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Developmental protective and risk factors in borderline personality disorder: A study using the Adult Attachment Interview

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ABSTRACT Mental representations and attachment in a sample of adults with Borderline Personality Disorder were assessed using the George, Kaplan and Main (1985) Adult Attachment Interview (AAI). Eighty subjects participated in the study: 40 nonclinical and 40 with Borderline Personality Disorder (BPD). The results obtained showed a specific distribution of attachment patterns in the clinical sample: free/autonomous subjects (F) represented only 7%, dismissing classifications (Ds) reached about 20%, entangled/preoccupied (E) 23% and unresolved with traumatic experiences (U) 50%. The two samples differed in their attachment patterns distribution by two (secure vs. insecure status), three (F, Ds and E) and four-way (F, Ds, E and U) categories comparisons. In order to identify more specific protective or risk factors of BPD, 25 one-way ANOVAs with clinical status as variable (clinical vs. nonclinical) were conducted on each scale of the coding system of the interview. Results support the hypothesis that some developmental relational experiences seem to constitute pivotal risk factors underlying this disorder. Results demonstrated potential benefits in using AAI scales in addition to the traditional categories. Implications for research and treatment are discussed.

KEYWORDS: Adult Attachment Interview – Borderline Personality Disorder – protective factors – risk factors

Stating that the impact of an individual's early interpersonal experience is never lost, but structured and interpreted in later mental representations of attachment, the work of Bowlby (1973, 1988) can be considered a starting point for a truly developmental perspective of psychopathology (Carlson & Sroufe, 1995; Cicchetti & Cohen, 1995). Over the last two decades, research carried out within the framework of attachment theory has generated a rapidly growing body of findings on the importance of early caring experience in the development of psychopathology and in the promotion of adaptation (Main, 1995). Attachment theory, in particular, states that the modality in which the individual's personal expectations, feelings and defences are organized – the mental representations of attachment – is central to the understanding of many psychopathological disorders (Cicchetti, Cummings, Greenberg, & Marvin, 1990; Sroufe, 1995). In this context the following relevant questions can be outlined:

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(a) How individual differences in attachment are rooted in patterns of early dyadic regulation,
(b) How these patterns provide the basis for individual differences in the emerging self and, finally,
(c) Which implications such early differences have on the development of patterns of more or less adaptive self-regulation in later development (Sroufe, 1995).

It is within this theoretical context that the importance of the clinical application of attachment theory can be appreciated; indeed, it allows us to obtain essential information in order to identify risk or protective mechanisms associated with development (Sameroff & Emde, 1989). If it is true that negative childhood events are considered risk factors for psychopathology because of their frequency, their severity or their cumulative effects, it is also crucial to consider their potential translation into stable representations (i.e., states of mind concerning attachment), and how these may be associated with specific psychological conditions. From this perspective, developmental mechanisms shed light on some crucial clinical issues, viewing adaptive and maladaptive patterns of personality as emerging from the reorganization of previous patterns, structures and competencies (Crittenden, 1998; Rosenstein & Horowitz, 1996). This paper is concerned with the early attachment experiences, and their subsequent mental representations among adults with Borderline Personality Disorder.

The clinical picture of Personality Disorders (PD), particularly that of Borderline Personality Disorder (BPD), is characterized over time by a stable pattern of interpersonal relatedness, which could be conceptualized as a peculiar dysregulation in the areas of emotion, behaviour, cognition and in the area of the self (Linehan, 1993). Patients with BPD tend to develop sudden pressurized relationships, which are initially marked by clinging dependence associated with the oscillation between idealization and devaluation of the person involved in the relationship. Complaints of chronic feelings of emptiness and boredom are frequent. Problems in anger control and impulsive behaviour – with a tendency towards para-suicidal behaviour – are also patognomonic cues of the disorder. Empirical studies to date have emphasized the relevance of a difficulty in coping with stress (Parker, Roy, Wilhelm, Austin, Mitchell, & Hadzi-Pavlovic, 1998), a history of traumatic childhood experiences as losses, physical and sexual abuse (Laporte & Guttman, 1996; Sabo, 1997), neglectful and yet overprotective parental care (Zweig-Frank & Paris, 1991), literal-minded parents (Feldmann & Guttman, 1984) and metacognitive deficits (Barone, 1999; Fonagy et al., 1995). Although the clinical assessment of personality has received a great deal of attention since the advent of the multiaxial system of diagnosis with the adoption of the DSMIII, one of the main features of BPD – that is the understanding of mechanisms implied in the dysregulation characteristic of this disorder – still remains an open issue. One of the reasons for this is that the current descriptive psychiatric classification system (APA, 1994) does not identify the specific developmental factors possibly underlying this aspect of the disorder (Barone & Liotti, 2001; Fonagy et al., 1996). An attachment perspective – particularly the study of how adults with the disorder mentally represent attachment relationships – may fruitfully contribute to the identification of the critical factors associated with dysregulation. Indeed, the quality of attachment plays a large part in determining the individual's degree of vulnerability to developmental deviations of regulation skills and, in this sense, types of attachment organization could represent protective or risk factors in developing this specific form of psychopathology. Autonomous-secure

attachment patterns seem to correspond to adaptive styles of cognitive processing and emotional regulation, i.e., the individual largely free of personality disorder. Insecure and disorganized attachment patterns seem to correspond to specific cognitive distortions of information processing linked to emotional and interpersonal dysregulation (Carlson & Sroufe, 1995). Furthermore, since some controversy surrounds the role of early social experience in the development of BPD, it is of compelling interest to increase our knowledge of the means by which this dysregulation is developed and maintained throughout the life cycle (Patrick, Hobson, Castle, Howard, & Maughan, 1994).

Although nowadays relatively little attention has been given to the common attachment experiences within the group of BPD pathology, some interesting findings have recently highlighted the centrality of this perspective in studying the disorder and its maladaptive interpersonal relationships (Barone, 1999; Fonagy et al., 1996, 1997; Liotti, 2000; Liotti & Pasquini, 2000; Patrick et al., 1994; Sack, Sperling, Fagen, & Foelsch, 1996). Some studies (Barone, Borellini, Madeddu, & Maffei, 2000; Fonagy et al., 1996; Patrick et al., 1994; van IJzendoorn et al., 1997) have tried to analyse, in particular, the role of mental representations of attachment in different contrasting clinical groups, reaching significant findings that provide some clarification of the form of emotional and interpersonal dysregulation typical of BPD.

Drawing upon the results of these studies – which highlight the existence of distinctive characteristics in attachment mental states of borderline patients – the aim of the present study is to explore the relationship between specific personality disorders (BPD) and specific attachment mental representations, using the Adult Attachment Interview – AAI – (George, Kaplan, & Main, 1985). The related coding system (Main, Goldwyn, & Hesse, in press), permits detailed and reliable consideration of the interviewee's probable past history with each parent, their current state of mind concerning each parent, and their overall organization or stance with respect to attachment, (dismissing, preoccupied, autonomous-secure). The coding system enables an independent and reliable judgement as to whether any past loss or trauma remains unresolved in the mind of the speaker.

Against this background, the goals of the present study may be stated as follows:

(1) To identify specific attachment pattern representations (i.e., main classifications of the AAI coding system) as first level of discrimination of potential protective and risk factors of BPD.
(2) To identify specific dimensions of them (i.e., scales of the AAI coding system) as a second level of discrimination of potential protective and risk factors of the disorder.
(3) To speculate upon the phenomenon of dysregulation in BPD, with the aim of understanding the mental organizations of attachment linked to this central feature of the onset and maintenance of the disorder.

METHOD

Subjects

Eighty-seven subjects participated in the study. Complete data was only available for 80 of them: 40 were non-clinical subjects and 40 were patients with cluster B

personality disorder. Seven of the latter group refused to co-operate. All of them were recruited after filling in a consent form which illustrated the aims and procedure of the study. The non-clinical sample was recruited from undergraduates, college students and adults active in the community. Clinical subjects were identified from the psychotherapy waiting list of a major Italian teaching hospital. This hospital is a national Centre for the treatment of severe personality disorders and includes a special outpatient division for the assessment and treatment of PD. Participants in the clinical sample were assessed by two trained psychiatrists who were not involved in the treatment of the patient, using a standardized diagnostic interview schedule (Axis I and Axis II of the Structured Clinical Interview for the DSMIV). The two interviews' evaluations were used to assess inter-rater reliability ($K = 0.73$; $p < 0.001$). Overall adjustment was also assessed using the Global Assessment of Functioning (GAF) Scale, Axis V of the DSMIV system (APA, 1994). The average rating of the patients was 45.4 ($SD = 10.3$). The full diagnostic profile obtained from the clinical group is summarized in Table 1 below.

Table 1 reveals that 20% of the sample met criteria for BPD ($N = 9$), 35% met criteria for both Borderline and Histrionic personality disorder ($N = 14$), 25% for both Borderline and Narcissistic personality disorder ($N = 10$), 10% for Borderline, Narcissistic and Histrionic personality disorder ($N = 4$) and finally 10% for Borderline and Antisocial personality disorder ($N = 3$). Only a small percentage (25%) met also criteria for Axis I disorders and all of them were, at the time of interview administration, at acute axis I symptom remission.

The two samples were matched for age ($M = 29$; $SD = 6.35$) and sex (25 females and 15 males) and were closely comparable in educational levels and socio-economic status. Notably, with respect to differences in the Adult Attachment Interviews obtained from the two samples, and presented below, no effect of gender was found.

Table 1 BPD group diagnostic characteristics

Axis I	
Affective disorders	$N = 3$
Anxiety disorders	$N = 4$
Eating disorders	$N = 2$
Substance abuse	$N = 1$
Total	$N = 10$
Axis II	
Borderline personality disorder	$N = 9$
Borderline personality disorder and Histrionic personality disorder	$N = 14$
Borderline personality disorder and Narcissistic personality disorder	$N = 10$
Borderline personality disorder and Antisocial personality disorder	$N = 3$
Borderline personality disorder and Narcissistic personality disorder and Histrionic disorder	$N = 4$
GAF	$M = 45.4$; $SD = 10.3$
Age	$M = 29$; $SD = 6.3$
Sex	$M = 15$; $F = 25$
Total subjects	40

Procedure

Patients were recruited for the study within 30 days of their first contact with the hospital, after they had completed the diagnostic assessment. Two trained psychiatrists administered the diagnostic instruments and rated each patient on the GAF scale. Rated psychologists, unaware of diagnoses, administered the AAI to both, the clinical and the non-clinical group.

Each subject was interviewed and the tape-recorded reports of the AAIs were transcribed verbatim and coded by two trained raters, according to the criteria set out by Main and Goldwin (1994). Both raters (the author and Dr. Francesca Zanon) have been trained in conducting the coding by M. Main and E. Hesse in 1995 and have substantial experience with this instrument. When rating, they were kept blind to the diagnosis of the patients, their clinical or non-clinical status.

Measures

The AAI (George et al., 1985) is a semi-structured interview the aim of which is to elicit information concerning an individual's current representation of his or her childhood experiences. Several categories of experiences were investigated, including the general quality of child-caregiver early relationships, experiences of early separation, illness, rejection, losses and maltreatment. In each one of these areas the interviewer is instructed to elicit specific memories to illustrate the participant's general statements. Participants are asked to recall attachment-related autobiographical memories from early childhood and to evaluate these memories from their current perspective. AAI transcripts are then classified not primarily on the basis of childhood attachment experiences per se, but according to the way the participants describe and reflect on these experiences.

The coding system for the AAI is based on a number of scales concerning probable past experiences and states of mind of the interviewee as reflected in the narrative (see Appendix). The scales concern basic dimensions linked to the main categories of attachment patterns (i.e., F, Ds, E and U) and are conceptualized in order to better specify the quality of the speaker's relationship history and current functioning.

In addition to the three main organized categories (i.e., F, Ds and E), the classification recognizes specific subtypes for each of them. The E category, for example, contains interviews that indicate a passive stance regarding an ill-defined experience of childhood (Sub-classification E1), others that are filled with current anger concerning past experience (Sub-classification E2) and others in which the participants appear to be fearfully preoccupied by traumatic events (Sub-classification E3); the Ds category contains interviews with more (Sub-classification Ds1) or less (Sub-classification Ds3) high levels of caregivers' idealization, and others with a tendency toward a derogation of attachment experiences (Sub-classification Ds2). Unresolved attachment classification is characterized by an apparent failure to resolve mourning over the loss of an attachment figure, or other traumatic events, particularly child abuse, sexual or physical. These interviews present signs of persistent disorganization when discussing traumatic experiences, like lapses in monitoring of reasoning and lapses in the monitoring of discourse. This classification is superimposed over the three previous main classifications representing a sign of a breakdown of one of them.

The classification system allows for a number of different ways of contrasting patterns of attachment among groups: (1) a three-way comparison of F, and non F

categories (i.e., Ds, E regardless of unresolved status), (2) a four-way comparison of F, Ds, E and U categories and (3) a two-way comparison of U and non-U categories. At the time of coding the raters had not yet been trained in the CC (cannot classify) category of the AAI coding.

The inter-rater reliability of raters was consistent with values reported in the literature: above 85% on four-way comparisons, and consistently high levels of agreement on rating scales.

RESULTS

Adult attachment classifications distribution

A comparison of the distributions of attachment classifications in the clinical and non-clinical groups is shown on Table 2.

Table 2 shows that the groups differed significantly according to two-way, three-way and four-way distributions of AAI classifications. Inspection of Table 2 reveals in the borderline personality disorders group, unresolved and entangled/preoccupied classifications are over-represented, while secure-autonomous subjects are only a small percentage (7%); and interestingly, dismissing classifications are evident in similar proportions in both groups (21%).

The exploration of AAI sub-classifications points to some relevant qualitative differences between the two groups: BPD subjects' F classifications are mostly high in the anger scores (F5), Ds classifications reveal a trend toward angry derogation (Ds2) or high idealization (Ds1), E classifications are mostly divided between an angry stance (E2) and a fearful overwhelmed one (E3), whereas the alternate classifications for unresolved interviews are mostly preoccupied. The non-clinical group shows a different picture: F classifications are mostly prototypic (i.e., F2, F3 and F4), Ds classifications present a lower level of idealization (i.e., Ds3), E classifications do not

Table 2 Adult attachment patterns distribution in clinical and non-clinical group

	F	*Ds*	*E*	*U*	*Four-group* X^2 *(df = 3)*	*Three-group* X^2 *(df = 2)*	*Two-group* X^2 *(df = 1)*
Clinical group	3 (7%)	8 (21%)	9 (22%)	20 (50%)	31.77*	20.61*	24.59*
Non Clinical Group	25 (62%)	8 (21%)	4 (10%)	3 (7%)			

*$p < .001$

Note: Four-group refers to F, Ds, E and U; three-group refers to F, Ds and E; two-group refers to non-U and U.

F = free/autonomous

Ds = insecure-dismissive

E = insecure-preoccupied

U = unresolved

show fearful/overwhelming preoccupations concerning attachment (i.e., E3) and finally U classifications are given mostly to otherwise Free/autonomous interviews.

Borderline personality disorder and score ratings on AAI scales In order to test the second hypothesis aimed at identifying more specific protective or risk factors in the two groups, 25 oneway ANOVAs (with clinical status as factor) were performed on each scale of the AAI coding system. These results are shown below in Table 3.

Table 3 indicates that the probable past attachment experiences of respondents with BPD, as compared to the non-clinical group, were radically impoverished. The BPD group received less loving experiences from mother and father, and more rejecting and neglecting experiences from both parents. Also, the clinical group scored significantly higher on having had a role reversing experience with their mothers during childhood. The F-values for these comparisons are of a magnitude associated with probabilities of these results being due to chance at the level of 0.00001.

Table 3 AAI scale scores in clinical and nonclinical groups

AAI Scales	*Clinical group (n = 40)*		*Nonclinical group (n = 40)*		
Subjective experience	M	SD	M	SD	F (df 1,78)
Loving (mother)	3.41	(1.38)	5.16	(1.56)	24.75**
Loving (father)	3.14	(1.46)	4.82	(1.47)	27.69**
Rejecting (mother)	4.45	(2.47)	2.65	(1.38)	16.02**
Rejecting (father)	4.37	(2.49)	2.31	(1.21)	21.99**
Role-reversing (mother)	3.88	(1.95)	2.42	(1.51)	13.98**
Role-reversing (father)	2.18	(1.58)	2.16	(1.49)	.00
Pressured to achieve (mother)	1.50	(1.11)	1.91	(1.54)	1.88
Pressured to achieve (father)	1.37	(1.19)	1.62	(1.15)	.90
Neglecting (mother)	3.94	(2.76)	1.72	(1.43)	13.75**
Neglecting (father)	4.75	(2.67)	2.77	(1.99)	13.76**
States of mind (parents)					
Idealising (mother)	2.58	(1.79)	2.4 0	(1.72)	.22
Idealising (father)	2.35	(1.44)	1.85	(1.28)	2.67
Involving anger (mother)	2.72	(2.02)	1.62	(1.12)	8.99*
Involving anger (father)	2.65	(2.08)	2061.27	(.81)	15.04**
Derogation (mother)	1.92	(1.70)	1.22	(.62)	5.98
Derogation (father)	2.22	(1.99)	1.35	(1.01)	6.13
Overall states of mind					
Overall derogation	2.63	(2.24)	1.47	(1.04)	8.89
Lack of recall	3.57	(1.50)	2.77	(1.09)	7.43
Metacognition	1.71	(1.03)	3.33	(1.61)	13.73**
Passivity	4.01	(1.29)	3.58	(1.39)	1.99
Fear of loss	1.15	(.69)	1.00	(.00)	1.83
Unresolved loss	3.91	(1.94)	2.01	(1.46)	5.47
Unresolved trauma	3.65	(2.04)	1.10	(.63)	31.03**
Coherence of transcript	3.93	(1.39)	6.10	(1.81)	35.90**
Coherence of mind	3.55	(1.24)	6.04	(1.78)	52.57**

*p < .005
**p < .001

Table 4 AAI scale scores in insecure clinical and nonclinical subjects

AAI Scales	*Clinical group (n = 37)*	*Nonclinical group (n = 15)*	
Subjective experience	Mean rank	Mean rank	U
Loving (mother)	35.30	22.13	130*
Loving (father)	22.84	30.39	169
Rejecting (mother)	29.04	18.70	160
Rejecting (father)	29.51	17.57	143*
Role-reversing(mother)	28.01	22.77	221
Role-reversing (father)	25.30	29.47	233
Pressured to achieve (m.)	25.26	29.57	231
Pressured to achieve (f)	26.03	27.67	260
Neglecting (mother)	29.54	16.07	121**
Neglecting (father)	27.76	20.23	183
States of mind (parents)			
Idealising (mother)	24.08	32.47	188
Idealising (father)	26.96	25.37	260
Involving anger (mother)	28.30	22.07	211
Involving anger (father)	29.03	20.27	184
Derogation (mother)	28.58	21.37	200
Derogation (father)	27.61	23.77	236
Overall states of mind			
Overall derogation	27.70	23.53	233
Lack of recall	27.46	24.13	242
Metacognition	26.47	29.57	246
Passivity	24.86	30.53	217
Fear of loss	1.00	1.00	-
Unresolved loss	36.93	35.43	261
Unresolved trauma	39.74	18.50	111**
Coherence of transcript	24.57	31.27	206
Coherence of mind	23.30	34.40	159

* $p < .005$
** $p < .001$

Table 3 also indicates two significant differences between the groups in terms of current state of mind with respect to involving anger. Specifically, the personality disordered group was scored higher for involving anger toward both mother and father.

In terms of overall state of mind regarding attachment, the clinical group scored significantly lower on metacognition, i.e., the capacity to monitor one's own thoughts and speech processes. The clinical group also scored significantly higher in terms of evidence of unresolved trauma. Most impressively, the clinical group scored dramatically lower on ratings of coherence of transcript and coherence of mind. These latter three comparisons are the most significant results highlighted in Table 3. Finally, of the 25 tests computed for Table 3, 13 (52%) yielded significant contrasts.

Insecure borderline subjects and score ratings on AAI scales On the basis of the results of the study, which showed an overrepresentation of insecure classifications in the BPD group, a further analysis was performed. It was aimed at exploring the role

of insecurity in the two groups by testing differences among AAI scales ratings for those interviews from both groups assigned to insecure (dismissing, preoccupied, unresolved) groups only. A non-parametric statistical test (Mann–Whitney Test with clinical status as factor) was used, with the alpha level being set at 0.005. This comparison of the AAI scale scores assigned to insecure interviews from the clinical groups ($N = 37$), and the non-clinical group ($N = 15$) is shown in Table 4 below.

Table 4 reveals that when borderline subjects are also insecure, the parental relationship appears to be a potential risk factors in the case of a combination of an actively rejecting father ($U = 143.5$; $p = 0.005$) and a neglecting ($U = 121$ $p = 0.0016$) and poor-loving ($U = 130.5$; $p = 0.0031$) mother.

Looking at the mental organizations of attachment (i.e., scales for overall states of mind), the main cues are summarized by a frame in which one can find a failure in the trauma resolution–concerning abuse–($U = 111.5$; $p = 0.0013$), with lapses in monitoring and in reasoning specific to the retelling of the past trauma.

It is notable that the attachment mental representations of insecure BPD subjects show a configuration which partially overlaps with the one found in the previous analysis (i.e., BPD subjects vs. control subjects, including secure interviews so highly over-represented in the control subjects). Indeed, both analyses share the characteristics of a not particularly supportive, rather than a neglecting and rejecting, caring quality. The experience of a failure in trauma resolution (i.e., abuse) is present in both situations as well. The present analysis adds to the previous data information on some characteristics of attachment mental representations which differentiate the main category of insecurity in the two groups. When borderline pathological condition and attachment insecurity are associated, the main cues which identify the developmental issues of the disorder are related to a specific type of parental relationship (i.e., the combination of an actively rejecting father and an unloving and neglecting mother). This combination of factors seems to impair the security of BPD subjects and to be associated with a failure in resolving traumatic experiences (concerning abuse).

DISCUSSION AND CONCLUSIONS

The results of this study provide support for the hypothesis that specific personality disorders–i.e., borderline personality disorder–correspond to specific types of response to the Adult Attachment Interview. In our sample, interviews from the participants with BPD are almost exclusively insecure, with more than half being unresolved regarding past loss or trauma. Not surprisingly, security could then be considered the main protective factor of the disorder.

The results pertaining to the dimensional rating scales demonstrate that some aspects of the quality of attachment mental representations in the borderline pathology may be better explained and clarified by exploring the probable past experiences, and current state of mind, regarding attachment. These features are indexed by the specific 9-point rating scales applied to Adult Attachment interviews.

The observed results from the AAI rating scales throw light on the BPD population noted to suffer from a major impairment in emotional regulation (Linehan, 1993). Specifically, the current sample of respondents with BPD showed a marked tendency toward an angry-involving relationship with the parents against the background of a role-reversing relationship with the mother. Furthermore, the joint effect of a weak and demanding maternal attachment figure combined with a neglecting or actively

rejecting style of parenting seems to generate a relational childhood background which cannot protect the individual from frightening experiences.

Our results also demonstrate a failure of metacognitive monitoring, stressing how this ability can be considered an essential protective factor. Given the impact of traumatic experience one can argue that the picture just mentioned seems to depict an unsafe environment, unable to protect the individual from frightening experiences. This issue is consistent with the considerations mentioned in the pivotal 'frightening-frightened' hypothesis proposed by Main and Hesse (1990). Recent studies (Lyons-Ruth, Bronfman, & Atwood, 1999; Schuengel, Bakermans-Kranenburg, van IJzendoorn, & Blom, 1999) have discussed the quality of this relational experience with the aim of explaining both the aetiology of disorganized attachment and the link between disorganization and the carer's lack of resolution with respect to attachment-related traumas. A central point of this literature is the differential role of maternal stances in determining the quality of disorganization in the child (Lyons-Ruth et al., 1999): a helpless-fearful stance is associated with a form of infant disorganization captured by the secondary classification of secure attachment, whereas a hostile-ambivalent stance is associated with a form of disorganization linked to underlying insecurity.

The results of the analysis of the quality of insecurity in BPD (i.e., the third set of analyses of the study) are consistent with the above considerations. They particularly support the second hypothesis of the study, which concerns the presence of specific sub-dimensions of the borderline's styles of attachment mental organizations. Our findings also help us in identifying which developmental factors could be considered specifically at risk for this disorder. It is worth stressing that the focusing of analysis on insecure subjects allows us to identify the distinctive role of each parent: it is the joint effect of a passive and unsupportive mother and an actively rejecting father that give rise to the peculiar configuration of insecurity in this pathology. The inability to resolve traumatic experience(s) is then conceived within a specific developmental framework.

Our data seem to confirm the assumption that the *organization/disorganization* dimension could be considered a more important risk factor than the *security/insecurity* dimension in predicting negative reactions to traumas, separations or losses (Adam, Keller, & West, 1995). In other words, a pathological reaction to traumatic events would be predicted by the disorganization of attachment rather than by the more general category of attachment insecurity. Even if the role of traumatic experiences in the pathogenesis of BPD is still a controversial issue (Fossati, Madeddu, & Maffei, 1999), it remains clear however, that early traumas may generate a crucial impairment in self-organization (Siegel, 1999). The last set of analyses of our study adds further information to this issue, stressing the role of a passive mother and the quality of traumatic experiences in the developing of attachment disorganization. Thus, in the case when the mother is a weak figure, unable to represent an organized attachment base, the vulnerability to traumatic experience constitutes an increasing risk factor for this psychopathology.

Although being cautious in indicating a deterministic relationship between psychiatric status and patterns of attachment, the results of this study provide clear support for the association between BPD and some mental organizations concerning attachment. They particularly show an interesting trend in the area which breaks down the data on traumatic experience, troubles in metacognitive monitoring and in the ability to keep a good level of mental coherence in discussing emotionally charged topics. Since it is actually well-known that disorganized attachments are associated with unresolved traumatic experiences and with later signs of psychopathology in

children and adults (Solomon & George, 1999), it is interesting to observe the incidence of their occurrence in this population of patients.

A number of accounts may be offered for this pattern of findings. First of all, what has consistently emerged is that these disorders are nearly always associated with non-autonomous – mostly preoccupied – states of mind. This is consistent with the outcomes of two other studies by Patrick and colleagues (1994) and Fonagy and colleagues (1996) which, using the AAI instrument, have found an even stronger association between BPD and entangled/preoccupied classifications. Since our data highlights the importance of the preoccupied attachment patterns for this group of patients, it is possible to state that a factor of vulnerability is constituted by the tendency toward maximizing strategies which may incline the individual to internalizing disorders. The reason is that the diversion of their own attention towards other's availability may leave negative representations painfully alive (Dozier, Stovall, & Albus, 1999). This finding, associated with difficulties in the area of emotional regulation (as involving anger and impairment in metacognitive monitoring), could indicate specific risk factors for the development of BPD.

A second factor, which seems to play an important role, is the way of experiencing traumatic events in this psychiatric population. Data – according to other research in this field (Fonagy et al., 1995; Stalker & Davies, 1995) – suggest that individuals with experiences of loss, severe maltreatment or sexual abuse who tend to respond to these experiences through the inhibition of mentalizing function and emotional regulation, are less likely to resolve these events and are more likely to manifest borderline psychopathology. Thus, the combination of maximizing attachment strategies and the experience of unresolved traumas appears central to borderline personality disorder. Finally, the data seems to support the importance of distinguishing the quality of lack of trauma resolution in order to identify more accurately developmental antecedents of functional or dysfunctional patterns of attachment, which could be precursors to specific psychopathologies.

These results shed some light on implications for treatment and suggest the opportunity to further explore this field. Longitudinal studies – from infancy to adulthood – would allow further tests of the model of 'psychopathology as an outcome to development' (Sroufe, 1997, p. 251). In addition, further studies are needed to better clarify the role of metacognition in this population of patients and to link them with some important achievements in this topic, which are being offered by developmental studies. The opportunity to identify possible deficits in this area, to clarify whether they are general or specific with respect to attachment, could give important indications for treatment. One of the most compelling questions, which still remains outstanding, concerns the role of deficits in emotional regulation (Barone, 2000; Wagner & Linehan, 1999) and its implications for mentalizing abilities in structuring the treatment setting for these patients (Bateman & Fonagy, 1999; Linehan, 1993). It is hoped that the perspective provided here might help to bridge the gap between theorizing about attachment development and clinical research and intervention.

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APPENDIX

Adult Attachment Interview coding system

Scales for subjective experience

	Mother	Father
Loving (1–9)	____	____
Rejecting (1–9)	____	____
Involving/reversing (1–9)	____	____
Pressured to achieve (1–9)	____	____
Neglecting (1–9)	____	____

Scales for states of mind respecting the parents

	Mother	Father
Idealizing (1–9)	____	____
Involving anger (1–9)	____	____
Derogation (1–9)	____	____

Scales for overall states of mind

Overall derogation of attachment (1–9)	_____
Insistence on lack of recall (1–9)	_____
Metacognitive processes (1–9)	_____
Passivity of thought processes (1–9)	_____
Fear of loss (1–9)	_____
Highest score for unresolved loss (1–9)	_____
Highest score for unresolved trauma (1–9)	_____
Coherence of transcript (1–9)	_____
Coherence of mind (1–9)	_____
Classification	_____