

RUNNING HEAD: ATTACHMENT AND SEXUAL ABUSE ONSET

Offenders' Attachment and Sexual Abuse Onset:

A Test of Theoretical Propositions

ABSTRACT

Confidential self-report data obtained on 107 adult male child sexual abusers were analyzed to test theoretical propositions concerning the role of attachment problems in the onset of sexual offending. Offenders' parent-child attachment relationships were most frequently characterized by "affectionless control", reflecting low parental care and high overprotection and control. Offenders reported significantly less secure attachment with their fathers than with their mothers. Overall, weak continuity from childhood attachment to trait (general) adult attachment was found, with insecure attachment more stable than secure attachment. Childhood attachment problems, particularly with fathers, were more clearly reflected in state adult attachment (i.e., in the month preceding sexual offending onset) than in trait adult attachment. Offenders who were in an adult intimate relationship prior to their onset sexual offense reported significant state increases in attachment avoidance, and their onset offenses were more likely to involve a female familial victim. Offenders who were not in a relationship prior to offending onset were younger, and their onset sexual offenses occurred in much more diverse circumstances. These findings provide tentative evidence that directly and indirectly implicates offenders' attachment problems specifically in the onset of their sexual abuse behaviour. Implications for developmental prevention and early intervention, situational prevention, and offender treatment, are discussed.

Keywords: Childhood attachment; adult attachment; sexual offenders; sexual abuse onset

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Associations between offenders' attachment problems and their offending behavior have long been of interest to researchers and clinicians. Indeed John Bowlby's early ideas about human attachment were formed partly through his clinical work with young offenders in war-time London. In one of his earliest papers Bowlby (1944) described the affectionless character of his young offender clients, which he proposed could be traced to disrupted maternal attachment. In his later and better-known trilogy on attachment and loss, Bowlby (1969, 1973, 1980) went on to elaborate a comprehensive theory of human attachment in which, incidentally, he gave little further attention to delinquency and crime. However, two lines of research have continued to focus on attachment and crime: a psychological approach, concerned with the effects of early parent-child attachment on the development of empathy and perspective-taking, moral reasoning, and self-regulation of aggression and violence (e.g., Fonagy et al., 1997; van Ijzendoorn, 1997); and a sociological approach, concerned with the development of positive social attachments as a critical aspect of informal social control (e.g., Gottfredson & Hirschi, 1990; Sampson & Laub, 1990).

Although they involve different levels of analysis and somewhat different conceptions of human attachment, these two approaches can be reconciled under the general rubric of control theory (Hirschi, 1969). Control theory assumes that humans are by nature prone to aggression and self-interest, and proposes that positive socialization is required to inhibit (or control) these natural antisocial desires and impulses. Offending itself occurs as a result of proximal interactions between low self-control and criminal opportunities. Control theory asserts that offenders do not necessarily learn to commit crimes, at least not initially; rather, in effect, they fail to learn not to (Wortley & Smallbone, 2006; Smallbone & Cale, in press). As Fonagy (2003) notes, "biological predisposition and social influence do not create

destructiveness, but rather compromise the social processes that normally regulate and tame it” (p.190).

Marshall's (1989) clinical observations of adult sexual offenders gave an initial impetus to research on the role of attachment problems more specifically in sexual offending. These observations were incorporated into Marshall and Barbaree's (1990) integrated theory, which explained sexual offending as the interaction of biological, developmental, social, and situational influences. Consistent with control theory, Marshall and Barbaree's model proposed that positive socialization is required to inhibit the universal biologically-based propensity for self interest and sexual aggression, particularly for adolescent and adult males. The developmental thread essentially linked early attachment problems to later problems managing physical and emotional intimacy, increasing the risk for sexual behavior to be expressed in impersonal circumstances or with less threatening sexual partners, including children. These general personal vulnerabilities were hypothesized to interact with situational and social factors to precipitate sexual offending.

There have subsequently been numerous other conceptual models proposed for the role of offenders' attachment problems in sexual offending. Some have concentrated on more or less direct developmental links between attachment problems and sexual offending (e.g., Beech & Mitchell, 2005; Smallbone & Dadds, 1998; Ward, Hudson, Marshall, & Siegert, 1995). An important limitation of these models is that they do not adequately explain how distal developmental factors, such as childhood attachment problems, could be responsible for a specific behavioral outcome, such as sexual offending. Others have retained a central focus on the proximal interactions between general developmental vulnerabilities and situational factors to explain the distal effects of early attachment problems (e.g., Burk & Burkhart, 2003; Mitchell & Beech, 2011; Smallbone, 2005, 2006; Smallbone & Cale, in press; Smallbone, Marshall, & Wortley, 2008; Ward & Beech, 2006).

Many empirical studies have found a high (but by no means universal) prevalence of adverse developmental experiences in the backgrounds of sexual offenders, and much of this work implicates attachment-related problems (e.g., abuse and neglect; low nurturance and affection; parental rejection). Studies more directly examining attachment in sexual offenders have similarly found a high (but not universal) prevalence of attachment problems among different types of sexual offenders. Most have indicated that insecure childhood attachment is more prevalent in sexual offenders than in nonsexual offenders and non-offenders (Craissati, McClurg, & Browne, 2002; Marsa et al., 2004; McCarthy, 2004; Smallbone & Dadds, 1998), although others have found no such differences (e.g., Marshall, Serran, & Cortoni, 2000). Some studies have found that some sexual offenders are more likely to report attachment problems with their fathers than with their mothers (Smallbone & Dadds, 1998; Smallbone & Wortley, 2000), but it is not yet clear whether maternal and paternal attachment play different roles in the development of sexual abuse and other coercive sexual behavior (Smallbone & Dadds, 2000, 2001). Compared to non-offenders, sexual offenders are also more likely to report insecure adult attachment, particularly fearful-avoidant and preoccupied-anxious attachment styles (Lyn & Burton, 2004; Marsa et al., 2004; Sawle & Kear-Colwell, 2001; Smallbone & Dadds, 1998; Stirpe, Abracen, Stermac, & Wilson, 2006; Ward, Hudson & Marshall, 1996). Differences have not been consistently found between different types of sexual offenders (e.g., adult-victim and child-victim offenders) or between sexual and nonsexual offenders, and the role of different insecure adult attachment types also remains unclear.

Most of the research on attachment problems in sexual offenders has been based on conceptions of attachment style as a stable, trait-like characteristic. Meanwhile, in the broader field of attachment research a consensus has emerged that childhood and adult attachment styles are less stable than had originally been assumed (Thompson, 2000). For example,

changes in caregiver environments and stressful life events (severe illness, parental illness, divorce) have been shown to alter attachment patterns from infancy, through childhood and adolescence, to adulthood (Belsky, Spritz, & Crnic, 1996; Waters, Hamilton, & Weinfield, 2000). Although early attachment experiences may shape an individual's expectations of (and therefore behavior in) later interpersonal relationships, new relationship experiences may modify these expectations (and behavior). Attachment (care-seeking) behavior itself is highly situation-dependent (Smallbone, 2006): individuals with a generally secure attachment style may nevertheless behave in avoidant, fearful, or anxious ways in certain circumstances, if only temporarily or momentarily. Thus attachment styles may become more or less secure at different times over the life course, and even in securely attached individuals insecure attachment behavior may be precipitated by adverse interpersonal circumstances (e.g., perceived or real unresponsiveness by an intimate partner) (Smallbone, 2006).

Attachment insecurity may therefore play both a predisposing and precipitating role in sexual abuse. Along the lines proposed by Marshall and Barbaree (1990), and consistent with control theory, Smallbone et al. (2008; see also Smallbone & Cale, in press) have argued that early attachment problems compromise the development of individuals' capacity for empathic concern, emotional self-regulation, and moral reasoning, and later also the development of strong (pro)social attachments. Insecure personal attachments and weak social attachments in turn lead to general problems with individuals' capacity for and commitment to self-restraint. According to this model, these individual-level vulnerabilities (low capacity for and commitment to self-restraint) interact with immediate situational factors (opportunity structures and precipitating conditions) to produce a sexual offense.

In the present study we aimed to test some of these recent theoretical propositions in a sample of convicted child sexual abusers. Smallbone and Cale (in press) have emphasized the theoretical importance of the onset sexual offense, not least because offender motivations,

opportunity structures and precipitating conditions may all change following the onset offense. Concentrating on the onset offense also allows empirical analysis of a specific offense incident rather than of the more amorphous construct of offending, which requires generalizing across potentially diverse individual circumstances. Sexual offenders vary widely in their pre-arrest and post-arrest persistence, but all have by definition committed a first offense. Accordingly, for the purposes of the present study we have attempted to isolate the onset sexual offense incident for our analysis.

In terms of developmental vulnerabilities, we were interested 1) to examine the nature and extent of early attachment patterns in child-sex offenders, and 2) to examine the extent to which these early attachment patterns continue to adulthood. There is emerging evidence that maternal and paternal attachment contribute in different ways to later development (Newland, Freeman, & Coyl, 2011), and tentative evidence of links between insecure paternal attachment and later sexual offending (Smallbone & Dadds, 1998, 2000, 2001). We were therefore also interested 3) to test for differences in maternal and paternal childhood attachment. In terms of situational factors, we were interested 4) to explore life events, and offenders' attachment orientation and behavior, in the period immediately preceding their onset sexual offense.

METHOD

Participants

Participants were 107 adult males serving prison sentences for sexual offenses against children under 16 years of age. The ages of participants at the time of their current sentence ranged from 18 to 80 years ($M = 42.10$ years, $SD = 12.42$). Mean sentence length was 108 months ($SD = 79.25$). Most participants identified as Anglo-Australian (86%), 11% as Indigenous-Australian and 3% as 'other ethnic' minority.

Two thirds (67%) had a previous criminal history: 25.2% had a history of sexual offenses, 11.8% had a history of nonsexual violent offenses, and 50.4% had a history of nonsexual nonviolent offenses.

Measures

Childhood attachment

The Childhood Attachment Questionnaire (CAQ) (Hazan & Shaver, cited in Collins & Read, 1990) contains three short paragraphs consistent with Ainsworth, Blehar, Waters, & Wall's (1978) three major childhood attachment styles (secure, anxious/ambivalent, and avoidant). This questionnaire was completed separately for maternal and paternal attachment relationships. Respondents rated the extent to which each description corresponded to their mother's and father's attitudes, feelings, and behavior toward them as they were growing up, on a seven-point Likert scale ranging from 1 (not at all like my mother/father) to 7 (very much like my mother/father). This questionnaire has previously demonstrated moderate to high test-retest reliability in a sample of incarcerated sexual offenders (Smallbone & Dadds, 1998).

The Parental Bonding Instrument (PBI) (Parker, Tupling & Brown, 1979) is a 25 item retrospective measure of respondents' recollections of parental bonding attitudes and behavior prior to age 16. Participants completed the PBI separately for each parent (or parental figure). Items were rated on a 4-point Likert scale ranging from 0 (very like) to 3 (very unlike), yielding scores on two sub-scales: 'care' and 'overprotection and control'. The 12 item care subscale measures warmth and affection, empathy and understanding, and positive reinforcement (e.g., "spoke to me in a warm and friendly voice"). The 13 item control subscale measures autonomy, emotional indifference, and parental control (e.g., "tried to control everything I did"). Assignment to high or low categories for each dimension is based on the following recommended cut-off scores: maternal care = 27; maternal control =

13.5; paternal care = 24; and paternal control = 12.5. Parenting styles can then be categorized according to one of four 'parental bonding quadrants' based on combined care and control scores: optimal parenting (high care, low control); affectionate constraint (high care, high control); affectionless control (low care, high control); and neglectful parenting (low care, low control). Parker (1990) and Wilhelm, Niven, Parker and Hadzi-Pavlovic (2005) have reported good reliability and validity of the PBI across different populations and over extended time periods.

Adult attachment

General (trait) adult attachment was measured using the Experiences in Close Relationships Inventory (ECRI) (Brennan, Clark, & Shaver, 1998). Respondents indicate how well each of 36 items describes their typical feelings in romantic relationships on a 7-point Likert scale ranging from 1 (disagree strongly) to 7 (agree strongly). The measure yields scores on two subscales: attachment avoidance and attachment anxiety. The avoidance scale assesses discomfort with interpersonal closeness, dependence, and intimate self-disclosure (e.g., "I don't feel comfortable opening up to romantic partners"). The anxiety scale measures fears of abandonment and strong desires for intimate contact (e.g., "I need a lot of reassurance that I am loved by my partner"). Low scores on both scales indicate a secure attachment orientation. The anxiety and avoidance dimensions have good internal consistency, with alphas greater than .90. Test-retest coefficients among non-offender samples have been found to be .71 (avoidance) and .68 (anxiety) (Lopez & Gormley, 2002). Adult attachment styles were also derived using Brennan et al.'s (1998) computational guidelines: secure (low anxiety, low avoidance); preoccupied-anxious (high anxiety, low avoidance); fearful-avoidant (high anxiety, high avoidance); dismissive-avoidant (low anxiety; high avoidance).

A modified version of the ECRI was also used for the purposes of measuring state adult attachment (ECRI-State). The ECRI-State measure was identical to the original ECRI, except that respondents were asked in the past tense about their experiences with a specific intimate partner relationship in the weeks preceding the onset sexual offense. Only those offenders who identified being in an intimate partner relationship in the month preceding their onset sexual offense were required to complete the ECRI-State. The reliability and validity of this modified version of the ECRI have not been previously established.

Sexual abuse onset

Offenders were asked to provide details about their first sexual contact with a child, whether or not this incident had been the subject of criminal charges. Self-report information was obtained on offender age, victim age and gender, the offender's relationship to the victim, personal problems encountered in the month preceding the onset offense, and strategies employed in response to these problems.

Social desirability

Social desirability was measured using the Marlowe-Crowne Short Form C (MC-C) ([MC-C], Reynolds, 1982). The MC-C is a 13-item measure derived from the original 33-item Marlowe-Crowne Social Desirability ([MC], Crowne & Marlowe, 1960). Available research attests to the psychometric properties of the MC-C and its utility for measuring biased self-presentation on self-report measures within forensic contexts (Andrews & Meyer, 2003).

Procedure

Prospective participants were identified by corrections staff, who explained that participation was voluntary. Offenders who agreed to participate were later contacted individually by a member of the research team. Offenders were offered complete anonymity, but were also invited to provide their name for the purposes of follow-up contact, in which

case they were assured that self-reported information would be kept confidential. Identifying information was available to the researchers only for the purpose of administering questionnaires, and data were otherwise de-identified. Official demographic and offense history data were provided by corrections staff. Identifier codes were used to match self-report and official data. Following the main data collection phase, 25 offenders who had agreed to follow-up contact were asked to complete the questionnaire a second time for the purposes of computing test-retest reliability of the above self-report measures. The average test-retest period was 6 months.

RESULTS

Reliability and validity analyses

The mean score for social desirability in this sample was lower ($M = 5.93$, $SD = 2.23$) than reported forensic norms ($M = 7.61$, $SD = 3.32$), including those specific to child-sex offenders ($M = 7.03$, $SD = 3.45$), but slightly higher than the general population ($M = 5.37$, $SD = 3.13$). These results indicate a low response bias in the present sample (Andrews & Meyer, 2003). Bivariate correlations were computed to assess the associations between social desirability and attachment ratings. The results indicated a small positive association between maternal secure attachment and social desirability scores, $r(101) = .24$, $p = 0.02$. Moderate negative correlations between social desirability and trait adult anxious, $r(98) = -.43$, $p < .001$, and state adult anxious attachment, $r(49) = -.39$, $p = .02$, were also found. To assess the possible impact of these associations on the findings overall, partial correlation analyses were computed, controlling for the effects of socially desirable responses. The partial correlations were very similar to the zero-order correlations, although there were some differences in the strength of some the relationships between the variables of interest. Partial correlation analyses (controlling for social desirability) are reported below.

Test-retest data for the childhood and adult attachment ratings and offense onset variables are presented in Table 1. With the exception of maternal and paternal anxious attachment, all childhood and adult attachment measures were found to be stable over the test-retest period. Due to the poor reliability of the childhood anxious attachment measures, these variables were excluded from subsequent analyses. High test-retest correlations were obtained for offender age, victim age and victim gender (see Table 1).

The subscales of the ECRI (trait adult attachment) were internally consistent, with Cronbach's alpha coefficients of .94 for the avoidance items and .93 for the anxiety items. For the ECRI-State (state adult attachment), alpha coefficients were .95 for avoidance and .94 for anxiety, again indicating very good internal consistency.

Partial correlations among the childhood and adult attachment measures are reported in Table 2. Moderate convergence between offenders' attachment relationships with their mothers and fathers was found on both childhood attachment measures. Moderate to strong negative correlations were obtained between both maternal secure and avoidant and paternal secure and avoidant attachment, and between maternal care and control and paternal care and control dimensions. Correlations between adult trait and state attachment dimensions indicate concordance both within and between adult attachment measures. Overall, these results indicate a low response bias, and good internal consistency, test-retest reliability, and construct, convergent and discriminant validity, for the self-report measures for this sample.

Principal Analyses

Childhood attachment

Most offenders indicated the presence of their mother ($n = 103, 97\%$) and father ($n = 97, 92\%$) in their life as a child. Table 3 presents mean (SD) maternal and paternal attachment ratings. Categorical attachment styles were also identified. Just over half of the offenders (51%) reported an insecure maternal attachment style, and almost two thirds (63%)

reported an insecure paternal attachment style. Familial-onset offenders ($n = 55$) were somewhat more likely than nonfamilial-onset offenders ($n = 49$) to report insecure maternal (55% vs. 46%) and insecure paternal attachment (65% vs. 58%), but these differences were not significant. Offenders' paternal attachment was significantly less secure ($M = 3.84$, $SD = 2.21$) than was their maternal attachment ($M = 4.69$, $SD = 2.31$), $t(99) = 3.24$, $p = .002$.

PBI scores indicated a predominant parenting style of *affectionless control* (low care; high overprotection and control) for both parents. Specifically, 45.9% of offenders' maternal relationships, and 50.6% of their paternal relationships, were characterized by this parental bonding style. By contrast, only 21.4% of offenders' maternal relationships and 14.9% of paternal relationships were characterized by *optimal parenting* (see Figure 1).

Trait adult attachment

Mean (SD) trait adult attachment ratings are also reported in Table 3. Trait adult attachment styles were also examined categorically. Three quarters (76%) of the sample reported an insecure adult attachment style: 43% were classified as fearful avoidant; 25% as preoccupied anxious; and 9% as dismissive avoidant. The prevalence of insecure adult attachment was similarly high for both familial-onset (73%) and nonfamilial-onset offenders (80%).

Attachment stability

Small to moderate correlations were obtained between maternal and paternal childhood attachment and trait adult attachment, indicating weak but discernable stability in attachment style from childhood to adult attachment (see Table 2). Insecure childhood attachment was more stable than secure childhood attachment. Of those who reported an insecure maternal attachment style, 84% reported an insecure trait adult attachment style. However, only 31% of those reporting a secure maternal attachment style reported a secure trait adult attachment style. Similarly, 81% of those who reported an insecure paternal attachment style reported an

insecure trait adult attachment style, but only 33% of those reporting a secure paternal attachment style reported a secure trait adult attachment style.

Childhood attachment was generally more reliably associated with state adult attachment than with trait adult attachment, with the strongest associations obtained between paternal secure and state anxious ($r = -.44$) and paternal avoidant and state avoidant ($r = .36$) attachment. The strongest associations involving trait adult attachment were between paternal care and trait anxious ($r = -.34$), and paternal avoidant and trait anxious attachment ($r = .23$).

Attachment and the onset sexual offense

Just over half the sample ($n = 57$; 56%) reported being in an intimate relationship in the month preceding their onset sexual offense. There were no differences in maternal, paternal or trait adult attachment between those who were and those who were not in an intimate relationship at that time. Offenders who were in an intimate relationship were significantly older at the time of the onset offense ($M = 35.8$ years, $SD = 11.20$) than those who were not in a relationship ($M = 26.8$ years, $SD = 14.88$), $t(98) = -3.43$, $p = .001$.

For offenders in a relationship, the onset offense victim was usually either a step-child (40%) or biological child (24%), and was significantly more likely to be female (84% vs. 58%), $\chi^2(1, N = 100) = 8.21$, $p = .004$, $\Phi = .29$. For those who were not in an adult relationship, relationships with the victims of their onset offenses were much more diverse, including the child of a friend (20.0%), child of a neighbor (9%), a nephew or niece (9%), a cousin (9%), a child met through work (7%), or a stranger (7%). The mean age of the victims of the onset offense was 10.5 years ($SD = 3.35$, range = 1-16 years), with 42% between 6 and 11 years, and 48% between 12 and 16 years. There were no significant differences in onset victim age between the two offender relationship groups.

About half (52%) of the sample reported relationship problems, 40% reported financial problems, and 28% reported sexual difficulties, in the month preceding the onset sexual

offense. Few sought help for these problems from a professional (14%), an adult friend (7%), or, least of all, from an adult family member (3%) or an intimate partner (4%). Some offenders (10%) sought help or comfort from a child. Avoidance strategies were more common, particularly self-isolation (55%), consuming alcohol or drugs (40%), and 'doing nothing' (23%).

Finally, paired samples *t* tests were computed to test for state changes in attachment orientation for offenders who were in an adult intimate relationship in the weeks preceding their onset offense. No differences were observed between trait adult and state adult attachment anxiety. However, offenders reported significantly higher attachment avoidance in the weeks preceding their onset sexual offense ($M = 3.77, SD = 1.34$), compared to their general (trait) adult attachment avoidance ($M = 3.44, SD = 1.54$), $t(54) = -2.45, p = .018$.

DISCUSSION

Recent theoretical formulations have pointed to the potential significance of offenders' attachment problems as both a predisposing and precipitating factor in their sexual abuse behavior, and particularly in the onset of their offending behavior (Smallbone, Marshall, & Wortley, 2008; Smallbone & Cale, in press). In the present study we conducted an exploratory analysis of sexual abusers' onset sexual offenses, with a particular focus on investigating theoretical links between early, enduring and context-specific attachment experiences and behavior.

First, offenders were somewhat more likely to report insecure than secure childhood attachment. This is consistent with most previous studies of childhood attachment with sexual abusers (Marsa et al., 2004; McCarthy, 2004; Smallbone & Dadds, 1998; Smallbone & Wortley, 2000). Childhood attachment problems have previously been observed more consistently in familial than in nonfamilial sexual abusers (Marshall et al., 2000; Smallbone & Dadds, 1998), and accordingly in the present study there was a non-significant trend for

familial-onset offenders to more often report both maternal and paternal attachment insecurity. Overall, the prevalence of insecure childhood attachment found in the present sample was considerably higher (51% and 63%) than that found in the general population (around 35%) (Campos et al., 1984; Waters, Hamilton, & Weinfeld, 2000). Both maternal and paternal relationships were characterized predominantly by 'affectionless control', reflecting low parental care and high overprotection and control. Other researchers (Craisatti et al., 2002; Marsa et al., 2004) have also found this to be the predominant parental bonding style in samples of sexual abusers. On the other hand, as with previous studies, a substantial minority of the present offenders reported secure childhood attachment relationships, confirming that childhood attachment problems are neither a necessary nor sufficient condition for sexual offending.

Second, offenders were more likely to report insecure childhood attachment relationships with their fathers than with their mothers. Only a few studies have previously examined maternal and paternal attachment in sexual abusers. Marshall et al. (2000) found that nonfamilial sexual abusers were more likely to report secure than insecure maternal attachment, but that their experiences of paternal attachment were more variable. Smallbone and Wortley (2000) similarly found that nonfamilial abusers were more likely to report secure maternal attachment, but that both familial and nonfamilial abusers were more likely to report insecure, and especially avoidant, attachment relationships with fathers. In the general population, rates of secure paternal attachment tend to be very similar to, if a little lower than, those of secure maternal attachment, with most studies indicating high concordance rates between the two (Fox, Kimmerly, & Schafer, 1991; Lamb, 1978; Main & Weston, 1981; Roelofs, Meesters, & Muris, 2008; van IJzendoorn & de Wolff, 1997). However, this research indicates qualitative differences in maternal and paternal attachment. Whereas mothers are generally regarded as the primary attachment figure, fathers' active

involvement with children has been associated particularly with the child's obedience, emotional regulation, and early academic success, and fathers' negative interactions with children have been associated with the child's attachment insecurity, problems with peers, and conduct problems (Newland, Coyl, & Chen, 2010). Findings suggest that paternal sensitivity and fathers' own attachment status are reliable predictors of children's attachment security at age 10 and 16 (Grossman et al., 2002; Roelofs et al., 2008). While both boys and girls do best with secure attachment to both parents, boys' attachments to their fathers seem to be especially important as a foundation for later social competence (Diener, Isabella, Behunin, & Wong, 2008).

Third, offenders were more likely to report insecure than secure general (trait) adult attachment. In the present sample the prevalence of insecure adult attachment was substantially higher than the prevalence of insecure childhood attachment. The prevalence of insecure adult attachment among the present offenders (76%) was also higher than that found in the general population (35% - 45%) (Bartholomew & Horowitz, 1991; Bakersman-Kranenburg & van IJzendoorn, 2009). Consistent with previous studies of child sexual abusers (Jamieson & Marshall, 2000; Proeve, 2003; Ward et al., 1996; Wood & Riggs, 2009), the most common insecure adult attachment styles in the present sample were fearful-avoidant and preoccupied-anxious styles. The higher prevalence of adult versus childhood insecure attachment suggests that the present offenders may have experienced life events since childhood that have adversely affected their general orientation to intimate relationships. Secure childhood attachment does not seem to have served as a strong protective factor for these offenders. General adult attachment problems may in turn have impaired their resilience to ordinary relationship difficulties, especially in adult intimate relationships, perhaps increasing their vulnerability to sexualizing care-giving relationships with children. Adult attachment is a developmentally more proximal factor than childhood

attachment, and thus would be expected to exert a more direct influence on adult behavior, including sexual abuse behavior.

Fourth, we found weaker than expected continuity from childhood to adult attachment styles. We have already noted the higher prevalence of adult attachment problems relative to childhood attachment problems in the present sample. More broadly, our findings suggest that childhood attachment style is not strongly predictive of general adult attachment style. Thus while it was not uncommon for insecure offenders to have a secure childhood attachment history, the reverse was generally not true – secure offenders generally did not have an insecure childhood attachment history. Another notable finding was that childhood attachment problems, particularly with fathers, were more clearly reflected in adult state attachment than in adult trait attachment. This suggests that early attachment vulnerabilities do not always manifest as stable adult attachment problems, but instead re-emerge in the context of relationship or other life problems. In the present case, half of the offenders reported experiencing relationship problems in the month preceding their onset offense, and most employed avoidance strategies (e.g., isolation; drug and alcohol use) in response to these problems. These findings indirectly support the theoretical proposition that acute or transient attachment problems often precipitate sexual abuse behavior.

Finally, offenders' adult attachment became more insecure in the period preceding their onset sexual offense. Recall that these findings pertain only to those offenders who were in an adult intimate relationship prior to their onset offense. For these offenders we found no changes in attachment anxiety, which is generally characterized by fears of abandonment and preoccupation with the attentions of an attachment figure. However, we did find a significant increase in attachment avoidance. Because offenders were asked specifically about their attachment to an adult partner, the findings indicate that this increase in attachment avoidance was concerned specifically with that partner. Other research has found that, when faced with

relationship difficulties, individuals tend to choose more insecure attachment behaviors, especially avoidance behavior (e.g., withdrawal from partners) (Gillath & Shaver, 2007). Many of the present offenders reported relationship and other personal problems at this time, but very few sought help from their adult partner. In the weeks immediately preceding their onset sexual offense, these offenders may have been withdrawing from usual attachment figures (e.g., adult family member or partner), perhaps focusing their attachment needs instead on the child whom they would soon sexually abuse. Indeed a small percentage (10%) reported seeking comfort from a child during this time, suggesting a role reversal whereby the adult directs their attachment needs to the child rather than vice versa.

Limitations

The present study is limited by its retrospective, self-report design, and our findings should accordingly be considered cautiously. While test-retest reliability data indicated that offenders were unlikely to be simply fabricating their responses, we cannot assume their recollections are an accurate representation of their attachment or offending histories. Although scores on the social desirability measure indicated a low response bias, offenders' recollections may still have been subject to defensiveness and other self-serving biases. All of the present offenders were incarcerated at the time of the study, and may therefore have been prone to over-estimate negative experiences from the past. Present relational schemas have been noted elsewhere as a potential bias on retrospective accounts of attachment experiences (Baldwin & Fehr, 1995); interview-based measures, such as the Child Attachment Interview (Target, Fonagy, & Schmueli-Goetz, 2003) or the Adult Attachment Interview (George, Kaplan, & Main, 1984), may have been more suitable in this regard. Sexual offenders have also been noted to 'fake good' (Tan & Grace, 2008) and to under-report the extent of their offending (Wood & Riggs, 2009). Even in the present circumstances where self-reported

offending was protected by confidentiality, the present offenders may have been reluctant to provide information about otherwise undisclosed and undetected offenses.

Finally, we are aware of the limitations of conducting multiple analyses without adjusting significance thresholds, but due to the exploratory nature of this study we took note of Rothman's (1990) caution that "scientists should not be so reluctant to explore leads that may turn out to be wrong that they penalize themselves by missing possibly important findings" (p. 43). In this respect the present findings may best be considered as a starting point from which to further explore the role of offenders' attachment problems in the onset of their sexual abuse behaviour.

Implications

The present study provides at least tentative evidence that directly and indirectly implicates offenders' attachment problems in the onset of their sexual abuse behavior. We think examining both distal and proximal associations of attachment problems and sexual offending is a promising research direction, and would argue more broadly that this person-situation interaction approach should be more widely adopted in sexual offending research. The field continues to be dominated by offender-centered approaches, both theoretically and empirically, and it seems clear that more needs to be understood about how individual offense-related vulnerabilities or dispositions are manifest specifically as sexual abuse behavior. Situational approaches should not be positioned as a competing paradigm but rather should be fully integrated with offender-centered approaches, in the longstanding tradition of the person-situation model of human behavior (Mischel, 1968).

This interactional approach may contribute in new ways to prevention efforts. In the present case, our findings suggest that developmental prevention and early intervention models, as well as situational prevention models, may be worth considering. Peri-natal attachment-focused prevention with disadvantaged young mothers has shown considerable

promise for reducing both childhood maltreatment of, and later involvement in delinquency by, the children of these mothers (Olds, 2002). The present findings suggest that strengthening attachment, or remediation of attachment problems, with new fathers may also be important for reducing developmental vulnerabilities associated with sexual offending. The present finding that adult attachment problems were more prevalent than childhood attachment problems suggest that attention also needs to be given to later relationship problems for adolescent and adult males.

Situational prevention may be effected by reducing exposure of developmentally-vulnerable adolescent and adult males to opportunities and precipitating conditions for sexual abuse. This may involve screening and monitoring of employees and others in organizational settings where they may be involved with vulnerable children. Being alert to early signs of emotional over-involvement with children or other interpersonal boundary problems in organizational settings may be important. Domestic settings are by far the most prevalent for sexual abuse, but are also the most difficult to implement situational interventions (Wortley & Smallbone, 2006). Nevertheless parents and guardians may benefit from clear information about the risks to children in their own homes, particularly by casual visitors, new boyfriends, or others who may become involved in routine intimate care-taking duties with children without the protective attachment bond that might otherwise prevent the sexualization of that relationship.

Finally, the present findings add further support to sexual offender treatment models that include efforts to remediate attachment and intimacy problems (e.g., Marshall, Anderson, & Fernandez, 1999). The development of a secure therapeutic relationship may provide otherwise insecurely attached offenders with a safe haven from which to explore and challenge maladaptive relational schemas and behavioral responses (Baker & Beech, 2004; Lyon, Gelso, Fischer, & Silva, 2007; Stirpe et al., 2006). Effectiveness of treatment may be

compromised by offenders' (or indeed therapists') inability to form a strong therapeutic alliance, especially fearful-avoidant clients who tend to have the lowest therapeutic alliance ratings (Eames & Roth, 2000). The findings may also indirectly inform community-based risk management strategies by alerting parole and other authorities to the potential importance both of secure attachment relationships as a protective factor, and of attachment-related problems as a dynamic risk factor, for sexual offending. Further research is needed to discover whether proximal attachment problems are associated with sexual recidivism, as well as with the onset sexual abuse incident as is suggested by the present study.

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Table 1

Test-retest Reliability of Attachment (Pearson r) and Onset Offense Variables (Pearson r and Kappa)

Childhood attachment		
	Maternal	Paternal
Secure	.87	.70
Anxious	.47	-.07
Avoidant	.80	.81
Care	.95	.91
Control	.87	.91
Adult attachment		
	Trait	State
Anxious	.69	.91
Avoidant	.76	.88
Abuse onset		
Offender age	.99	
Victim age	.87	
Victim gender	1.00	

Table 2

Partial Correlations Among Maternal and Paternal Childhood Attachment and Adult Trait and State Attachment Ratings

	Attachment style													
	Maternal					Paternal					Trait		State	
	Secure	Anxious	Avoidant	Care	Control	Secure	Anxious	Avoidant	Care	Control	Avoidant	Anxious	Avoidant	Anxious
Maternal														
Secure	-													
Anxious	-.23*	-												
Avoidant	-.72***	.34***	-											
Care	.41***	-.11	-.42***	-										
Control	-.34***	.15	.24*	-.53***	-									
Paternal														
Secure	.31**	-.05	-.17	.03	-.07	-								
Anxious	.10	.43***	.06	.13	-.07	-.09	-							
Avoidant	-.18	.20	.31**	.12	-.004	-.65***	.23*	-						
Care	-.002	.07	.12	.27**	-.08	.29**	-.12	-.28**	-					
Control	-.01	.13	-.05	-.30**	.50***	-.05	-.02	.18	-.33**	-				
Adult(Trait)														
Avoidant	-.13	.19	.19	-.06	.11	-.25**	.07	.22*	.01	-.07	-			
Anxious	-.06	.11	.10	-.18	.21*	-.17	.16	.23*	-.34***	.17	.31**	-		
Adult(State)														
Avoidant	-.20	.21	.18	-.01	.29*	-.29*	.11	.36**	.01	.06	.76***	.30*	-	
Anxious	-.32*	.08	.16	-.25	.27	-.44***	.14	.25	-.32*	.09	.18	.66***	.29*	-

Note. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Table 3

Mean (SD) Childhood and Adult Attachment Ratings

Childhood Attachment	Maternal	Paternal	95% CI	
			<i>LL</i>	<i>UL</i>
Secure *	4.69 (2.30)	3.84 (2.21)	0.32	1.38
Avoidant	2.95 (2.38)	3.42 (2.38)	-1.03	0.09
Care	19.25 (10.38)	18.10 (9.12)	-1.37	3.67
Control	18.61 (8.11)	18.50 (8.14)	-1.62	1.85
Adult Attachment	Trait	State	<i>LL</i>	<i>UL</i>
Anxious	3.82 (1.33)	3.80 (1.43)	-0.61	-0.06
Avoidant *	3.44 (1.55)	3.77 (1.34)	-0.26	0.30

Note. CI = confidence interval; *LL* = lower limit, *UL* = upper limit; * $p < 0.02$

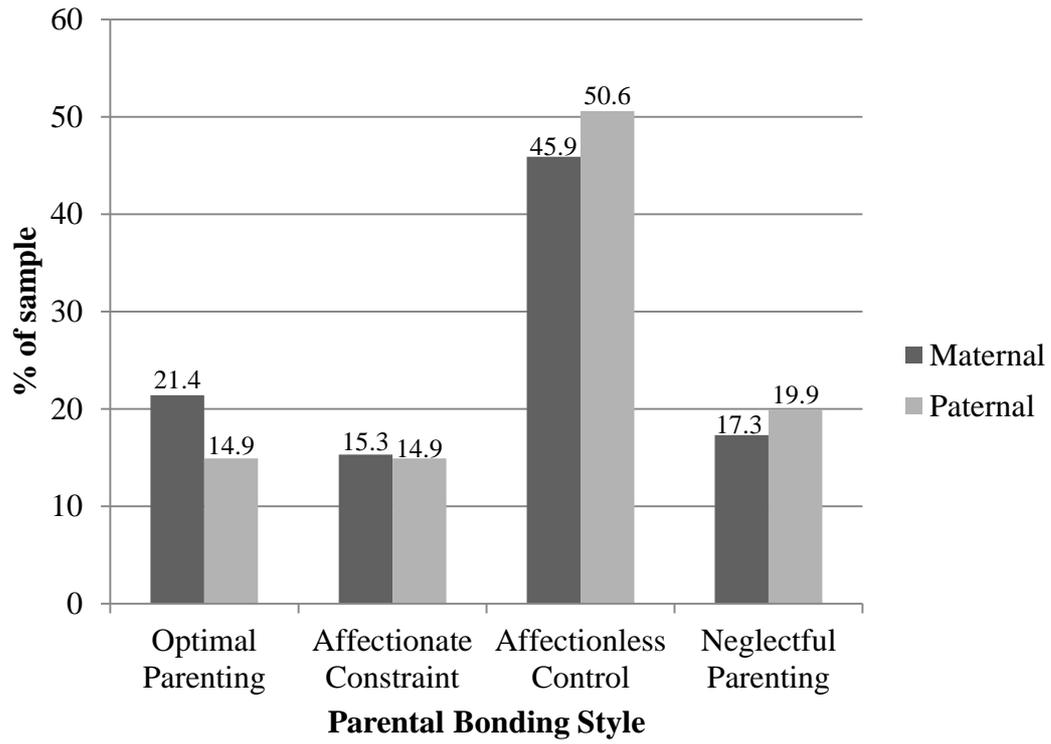


Figure 1. Frequencies of parental bonding styles (%)