

# The relationship between attachment styles and Cluster B personality disorders in prisoners and forensic inpatients

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Received 23 April 2003; received in revised form 16 July 2004; accepted 9 April 2005

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## Abstract

The relationship between attachment styles and Cluster B personality disorders were examined among prisoners, forensic inpatients and controls from the general population. Forensic inpatients and prisoners reported significantly less frequently the secure attachment style (Relationship Questionnaire) and significantly more the fearful attachment style compared to the normal controls. Both forensic groups could not be distinguished from each other. Further, prisoners, forensic inpatients and controls could not be differentiated on the basis of the dismissing nor the preoccupied attachment style. With respect to personality pathology, almost all relationships between Cluster C pathology, on the one hand, and attachment styles, on the other, were significant. Cluster A pathology was clearly related to the secure and fearful attachment style. With respect to cluster B pathology, the results were more specific but also less clear. The results were strongly dependent on the way the personality pathology variables were treated, as either categorical or dimensional. None of the cluster B personality pathology variables were associated with the fearful attachment style and histrionic personality pathology was negatively associated with the dismissing attachment style. Antisocial personality features were associated with a dismissing attachment style. Borderline personality pathology, when treated as a categorical variable, was significantly related to the preoccupied attachment style. These results show that (1) cluster A and cluster C pathology are more strongly associated with attachment than cluster B, (2) treating personality data as either dimensional or categorical is of major importance to the conclusions that can be drawn, (3) it is important to control for the influence of co-morbid personality pathology when examining the relationship between (Cluster B) personality pathology and attachment.

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*Keywords:* Attachment; Personality disorder; Cluster B; Forensic inpatients

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## 1. Introduction

Attachment is considered an important etiological factor in the development of personality disorders. Bowlby defines his attachment theory as ‘a way of conceptualizing the propensity of human beings to make strong affectional bonds to particular others and of explaining the many forms of emotional distress and personality disturbance, including anxiety, anger, depression, and emotional detachment, to which unwilling separation and loss give rise’ (Bowlby, 1977, page 201). Primary caretakers play an important role in the development of the attachment representations of the child. The

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child learns to organize the information about itself and its social environment and develops an internal network of attachment that directs feelings and behaviors later on in life. When the attachment pattern is insecure, problems later on in life are likely to occur. According to Bowlby, emotionally detached individuals (such as in psychopathy), who are incapable of maintaining a stable affectional bond with anyone are often delinquent or suicidal.

Based on Bowlby's attachment theory, several theorists have postulated different types of attachment styles, though on first sight they do show resemblance. [Main and Goldwyn \(1991\)](#) classify attachment styles as: (1) secure–autonomous, (2) insecure–dismissing, (3) insecure–preoccupied and (4) unresolved with respect to loss of trauma. [Bartholomew and Horowitz \(1991\)](#) distinguish four attachment types that are conceptualized on two dimensions: concept of self and concept of others. *Secure attachment* is characterized by a valuing of intimate friendships, the capacity to maintain close relationships without losing personal autonomy, and a coherence and thoughtfulness in discussing relationships and related issues. The *dismissing attachment* style is characterized by a downplaying of the importance of close relationships, restricted emotionality, an emphasis on independence and self-reliance, and a lack of clarity or credibility in discussing relationships. The *preoccupied attachment* style is characterized by an over-involvement in close relationships, a dependence on other people's acceptance for a sense of personal well-being, a tendency to idealize other people, and incoherence and exaggerated emotionality in discussing relationships. The *fearful attachment* is characterized by avoidance of close relationships because of fear of rejection, a sense of personal insecurity and a distrust of others.

The typology of [Bartholomew and Horowitz \(1991\)](#) originates from a social psychological tradition, in which attachment is defined as an interpersonal concept, whereas the classification of [Main and Goldwyn \(1991\)](#) stems from developmental psychology in which attachment refers to intrapsychic processes ([Zeijlmans van Emmichoven, 2000](#)). The measures that are derived from both views, the Adult Attachment Interview (AAI; [Main & Goldwyn, 1994](#)) and the Relationship Questionnaire (RQ; [Bartholomew & Horowitz, 1991](#)), respectively, are therefore not regarded as measures of identical constructs ([Zeijlmans van Emmichoven, 2000](#)). This implies that when reviewing the literature on the relationship between attachment and criminality and personality disorders (PDs), one has to take note of the attachment measure that is reported on.

Several empirical studies have been conducted on the relationship between attachment on the one hand and personality disorders and delinquent, criminal and/or aggressive behavior on the other hand. In a review article on attachment relationships among children with aggressive behavior problems it was concluded that disorganized attachment behaviors (unresolved) predict aggression in school-age children with other family factors controlled for ([Lyons-Ruth, 1996](#)).

In their meta-analysis of 30 studies on the relationship between attachment and psychopathology [IJzendoorn and Bakermans-Kranenburg \(1996\)](#) concluded that there are no systematic relations between clinical diagnosis and type of insecure attachment as assessed by the AAI. More recently however, a few studies have found specific associations. For example, [Rosenstein and Horowitz \(1996\)](#) found that psychiatrically hospitalized adolescents, showing a dismissing attachment organization according to the AAI, were more likely to have a conduct or substance abuse disorder, narcissistic or antisocial personality disorder. Patients with a preoccupied attachment organization were more likely to be diagnosed with an obsessive–compulsive, histrionic, borderline or schizotypal PD.

Inpatients with a borderline PD diagnosis according to the AAI were characterized more frequently by an unresolved attachment style than matched controls ([Fonagy et al., 1996](#)). In another study significant differences on several self-report measures for attachment styles were found between borderline patients and students, primarily females ([Sack, Sperling, Fagen & Foelsch, 1996](#)). Borderline patients were found to endorse avoidant, hostile, and resistant/ambivalent attachment styles significantly more frequently than college students according to the Attachment Style Inventory ([Sperling & Berman, 1991](#)). According to another self-report attachment instrument, the Reciprocal Attachment Questionnaire (RAQ; [West, Sheldon, & Reiffer, 1987](#)), the borderline group was characterized by angry withdrawal. A similar finding was found in a study among male forensic borderline outpatients and outpatient controls who were characterized by avoidant/schizoid PDs: the forensic patients reported an anxious style of attachment that is characterized by angry withdrawal as measured with the RAQ ([West et al, 1987; West, Rose, McDonald & Hashman, 1996](#)).

No clear pattern of relationships between attachment as assessed with the AAI and PDs was found in a group of 40 male forensic patients ([van IJzendoorn et al., 1997](#)). Though more insecure attachment styles were found than in non-clinical samples, the distribution of attachment styles could not be distinguished between the forensic sample and other clinical samples. Further, subjects were difficult to classify in one of the three clusters of the AAI (Autonomous,

Dismissive or Preoccupied). Most subjects (53%) were classified as ‘cannot classify’ or ‘unresolved experiences of trauma’. There was no clear pattern of relationships between specific PDs and specific attachment styles. A similar finding was reported in a longitudinal study (Allen, Hauser & Borman-Spurrell, 1996): adults aged 25 to 28 years whose attachment style could not be determined (unresolved according to AAI) and adults with a dismissing attachment style reported significantly more criminal behavior as well as psychological distress than secure adults.

Brennan and Shaver (1998) found in a large group of students some evidence that self-reported attachment (Relationship Questionnaire) was unrelated to psychopathy (composed of the antisocial, sadistic and passive–aggressive PD scales of the PDQ-R). The other PD factors in their study however did show strong associations with attachment.

The studies discussed above all confirm that personality disordered offenders are characterized most often by insecure attachment styles or by unresolved attachment styles according to the AAI classification. Though some studies did find a relationship between specific types of PDs and specific attachment styles, most studies show no clear pattern of relationships. Several studies report that criminal offenders or persons with a personality profile similar to psychopathy show no clear attachment pattern (unresolved or cannot classify) according to the AAI. Bowlby (1977) notes that emotionally detached individuals (as in psychopathy) are often delinquent. Possibly, emotional detachment is not measured by the AAI and other attachment measures. Dismissing as defined by the AAI is regarded as an equivalent for detachment. But it refers to feelings of fear or concern of being disappointed, whereas in the case of psychopathy there appear to be no feelings involved, it is as if no fearful feelings or concern exists, but solely indifference or no caring. The emotionally detached persons are perhaps more clearly distinguished by the attachment typology of Bartholomew and Horowitz (1991), because it also distinguishes a fearful avoidant category next to a dismissive avoidant category. Studies on the relationship between attachment as measured by the RQ on the one hand and PDs and criminality on the other hand however are either rare or absent.

In the present study the relationship between self-reported attachment styles on the one hand and Cluster B pathology and criminality on the other hand will be examined. More insights into the manner in which offenders and personality disordered individuals relate to others might enhance a better understanding of the adjustment problems they are confronted with throughout their lives. Insecure attachment representations not only distort or bias perceptions of oneself and others in social interactions, but also lead to inadequate and inflexible ways of coping with stressful situations, like social withdrawal or aggressive behavior. In this way the internal network of attachment representations is self-fulfilling: the coping reactions lead to a confirmation of the rules by which self and others are evaluated. Several studies found that attachment is a mediator for treatment outcome (Fonagy et al, 1996; Meyer, Pilkonis, Proietti, Heape, & Egan, 2001).

## 2. Method

### 2.1. Subjects

Subjects in this study were all male, drawn from three different populations: 39 forensic psychiatric inpatients, 192 prisoners and 195 controls from the general population. The inpatients participated in a therapy outcome study. The prisoners participated in a study on the psychosocial problems of long-sentenced prisoners. The normal controls were drawn from the general population and asked in writing to participate in a psychological study on well-being and psychological complaints and therefore to fill in a booklet of questionnaires and to return it anonymously by mail. The mean age of the normal controls was 43.6 years (SD=11.7, range 22–65 years). The mean age of the prisoners was 33.8 years (SD=8.9, range 21–66) and of the patients was 35 years (SD=11.3, range 20–71). The controls were significantly more educated and older compared to the prisoners and patients. All subjects participated voluntarily in the studies and no reward was received. The two forensic groups signed an informed consent stating that the data from the study would not be used for treatment or judicial purposes.

### 2.2. Measures

*Attachment style* was measured by the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991). Respondents are asked to classify themselves into one of four categories, each representing an attachment style: secure, fearful avoidant, preoccupied and dismissing. In this study subjects were asked to choose the attachment style that most closely resembles the way they relate to other people in general.

### 2.2.1. Personality disorders

The prisoners and normal controls completed a Dutch translation (Ouwersloot, van den Brink, de Boer, & Hoogduin, 1988) of the *Personality Disorder Questionnaire* (PDQ-R; Hyler & Rieder, 1987). This 152 item self-report instrument was designed to measure DSM-III-R (APA, 1987) personality disorders. The PDQ-R also contains an ‘impairment distress’ scale. The five items of this scale measure disturbances in social, psychological and occupational functioning. A score of two or more points on this scale is required in order to be considered as impaired enough to have a personality disorder. The PDQ-R has a high sensitivity but a low specificity for almost all axis II disorders, referring to a few false negatives and many false positives (Hyler, Skodol, Kellman, Oldham, & Rosnick, 1990; Hyler, Skodol, Kellman, & Doidge, 1992). The developers of the PDQ-R believe it to be an efficient instrument for screening inpatients and outpatients for DSM-III-R personality disorders.

The forensic patients were examined with *The International Personality Disorder Examination (IPDE)* (Diekstra, Duijsens, Eurelings-Bontekoe, & Ouwersloot, 1993; World Health Organization, 1993), a semi-structured interview with which all DSM-III-R as well as ICD-10 PDs are assessed. The criteria are scored as either absent (0), probably present (1) and present (2). The presence of a criterion has to be confirmed by examples that demonstrate the patient’s behavior, and this behavior has to have been present during at least the preceding five years. In the present study only the DSM-III-R diagnoses are reported. A probable diagnosis is given when the minimal required number of criteria for a positive diagnosis but one, was found.

In the present study the categorical as well as the dimensional scoring method (summation of the positive features) are used for the PDQ-R and the IPDE. In order to be able to use all three groups in the analyses, IPDE and PDQ-R diagnoses were regarded the same. In order to reduce the chance of underestimating the prevalence of PD’s diagnoses in the inpatient group, the probable IPDE diagnoses were regarded as positive diagnoses. For the dimensional scoring of the IPDE this implies that one extra positive feature per personality disorder variable was counted.

Scores for Clusters A, B and C were also included in the analyses. Categorical cluster scores have the value 0 (no positive diagnosis in this cluster) or 1 (at least one positive diagnosis in this cluster). Dimensional cluster scores were obtained by summation of the positive personality features of the PDs within the cluster. The sadistic and self-defeating PDs were left out of the analyses.

### 2.3. Statistical analyses

In order to determine whether or not the three groups differed with respect to attachment styles, a Chi-square statistic was applied. Since a large proportion of the prisoners-group consisted of subjects with a non-West-European cultural background (41.7%), mostly Antillean and Suriname, whereas the other two groups did not, preliminary analyses were performed to assess the influence of cultural background on the measures for attachment and personality pathology. Cultural differences were found on the overall attachment classification and on the preoccupied attachment style and on most scales of the PDQ-R. Prisoners with a non-West-European background were characterized significantly more often by all pathology variables. Further, educational level also appeared to be significantly related to attachment styles. And significant differences on age and educational level were found among the three samples: the controls were more educated and older than both forensic groups. Given the results of the preliminary analyses, the effects of age, educational level and cultural background were controlled in the following analyses.

Logistic regression analyses (Stevens, 2002) were performed to examine the relationship between the attachment styles on the one hand and Cluster B personality pathology, criminal status and patient status on the other hand. The variables were entered into the regression equation using the Stepwise method. In the regression equations we controlled for outliers and influential data points.

## 3. Results

With respect to attachment styles, significant differences between the three groups are found as listed in Table 1.

When analyses are performed on the type of attachment style, it appears that the three groups only differ significantly on the secure and the fearful attachment styles. Normal controls are characterized more frequently by a secure attachment style when compared to forensic patients ( $(\chi^2(1,230)=10.0, p=.002)$ ) and prisoners ( $(\chi^2(1,383)=17.2, p=.000)$ ). Normal controls are characterized less frequently by the fearful attachment style than forensic patients ( $(\chi^2(1,230)=12.1, p=.000)$ ) and prisoners ( $(\chi^2(1,383)=7.6, p=.006)$ ). No significant differences on

Table 1  
Differences on attachment styles between forensic patients, prisoners and controls

	Patients		Prisoners		Controls		df	$\chi^2$
	N		N		N			
Attachment	38	(100)	181	(100)	191	(100)	6	25.6*
Secure	11	(28.9)	67	(37.0)	107	(56.0)	2	21.6*
Dismissive	7	(18.4)	47	(26.0)	34	(17.8)	2	2.8
Preoccupied	5	(13.2)	17	(9.4)	22	(11.5)	2	1.0
Fearful	15	(39.5)	50	(27.6)	28	(14.7)	2	14.0*

Percentages in brackets; \*significant at .001.

the secure and fearful attachment styles between forensic patients and prisoners are found. In order to find out if these results remain significant after controlling for the influence of educational level, cultural background, age and personality pathology, logistic regression analyses were performed in which the attachment styles are treated as separate dependent variables. The results are listed in Table 3. In Table 2 the strength of the associations between dependent and independent variables is listed. The associations between independent variables that are used within the same logistic regression equation vary from .00 to .58. Thus, most associations between the independent variables are low to moderate.

After controlling for the influence of cultural background, age, and educational level, criminal status (forensic patients and prisoners) was significantly negatively related to a secure attachment style and positively related to a fearful attachment style, whereas patient status alone (forensic patients versus prisoners) was not. The latter indicates that no differences between forensic patients and prisoners are found on attachment styles. After controlling for the influence of personality pathology, measured dimensionally and categorically, the results of two regression equations in which dimensional PD scores were used, showed diverging results (see Table 3). When Cluster B personality features (dimensional scores) were controlled for, no significant relationship between secure attachment and criminal status remained, whereas now patient status was a significant (negative) predictor for secure attachment. However, when the Cluster B personality disorder features were introduced separately as predictors, the significant relationship

Table 2  
Correlations (Spearman's Rho) among attachment styles and predictor variables, including categorical and dimensional personality pathology variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Secure	–														
2. Dismissing	–.45	–													
3. Preoccupied	–.30	–.17	–												
4. Fearful	–.47	–.27	–.18	–											
5. Age	.14	–.09	.03	–.08	–										
6. Education	.22	–.11	.02	–.13	.17	–									
7. Culture	–.18	–.01	.09	.03	–.21	–.15	–								
8. Criminal	–.23	.08	–.03	.16	–.41	–.50	.44	–							
9. Patient	–.10	–.02	.03	.11	–.09	–.34	–.11	.29	–						
10. Cluster A <sup>a</sup>	–.29	.02	.11	.23	–.04	–.01	.04	–.05	–.07	–					
	–.41	.14	.07	.27	–.09	–.12	.28	.27	–.16						
11. Cluster B	–.23	–.11	.18	.23	–.13	–.09	.11	.14	.18	.49	–				
	–.37	.01	.19	.25	–.25	–.29	.29	.47	.11	.49					
12. Cluster C	–.25	–.07	.20	.22	.05	.05	.08	–.01	–.05	.40	.44	–			
	–.39	–.06	.26	.28	–.06	–.09	.28	.20	–.08	.48	.58				
13. Borderline	–.24	–.07	.18	.22	–.14	–.10	.18	.15	.03	.47	.70	.37	–		
	–.28	–.02	.14	.22	–.23	–.23	.31	.43	.03	.29	.79	.53			
14. Antisocial	–.15	.03	–.01	.15	–.22	–.25	–.00	.27	.36	.22	.52	.04	.29	–	
	–.29	.13	.07	.17	–.27	–.31	.12	.45	.20	.23	.72	.22	.34		
15. Histrionic	–.19	–.13	.17	.16	–.04	.04	.18	.12	.01	.38	.64	.46	.43	.20	–
	–.22	–.11	.24	.14	–.06	–.12	.27	.25	–.00	.31	.68	.51	.38	.27	
16. Narcissistic	–.06	–.06	.11	.05	–.01	–.04	.14	.08	–.01	.24	.49	.42	.32	.09	.42
	–.27	–.04	.17	.20	–.12	–.14	.22	.23	.04	.34	.71	.54	.36	.28	.49

<sup>a</sup> First correlation refers to categorical personality and second correlations to dimensional personality measures;  $r < .14$  = not significant,  $r \geq .14$  and  $r < .17$  = significant at .01,  $r \geq .17$  = significant at .001.

Table 3

Logistic regression analyses predicting attachment styles from personality pathology (categorical and dimensional scores), age, educational level, cultural background, prisoner and patient status

	Secure (N=184)		Dismissing (N=87)		Preoccupied (N=43)		Fearful (N=92)	
	Cat	Dim	Cat	Dim	Cat	Dim	Cat	Dim
Educational level	.41*	.48**	-.37**	-				
Criminal status	-.88***	-					.92**	-
Patient status	-	[-.97] <sup>1)</sup>					-	1.4***
Cluster A	-1.0***	-.15***		.14***			.93**	.12***
Cluster C	-1.2***	-.15***	-	-.09*	.99**	.14***	.76*	.12***
Cluster B	-	[n.s.] <sup>1)</sup>	-.71	-	.76	-		
Borderline					.83	-		
Antisocial	-	-.16***	-	.13*				
Histrionic			-1.2*	-.22*	-	.23*		
Percent correctly classified	68.9	72.8	79.4	79.6	89.6	89.1	77.7	76.7

Only regression weights, B, of significant predictors are listed; Cat = categorical, Dim = dimensional; Wald \*significant at .05, \*\*significant at .01, \*\*\*significant at .001; <sup>1)</sup> the same significant predictors were found when Cluster B pathology was entered as one factor or when Cluster B disorders were entered separately, except for the equation in which dimensional Cluster B pathology was entered to predict the secure attachment style: in this case patient status was found to be significant; the B values that are listed are the ones that are found for the equations in which the Cluster B disorders were entered separately.

with patient status disappeared: the non-significant relationship with criminal status though remained. For the fearful attachment style, criminal status also was no longer predictive after controlling for Cluster B pathology (as a composite dimensional score as well as separate Cluster B dimensional scores), whereas patient status now was significantly related to the fearful attachment style.

Table 3 further shows that the results with respect to the relationships between attachment styles and personality pathology strongly depend on the scoring method of the personality pathology as either categorical or dimensional.

The results with respect to Cluster A and Cluster C pathology are the least influenced by the scoring method; the only difference between the two scoring methods is found for Cluster A and C pathology on the dismissing attachment style. The results with respect to Cluster B disorders however vary strongly across the scoring method.

#### 4. Discussion

In the present study the relationship between attachment styles, personality pathology and a criminal status were examined, using logistic regression analyses. The results showed that criminal status, prisoner as well as forensic inpatient, are negatively associated with a secure attachment style, meaning that prisoners and forensic patients show more insecure attachment styles than controls from the general population. These findings are consistent with other studies that found that criminal offender populations are insecurely attached (e.g. van IJzendoorn et al, 1997). The prisoners and forensic patients in this study could not be distinguished on account of attachment styles.

Criminal status was significantly linked to only one of the three insecure attachment styles, namely the fearful. Persons with a fearful attachment style are characterized by avoidance of close relationships because of fear of rejection, a sense of personal insecurity and a distrust of others. These findings are consistent with clinical impressions and empirical findings about the learning histories of prisoners and forensic inpatients. Most of them have a history of early traumatic experiences in which often parental figures play a causal role in violating their trust in them (e.g. McCord, 1979). Further, in a criminal and often addictive milieu, distrusting others might be of major importance to 'survive'. Also, prisoners and forensic patients often feel unfairly treated by the criminal justice system, which probably is the result of the learning experience that being honest about criminal behaviors (trusting others) results in punishment (imprisonment or a TBS order).

These results also confirm that difficulties in the treatment of offenders often have to do with fear of trusting therapists and fear of showing vulnerabilities. Offenders in general are reluctant to be open about their emotions and the problems they encounter. Acting in a brutal or manipulative or avoidant manner is most often done in order to keep others at an emotionally safe distance. For clinical practice this implies that a great amount of time and effort will be needed to build a good therapeutic relationship and a safe environment in which the offender dares to be open about his feelings,

cognitions and behavior. It also demonstrates that even the smallest suspicion of unreliability on the part of therapists can immediately undo the trust that was built.

In the present study, criminal status remained significantly related to the secure and fearful attachment styles, after controlling for age, educational level, cultural background and personality pathology variables, for all but two equations. Criminal status no longer appeared to be significantly related to the secure attachment style, after Cluster B pathology features or antisocial personality features were entered into the equation. The relationship between criminal status and a secure attachment style though remained the same when categorical Cluster B and antisocial personality disorder scores were controlled for. This can be ascribed to the fact that antisocial features and Cluster B pathology features are strongly related to criminal status. After controlling for Cluster B pathology features, patient status however was now significantly negatively related to a secure attachment. This implies that differences between forensic inpatients and criminal offenders may exist, after the pathology is controlled for: in other words, offenders may not be distinguishable from the normal population on account of a secure attachment style, after the influence of personality pathology is accounted for, whereas forensic inpatients may.

For the fearful attachment style a similar pattern was found. After controlling for Cluster B dimensional scores (either as one cluster or as separate personality disorders scores), criminal status no longer was significantly related to this attachment style, whereas after controlling for the categorical Cluster B scores, it was.

When all variables are entered into the regression equations it appears that Cluster C pathology is significantly related to all attachment styles. An exception is the non-significant relationship between the categorical Cluster C score and the dismissing attachment style. The directions of these relationships are in line with the expectations. Also, according to what might be expected, Cluster A is significantly negatively associated with the secure and positively with the fearful attachment style. No relationship with the preoccupied attachment style is found. Further, Cluster A pathology is negatively associated with the dismissing attachment style, but only when measured dimensionally. Cluster B pathology, treated as one personality factor, shows significant relationships with the dismissing and the preoccupied attachment style, but only when measured categorically. These relationships become clearer when the results of the separate Cluster B personality disorders in relation to attachment styles are examined.

The results with respect to the relationship between the specific Cluster B disorders and attachment styles vary strongly across the scoring method. Irrespective of the scoring method though, it appears that the fearful attachment style is not related to (any specific) Cluster B pathology, after controlling for the other personality pathology variables. And according to both scoring methods, histrionic personality pathology is significantly negatively related to the dismissing attachment style, though the regression coefficients in the case of the dimensional scoring method is weaker for the categorical scoring method.

The finding that the histrionic personality disorder is negatively associated with the dismissing attachment style indicates that histrionic individuals are less likely to have an attachment style that is characterized by downplaying of the importance of intimate relationships, restricted emotionality, an emphasis on independence and self-reliance, and a lack of clarity or credibility in discussing relationships. This finding seems logical, considering that the core feature of histrionic personality is feeling distressed when not getting a lot of attention from others. Therefore histrionic individuals are likely to seek attention from others in all kinds of ways and exaggerate the number and depths of personal contacts with others; this is the opposite of what individuals with a dismissing attachment style would do. These features of the histrionic personality also (at least partially) explain the positive relationship with the preoccupied attachment style, that is characterized by an overinvolvement in close relationships, a dependence on other people's acceptance for a sense of personal well-being, a tendency to idealize others, and incoherence and exaggerated emotionality in discussing relationships. The positive relationship with the histrionic personality pathology though was only found when the dimensional scoring method was used.

In the present study, borderline personality pathology only when measured categorically is significantly associated with a preoccupied and a fearful attachment style. These findings are roughly in line with what several other studies found that used categorical scoring methods (diagnoses or categorical scoring), namely that borderline patients are characterized by a preoccupied (Rosenstein & Horowitz, 1996) or an anxious attachment style with angry withdrawal (Sack et al, 1996; West et al, 1996). Nickell, Waudby, and Trull (2002) though also found a significant negative relationship between borderline features (dimensional scoring) and an anxious attachment style. These findings

diverge with the findings of the present study, which could be ascribed to a difference in samples: the sample in the Nickell study consisted of 18-year old students.

Other varying relationships across personality pathology scoring method are found for the secure and dismissing attachments to which antisocial personality pathology is significantly (negatively and positively, respectively) related, but only when measured dimensionally.

In the introduction of this paper it was suggested that individuals with antisocial (and psychopathic) personality pathology or criminal status may be differentiated more precisely with the typology of the RQ than with the typology of the AAI. Dismissing attachment in the AAI is described as rejection of close relationship because of fear for close relationships, whereas in dismissing as defined by the RQ, no feelings of fear are described. Only avoidance is emphasized. Avoidance because of fear for rejection is described by the fearful attachment style in the RQ. It was argued that dismissing as defined by the RQ would resemble more closely emotional detachment, which according to Bowlby is found frequently among delinquents. The hypothesis that antisocial personality pathology is associated with a dismissing attachment as measured by the RQ was partially supported by the results of the present study. The fact that Brennan and Shaver (1998), in their study did not find a significant relationship between RQ attachment styles and a psychopathic personality dimension (including antisocial features) may be ascribed to the fact that their sample only consisted of students.

As aforementioned, criminal status was not significantly related to a dismissing attachment style. The dismissing attachment style as defined by the RQ assumes a kind of independence and ability to handle problems. Most individuals who already experience personal problems, since they are imprisoned or hospitalized, are probably not likely to state that they are independent and capable of handling their own problems.

The present study has several limitations. Personality disorders were in two of the three samples assessed with the PDQ-R, which is known to result in an overestimation of personality pathology. In the patient sample, personality pathology was assessed using a semi-structured interview. In order to reduce the chance of underestimation of pathology in the patient sample, also probable diagnoses were included in the group with a positive diagnosis for a personality disorder. For the dimensional scoring method one extra positive feature per personality disorder was counted. By doing so, PDQ-R and IPDE scores were regarded as comparable. Such an approach is questionable. When only the PDQ-R data were entered into the regression equation (leaving the IPDE data of the forensic inpatients out), the results with respect to the categorical scoring method remained practically the same, except now no significant relationships were found between Cluster B pathology and the dismissing attachment style (Wald=3.2,  $p=.08$ ) and Cluster C pathology and the preoccupied attachment style (Wald=2.8,  $p=.09$ ), whereas a significant relationship was found between the histrionic personality disorder and the preoccupied attachment style (Wald=5.6,  $B=1.0$ ,  $p=.02$ ) and the narcissistic personality disorder and the fearful attachment style (Wald=3.9,  $B=-1.0$ ,  $p=.05$ ).

With respect to the dimensional scoring method, no differences were found for the fearful and preoccupied attachment styles, compared to the results of the analyses in which the forensic patients were included, the secure attachment not being negatively associated with the antisocial personality features anymore (Wald=3.0,  $p=.08$ ). With respect to the results of the preoccupied attachment style, a significant relationship with criminal status (Wald=9.7,  $B=-1.8$ ,  $p=.01$ ) was found. No differences with respect to the other variables (including Cluster A and C pathology and criminal status were found) between the analyses with and without the patients were found. The regression weights also were nearly the same. In general dimensional personality scores are preferred to categorical scores, especially in offender populations (Ulrich, Borkenau, & Marneros, 2001). Nevertheless, it is considered important to report also on categorical scores, in order to compare findings to other studies that did use categorical scoring methods or only use samples based on (clinical) diagnoses.

Other limitations that limit the generalization of the results of the present study concern sample characteristics. The samples only consist of men. The forensic patients were drawn from the population of only one forensic hospital and is relatively small. The prisoners are drawn from three prisons only. The results regarding the cultural background should be treated with great care, since cultural background was only assessed in the offender populations and not in the normal sample.

As mentioned in the Introduction of this paper, results of studies on attachment cannot be compared, without considering the type of attachment style measure that is reported on. In the present study the Relationship Questionnaire was used, which has the advantage of being easy to administer. In future studies though it is recommendable to use several attachment measures.

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