

The Relationship between Attachment and Psychopathy:
A Study with a Sample of Violent Offenders

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ABSTRACT

This study used a mixed quantitative-qualitative methodology to investigate the relationship between attachment and psychopathy. The Psychopathy Checklist-Revised (PCL-R; Hare, 2003) was administered to 139 Italian offenders who were convicted of violent crimes (murder, rape, child sexual abuse, armed robbery, assault causing bodily harm). First, we explored whether the two PCL-R items theoretically denoting devaluation of attachment bonds (promiscuous sexual behavior and many marital relationships) were able to predict PCL-R total, factor and facet scores. Subsequently, we analyzed the transcripts of the 10 participants who obtained the highest PCL-R scores in the sample, assessing their childhood experiences and their current attachment representations and attachment styles. Results of the analyses showed that the PCL-R items denoting devaluation of attachment bonds were able to predict the PCL-R scores; moreover, most of the participants who obtained the highest PCL-R scores also reported severe abuse during their childhood and showed indicators of disorganized attachment. Findings of the study suggest that the exploration of past and current attachment relationships can be crucial for the understanding of violent behavior.

Keywords: Psychopathy, Attachment, Child abuse, Criminal behavior, Mixed-method

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Introduction

Attachment refers to the human ability to form bonds of affection and love toward significant others. Attachment is considered a motivational system that plays a significant role in every life stage. Infants need to maintain proximity with their caregivers in order to be protected from threat and danger (Bowlby 1969/82): in fact, on the evolutionary level the “safe haven” role of the caregivers can increase the chance of survival. Later on, the child’s interactions with his or her caregivers will determine whether or not the child will develop a sense of security: the “secure base” deriving from positive interactions with caregivers helps the child to develop integrated mental states and behaviors, creating a positive template for future interactions in the social world (Schimmenti and Bifulco 2013). Indeed, secure attachment bonds help the immature brains of children in organizing mental processes and behavioral states through the use of social biofeedback from parents (Gergely and Watson 1996). In adolescence and adulthood, secure attachment leads individuals to seek a safe haven and a secure base in close and intimate relationships; it combines together with other motivational systems (especially the motivational systems related to caregiving, sexuality and cooperation) for generating romantic attachments: this can be considered a part of the biological endowment of our species, which allows it to persist over time (Diamond and Marrone 2003).

Classical depictions of attachment styles include three major classifications: secure attachment, anxious attachment and avoidant attachment (Ainsworth et al. 1978; Bifulco and Thomas 2012). As adults, those who are securely attached tend to enjoy intimate and close relationships; they are also able to share feelings with others and to seek social support in case of necessity. On the contrary, those showing anxious attachment have a high desire for closeness and intimacy, but they are often ambivalent about their desire because they worry that people will not

reciprocate their feelings; on the opposite side, those with avoidant attachment are usually not interested in close relationships and they are unwilling or unable to share thoughts and feelings with others (Bartholomew and Horowitz 1991; Feeney and Noller 1991; Pace and Zappulla 2010; Schimmenti and Bifulco, 2013). Some individuals who were exposed to interpersonal abuse in childhood may also show disorganized or dual attachment, i.e. they could present unresolved trauma and/or the conflicting characteristics of both anxious and avoidant attachment together with an inconsistent pattern of responses to attachment-related stimuli (Bifulco and Thomas 2012; Di Carlo et al. 2011; Main 1991; Schimmenti et al. 2012).

Psychopathy is a well-known personality disorder in the psychological and criminological fields. It is characterized by a cluster of interpersonal, affective, lifestyle and antisocial features, including egocentricity, grandiosity, deceptiveness, shallow emotions, lack of empathy, guilt, or remorse, impulsivity, irresponsibility, and the ready violation of social and legal norms and expectations (Hare 1998, 2003). Psychopathy has been demonstrated to be strictly related to both violent crimes and recidivism (Rice and Harris 1992).

On a theoretical level, an important aspect of psychopathy concerns the inability to form and maintain strong relational bonds, as observed in early psychological and sociological studies on this construct (e.g., Cleckley 1976; Greenwald 1974; Henderson 1939; McCord and McCord 1964). Several authors—mostly from the psychoanalytic tradition—have suggested that the psychopath's inability to form strong attachment bonds derives from childhood experiences of neglect, abuse, deprivation, and inconsistent discipline (Akhtar 1992; Bird 2001); other authors have instead emphasized the role played by genetic and temperamental influences in psychopathy—for instance, the presence of callous-unemotional traits since childhood (Frick 2002). While the causal role of childhood trauma in predisposing individuals to criminal behaviour has been demonstrated (e.g. Maxfield and Widom 1996), the link between attachment experiences and psychopathy remains controversial (DiLalla and Gottesman 1991).

The incapability of psychopaths to form attachment bonds is reflected in at least two items of

the Psychopathy Checklist-Revised (PCL-R; Hare 2003), the most used clinician-report measure for the assessment of psychopathy. These PCL-R items are: “Item 11. Promiscuous sexual behavior” and “Item 17. Many short-term marital relationships”. Interestingly, these two items were not included in the two factor-four facets structure of the PCL-R, as they did not load to any of its facets. This was in line with previous findings on PCL-R factor structure: several studies showed that these items load differently across samples, thus generating inconsistent schemes of associations with respect to PCL-R facets (e.g., Hare 1991; Cooke and Michie 2001); nonetheless, item response theory analyses demonstrated that these items are informative and discriminating for the construct of psychopathy (e.g. Hare 1991, 2003). Thus we might postulate theoretically that these items address another important facet of psychopathy, since they could be considered typical indicators of “devaluation of attachment bonds” (DAB). In fact, while there are other items in the PCL-R that likely relates to adult attachment problems (e.g. “Item 8. Callous/Lack of empathy”), the two DAB items reflect a socio-emotional detachment as observed in a crucial evolutionary dimension, i.e. the sexual behaviors (Hare 1998). In the Darwinian evolutionary theory (Darwin 1859), behavioral traits survive within a population if they have individual or collective survival value with regard to the surrounding environments. This applies also to sexual behaviors: human males and females have evolved different, yet complementary mating strategies to guarantee the reproduction of the specie (Duntley and Shackelford 2008). Every father and mother knows that childrearing requires a lot of material, emotional, and financial efforts, and this might conflict with the male’s reduced biological effort in the reproduction of his genes, which requires only sexual intercourse. Eventually, a male’s mating strategy for reproduction could be having sex with as many females as possible, but this will dramatically reduce the chance of survival in children: it should be noted that for most of human history, a mateless female might be unable to provide for her own material needs, even less for a baby she is carrying or children she is raising. Thus a male mate who is able and willing to provide resources for his family could literally be a matter of life and death for the woman and the baby (Miller 2013). Nature helps resolve this problem through the attachment

system. In fact, across human cultures, sexual behavior is consistently associated with pair bonding, although sex is neither necessary nor sufficient for human pair bond formation (Fisher 1992). Attachment, of course, is not a thing but a process that is biologically manifested by different behaviors depending on the external (e.g., social) or internal (e.g., endocrine) context (Insel 1997). Concerning pair bond formation and the subsequent romantic attachment, even these dimensions involve mates' seeking proximity and a response to separation, with sexuality playing a relevant role in the process. In fact, neurobiological research shows that two neuropeptides, vasopressin and oxytocin, are implicated in the central mediation of attachment: these neuropeptides are released into plasma during human sexual behavior during the arousal and the resolution phases (Murphy et al. 1987), and one might speculate that the coordinated release of these neuropeptides into specific neural pathways during sexual intercourse facilitates the formation of a pair bond (Insel 1997; Macdonald 2013).

Therefore, the impersonal sexual behavior and the indiscriminate mating strategies of psychopaths could reflect an inability to form romantic relationships and a devaluation of attachment bonds, which may constitute a core aspect in the psychopathic personality. In fact, on a strictly clinical level, detachment is considered a crucial psychological domain which should be taken into account for diagnosing the psychopathic variant of the Antisocial Personality Disorder in the DSM-5 (American Psychiatric Association 2013). Moreover, the very origin of attachment theory (Bowlby 1944, 1963/82) and the recent advances in affective neuroscience research (Schoore 2003) suggest that the devaluation of attachment bonds derives from childhood interpersonal trauma and its effect on the attachment system. In the light of the aforementioned considerations, we conducted a mixed quantitative-qualitative study to explore the role of the attachment system in the development of psychopathic personalities.

Method

Participants

Participants were 139 Caucasian inmates (83% males, $n=116$) ages 20 to 71 ($M=43.0$; $SD=$

11.1) who were convicted of violent crimes (murder, rape, child sexual abuse, armed robbery, assault causing bodily harm). They were recruited from Italian prisons (75%, n=104) and forensic psychiatric units (25%, n=35). Gender was similarly distributed across the two groups: 75% (87) among those in prisons were males; similarly, 83% (29) among those in forensic psychiatric units were males ($\chi^2_{(1)}=.01, p=.91, ns$). Most of the participants were not married (82%, n=114) and had a low level of education (74%, n=103, with 8 years or less of education). Participants were recruited for a comprehensive research programme commissioned by the Italian Ministry of Justice and aimed at the evaluation of psychopathic traits among Italian violent offenders (Caretto et al. 2011a).

Procedure

Sixteen researchers were involved in this national research programme and supplied ratings for this study: they were fully trained in the administration and scoring of the PCL-R and had taken Hare's accredited training course. All participants were introduced to the purpose of the study, and it was explained that data would be recorded according to a strict procedure to guarantee confidentiality. They had to sign an informed consent prior to undertaking the study; additionally they were told that they would not receive any legal or material benefit for their voluntary participation in the study. Interviews took place individually in the room where prison educators usually interview the inmates. For security reasons, a police officer was ready to appear in case of necessity.

The study was conducted between June 2008 and June 2011: it was ethically cleared by the Italian Ministry of Justice and by the prison's internal ethics committee.

Measures

The *Psychopathy Checklist-Revised* (PCL-R; Hare 2003) was used to assess the psychopathic traits among the offenders. The PCL-R is a rating scale that uses a semistructured interview, case history information, collateral information, and predetermined scoring criteria to rate 20 items on a 3-point scale, according to the extent they apply to a given individual. Eighteen of the items form four dimensions: Interpersonal (e.g. grandiose sense of self worth); Affective (e.g. lack of remorse

or guilt); Lifestyle (e.g. irresponsibility); and Antisocial (e.g. juvenile delinquency). The Interpersonal/Affective dimensions and the Lifestyle/Antisocial dimensions comprise, respectively, the higher-order PCL-R Factors 1 and 2. The remaining two items (i.e. “Item 11. Promiscuous sexual behavior”; “Item 17. Many short-term marital relationships”), which we postulated theoretically as indicating a devaluation of attachment bonds, do not load on any facet but contribute to the total PCL-R score. Total PCL-R scores can vary from 0 to 40, reflecting the degree to which the individual matches the prototypical psychopath. In the present study, participants were administered the entire PCL-R interview format recommended by Hare (2003), and detailed collateral information (e.g. criminal records, psychiatric records, prison records) were available; interviews were audio-recorded and lasted from less than 1 hour to more than 5 hours, depending on the participants’ style of communication. Cronbach’s alpha was .85 for the PCL-R full scale (Factor 1=.82; Factor 2=.79; Interpersonal=.79; Affective=.78; Lifestyle=.74; Antisocial=.74); moreover, the first author of this study rated 34 random cases (25%) blind to PCL-R scores supplied by other researchers to test inter-rater reliability, obtaining an average intraclass coefficient correlation (ICC) of .98 for the PCL-R total score, with ICC ranging from .89 (Affective) to .98 (Antisocial) for factors and facets, and a mean Cohen’s k for individual items of .85 ($SD=.10$).

Furthermore, since the PCL-R interview entails several questions reflecting important attachment issues (e.g. “What was your relationship like with your parents?”; “Were you ever physically, sexually, or emotionally abused?”; “Have you ever felt deeply in love with anyone?”), the interview transcripts of the 10 participants who obtained the highest scores on the measure were analyzed in order to select the excerpts where attachment topics were discussed. Subsequently, these excerpts were qualitatively analyzed following two classical rules applied to adult attachment research with semi-structured interviews: (1) the analysis of states of mind regarding attachment, based on the individual’s narratives about parental behavior and concordance with Grice’s maxims (1975), as in the psychodynamic tradition of the *Adult Attachment Interview* (AAI; Main et al. 1985); and (2) the analysis of attachment styles based on behavioral attachment attitudes and the

ability to make and maintain close relationships, as in the psychosocial tradition of the *Attachment Style Interview* (ASI; Bifulco et al. 2002). These two clinician-rated measures of adult attachment can be considered complementary, since the first investigates the attachment representations, whereas the latter investigates the attachment styles.

Specifically, in the AAI the coherence of the transcript is assumed to reflect the coherence of mind with respect to attachment representations. Coherent discourse is based on what the linguistic philosopher Grice (1975) called the 'Cooperative Principle', based on four maxims, namely (a) Quality (be truthful and have evidence for what you say); (b) Quantity (be succinct, yet complete); (c) Relevance (be relevant with respect to the topic of the discourse); (d) Manner (be clear, brief and orderly). In the AAI, people with insecure attachment representations show incoherent discourses when discussing their relationships with attachment figures during childhood, while disorganized speech, lapses in the monitoring of discourse and failures in reasoning when discussing experiences of loss or abuse testifies to attachment disorganization (Di Carlo et al. 2011; Main 1991). Specifically, the analysis of transcripts allows the scoring of five scales of inferred experiences with parents during childhood (i.e. loving, rejecting, involving/role reversal, neglect, pressuring to achieve), and the interviewee's way of discussing these experiences allows the scoring of scales for states of mind (idealization, lack of recall, dismissing derogation, fear of loss, involving/preoccupying anger, passivity of discourse, unresolved loss, unresolved abuse, coherence of transcript, metacognitive monitoring, overall coherence of mind), on the basis of the concordance with Grice's maxims. Through these scales it is possible to categorize individuals into four categories with respect to attachment representations: F (Free/Autonomous) individuals show a coherent, internally consistent, non-defensive discourse, and they value attachment relationships describing them in a balanced way and as influential; Ds (Dismissing) individuals show defensive discourse, can openly devalue the attachment relationships, and often violate the maxims of quality and quantity, being too succinct in their answers and offering contradicted or unsupported positive descriptions of attachment relationships; E (Preoccupied) individuals experience continuing

preoccupation with their own parents in the present, which is reflected in incoherent, often lengthy and irrelevant sentences where all of Grice's maxims are usually violated; U/D

(Unresolved/Disorganised) category can be applied in addition to any of the organized categories described above, when the individual shows severe lapses in the monitoring of discourse resulting from unresolved loss or abuse. Moreover, a CC (Cannot Classify) category is applied when the analysis of the transcript shows competitive internal working models of attachment, and when a very uncommon mix of dismissing and preoccupied strategies that produces highly incoherent discourse is observed (Schimmenti et al., 2012).

In the ASI, overall adult attachment style is assessed by seven attitudinal scales related to general aspects of insecure attachment (mistrust), specific facets of avoidant attachment (attitudinal constraints on closeness; high self-reliance; dismissing anger) and specific facets of anxious attachment (fear of rejection, fear of separation, high desire for engagement with others); moreover, when an insecure attachment is observed, the ASI allows to assess the degree of insecurity of attachment ('marked', 'moderate' or 'mild' levels), based on the individual's ability to make and maintain close relationships. The styles reflected included Secure, Anxious (enmeshed or fearful) or Avoidant (angry-dismissive or withdrawn); thus insecure attachment styles (i.e. the Avoidant style and the Anxious style) are rated in contrast to Secure style. Also, a Dual/Disorganised classification of attachment style is applied when the individual's answers show conflicting attachment attitudes that indicate a severe instability or a quick succession in the organization of attachment styles, e.g. these individuals may show during the same interview high fear of separation and high dismissing anger (Bifulco et al. 2002; Bifulco and Thomas 2012).

Data analysis

Quantitative analysis was performed examining the associations between the two PCL-R "devaluation of attachment bonds" (DAB) items ("Item 11. Promiscuous sexual behavior" and "Item 17. Many short-term marital relationships") and PCL-R total score (with DAB item removed), as well as its factors and facet scores. Also, a logistic regression analysis was performed

to check whether the two lack of attachment items significantly predicted the classification of participants into the psychopathic ($PCL-R \geq 30$) versus non-psychopathic ($PCL-R < 30$) groups.

Qualitative analysis was performed on excerpts of transcripts of the 10 participants who resulted in the highest PCL-R scores. For each transcript, the excerpts concerning attachment issues were selected independently by two of the authors (AS and VC), with consensus team checks for reliability blind to PCL-R scores of the participants. By means of these excerpts, it was possible to individuate the developmental adversities experienced by these participants. Moreover, two of the authors (AS and GDC) independently analyzed these excerpts according to the established criteria for scoring the AAI states of mind regarding attachment (on 1 to 9 scales, consistent with the procedure for AAI scoring) and the ASI attachment styles (on 1 to 4 scales, consistent with the procedure for ASI scoring), applying the AAI and ASI scales where appropriate. Satisfactory ICC between the two raters was obtained for all the scales (from .70 to .95); also, disagreements between the two raters were always in the range of ± 3 for the AAI scales and ± 1 for the ASI scales, and there was only a case in which the differences in ratings generated two different AAI classifications (this concerned scores on the AAI scale about unresolved loss in the fifth case presented in Table 2; the disagreement was quickly resolved after one of the raters specified to the other the excerpt of the transcript qualifying that case as unresolved/disorganised).

Results

PCL-R scores were normally distributed in the sample (no significant skewness or kurtosis). The PCL-R average score was 21.69 ($SD=8.18$); Factor 1 mean score was 10.09 ($SD=4.08$) and Factor 2 mean score was 9.92 ($SD=4.81$). In our study, male participants scored slightly higher than female participants ($M=22.26$, $SD=8.03$, and $M=18.83$, $SD=8.52$, respectively: $t_{(137)}=1.85$, $p=.07$). This trend in difference derived from higher Factor 1 scores among males ($t_{(137)}=2.33$, $p=.02$), whereas Factor 2 scores were similar across groups ($t_{(137)}=0.77$, $p=.45$, ns). Twenty-four participants (17% of the entire sample) showed high levels of psychopathy (PCL-R Total score of 30 or above) according to the most used PCL-R scoring interpretation criteria (Hare, 2003). Among them, there

were 22 males and 2 females (Fisher's exact test $p=.37$, ns)

The mean score of PCL-R Item 11 was 1.12 ($SD=.90$), that of Item 17 was .56 ($SD=.71$). PCL-R Item 11 and 17 (the DAB items) were intercorrelated between them ($r=.25$, $p=.003$; Cronbach's $\alpha=.40$), with the size of correlation suggesting that the two DAB items assess different features of attachment behaviors. Table 1 shows the Pearson's r correlations between the DAB items and the PCL-R total score (with the DAB items removed), factor scores and facet scores. As expected, the sum of DAB items was highly intercorrelated with each of the two items it comprised ($r=.84$ with Item 11 and $r=.73$ with Item 17, respectively).

(Table 1 about here)

The sum of the DAB items significantly and positively predicted the PCL-R total scores with DAB items removed ($AdjR^2=.32$; $F_{(1,137)}=66.85$, $p<.001$; $\beta=.57$, $t=8.17$, $p<.001$), the PCL-R factor scores ($AdjR^2=.14$, $\beta=.38$, $p<.001$, and $AdjR^2=.15$, $\beta=.39$, $p<.001$ for the Interpersonal-Affective and the Social Deviance factors, respectively), and its facet scores (with variance explained ranging from 7% of the lifestyle facet to 13% of antisocial facet, all $p<.01$). The two items show differential associations with PCL-R scales: both of them predicted the PCL-R total score ($\beta=.43$ for Item 11 and $\beta=.29$ for Item 17, both $p<.001$), the Social Deviance factor ($\beta=.25$, $p=.003$ for Item 11, and $\beta=.24$, $p=.003$ for Item 17, respectively), and the Antisocial facet ($\beta=.30$, $p<.001$ for Item 11, and $\beta=.17$, $p=0.034$ for Item 17, respectively); only item 11 predicted the Interpersonal-Affective factor ($\beta=.35$, $p<.001$) and its related facets ($\beta=.29$, $p=.001$ for both the Interpersonal and the Affective facets); and only item 17 predicted the Lifestyle facet ($\beta=.24$, $p=.006$).

The sum of the DAB items also predicted the classification of participants into the group who scored 30 or above on the PCL-R (Pseudo- $R^2=.30$; $Wald_{(1)}=19.25$, $O-R=3.00$, $p<.001$), with a goodness-of-fit of 83.5%. Another logistic regression analysis showed that both of the two items contributed to predicting the classification of participants into the psychopathic group (Pseudo- $R^2=.35$, $p<.001$), with item 11 giving the strongest contribution ($Wald_{(1)}=10.03$, $Exp(B)=8.24$, $p=.002$), while item 17 showing only a weak predictive ability ($Wald_{(1)}=3.82$, $Exp(B)=1.92$,

$p=.049$).

The 10 participants who obtained the highest PCL-R scores in the entire sample ($M=35.8$; $SD=1.55$) also obtained very high scores on the DAB items: mean score of Item 11 was 1.90 ($SD=.31$), that of Item 17 was 1.60 ($SD=.70$). As expected, their scores on the DAB items were higher than those of the other participants (Item 11: $t_{(137)}=2.51$, $p=.01$; Item 17: $t_{(137)}=4.07$, $p<.001$), and this result remained consistent even when tests for differences were applied only with respect to individuals who showed at least a medium degree of psychopathy (PCL-R total scores of 20 or above) according to the PCL-R interpretation criteria (Item 11: $t_{(87)}=2.82$, $p=.01$; Item 17: $t_{(87)}=2.77$, $p=.02$).

Results of qualitative analyses, summarized in Table 2, showed that none of these ten participants could be classified as having a secure attachment: their discussion of attachment topics was always rated as insecure with both the AAI and ASI criteria, whose independent classifications demonstrated a total concordance for the organized attachment strategy (Secure/Free; Anxious/Preoccupied; Dismissing/Avoidant). Moreover, there were indicators of dual and/or disorganised attachment in 7 cases—i.e., transcripts showed competitive internal working models of attachment including both anxious/preoccupied and avoidant/dismissing attitudes, and/or unresolved abuse and unresolved loss.

(Table 2 about here)

When looking at adverse childhood experiences in this subsample, the majority of the participants (7/10) have also experienced multiple and severe relational trauma: these are considered as risk factors able to threat the attachment system (Bifulco and Moran 1998), and included loss of a parent, living for more than a year in residential care, extreme neglect, rejection, physical, psychological and sexual abuse from parents, witnessing violence in the household, and so on.

For example, subject n. 9 in Table 2 was a violent offender who killed three women. He showed disorganized speech and failures in the monitoring of discourse related to loss and abuse in

a number of sentences, including when he discussed the death of his father who constantly humiliated him when he was a child, forcing him to show his hypospadias in front of many female relatives. He showed high levels of fear of rejection and desire for engagement with others, as he stated that he suffered very much and thought many times about suicide due to his inability to have many friends and to be accepted by women, but at the same time there were disturbing sentences in the PCL-R excerpts, such as “I can do everything I want”, which denotes a very extreme level of self-reliance, or “Women are useless; the most I’ve met in my life were only bitches”, which denotes an angry-dismissive attitude.

Another subject (n. 4 in Table 2) was a highly manipulating and seductive woman who was severely exposed to parental violence during her childhood, after which she went to a residential care structure where she was sexually abused. As an adolescent, she developed indiscriminate sexual behaviors and even psychotic symptoms, and eventually she killed a relative. She showed attachment disorganization when discussing the experience of sexual abuse, and even rapid fluctuation of attachment representations: she idealized her father who had neglected her and was violent toward her mother, while she talked about the relationship with her mother showing indicators of deep enmeshment and involving preoccupation. She was very fearful and anxious about close and intimate relationships, showing high levels of mistrust (“I’m sure that people who were close to me did not like me. They used me but they did not like me. Even my mother did not like me, even my former mates did not like me. There’s something essentially wrong with me”), but at the same time she was withdrawn in her relational attitudes, stating that she did not need anyone because she loved to stay alone and she felt good about that.

As we have stated before, even when there was no evidence of overt neglect of abuse, the discussion of attachment representations and attachment attitudes in this subsample was always scored as severely insecure. For example, the subject n. 2 in Table 2, one of the two “top- scorers” of the PCL-R, was an infamous killer and rapist who grew up in a wealthy family where he always got everything he wanted. He clearly showed derogation of attachment, an indicator of highly

dismissive, avoidant attachment. When the interviewer asked about his most infamous crime during his youth (together with his friends, he raped two girls for an entire day and killed one of them while the other eventually survived), he shockingly answered: “When you speak about that episode, I have to say that it was absolutely normal for me, I didn’t even remember, it was nothing unusual... These two girls seemed like nothing to me. It isn’t the truth that they were nothing to me because they were suburbanites... All bullshit... They seemed like nothing to me because I considered even my mother nothing, even my brother nothing, even people living in my district nothing. I lived my own world, in my own idea of myself. I thought that was what I had to do”. He also showed extreme self-reliance: for instance, when asked about his experiences in prison, he answered that now he was suffering a bit for being incarcerated, but that imprisonment was even “funny” at the beginning (“The first time was fun. I was young, but already a little don. So I found a young boy who was quite pretty and I ordered him to give me a blowjob. He obeyed.”).

Results of qualitative analysis therefore suggest that many psychopathic offenders show insecure or even disorganized attachment styles and representations, and that in many cases their states of mind regarding attachment and their adult attachment attitudes have been generated by early negative experiences and disrupted interactions with caregivers.

Discussion

The findings of the study show that the attachment system is an important variable to take into account for understanding psychopathy. The PCL-R items we argued denoting devaluation of attachment bonds (promiscuous sexual behavior and many marital relationships) were indeed able to predict PCL-R scores in the sample; moreover, these two items showed differential associations with PCL-R factor and facets scores, suggesting that both of them are relevant for understanding the role played by attachment (at least as it is reflected in sexual behavior and mating strategies) in the development of psychopathic personality. In detail, the promiscuous sexual behaviour showed the strongest associations with the interpersonal and affective traits of psychopathy, whereas the many marital relationships were more related to the lifestyle dimension of psychopathy, with its parasitic,

irresponsible and impulsive traits.

The investigation of attachment experiences in the subsample of the most severe psychopaths, who showed very high average scores on the items denoting devaluation of attachment bonds, further suggested that insecure and disorganized attachment styles and representations are very common among violent offenders, and that adverse childhood environments likely play a relevant role in the development of psychopathic personalities, as indicated by early studies on psychopathy and confirmed by some recent empirical evidence (Craparo et al. 2013; Frodi et al. 2001; Lang et al. 2002).

In summary, it is possible to assume that there are cases of psychopathic personality whose origins are rooted in the failure of the attachment system during childhood and their negative effects on self and relationships (Caretta et al. 2012; De Zulueta 2009). It is likely that severe experiences of loss, abuse and neglect from parents can combine with temperamental traits (e.g. the callous-unemotional traits or the low reward dependency), deeply damaging the developing brain, the attachment system, and the possibility to feel and share affective states (Schimmenti 2012; Schore and Schore 2008).

The findings of our study must be read in light of several limitations. Although our results can be considered in line with recent findings that have extensively illustrated the role played by a negative quality of attachment on the onset of maladaptive development, the recent position no longer conceives quality of attachment as a ‘totalizing’ construct that alone can explain the trajectories of individual development, but in a less deterministic position, as an important factor among others (Guzzo et al. 2013). In this sense, further research should be conducted to study those psychosocial factors that, in combination with the failure of the attachment system, can lead to criminal behavior (Schimmenti et al., 2014). Moreover, this study would have benefit from external measures of psychopathy and attachment: this could help in discriminating the unique and shared contribution of the DAB items in the assessment of attachment issues and psychopathic traits. Lastly, the authors who scored the AAI and the ASI scales have participated in the official courses

of these measures and are reliable in their scoring; however, the use of excerpts from PCL-R transcripts for scoring the AAI and the ASI scales, even if theoretically possible, should be viewed as preliminary, and future studies using the full AAI and ASI interviews are needed to replicate results and generalize findings to the criminal population. Conversely, this study also has a number of strengths, including the mixed methodology that allowed a deeper illustration of the role played by attachment problems in psychopathy, and the exploratory use of two complementary methods of transcript analysis to investigate these problems. In fact, to the best of our knowledge, this is the first time that the AAI and the ASI criteria for assessing attachment were used together, resulting in highly concordant classifications.

Conclusions

In spite of its limitations, this study showed that exploring past and current attachment relationships can result in particular importance for understanding the psychological origins of violent behaviors. Furthermore, the present study may have important implications for the development of preventative strategies and intervention programmes for violent offenders. In fact, results showed that most of the participants who obtained the highest PCL-R scores also reported several childhood adversities and were classified as having disorganized attachment; therefore, it is possible that treatments addressing disorganised states of mind and childhood trauma during detention might reduce the risk of violent behaviors and recidivism; also, a close investigation of attachment styles and representations could be particularly relevant in the forensic assessment of offenders who committed violent crimes, especially for criminal offences where the dimension of romantic attachment is likely to be involved, as with stalking behaviors (Caretta et al. 2011b); on a more social level, our findings support the idea that a combined assessment of attachment styles and psychopathic traits among offenders can be crucial for assessing the risk of recidivism and may help in the choice of the best treatment, rehabilitation or resocialization programme for a specific offender.

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