

# The Relationship between Attachment and Criminal Psychopathy: A Systematic Review

Theodoros Papagathonikou

Centre for Psychiatry, Queen Mary University of London

## Abstract

**Background:** Psychopathy has been theoretically and clinically associated with pathologies of attachment. Cotemporary research on this theme, however, remains scarce.

**Objectives:** The aim of the present systematic review is to examine the relationship between attachment and criminal psychopathy amongst violent and sexually violent incarcerated offenders and forensic mental health patients.

**Methods:** Relevant databases (Psych Info, PubMed, Sage and Web of Science) were searched from 1980 to March 2019 to identify suitable studies for inclusion. The systemic review was carried out in line with 'Preferred Reporting Items for Systematic Review and Meta-analysis' (PRISMA) guidelines to ensure that bias is avoided and also to allow a rigorous and in-depth examination of the literature.

**Results:** Two studies were included in the review. The studies demonstrate that there is a high prevalence of traumatic childhood experiences, including various types of abuse and neglect amongst criminal psychopaths. It appears that attachment seems to be an important factor in understanding psychopathy.

**Conclusion:** Higher scores on psychopathy appear to be associated with abnormalities of attachment, such as disorganized, insecure-avoidant, and insecure-preoccupied attachment styles. Given the narrowness of the inclusion criteria, only two studies identified for inclusion. Future research should aim to explore further the relationship between attachment and psychopathy.

**Key Words:** Psychopathy- Crime- Attachment- Trauma- Violence-Review

## Introduction

The origins of attachment theory go back to the work of John Bowlby [1, 2, 3, 4, 5] and Mary Ainsworth [8, 7, 9, 10, 6]. Since 1975, there has been considerable amount of research into attachment, as it has been proved a prominent and empirically anchored theoretical framework for the investigation of various forms of psychopathology [9].

As a primary motivational system, attachment reflects the capacity to form emotional bonds with significant others. It refers to a biologically based species-specific motivational system that aims to increase and maintain the proximity between the infant and the primary caregiver, who is usually the mother [2]. Bowlby [2] defined attachment as the 'lasting psychological connectedness between human beings' (p.194). It begins with simple objectless but goal-directed signalling and aversive behaviours, such as smiling, crying or vocalizing, which seek to increase and maintain proximity between the infant and the caretaker; meet child's physiological needs by securing food, warmth and protection [4]; and also promote a feeling of security that facilitates child's exploration of their environment [2].

Bowlby [2] suggested that the foundations of secure attachment can only be understood within the spectrum of mother-infant interaction. During the first weeks of infant's life, the primary caregiver provides a secure environment for them and maintains the proximity seeking behaviour. According to Ainsworth [9], harmonious and attuned responses to the infant's behavioural proclivities lead to establishment of stable patterns of interaction between the mother and the infant.

The early attachment relationships with the primary caregivers are crucial to children's emotional, as well as cognitive development [3]. Those very early experiences with the primary attachment figures are organised into an attachment system which will later form a stable attachment style [3, 2, 7]. The attachment style is a relatively stable pattern that contains all the previous emotional interactions with the primary attachment figure and, therefore, creates a framework that determines how the child will relate to oth-

er people later in adulthood [2, 12]. These early interactions between the infant and the primary attachment figure are internalized by the infant and demarcate their attachment pattern [13, 14, 1, 9]. Bowlby [2] referred to this first internalized interaction between the infant and the mother as *internal working modes (IWMs)*.

Positive interaction with the primary caregivers helps the child to develop a sense of security, namely a "secure base" [2]. The child begins to develop an internalized model of their mother and are able to evoke a memory of her when she is absent. This mnemonic representation ameliorates the overwhelming feelings of fear and anxiety experienced by the infant when the mother is not present. At this stage the child develops a stable, supportive and gratifying internal representation of the mother; the ability to tolerate ambivalent feelings [15, 17] and also a healthy self-concept.

By the same token, research has shown that early relational trauma and severe maltreatment in childhood can lead to pathologies of attachment [16]. Attachment pathologies are severe disturbances in the attachment bond. Abnormalities of attachment can gradually decrease the capacity for attachment and terminate the attachment behaviour [3]. The most significant of these factors are the presence of a threatening stimulus and mother's behaviour; whether she withdraws from or rejects the child.

Abnormalities of attachment have been identified and measured. Ainsworth and her colleagues [9] introduced two dimensions underlying insecure attachment: insecure-avoidant and insecure-preoccupied; Bartholomew [19, 20] proposed four categories of adult attachment: secure, dismissing, preoccupied and fearful; whereas Main and Solomon [21] introduced the disorganised/ disorientated attachment pattern. Bowlby [2, 3] systematized child's relation to the early maternal deprivation into three phases: protest, despair and detachment. Reid Meloy [32] postulated that the child disavows the attachment and develops a sadomasochistic primary attachment when the primary caregiver is perceived as an aggressive figure or when she is physically or emotionally sadistic.

Pathologies of attachment have been associated with the development of violent and antisocial behaviour [20, 21]. Research indicates that individuals who had experienced anxious-avoidant attachments present traits such as impulsivity; aggression; and violent behaviour towards others [19, 24, 25]. Anxious and insecure attachments predicted conduct and borderline personality disorder [56]; as well as sexually coercive behaviours [27, 11]. Furthermore, anxious attachment has been associated with the development of antisocial behaviour [57], affectionless character [1], primary psychopathy [2], sadistic traits [24] and sexual violence [25]. Although the association between attachment abnormalities and various forms of psychopathology and criminal behaviour has been well demonstrated, less is known about the relationship between attachment and the most severe personality disorder, namely psychopathy.

Psychopathy is amongst the most controversial and elusive personality disorders of our time. Since it was first appeared in the psychiatric literature, psychopathy has received abundant theoretical and empirical attention. Despite voluminous research, the understanding of the construct remains relatively opaque, as there appears to be little consensus in relation to the definition; characteristics; and most significantly, the etiology of the disorder [59]. Indeed, the fundamental causes of psychopathic disturbance remain unclear, whereas psychological treatments for psychopathic patients are marked by therapeutic pessimism, as these patients appear intransigent to any therapeutic intervention [58].

Although the term 'psychopath' has gone through various historical misconceptions, psychopathy is generally conceptualized as a deviant developmental disorder characterized by a constellation of interpersonal, affective and lifestyle traits [34]; severe emotional and affective deficits [34, 48]; and an inordinate amount of instrumental aggression [29, 31, 32, 37, 40]. The psychopath is affectively shallow, callous, and lacks the capacity to experience empathy, remorse and guilt. On the interpersonal level, these patients are notorious for their grandiosity and self-centeredness, and they do present a tendency to con and manipulate the others.

The aforementioned interpersonal and affective deficits

are often, but not necessarily, combined with a socially deviant lifestyle that can lead to severe forms of criminal and antisocial behaviour [32, 33]. Empirical studies have shown that criminal psychopathy is associated with predatory violence [32, 36]; sexual offending and sexual homicides [35, 38]; emotional detachment from the suffering of the others [39, 41]; intimate partner aggression [60]; stalking [61]; as well as non-sexual violence [31].

Apropos of the etiology of psychopaths' criminal behaviour research literature is mired in controversy. Previous attempts to understand psychopaths' proneness to crime focused on the influence of genetic predisposition and temperamental traits. Neurobiological models of psychopathy suggest that physiological anomalies in the limbic system predispose psychopaths to more instrumental modes of violence [47, 44, 46, 33, 48]. More recently, however, research focus has started to shift from brain abnormalities to the impact of the early socio-environmental factors upon adult personality development in psychopathic individuals.

Over the last few decades, there has been a significant number of theories associating the development of psychopathy to pathologies of attachment during the early childhood [4, 49, 41, 32, 62]. Bowlby [1] was the first who suggested that pathologies of attachment in early childhood could aetiologically explain the development of psychopathy. He suggested that prolonged separation from the mother and constant maternal rejection can lead to the development of what he described as 'affectionless psychopathy'. In his seminal paper 'Forty-Four Juvenile Thieves' [1], he found that children who suffered maternal deprivation tend to present severe deficiencies in their affective faculty and became 'affectionless characters'.

Most salient to psychopathic personality is the chronic emotional detachment from the suffering of the others [32, 37] as psychopaths do not present any relational capacity to bond with other people [53, 51, 52, 34,]. Following Bowlby's rhetoric, several authors hypothesized that psychopaths' chronic emotional detachment is rooted in early traumatic childhood experiences of abuse, deprivation and neglect [3, 49, 41, 32, 62]. These traumatic experiences have been the-

oretically and clinically associated with the development of antisocial behaviour [57], affectionless psychopathy [1], and primary psychopathy [32, 63].

Chronic emotional detachment in psychopathy is also reflected in the gold standard instrument for the assessment of psychopathy, namely the Psychopathy Checklist Revised [PCL-R; 34]. Schimmenti et al. [64] argued that item 11 (“promiscuous sexual behaviour”) and item 17 (“many sort term marital relationships”) can be considered as indicators of “devaluation of attachment bonds” (DAB). Indeed, human violence occurs within an attachment bond [65]. It is further argued that item 2 ‘Grandiose sense of self-worth’, a core trait in psychopathy, prevents the formation of any attachment bond as it demands “a scornful and detached devaluation of others” [Gacono et al., 1992, as cited in 65, p.78].

The theoretically proposed and clinically observed chronic emotional detachment in psychopaths raises an important question: if the psychopath is so emotionally detached from the others, why do they engage in such destructive forms of violence? Empirical research has shown that psychopaths are more sadistic comparing to non-psychopaths [54, 43, 36] Furthermore, psychopaths appear to engage in more heinous crimes, including severe forms of torture prior to the murder of the victim [53]. The aforementioned theoretical and clinical considerations suggest that the relationship between attachment and criminal psychopathy needs to be explored more scholastically. The aim of this review is to systematically examine the existing empirical studies that explored the relationship between criminal psychopathy and attachment. To our knowledge, the literature relevant to the association between attachment and criminal psychopathy has not been systematically reviewed to date.

## Methods

### Objectives

The current systemic review was carried out in line with ‘Preferred Reporting Items for Systematic Review and Meta-analysis’ (PRISMA) guidelines. The guidelines set by PRISMA ensure that bias is avoided and also allow a rigorous and

in-depth examination of the literature. As was mentioned in the introduction, the literature was systematically reviewed to examine the relationship between attachment and criminal psychopathy.

### Information sources and search

This review systematically examines all English-language studies that address the research question directly, namely the relationship between attachment and criminal psychopathy. The databases Psych Info, PubMed, Sage, and Web of Science were searched combining the following words: a) psychopathy/psychopathic traits and attachment b) psychopathy/psychopathic traits and attachment styles c) psychopathy/psychopathic traits and attachment orientation d) psychopathy/psychopathic traits and attachment abnormalities e) psychopathy/psychopathic traits and attachment pathologies. The search was limited to peer review articles including either qualitative or quantitative studies written in English language.

### Eligibility Criteria

The articles were reviewed according to the following inclusion criteria:

- ▶ Original published studies written in English.
- ▶ Studies focussed on violent and/or sexually violent participants housed either in a prison or in forensic psychiatric hospitals.
- ▶ Studies in which psychopathy was assessed by the Psychopathy Checklist Revised (PCL-R) and/or Psychopathy Checklist Screening Version (PCL:SV).
- ▶ Studies included a valid measure of attachment.
- ▶ Studies that included a comparison group of non-psychopathic participants.

The aforementioned combination appeared in the title, abstract or the keywords of the paper. The search was strictly limited to peer review journals and yielded 309 references; 177 citations from PubMed; 3 citations from SAGE; 22

citations from PsychInfo; and 107 citations from Web of Science. All the aforementioned databases were searched from 1980, which was the date the PCL-R was created, to March 2019. After removing the duplicates and non-relevant papers this resulted in 80 articles. The author decided to exclude studies carried out in children and adolescents due to their ongoing personality development.

### Relevant Studies

The 80 potentially relevant studies were reviewed for inclusion in line with the selection criteria. These studies were reviewed in order to ensure that include violent and sexually violent psychopaths housed either in a prison or in a secure forensic mental health hospital. From the total of 80 studies, the following were excluded: 33 studies including community samples and other non-incarcerated individuals (i.e. students); 9 review papers; 13 studies in which the participants were not adults; 7 single case studies; and 7 duplicates which were removed by hand. Next, the 11 remaining studies which included either violent or sexually violent adult psychopaths were examined: 8 studies did not use any valid measure of attachment; in one study the diagnosis of psychopathy was not based on the PCL-R.

### Included Studies

Two studies were identified for inclusion. The first study that explored the relationship between attachment and criminal psychopathy was conducted by Frodi et al. (2001) who examined the mental representations of the early attachment relationships in 24 incarcerated violent psychopaths who were housed in prisons and secure forensic psychiatric settings in Sweden. Psychopathy was assessed by the Psychopathy Checklist Revised (PCL-R), whereas attachment relationships were measured through the gold standard Adult Attachment Interview (AAI).

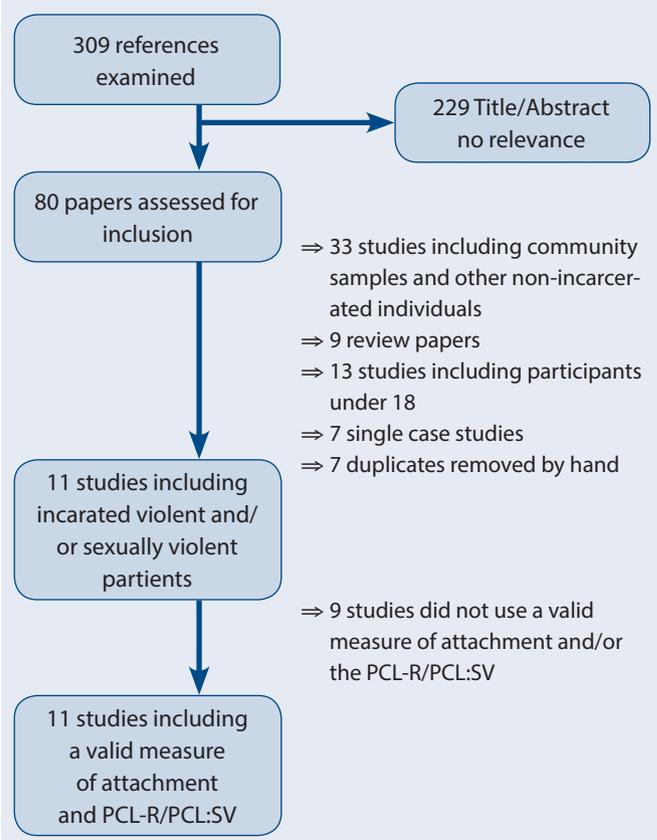
Further to the AAI, the participants completed the EMBU, a Swedish self-report questionnaire that assesses memories of the relationship with the parents. Attachment scores, as measured by the AAI and EMBU, of participants who scored

high on the PCL-R were compared with those who had lower psychopathy scores.

The second study that explored the relationship between attachment orientations and criminal psychopathy was carried out by Schimmenti et al. [64]. Through the means of a mixed methods study the authors examined the attachment representations in a sample of 139 incarcerated Italian offenders. Similar to the abovementioned study, psychopathy was measured by the Psychopathy Checklist Revised (PCL-R).

First, Schimmenti et al. [64] tested whether the PCL-R items 11 “promiscuous sexual behavior” and item 17 “Many short-term marital relationships”, which theoretically denote devaluation of attachment bonds (DAB), could predict PCL-R

Figure 1: Flowchart of article search



total, as well as factor and facet scores. Next, Schimmenti et al. [64] examined the interview transcripts of the 10 participants who obtained the highest scores on the PCL to explore the excerpts that reflected attachment topics. The attachment excerpts were qualitatively analyzed following the rules of two validated attachment measures: the Adult Attachment Interview [AAI; 66] and the Attachment Style Interview [ASI; 67]. The results showed that the PCL-R items that reflect DAB were able to predict PCL total.

*Plan of analysis*

The two studies included in the present systematic literature review investigated the relationship between attachment and criminal psychopathy in a sample of violent forensic mental health patients and incarcerated offenders. The research variables of the two included studies were examined to test the relationship between attachment orientations and criminal psychopathy. The identified research variables

**Table 2: Summary of study findings**

Author and Year	Aim(s)	Methods	Sample	Findings
Frodi et al. (2003)	Whether the AAI can be used with incarcerated psychopaths who present different degrees of psychopathy	Psychopathy assessment: <i>Psychopathy Checklist Revised: Screening version (PCL:SV)</i>  Assessment of attachment: <i>Adult Attachment Interview (AAI)</i>  <i>EMBU questionnaire</i>	14 violent psychopathic criminal offenders housed in a forensic psychiatric hospital (2) and/or a medium-security prison(12)	Incarcerated psychopaths are associated with a higher incidence of violent crime; more foster home placements; physical abuse experienced in childhood; and attachment abnormalities when compared to those with lower psychopathy score
	Determine whether early environmental failures, such as early traumatic experiences, institutionalization, separation and abuse can predict higher scores on psychopathy			
	Find out whether the incarcerated violent psychopaths are characterized by an abnormality of attachment which is related to their early traumatic experiences.			
Schimmenti et al. (2015)	To explore whether the two PCL-R items that theoretically denote devaluation of attachment bonds were able to predict PCL-R total, factor and facet scores Assess the relationship between psychopathy and attachment in those 10 participants who obtained the highest psychopathy score.	Psychopathy assessment: <i>Psychopathy Checklist- Revised (PCL-R)</i>  Attachment assessment: PCL-R excerpts that reflect attachment issues were analyzed through the means of Adult Attachment Interview (AAI) and Attachment Style Interview (ASI)	139 violent incarcerated inmates housed in prisons (104) and/or forensic psychiatric hospitals (35)	<ul style="list-style-type: none"> <li>▶ DAB items significantly predicted PCL-R total scores.</li> <li>▶ Higher scores on PCL-R were associated with very high scores on DAB items</li> <li>▶ Participants who scored high on the PCL-R classified as having insecure attachments Higher psychopathy scores were associated with early childhood trauma and abuse</li> </ul>

were subsequently organized in two major themes, which have been associated at a theoretical and a clinical level; adverse childhood experiences and attachment pathologies. As was mentioned in the introduction, research has proposed that early relational trauma and severe maltreatment in childhood are associated with abnormalities in the attachment bond [18].

## Results

Both studies examined in the present systematic review indicate that attachment abnormalities in violent psychopaths are associated with higher scores on the PCL-R/PCL:SV [64, 68]. The two studies suggest that there was a high prevalence of traumatic childhood experiences, including abuse and neglect amongst violent psychopathic offenders. A summary of the results of the studies can be found in Table 2.

### *Adverse childhood experiences*

In both studies criminal psychopaths experienced more traumatic experiences comparing to non-psychopaths who have been convicted for similar offences. Frodi et al. [68] found that higher psychopathy scores were particularly associated with physical abuse and maltreatment in childhood, as well as more foster home placements. They found that criminal psychopaths experienced physical abuse more often comparing to the non-psychopathic criminals. Moreover, Frodi et al. [68] showed that a higher incidence of maltreatment and physical abuse in childhood was further associated with higher psychopathic scores.

This finding was confirmed by Schimmenti et al. [64] who also found that most of the participants experienced early relational trauma; physical and/or sexual abuse; loss of a parent; and spent more than one year in foster care. It was found that seven out of ten participants suffered severe emotional trauma (Schimmenti et al. [64]). Moreover, most of the psychopathic offenders experienced parental neglect at early childhood in both studies.

According to Frodi et al. (2001) there appears to be an association between higher psychopathic scores, the type of crime, as well as, the number of convictions. The authors suggest that higher psychopathic scores are associated with more violent crimes and a higher number on convictions. This finding is also supported by Schimmenti et al. (2014) who found that higher scores on the PCL-R are associated with more violent type of crimes.

Further to early relational trauma and severe maltreatment during childhood, there appears to be a connection between early childhood institutionalization and the development of criminal psychopathy. Frodi et al. [64] compared 14 violent offenders who diagnosed with severe psychopathy (PCL: SV >16) with those who diagnosed with low psychopathy (PCL:SV<12). The study findings suggest that criminal psychopaths appear to have more institutionalizations comparing to their inmates/ forensic patients who had been convicted for the same offences. The study carried out by Schimmenti et al [64] confirmed Frodi's et al. [68] finding indicating that 7 out of 10 psychopathic participants lived in residential care for more than a year.

### *Attachment Abnormalities*

No participant found to be securely attached in Schimmenti's et al. [64] study, whereas there was only one securely attached in Frodi's et al. [68] study. This participant, however, had experienced a very traumatic loss as his father died when he was at a very young age. In Fordi's et al. [64] study no association was reported between the AAI classifications and the degree of psychopathy, as the classifications were nearly identical between participants who scored high and low on the PCL:SV.

When conducted the AAI using the three main classifications, Frodi et al. [68] found that 64% (n=9) of the participants presented a dismissing attachment pattern (D); a pattern characterized by derogation of attachment-figures, tendency to idealize the parents and lack of childhood memories. Seven percent of the participants (n=1) displayed autonomous attachment style (F). Individuals who

present this attachment style usually value the attachment relationships; maintain good memories of their childhood and they are characterized by truthfulness. Four participants (29%) presented preoccupied attachment orientation (E), an orientation associated with lengthy narratives and preoccupation with childhood attachment experiences. As aforementioned, there was only one secure patient, who, however, suffered severe trauma in his early childhood. The participant appeared to value attachment relationships and was subsequently classified in U/d category of the AAI (“unresolved with respect to trauma/abuse or loss”).

Nevertheless, no secure individual was found when the categories CC (“cannot classify”) and U/d (“unresolved with respect to trauma/abuse or loss”) were used. Out of the 14 patients, 64% were presented Ds; 36% CC or U/d. As Frodi et al. [68] point out: “close to two-thirds of our participants were characterized by an inability to see the value of attachment figures and attachment –related experiences” (p. 275).

Very similar results were found by Schimmenti et al. [64] in a considerably larger sample. First, it was found that PCL-R’s DAB items (namely item 11 and item 17) were intercorrelated. Furthermore, the sum of DAB items predicted PCL-R total score; as well as the PLC-R affective, interpersonal and social deviance factors. The two items, however, presented different associations with the PCL-R scales. Although both of them predicted PCL-R total score as well as Social Deviance and Antisocial facet scores, only item 11 predicted the Interpersonal and Affective facet. Interestingly, the sum of DAB items predicted high scores on psychopathy (PCL-R>30). Further, the 10 highest PCL-R scores, presented also very high scores on the DAB items. Similar to Frodi’s et al. [68] findings, Schimmenti et al. [64] did not find any secure attachments between the participants, when used AAI and ASI criteria. They did, however, identify dual and/or disorganized attachment styles among the participants, including both anxious-preoccupied, as well as avoidant, dismissing styles.

In both studies the researchers found that most of the participants suffered from mild to severe forms of early relational trauma, including negative care childhood ex-

periences; physical, sexual, and/or emotional abuse; loss; parental neglect and parental humiliation. There appears to be, therefore, an association between early traumatic childhood experiences and insecure attachment styles.

## Discussion

As early as 1944, Bowlby suggested that early childhood trauma can cause pathologies of attachment that lead to development of affectionless psychopathy. Since 1944, however, research on psychopathy and attachment has remained considerably scarce. Considering the scarcity of research, the aim of the current review was to explore the relationship between psychopathy and attachment. The findings of the two included studies provide further evidence to the theoretically proposed, and clinically observed relationship between psychopathy and attachment abnormalities. Both studies showed that insecure and disorganized attachment styles were able to predict psychopathy amongst violent and/or sexually violent participants. Indeed, higher PCL-R scores were associated with severe attachment abnormalities and more violent offences. Interestingly, no secure participant identified in the two studies. This can lead us to a hypothesis on whether psychopathy and secure attachment are mutually exclusive.

Collectively, study findings seem to suggest that criminal psychopaths cannot form secure attachments with the other human beings. The two included studies also examined the personal history of participants and found that higher psychopathy scores are associated with more institutionalizations and violent crimes, as well as more severe physical abuse comparing to the non-psychopaths. It is possible that negative care childhood experiences, along with inherited temperamental traits [53], significantly affect psychopaths’ ability to form emotional attachments with the other people.

It is noted, however, that the findings of this review are incongruent with the misleading picture of the psychopath who is portrayed as a monstrous criminal, as well as someone who cannot experience vulnerability and pain. In contrast to common belief the included studies suggest that

psychopaths experienced emotional pain and vulnerability earlier in their life. In addition to the two included studies, several researchers have proposed that psychopathy is a result of early childhood aversive experiences [63, 41, 32, 62]. Although, our current understanding regarding the relationship between psychopathy and trauma is mostly based on single case studies; a small body of research confirms the existence of a positive link between aversive experiences and psychopathy [69, 42; 70, 71].

Similar to the above-mentioned studies, the review indicates that early traumatic childhood experiences are important in predicting attachment abnormalities; violent types of crime; and higher psychopathy scores. The vast majority of the participants experienced severe early relationship trauma, including abuse, parental neglect and lived in foster homes during their early childhood. The analyses of both studies support Bowlby's early findings that aversive childhood experiences can potentially lead to a pathology of attachment, namely to "affectionless psychopathy". The study findings, however, suggest that pathology of attachment can be considered as an aetiological factor that contribute to the development of the psychopathic personality. A better understanding of the early developmental antecedents that contribute to the development of criminal psychopathy can potentially lead to the development of more effective psychotherapeutic treatments for psychopathy. Given the scarcity of research with regards to the association between attachment and criminal psychopathy, further research is required in order to allow us to draw more certain conclusions about the relationship between them.

## Conclusion

The focus of this review was to explore the relationship between attachment and criminal psychopathy amongst violent psychopaths. The two studies identified for inclusion show that higher psychopathy scores are associated with abnormalities of attachment, such as disorganized, insecure-avoidant, and insecure-preoccupied. The included studies further suggest that psychopathic inmates experienced higher incidence of violent crime; more foster home

placements; physical abuse in childhood; and attachment abnormalities when compared to non-psychopaths.

This review, however, is not without limitations. Due to the narrowness of the inclusion criteria, only two studies were identified for inclusion. This, of course, does not allow the generalization of the findings and prevent us for drawing certain conclusions. By the same token, the two studies showed that attachment is a very important factor in understanding psychopathy; the contribution of this factor, however, needs to be explored further.

## Excluded Studies

A list of excluded studies is obtainable from the author at request.

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