Malamuth & Malamuth, 1999). It reflects distrust and hostility toward women stemming from anticipated rejection. Males who score high on the construct experience the need to control or dominate women in interpersonal relationships (Malamuth et al., 1995). Psychosocial deficits reflect poor social self-esteem, anxiety, and depression. It is hypothesized that youth who score high on this construct lack the social confidence and skills to form healthy relationships with female peers. The egotistical-antagonistic masculinity construct reflects a stereotypically masculine sex role orientation, and a tendency to aggressively seek dominance in sexual competitions with other males (Hunter et al., 2004).

In previous research, Hunter et al. (2003, 2004) found that deficits in psychosocial functioning mediated the influence of exposure to violence against females on adolescent perpetration of sexual and non-sexual offenses. Childhood exposure to violence against females was observed to be associated with greater psychosocial deficits, which in turn predicted sexual offending against a child rather than a peer or adult female. Exposure to violence against females directly predicted higher levels of engagement in non-sexual aggression and delinquency. The latter was also positively associated with childhood exposure to male-modeled antisocial behavior. Offenders of peer and adult females were found to have used higher levels of aggression in their reference sexual offenses. Egotistical-antagonistic masculinity and hostile masculinity were observed to be closely related, although neither

predicted sexual offense characteristics. However, the former did positively predict engagement in non-sexual aggression and delinquency.

In subsequent typology research, the investigators are exploring the presence of three prototypic subtypes of juvenile sex offenders with distinct manifestations and differential developmental trajectories: “adolescent-onset, non-paraphilic youth;” “early adolescent onset, paraphilic youth;” and “early childhood onset, life-course persistent youth.” This work reflects the theoretical influence of Moffitt, who has longitudinally studied antisocial and violent behavior in males (Moffitt, 1993). Moffitt has found that life-course persistent delinquent youth can be differentiated from adolescent-limited youth on the basis of personality characteristics and offending behavior. Specifically, life-course persistent youth score higher on measures of psychopathy, impulsivity, and interpersonal insensitivity than adolescent-limited delinquent youth, and engage in a higher level of violent delinquent behavior during adolescence (Moffitt, Caspi, Dickson, Silva, & Stanton, 1996).

#### Objectives of the present study

The present study represents new analyses on additional variables collected in a large multi-state study of adjudicated juvenile sex offenders (Hunter et al., 2003). It expands the study of juvenile sex offenders to include exploration of emotional empathy and its developmental, personality, and behavioral correlates. Emotional empathy was specifically examined in relationship to the following: (1) three developmental risk factors (child maltreatment, exposure to violence against females, and exposure to antisocial males), and two protective factors (parental attachment and paternal investment); (2) the previously studied personality constructs of psychosocial deficits, egotistical-antagonistic masculinity, and hostile masculinity; and (3) engagement in non-sexual delinquency.

Interest in the latter outcome stems from the relatively high prevalence of non-sexual delinquency in juvenile sex offenders, previously reviewed research linking empathy to non-sexual crime and violence in sex offenders, and the potential relevance of this variable to understanding differences amongst juvenile sex offenders. Program evaluation data suggest that rates of non-sexual recidivism in treated juvenile sex offenders are generally 3–4 times higher than sexual recidivism rates. Whereas, rates of sexual recidivism are typically under 15% in juveniles tracked three to five years following treatment, non-sexual recidivism rates range from 24 to 60% (Becker, 1998). Although non-sexual delinquency is prevalent in juvenile sexual offenders, it is far from universal and there is considerable apparent variability within the population as to age of onset, type, and frequency of such behavior. It is believed that an enhanced understanding of

the developmental and personality processes that contribute to the emergence of non-sexual delinquency in juvenile sexual offenders offers insight into typological distinctions, and ultimately has relevance for clinical practice.

The authors were interested in exploring the direct and indirect effects of the aforementioned developmental antecedents and personality constructs on emotional empathy, and the mediating and moderating influences of emotional empathy on engagement in non-sexual delinquent behavior. As detailed in the following section, a previously tested causal model (Hunter et al., 2004) guided the sequential ordering of analyses. These analyses were aimed at assessing two general sets of hypotheses: (1) the developmental risk factors would exert direct and indirect (through personality factors) negative effects on emotional empathy, and the protective factors direct and indirect positive effects; and (2) emotional empathy would have both mediating and moderating influences on engagement in non-sexual delinquency.

## Methods

### Participants

Participants were recruited from multiple public and private institutional treatment programs for juvenile sex offenders across the U.S. Sites included both correctional and non-correctional, mental health-oriented residential facilities. All male youth at each facility between the ages of 13 and 18 with a history of sexual offending were invited to participate. Participation required both youth and parental informed consent. While precise data are not available, the majority of youth and parents approached for participation agreed to do so. Youth were paid \$25.00 for participating where institutional policy did not prohibit such payment. These youth were at various stages in the treatment process at the time of their participation.

Data were collected on 206 youth. Six of these cases were excluded because the youth did not meet the criterion for minimum reading level on the Ohio Literacy Test ( $\geq$  fifth grade). Five additional cases were dropped from the sample because the reference sexual offense did not involve physical contact with the victim. Of the remaining 195 cases, eleven were dropped from current analyses because of missing data on one of the independent variables, “positive fathering.” This resulted in a final sample size of 184 juvenile sex offenders. Participating youth ranged in age from 12 to 18 years, with an overall mean age of 16.0 years. Approximately, 66% of the overall sample was Caucasian, 24% African-American, 7.5% Hispanic, 1.5% Native American, and 1% “Other or Unknown.”

Over three-quarters of the sample had been exposed to some form of sexual or physical violence toward females;

54.3% had witnessed a male relative beat a female and 18.7% had seen a male relative rape or sexually abuse a female. Over 91% of the sampled youth had been exposed to some form of male-modeled antisocial behavior; 50.8% had viewed a male relative threaten another male with a weapon, and 62.5% had seen a male relative engage in illegal activity (e.g., sell drugs). Over 71% of the sample reported childhood sexual victimization; 63.0% reported physical abuse by a father or step-father.

### Procedures and measures

Trained research assistants coded sexual offense and criminal history data from institutional records. Survey data were collected under the supervision of a senior research assistant—a State of Virginia certified sex offender treatment provider. Youth were administered a social history questionnaire that provided detailed data on developmental experiences occurring before the age of 13, and engagement in acts of non-sexual aggression and delinquency in the year preceding residential placement. Developmental data included the self-report of maltreatment experiences (sexual and non-sexual), exposure to violence against females, and exposure to male-modeled antisocial behavior. The collected data were scaled and based on frequency of occurrence. Youth were also administered a battery of assessment instruments designed to measure the personality constructs of interest. Cronbach's alphas (based on the present sample, and where appropriate) for measures/indices are indicated in parentheses.

#### *Exposure to violence against females*

This index consisted of six social history questionnaire items ( $\alpha = .83$ ) involving exposure before the age of 13 to male-perpetrated sexual and non-sexual violence toward females (e.g., “see a same age or older male relative beat a female with his fists or an object”).

#### *Child maltreatment*

This index consisted of seven social history questionnaire items ( $\alpha = .71$ ) involving the experience of sexual or physical abuse before age 13 (e.g., “physically beaten by your biological father”).

#### *Exposure to antisocial males*

This index consisted of six social history questionnaire items ( $\alpha = .87$ ) involving exposure before the age of 13 to same age or older males engaging in a variety of antisocial behaviors and substance abuse (e.g., “see a same age or older male relative threaten another male with a weapon”).

### *Paternal investment/positive fathering*

This index consisted of four social history questionnaire items ( $\alpha = .85$ ) involving positive social experiences with the biological father, and the witnessing of the father engaging in positive, prosocial interactions with other family members (e.g., “how much time did you spend with your biological father doing things you really enjoyed?”).

### *Parental attachment*

This index consisted of two social history questionnaire items rating the degree of importance of the biological father and mother to the participant.

### *Non-sexual delinquent behavior*

This index consisted of nine social history questionnaire items ( $\alpha = .88$ ) involving the report of engagement in non-sexual delinquent behavior and violence in the 12 months preceding the study (e.g., “About many times have you taken a car for a ride without the owner’s knowledge?”; “How many times have you been involved in physical fights in which you caused serious injury (or even death) to somebody else?”). In orientation to completion of this instrument, youth were verbally instructed to rate this behavior for the year preceding current residential placement. As a precaution against the possibility that some youth errantly rated their delinquent behavior over a period that included institutionalization, the authors correlated residential length of stay with the youth’s rating of engagement in non-sexual delinquency. This produced a non-significant correlation ( $r = -.04, p = .626$ ), and thus provided some assurance of the absence of an experimental confound on this variable.

### *Hostile masculinity*

*Hostility Toward Women* ( $\alpha = .81$ ) is a 21-item instrument reflecting a negative stereotypic view of females as rejecting and untrustworthy (e.g. “It is safer not to trust girls”) (Check, 1985).

*Adversarial Sexual Beliefs* ( $\alpha = .84$ ) is a 9-item scale assessing the degree to which male-female relationships are perceived to be antagonistic (e.g. “In a dating relationship a woman is largely out to take advantage of a man”) (Burt, 1980).

*Rape Myths Acceptance* ( $\alpha = .84$ ) is a 13-item scale that measures attitudes justifying sexual aggression toward females (Burt, 1980).

*Acceptance of Interpersonal Violence* ( $\alpha = .55$ ) is a 6-item scale measuring attitudes contributing to sexual violence (Burt, 1980).

### *Egotistical/Antagonistic masculinity*

*Mating Effort Scale* ( $\alpha = .83$ ) is a 10-item scale that measures intrasexual competition amongst males in the pursuit of females, and a preference for multiple sexual partners (Rowe et al., 1997).

*Negative/Positive Masculinity/Femininity* (Spence, Helmreich, & Holahan, 1979) ( $\alpha = .81$ ). Nine items were used that measure negative masculinity (e.g., “I am a bossy person”).

### *Psychosocial deficits*

YSR scales: Anxious/Depressed, Social Problems, Withdrawn (Achenbach, 1994). These scales respectively measure poor self-esteem and loneliness, immaturity and peer rejection, and social isolation. The YSR is a widely used assessment instrument with well-established psychometric properties.

*Social Self-Esteem Inventory* ( $\alpha = .92$ ) (Lawson, Marshall, & McGrath, 1997) is a 30-item scale measuring self-esteem in social situations.

### *Emotional empathy*

The *Empathic Concerns* scale ( $\alpha = .60$ ) of the *Interpersonal Reactivity Index* consists of seven items describing positive or negative emotional responses to the misfortune of others (e.g., “When I see someone being taken advantage of, I feel kind of protective towards them.”) (Davis, 1980).

### Statistical analyses

All hierarchical multiple regression analyses were done using SAS version 8.2 (SAS Institute, 1999) General Linear Models Procedure (PROC GLM) using Type I Sums of Squares (SS1) for hierarchical partitioning of variance.

A series of hierarchical regressions was performed in which a set of dependent criterion variables was analyzed sequentially according to a hypothesized causal order. Each successive dependent variable was predicted from an initial set of ordered predictor variables, each time entering the immediately preceding dependent variable hierarchically as the first predictor, then entering all the ordered predictors from the previous regression equation. Thus, each successive regression entered all of the preceding dependent variables in reverse causal order to statistically control for any indirect effects that might be transmitted through them. Within this analytical scheme, the estimated effect of each predictor was limited to its direct effect on each of the successive dependent variables. The general format for these hierarchical multiple

regressions were therefore as follows:

$$Y1 = X1 + X2 + X3$$

$$Y2 = Y1 + X1 + X2 + X3$$

$$Y3 = Y2 + Y1 + X1 + X2 + X3$$

...

The hypothesized causal order was taken from a previously published structural equations model (Hunter et al., 2003), in which this causal order had been theoretically specified and the model found to have acceptable fit to the data. In the present analysis, we included some previously unexamined variables, such as Empathy and the interaction of Empathy with Hostile Masculinity, to test for both the mediating and moderating effects of Empathy within the previously specified structural framework.

## Results

### Hierarchical multiple regressions

A series of hierarchical multiple regressions was constructed based primarily on the causal order that we previously tested in our structural equations model (Hunter et al., 2003). A hypothesized order of causal priority was first specified for the initial set of “background” developmental variables: Positive Fathering, Child Maltreatment, Exposure To Violence Against Females, Exposure To Antisocial Males, and Parental Attachment. These predictors were then used to predict the remainder of the variables in the following sequential order:

1. Psychosocial Deficits ( $R^2 = .050$ )
2. Egotistical/Antagonistic Masculinity ( $R^2 = .148$ )
3. Hostile Masculinity ( $R^2 = .321$ )
4. Empathy ( $R^2 = .168$ )
5. Non-Sexual Delinquent Behavior ( $R^2 = .366$ ).

As stated above, each of these dependent variables was successively used as the first predictor for the next one in the list, with its own sequence of predictors entered afterwards to test for any remaining direct effects from the previous stages. Thus, this procedure culminates in entering the variables in reverse causal order. Model parsimony is maximized by avoiding repeatedly significant results from variables further back in the causal hierarchy that have only indirect effects on each of the successively tested dependent variables. Any extant indirect effects are partialled out by statistically controlling for the immediately preceding dependent variable. This particular theoretical order was arrived at by a combination of two guiding principles: (a) the order that was

specified in our published structural equation models, and (b) the new hypothesis that Empathy should both mediate and partially moderate the effects of the other personality variables on delinquent behavior.

The following sections detail the results of each of these multiple regressions, reporting standardized regression weights for significant predictors of each of the successive dependent criterion variables. The reader is reminded that the regression coefficients reported from these models are designed to estimate only the direct effects on each successive dependent criterion variable and do not include the indirect effects through any causally prior dependent criterion variables.

### *Psychosocial deficits*

The two significant predictors of Psychosocial Deficits were Child Maltreatment ( $F(1,178) = 4.36, p = .0382$ ), which tended to directly increase (+.086) Psychosocial Deficits, and Exposure To Violence Against Females ( $F(1,178) = 4.27, p = .0403$ ), which also tended to directly increase (+.199) Psychosocial Deficits.

### *Egotistical/Antagonistic masculinity*

The two significant predictors of Egotistical/Antagonistic Masculinity were Psychosocial Deficits ( $F(1,177) = 14.82, p = .0002$ ), which tended to directly increase (+.261) Egotistical/Antagonistic Masculinity, and Exposure To Antisocial Males ( $F(1,177) = 13.43, p = .0003$ ), which also tended to directly increase (+.313) Egotistical/Antagonistic Masculinity.

### *Hostile masculinity*

The two significant predictors of Hostile Masculinity were Egotistical/Antagonistic Masculinity ( $F(1,176) = 69.02, p = .0001$ ), which tended to directly increase (+.490) Hostile Masculinity, and Psychosocial Deficits ( $F(1,176) = 6.85, p = .0096$ ), which also tended to directly increase (+.151) Hostile Masculinity.

### *Empathy*

Four significant predictors were found for Empathy. These were Hostile Masculinity ( $F(1,175) = 13.82, p = .0003$ ), which tended to directly decrease (−.168) Empathy, Positive Fathering ( $F(1,175) = 5.82, p = .0168$ ), which tended to directly increase (+.051) Empathy, Exposure To Violence Against Females ( $F(1,175) = 3.82, p = .0522$ ), which tended to directly decrease (−.188) Empathy, and Parental

Attachment ( $F(1,175) = 8.43, p = .0042$ ), which tended to directly increase (+.224) Empathy.

### *Non-sexual delinquent behavior*

Seven significant predictors were found for Non-Sexual Delinquent Behavior. These were Empathy ( $F(1,173) = 8.27, p = .0045$ ), which tended to directly decrease (−.065) Non-Sexual Delinquent Behavior, Hostile Masculinity ( $F(1,173) = 13.17, p = .0004$ ), which tended to directly increase (+.120) Non-Sexual Delinquent Behavior, the interaction of Empathy with Hostile Masculinity ( $F(1,173) = 4.96, p = .0273$ ), which tended to directly decrease (−.128) Non-Sexual Delinquent Behavior, Egotistical/Antagonistic Masculinity ( $F(1,173) = 16.14, p < .0001$ ), which tended to directly increase (+.254) Non-Sexual Delinquent Behavior, Psychosocial Deficits ( $F(1,173) = 9.70, p = .0022$ ), which tended to directly decrease (−.224) Non-Sexual Delinquent Behavior, Exposure to Violence Against Females ( $F(1,173) = 38.12, p < .0001$ ), which tended to directly increase (+.299) Non-Sexual Delinquent Behavior, and Exposure To Antisocial Males ( $F(1,173) = 6.81, p = .0099$ ), which also tended to directly increase (+.205) Non-Sexual Delinquent Behavior.

### Follow-up multiple regression

Follow-up multiple regression was conducted in support of further assessing the hypothesis that emotional empathy serves as a “mediator” of the influence of “positive fathering,” “exposure to violence against females,” “attachment to parents,” and “hostile masculinity” on engagement in non-sexual delinquency (*each a significant predictor of emotional empathy*). The rationale for this additional regression is that, hypothetically, the above referenced variables could predict emotional empathy, and emotional empathy in turn predict non-sexual delinquency, without the referenced variables actually predicting non-sexual delinquency (i.e., “A” predicts “B,” and “B” predicts “C,” but “A” does not predict “C”). Thus, the finding that the identified variables predict non-sexual delinquency in the absence of emotional empathy in the regression model would bolster the assumption that emotional empathy mediates their influence on non-sexual delinquency.

With emotional empathy (and the interaction of hostile masculinity and empathy) removed from the multiple regression model, neither “positive fathering” nor “attachment to parents” was significant in the prediction of non-sexual delinquency. With emotional empathy (and the interaction of hostile masculinity and empathy) removed from the model, “exposure to violence against females” ( $F(1, 175) = 42.49, p < .0001$ ) directly increased (+.335) non-sexual delinquency. With the referenced variables removed from the

model, “hostile masculinity” ( $F(1, 175) = 17.72, p < .0001$ ) directly increased non-sexual delinquency (+.141).

### Discussion

Study findings provide overall support for the relevance of emotional empathy to understanding non-sexual delinquency in juvenile sexual offenders, and its link to positive and negative developmental experiences. As hypothesized, emotional empathy appears to have both mediating and moderating influences on the propensity of juvenile sex offenders for engaging in non-sexual delinquency. Thus, the study of emotional empathy may not only serve to identify who is particularly likely to aggress (e.g., those with the most virulent personality constellation that includes low empathy) but also to elucidate the mediating processes that result in low or high manifestation of aggression.

Consistent with predictions regarding developmental antecedents, positive fathering and attachment to parents were associated with greater emotional empathy in juvenile sex offenders, and exposure to male-perpetrated physical and sexual abuse of females with diminished emotional responsiveness. These results therefore support theory that empathy is developmentally linked to secure parental attachments and experiencing parents during the formative years as caring and invested.

Juvenile sex offenders who reported spending time with their fathers in positive social pursuits, and witnessing the father as being egalitarian and sensitive to the needs of other family members, evidenced a greater capacity to respond in a similar manner to others’ emotional distress and suffering. On the other hand, those youth who reported that they did not experience such paternal support and investment, and those who were exposed to male perpetrated violence against females showed indication of being less empathic and interpersonally sensitive. The latter finding is consistent with the research of Linz et al. (1988), and suggests that young males may become emotionally calloused by the repeated witnessing of male-perpetrated abuse of females. Overall, these findings underscore the salience of positive male role-modeling and paternal nurturance in the socialization of young boys.

Results did not support an association between child maltreatment and exposure to antisocial males and emotional empathy, although exposure to antisocial males exerted a direct positive influence on engagement in non-sexual delinquency. Relatively strong support was found for the assumption that emotional empathy partially mediates the influence of exposure to violence against females and hostile masculinity on engagement in non-sexual delinquency. These variables both predicted emotional empathy, and predicted non-sexual delinquency when emotional empathy was removed from the model. Thus, while both of these variables

directly contributed to greater non-sexual delinquency in juvenile sexual offenders, they also appeared to increase such behavior by lowering emotional empathy.

Less compelling was support for the assumption that emotional empathy mediates the influence of positive fathering and attachment to parents on non-sexual delinquency. Although the former variables predicted emotional empathy, they did not predict non-sexual delinquency when emotional empathy was removed from the model. While this negative finding weakens the mediation hypothesis, the absence of a significant statistical relationship between these variables and non-sexual delinquency may have been a function of insufficient statistical power to detect smaller effects.

Consistent with hypothesis, and past research (Dean & Malamuth, 1997), emotional empathy appears to moderate the connection between hostile masculinity and delinquent behavior. High emotional empathy is associated with an attenuated or dampened positive effect of hostile masculinity on non-sexual delinquency. While the exact mechanism of the above effect is unknown, two possibilities are suggested. The first is that high empathy and compassion directly suppress or inhibit the behavioral expression of hostile masculinity in juveniles. In other words, emotional empathy helps block the acting-out of antisocial inclinations associated with hostile masculinity's inner tensions and frustrations. The second possibility is that high hostile masculinity coupled with low empathy reflects a higher order (and perhaps more virulent) personality construct, such as psychopathy. Here, emotional empathy may not directly impact the expression of hostile masculinity but instead be part of a constellation of personality traits associated with relatively remorseless engagement in aggressive and antisocial behavior.

The nature of the relationship between psychosocial deficits and antisocial behavior is interesting, and on the surface somewhat paradoxical. While more pronounced psychosocial deficits are indirectly associated with greater non-violent delinquent behavior through hostile masculinity and the latter's relationship with emotional empathy, they are directly associated with lower levels of non-sexual delinquent behavior.

As discussed by Hunter et al. (2004), low social competency coupled with high intra-sexual competitiveness may contribute to frustration in heterosexual pursuits and, hence, the development of negative and hostile attitudes toward females. Perhaps individuals low in social competency and high in hostile masculinity are generally less empathic and concerned about the rights and welfare of others. They may, in fact, have little compunction about engaging in antisocial and aggressive behaviors. It is speculated, however, that the execution of delinquent behavior requires a certain level of self-confidence and/or planning ability that such individuals lack. In this regard, poor social skills and social self-esteem

may, like high empathy, inhibit acting-out in otherwise predisposed individuals.

### Clinical implications

Overall, the study's findings suggest that assessing empathy deficits in juvenile sex offenders is a worthwhile clinical endeavor. Emotional empathy deficits appear to be linked to an increased risk for engagement in non-sexual delinquency, and closely associated with negative sexual attitudes and cognitions. To the extent that empathy deficits and victim blame can be ameliorated in juvenile sexual offenders through focused therapeutic interventions, the risk of sexual and non-sexual recidivism may be reduced. Current findings suggest that male therapists should be particularly attentive to the importance of modeling prosocial skills and egalitarian sexual attitudes in working with these youth, and ensuring that there are proper familial and environmental supports for their acquisition and maintenance.

Clinicians should be especially cognizant of the apparent interactive relationship between emotional empathy and hostile masculinity. Males who endorse negative, pejorative attitudes toward females and who have little empathy for others seem to be at particularly high risk for further engagement in aggressive and antisocial behavior. The interaction implies that their risk for engagement in non-sexual delinquency is elevated beyond what would be found by simply adding these risk factors together. In other words, this is a particularly forbidding combination of personality traits.

Achievement of a better understanding of the mechanism through which this interaction operates is important for clinical practice. To the extent that high emotional empathy directly inhibits the acting-out of inner hostilities in otherwise predisposed and high-risk individuals, then it becomes therapeutically imperative to intensively focus on ameliorating such deficits when found. On the other hand, if low empathy and high hostile masculinity are merely correlates of a more pervasive personality disorder (e.g., psychopathy), then such efforts may be futile and clinicians (and public interests) would be better served by focusing on the development of effective containment strategies (i.e., enhanced clinical and legal monitoring of high-risk offenders, etc.).

### Study limitations and directions for future research

While the discussed findings are generally supportive of study hypotheses, inferences regarding the developmental origins and significance of emotional empathy to understanding juvenile sexual offenders are limited by a number of considerations. First, the study relied on cross-sectional methods to study the relationship between emotional empathy, personality traits, and developmental experiences in juvenile sexual offenders. Therefore, the observed associations

between emotional empathy, developmental experiences, and personality are correlational, and not necessarily indicative of causal relationships.

Second, the accuracy of the youth's retrospectively reported childhood experiences and level of engagement in delinquent behavior is unknown, and subject to a number of situational influences (e.g., mood). Third, it is noted that the sample was limited to residentially treated youth who had committed "hands-on" sexual offenses; it is unclear as to whether the findings would generalize to lesser-disturbed youth. Fourth, while the observed relationships between emotional empathy and delinquent behavior were statistically significant they were quite modest in magnitude. Other factors, such as the direct influences of exposure to abuse of females and egotistical-antagonistic masculinity, may offer more insight into why juvenile sex offenders engage in non-sexual delinquent behavior. Finally, and as discussed below, the various links identified in the present research might also be explained by models that emphasize gene-environment interactions (e.g., Taylor, McGue, Iacono, & Lykken, 2000).

Biologically related parents and their offspring typically share both genes and environments. Therefore, associations between variables such as positive fathering, exposure to violence against women, emotional empathy, and adolescents' delinquent behavior could be partly explained by shared genetic factors rather than by environmental influences. Such a model could suggest that genetic factors affect neurophysiology and neurochemistry underlying personality characteristics, and that this may increase some parents' propensity to engage in abusive behavior or lessen their positive parental behavior. Furthermore, these shared genes may reduce their offspring's empathy and increase the youth's antisocial behavior. The current design does not enable comparing such a model to one relying exclusively on environmental transmission.

The authors intend to continue their research on understanding differences amongst juvenile sexual offenders and their implications for clinical practice. Future research will include assessment of the identified prototypic subtypes of juvenile sex offenders and their differential developmental outcomes. In the conduct of this research, emotional empathy will be examined in relationship to personality differences between subtypes of sexually aggressive youth, and as a moderator of hostile masculinity and other risk factors for engaging in sexual and non-sexual crime. The latter inquiry will include an attempt to discern the mechanism(s) through which emotional empathy exerts its moderating influence.

## References

- Achenbach, T. M. (1994). Child behavior checklist and related instruments. In M. E. Maruish (Ed.), *The use of psychological testing for treatment planning and outcome assessment* (pp. 517–549). Hillsdale, NJ, USA: Lawrence Erlbaum Associates, Inc.
- Allen, J. P., Marsh, P., McFarland, C., McElhaney, K. B., Boykin, K., Land, D. J., et al., (2002). Attachment and autonomy as predictors of the development of social skills and delinquency during midadolescence. *Journal of Consulting & Clinical Psychology, 70*(1), 56–66.
- Barbaree, H. E., Marshall, W. L., & McCormick, J. (1998). The development of deviant sexual behaviour among adolescents and its implications for prevention and treatment. *Irish Journal of Psychology, 19*(1), 1–31.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality & Social Psychology, 51*(6), 1173–1182.
- Becker, J. V. (1998). What we know about the characteristics and treatment of adolescents who have committed sexual offenses. *Child Maltreatment: Journal of the American Professional Society on the Abuse of Children, 3*(4), 317–329.
- Bernadett-Shapiro, S., Ehrensaft, D., & Shapiro, J. L. (1996). Father participation in childcare and the development of empathy in sons: An empirical study. *Family Therapy, 23*(2), 77–93.
- Bernat, J. A., Calhoun, K. S., & Adams, H. E. (1999). Sexually aggressive and nonaggressive men: Sexual arousal and judgements in response to acquaintance rape and consensual analogues. *Journal of Abnormal Psychology, 108*(4), 662–673.
- Bovasso, G. B., Alterman, A. I., Cacciola, J. S., & Rutherford, M. J. (2002). The prediction of violent and nonviolent criminal behavior in a methadone maintenance program. *Journal of Personality Disorders, 16*(4), 360–373.
- Braaten, E. B., & Rosen, L. A. (2000). Self-regulation of affect in attention deficit-hyperactivity disorder (ADHD) and non-ADHD boys: Differences in empathic responding. *Journal of Consulting & Clinical Psychology, 68*(2), 313–321.
- Burt, M. R. (1980). Cultural myths and supports for rape. *Journal of Personality & Social Psychology, 38*(2), 217–230.
- Burke, D. M. (2001). Empathy in sexually offending and nonoffending adolescent males. *Journal of Interpersonal Violence, 16*(3), 222–233.
- Capaldi, D. M., Dishion, T. J., Stoolmiller, M., & Yoerger, K. (2001). Aggression toward female partners by at-risk young men: The contribution of male adolescent friendships. *Developmental Psychology, 37*(1), 61–73.
- Check, J. V. (1985). The Hostility Toward Women Scale. *Dissertation Abstracts International, 45*(12-B, Pt1), 3993.
- Cohen, D., & Strayer, J. (1996). Empathy in conduct-disordered and comparison youth. *Developmental Psychology, 32*(6), 988–998.
- Cortoni, F., & Marshall, W. L. (2001). Sex as a coping strategy and its relationship to juvenile sexual history and intimacy in sexual offenders. *Sexual Abuse: A Journal of Research & Treatment, 13*(1), 27–43.
- Covell, C. N., & Scalora, M. J. (2002). Empathic deficits in sexual offenders: An integration of affective, social and cognitive constructs. *Aggression & Violent Behavior, 7*(3), 251–271.
- Davis, M. H. (1980). Individual differences in empathy: A multidimensional approach. *Dissertation Abstracts International, 40*(7B), 3480.
- Dean, K. E., & Malamuth, N. M. (1997). Characteristics of men who aggress sexually and of men who imagine aggressing: Risk and moderating variables. *Journal of Personality & Social Psychology, 72*(2), 449–455.
- Dishion, T. J., McCord, J., & Poulin, F. (1999). When interventions harm: Peer groups and problem behavior. *American Psychologist, 54*(9), 755–764.

- Dishion, T. J., Spracklen, K. M., Andrews, D. W., & Patterson, G. R. (1996). Deviancy training in male adolescents friendships. *Behavior Therapy, 27*(3), 373–390.
- Duan, C., & Hill, C. E. (1996). The current state of empathy research. *Journal of Counseling Psychology, 43*(3), 261–274.
- Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology, 51*, 665–697.
- Eisenberg, N., Fabes, R. A., Bustamante, D., Mathy, R. M., Miller, P. A., & Lindholm, E. (1988). Differentiation of vicariously induced emotional reactions in children. *Developmental Psychology, 24*(2), 237–246.
- Eisenberg, N., Fabes, R. A., Murphy, B., Karbon, M., Maszk, P., Smith, M., et al., (1994). The relations of emotionality and regulation to dispositional and situational empathy-related responding. *Journal of Personality and Social Psychology, 66*(4), 776–797.
- Fergusson, D. M., & Horwood, L. J. (1998). Exposure to interparental violence in childhood and psychosocial adjustment in young adulthood. *Child Abuse & Neglect, 22*(5), 339–357.
- Fernandez, Y. M., & Marshall, W. L. (2003). Victim empathy, social self-esteem, and psychopathy in rapists. *Sexual Abuse: A Journal of Research & Treatment, 15*(1), 11–26.
- Fisher, D., Beech, A., & Browne, K. (1999). Comparison of sex offenders to nonoffenders on selected psychological measures. *International Journal of Offender Therapy & Comparative Criminology, 43*(4), 473–491.
- Geer, J. H., Estupinan, L. A., & Manguno-Mire, G. M. (2000). Empathy, social skill, and other relevant cognitive processes in rapists and child molesters. *Aggression & Violent Behavior, 5*(1), 99–126.
- Hudson, S. M., & Ward, T. (2000). Interpersonal competency in sex offender. *Behavior Modification, 24*(4), 494–527.
- Hunter, J. A., Figueredo, A. J., Malamuth, N., & Becker, J. V. (2004). Developmental pathways in youth sexual aggression and delinquency: Risk factors and mediators. *Journal of Family Violence, 19*(4), 233–242.
- Hunter, J. A., Figueredo, A. J., Malamuth, N. M., & Becker, J. V. (2003). Juvenile sex offenders: Toward the development of a typology. *Sexual Abuse: A Journal of Research & Treatment, 15*(1), 27–48.
- Hunter, J. A., & Longo, R. (2004). Relapse prevention with juvenile sexual abusers: A holistic/integrated approach. In G. O'Reilly, W. L. Marshall, R. C. Beckett, & A. Carr (Eds.), *Handbook of clinical intervention with juveniles abusers*. Dublin, Ireland: Wiley Publishers.
- Lawson, J. S., Marshall, W. L., & McGrath, P. (1997). The social self-esteem inventory. *Educational & Psychological Measurement, 39*(4), 803–811.
- Lindsey, R. E., Carozzi, A. F., & Eells, G. T. (2001). Differences in the dispositional empathy of juvenile sex offenders, non-sex-offending delinquent juveniles, and nondelinquent juveniles. *Journal of Interpersonal Violence, 16*(6), 510–522.
- Linz, D. G., Donnerstein, E., & Penrod, S. (1988). Effects of long-term exposure to violent and sexually degrading depictions of women. *Journal of Personality & Social Psychology, 55*(5), 758–768.
- Lisak, D., & Ivan, C. (1995). Deficits in intimacy and empathy in sexually aggressive men. *Journal of Interpersonal Violence, 10*(3), 296–308.
- Malamuth, N. (2003). Criminal and noncriminal sexual aggressors: Integrating psychopathy in a hierarchical-mediational confluence model. In R. A. Prentky, E. Janus, & M. Seto (Eds.), *Understanding and managing Sexually Coercive Behavior*. Annals of the New York Academy of Sciences, Vol. 989. (pp. 33–58). New York Academy of Sciences.
- Malamuth, N. M. (1998). The confluence model as an organizing framework for research on sexually aggressive men: Risk moderators, imagined aggression, and pornography consumption. In R. G. Geen & E. Donnerstein (Eds.), *Human aggression: Theories, research, and implications for social policy* (pp. 229–245). San Diego, CA, USA: Academic Press, Inc.
- Malamuth, N., Linz, D., Heavey, C., Barnes, G., & Acker, M. (1995). Using the confluence model of sexual aggression to predict men's conflict with women: A ten year follow-up study. *Journal of Personality & Social Psychology, 69*(2), 353–369.
- Malamuth, N. M., & Malamuth, E. Z. (1999). Integrating multiple levels of scientific analysis and the confluence model of sexual coercers. *Jurimetrics, 39*, 157–179.
- Marcus, R. F., & Gray, Jr., L. (1998). Close relationships of violent and nonviolent African American delinquents. *Violence & Victims, 13*(1), 31–46.
- Marshall, W. L. (1993). The role of attachments, intimacy, and loneliness in the etiology and maintenance of sexual offending. *Sexual & Marital Therapy, 8*(2), 109–121.
- Marshall, W. L., Bryce, P., Hudson, S. M., Ward, T., et al. (1996). The enhancement of intimacy and the reduction of loneliness among child molesters. *Journal of Family Violence, 11*(3), 219–235.
- Marshall, W. L., Hudson, S. M., Jones, R., & Fernandez, Y. M. (1995). Empathy in sex offenders. *Clinical Psychology Review, 15*(2), 99–113.
- Marshall, W. L., & Moulden, H. (2001). Hostility toward women and victim empathy in rapists. *Sexual Abuse: A Journal of Research & Treatment, 13*(4), 249–255.
- McGrath, M., Cann, S., & Konopasky, R. (1998). New measures of defensiveness, empathy, and cognitive distortions for sexual offenders against children. *Sexual Abuse: Journal of Research & Treatment, 10*(1), 25–36.
- Mikulincer, M., Gillath, O., Halevy, V., Avidho N., Avidan S., & Eshkoli, N. (2001). Attachment theory and reactions to others' needs: Evidence that activation of the sense of attachment security promotes empathic responses. *Journal of Personality & Social Psychology, 81*(6), 1205–1224.
- Mirowsky, J. (1999). Analyzing associations between mental health and social circumstances. In C. S. Aneshensel & J. C. Phelan (Eds.), *Handbook of sociology and social research* (pp. 105–123). Dordrecht, Netherlands: Kluwer Academic Publishers.
- Moffitt, E. E., Caspi, A., Dickson, N., Silva, P., & Stanton, W. (1996). Childhood-onset versus adolescent-onset antisocial conduct problems in males: Natural history from ages 3 to 18 years. *Development and Psychopathology, 8*, 399–424.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*(4), 674–701.
- Monto, M., Zgourides, G., & Harris, R. (1998). Empathy, self-esteem, and the adolescent sexual offender. *Sexual Abuse: A Journal of Research & Treatment, 10*(2), 127–140.
- Monto, M., Zgourides, G., Wilson, J., & Harris, R. (1994). Empathy and adolescent male sex-offenders. *Perceptual & Motor Skills, 79*(3, Pt2), Special Issue.
- Nussbaum, D., Collins, M., Cutler, J., Zimmerman, W., Farguson, B., & Jacques, I. (2002). Crime type and specific personality indicia: Cloninger's TCI impulsivity, empathy and attachment subscales in non-violent and sexual offenders. *American Journal of Forensic Psychology, 20*(1), 23–56.
- Pithers, W. D. (1999). Empathy: Definition, enhancement, and relevance to the treatment of sexual abuser. *Journal of Interpersonal Violence, 14*(3), 257–284.
- Regehr, C., & Glancy, G. (2001). Empathy and its influence on sexual misconduct. *Trauma Violence & Abuse, 2*(2), 142–154.
- Rice, M. E., Chaplin, T. C., Harris, G. T., & Coutts, J. (1994). Empathy for the victim and sexual arousal among rapists and nonrapists. *Journal of Interpersonal Violence, 9*(4), 435–449.
- Rowe, D. C., Vazsonyi, A. T., & Figueredo, A. J. (1997). Mating-effort in adolescence: A conditional or alternative strategy. *Personality & Individual Differences, 23*(1), 105–115.

- Roys, D. T. (1997). Empirical and theoretical considerations of empathy in sex offenders. *International Journal of Offender Therapy & Comparative Criminology*, 41(1), 53–64.
- SAS (1999). The SAS Institute, Inc., Cary, NC.
- Seidman, B. T., Marshall, W. L., Hudson, S. M., & Robertson, P. J. (1994). An examination of intimacy and loneliness in sex offenders. *Journal of Interpersonal Violence*, 9(4), 518–534.
- Shadish, W.R., & Sweeney, R. B. (1991). Mediators and moderators in meta-analysis: There's a reason we don't let dodo birds tell us which psychotherapies should have prizes. *Journal of Consulting & Clinical Psychology*, 59(6), 883–893.
- Smallbone, S. W., Wheaton, J., & Hourigan, D. (2003). Trait empathy and criminal versatility in sexual offenders. *Sexual Abuse: A Journal of Research & Treatment*, 15(1), 49–60.
- Spence, D. C., Helmreich, R. L., & Holahan, C. K. (1979). Negative and positive components of psychological masculinity and femininity and their relationships to self-reports of neurotic and acting out behaviors. *Journal of Personality & Social Psychology*, 37(10), 1673–1682.
- Taylor, J., McGue, M., Iacono, W. G., & Lykken, D. T. (2000). A behavioral genetic analysis of the relationship between the Socialization scale and self-reported delinquency. *Journal Personality*, 68, 29–50.
- Thornton, S., & Thornton, D. (1995). Facets of empathy. *Personality & Individual Differences*, 19(5), 765–767.
- Trost, K. K., Collins, R. L., & Embree, J. M. (1994). The role of emotion in social support provision: Gender, empathy and expressions of distress. *Journal of Social & Personal Relationships*, 11(1), 45–62.

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