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Attachment and psychopathology in a community sample

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Abstract
The Structured Clinical Interview for DSM-III-R (SCID-I) and the Adult Attachment Interview (AAI) were administered to 60 women participating in a study (n = 226) of mother–child interaction. These women were not referred to the study for psychiatric care. The 60 women interviewed with the AAI were selected from the first 190 women who completed the SCID-I, so that 30 received a diagnosis and 30 did not. Analyses indicated that psychopathology diagnoses were associated significantly with mental representations of attachment classified in the AAI. The non-autonomous groups had increased likelihood of SCID diagnosis, compared to the autonomous group. While 32% of women with autonomous AAI transcripts received SCID diagnoses, 63% of women with Dismissing, 100% of woman with Preoccupied, and 65% of women with Unresolved transcripts received diagnoses. Secondary analyses indicated that Dismissing classifications were associated with Axis I diagnoses and Preoccupied classifications with affective disorders. Of note was that among women with Unresolved classifications, underlying secure attachment was associated with low risk of psychopathology, while underlying anxious attachment was associated with elevated risk of diagnosis. These findings support the premise from attachment theory that early relationships affect patterns of interpersonal expectations and behavior and affect regulation.

Keywords: Attachment, psychopathology, DSM, SCID, AAI

Introduction
In his formulation of attachment theory, Bowlby (1973, 1980, 1982, 1986) postulated that experiences of insecurity with primary caregivers in infancy establish patterns of social interaction and emotional regulation that may be the basis of some adult psychopathology. A tendency to seek out attachment figures in times of stress and to monitor the availability of attachment figures is present throughout life (Main, 1996), implying that insecure adults would demonstrate difficulties in forming and maintaining interactions and relationships with others.

Until 20 years ago, no reliable method was available to assess adults’ representations of early attachment experiences, so that Bowlby’s prediction could be tested empirically. The Adult Attachment Interview (AAI; George, Kaplan, & Main, 1996) provides researchers with a standardized method to assess adult mental representations of childhood attachment experiences. For the AAI, Bowlby’s (1982) construct of the “internal working model” was operationalized by Main and colleagues (e.g., Main, Kaplan, & Cassidy, 1985) as “state of
mind with respect to attachment” expressed in discourse about early relationships. Scoring of the AAI focuses on coherency of discourse and on the strategies used to relate attachment experiences, rather than on the content of memories about childhood (Main & Goldwyn, 1984–1998; Main, Goldwyn, & Hesse, 2003). Adult attachment is assessed with respect to the adult’s integration of abstract judgments about early relationships with specific memories. This integration is called coherence, autonomy, or security and is seen as the analogue to secure base behavior in infancy (Allen, Hauser, & Borman-Spurell, 1996).

With AAI, a researcher makes a simple but remarkable shift in attention from the content of autobiographical memory to the form of discourse in which those memories are presented (Van IJzendoorn, 1995). Four patterns of adult discourse in the AAI are observed (Main & Goldwyn, 1984–1998):

Secure-Autonomous (Group F). Adults termed Secure-Autonomous provide discourse that is “coherent and collaborative” (Main, 1996, p. 240), presenting even difficult early experience in clear and vivid ways. Discourse includes no contradictions between semantic and episodic memories of childhood attachments, a focus on the goal of the discourse task, and rich use of language and expression. The interviewee demonstrates an ability to discuss and reflect on attachment experiences without disorganization, lack of memory, or passivity of thought. These interviews are characterized by recognition, acceptance, and forgiveness of imperfections and injustices in parents and self. Even adults with extreme and abusive attachment histories, who have come to understand coherently their early difficulties, may provide autonomous discourse. Discourse termed, “insecure” or “non-autonomous” may show one of three patterns:

Dismissing (Group Ds). Transcripts coded Dismissing are characterized by notable contradictions in the interviewee’s discourse about early attachments. Strong idealization of caretakers is common, along with contradictory and impoverished memories of actual events. The interviews are notable for restriction in coherence and content. Some adults in this group minimize the importance of close relationships and emphasize wiliness, craftiness, and extraordinary self-reliance.

Preoccupied (Group E). The transcripts of adults termed Preoccupied may be long and embellished, including information that is irrelevant to the discourse task. There are frequent examples of passive speech, sentences begun and left unfinished, and specific ideas that disappear in vague expressions. The boundaries between present and past, self and other often are confused. In some transcripts coded E there is notable involving anger, which is displaced from past childhood events to the present discourse task.

Unresolved (Group U). Transcripts of adults are termed Unresolved/ Disorganized when there is evidence of substantial lapses in reasoning and/or discourse specifically surrounding the discussion of loss or other traumatic events. It should be noted that the U classification is made based solely on the discussion of trauma or loss experiences and is superimposed on the main (F, Ds, or E) attachment classification.

In addition, transcripts may be termed Cannot Code (Group CC) if they do not fit the above categories. For these participants, discourse appears to “represent a global breakdown in the organization and maintenance of a singular strategy for adhering to the discourse task of the AAI” (Hesse, 1996, p. 4). For purposes of statistical analyses, these subjects are grouped with the Group U subjects.
During the 1980s and 1990s, as measures of adult attachment were refined, diagnoses of psychopathology also were made more reliable among raters, beginning with the revised third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM III-R). A standardized semi-structured diagnostic interview based on the DSM III-R, The Structured Clinical Interview for DSM III-R (SCID), permits a clinical investigator to reach a reliable diagnosis, using a standardized method.

A number of studies in the 1990s (Adam, Sheldon-Keller, & West, 1996; Allen, Hauser, & Borman-Spurrel, 1996; Cole-Detke & Kobak, 1996; Dozier, 1990; Dozier, Stevenson, Lee, & Velligan, 1991; Fonagy, Leigh, Steele et al., 1996; Patrick, Hobson, Castle, Howard, & Maughan, 1994; Rosenstein & Horowitz, 1996) established the validity of using of the AAI in adults and adolescents with a wide range of psychopathology. These studies included individuals already identified with psychiatric diagnoses to determine adult attachment classifications associated with diagnosis (Hesse, 1996). Results of these investigations indicate that the occurrence of autonomous attachment is exceedingly low among individuals with psychopathology. Furthermore, these studies suggest that the Unresolved and Cannot Classify groups are observed with significant frequency in association with psychiatric diagnosis (see Hesse, 1996, for a review).

These pioneering studies provide evidence that attachment organization lacking security and coherence in adulthood may lead to “enduring vulnerabilities to psychopathology” (Allen et al., 1996, p. 254) by impairing the capacity to be part of satisfying social relationships, as well as the ability to understand and evaluate social interactions appropriately. Non-autonomous states of mind specifically may impair ability to attend to social interactions in a flexible and non-defensive way. Similarly, insecure states of mind may lead individuals to have negatively biased expectations of self and others, leading to self-fulfilling and self-perpetuating patterns of atypical interpersonal interactions and relationships. Indeed, patterns of adult attachment may mediate the transmission of psychopathology across generations (Allen et al., 1996).

As existing studies are limited to clinically-referred populations, they may include only more severe cases of psychopathology and thus inflate the association between attachment and psychopathology. Furthermore, in cases of severe psychopathology, memories of attachment experiences could be influenced by retrospective distortion.

In the study reported here, the question of whether the occurrence of psychopathology in adulthood may be related to the quality of mental representation of childhood attachment experiences is addressed in a sample of women who were not referred for psychiatric evaluation. The AAI and SCID were administered to 60 women to assess whether mental representations of attachment were associated with adult psychopathology. Measures of social support and stressful life events also were included to provide information about processes of social interactions and experiences that link attachment and psychopathology.

The women studied were recruited from a sample of mothers participating in a larger research project investigating failure-to-thrive. Children with growth deficits constituted approximately 40% of the larger sample and were referred to this study for medical and developmental evaluation. All mothers constitute a non-referred sample, including a majority who were recruited from a community population. The 60 women interviewed with the AAI were selected from among 190 women who completed the SCID-I, so that 30 received a diagnosis and 30 did not. With this sample, two central questions were addressed: (1) are mental representations of attachment, as assessed in the AAI, associated with psychopathology as assessed by the SCID?; and (2) are there significant associations between the nature of psychopathology and specific attachment classifications? Specifically, is unresolved loss or trauma relating to early attachment experiences, as assessed by the AAI,
associated in predictable ways with types of psychopathology? Secondary analyses were conducted using data on social support and stressful life events to investigate processes of social interaction that may mediate attachment and psychopathology.

Method

Subjects

Sixty women participated in this study (please see Table I for demographic data on this sample). They were mothers of 9 to 30-month-old children who had participated in a larger study \( (n = 226) \) of psychological, social and biological correlates of childhood malnutrition or failure-to-thrive (FTT). In that study, which included both children with FTT and typically-growing comparison children, a SCID was administered to each mother. Among the first 190 participants from the larger study, 98 (52%) received a diagnosis of psychopathology on the SCID-I and 92 did not. Based on the SCID results from these 190 women, 30 subjects were randomly selected from among the 98 with a positive clinical diagnosis from the SCID and invited to participate; 30 comparison subjects were chosen randomly from among the 92 with no SCID diagnosis. The child’s health (FTT) status was not a factor considered in subject selection.

All participants were originally recruited to the larger study from the pediatric clinic of a major New York City teaching hospital and community pediatric practices affiliated with the hospital. Participation in the study was voluntary. All subjects signed IRB approved consent forms (one for the larger study and an additional form for the AAI study) and were paid for participation.

The 60 participants in the AAI study were compared to the 130 who did not participate on the following variables: child age, mother age, mother education, mother ethnicity, mother marital status, and SCID Axis I and Axis II diagnoses. There were no significant differences between the groups observed. Thus, it appears that the sample to be described below was an appropriately random selection from the larger group.

Twenty of the 60 participants (33%) were African-American, 20 (33%) were Caucasian, 17 (28%) were Latina, and 3 (6%) were Asian or South Asian. Thirty-three (55%) were single, divorced, or widowed; 26 (45%) were married or living with a partner. There was a wide range of annual per capita income, education level, and number of children in the family.

Twenty-three participants (38%) had children who had been diagnosed with FTT and 37 subjects (62%) had normally growing children, similar proportions from each group were observed in the 130 families not included in the AAI study (see Ward, Lee, and Lipper (2000) for information on study definitions of FTT). In the SCID diagnosis group, 16 of 30 children were affected with FTT and in the no-diagnosis group, 8 of 30 were affected with FTT. The rates of FTT in the two SCID diagnosis groups were significantly different.
(kappa = 2.7, T = 2.10, p < .05). This finding is consistent with reports in the literature suggesting that mothers whose children have growth deficits are at risk for psychopathology (Polan et al., 1991).

**Procedures**

**SCID interviews.** The SCID interviews were conducted by a psychiatrist or one of three graduate students in clinical psychology trained and supervised by the psychiatrist in the administration of the instrument. Interviewers based diagnoses on reported and observed symptoms during the semi-structured clinical interview, which averaged approximately an hour in length. A diagnosis was made if and only if the interviewee's symptoms met the standardized threshold for a specific disorder. In addition, the interviewer recorded a narrative report of his or her main impressions of the interview.

The SCID begins with general queries of the subject's current level of function and perceived life stressors, then proceeds to queries about the presence or absence of specific disorders. Following DSM-III-R, the interview protocol is organized by categories of disorders based on observed or reported symptoms. Symptoms of each disorder in the DSM-III-R are addressed by specific questions. All items endorsed by an interviewee were reviewed with her. The interviewer then made a judgment of whether the symptom was present, sub-threshold, or absent. If a patient reported or demonstrated the required number of symptoms occurring concurrently, a diagnosis was made. Using the SCID, the interviewer makes no assumptions about the etiologies or mental organizations underlying psychopathology.

The diagnostic categories are broadly grouped on two axes. Axis I includes the affective, substance abuse, anxiety, and adjustment disorders. Axis II includes the personality disorders, including avoidant, dependent, obsessive-compulsive, passive-aggressive, self-defeating, paranoid, schizotypal, schizoid, histrionic, narcissistic, anti-social, and borderline personality disorder. The senior interviewer routinely monitored interview sessions and SCID-I scoring for the graduate students, assuring accurate administration, scoring, and diagnosis.

**AAI interviews.** In a separate session, selected subjects were administered the AAI (George et al., 1996), which was tape-recorded and transcribed verbatim. The AAI is a semi-structured interview that includes 15 questions probing early attachments. The interview begins with a request for general evaluations of relationships to early caregivers and then moves to specific descriptions of childhood experiences. Questions about emotional upsets, physical injuries or illness, rejection, early separations from the parents, loss, and abuse are asked. A subject is asked to speculate about the reasons why her caregivers acted as they did and about the probable effects of the early caretaking environment on adult personality. Finally, the subject is asked about current relationships to parents and children.

Each interview was assessed in a multi-staged discourse analysis, coded, and given a main attachment classification based on discourse style and coherency. The main classifications include: Secure-Autonomous (F), Dismissing (Ds), and Preoccupied (E). If the interview transcript showed evidence of disorganization in discussions of loss or trauma, the interview was classified as Unresolved (U), in addition to the major (F, Ds, or E) attachment classification (Main & Goldwyn, 1984–1998). Transcripts that did not fit the above categories were placed in a Cannot Code (CC) category. For purpose of analyses, CC classifications were grouped with U in keeping with other attachment research.
One coder (Coder 1), who is certified as reliable in AAI coding by Mary Main and Erik Hesse, coded all 60 transcripts. Two other coders (Coders 2 and 3), who were trained by Main and Hesse in AAI coding but did not complete reliability testing, independently scored 13 and 11 of the 60 transcripts, respectively. Coder 1 met at least bi-weekly with two other coders. In those meetings, reliability cases were reviewed and any coding disagreements were resolved by consensus of the three coders. These meetings also provided opportunity for Coder 1 to review recent codes with Coders 2 and 3 and to request opinions on cases that were difficult to code. Agreement on Ds/E/F/U classification for Coders 1 and 2 was 92% (kappa = .88); for Coders 1 and 3 was 82% (kappa = .68); and for Coders 2 and 3 was 78% (kappa = .61).

Other data. Demographic data were collected as part of the larger study, as were assessments of stressful life events and social support.

Life events were measured with an adaptation of Cochrane and Robertson’s (1973) inventory (developed by Egeland & Deinard, 1975). The respondent was read a list of 44 events (e.g., “has trouble with public assistance,” “changed residence,” “had a death in the family”) and was asked to report whether each event occurred in the past year. Positive responses were queried to provide information for coding. Total scores were based on both frequency and severity of events, using the coding manual of Egeland and Deinard (1975).

Social support was measured with an adaptation of Crockenberg’s (1981) interview. The respondent was asked whom she knows; how much, how often, and with what each person helps; and whether she received the help she needs. For each person she named, the respondent chose a rating of quality of support by placing a marker for that person in one of four rings surrounding a center circle designated as the mother and child. She also defined people who gave either too much or too little help. Support scores were calculated separately for partner, family members, and friends. For the first category, the quality of support score was used, unless the mother reported that her partner gave too much or too little help. For the friends and family categories, the quality of support scores for all persons in a category were summed (and scores for people whose support mother described as not useful to her were removed). In this report, a summary score for total support (partner + family + friends) was used in analyses.

Results

Descriptive data

In this sample of 60, using the three-group system, 31 subjects (52%) were classified Secure-Autonomous (F), 12 (20%) Dismissing (Ds), and 13 (22%) Preoccupied (E). An additional 4 (7%) were coded cannot classify (CC). Using the four-group system, 25 subjects (42%) were classified Autonomous (F), 8 (13%) Dismissing (Ds), 4 (7%) Preoccupied (E), and 23 (38%) Unresolved (U or CC) AAI. It is of note that 3 of the 4 subjects who received a major classification of CC also received a U classification. All 4 were included in the U category for analyses.

Demographics and SCID diagnoses

Women with and without psychopathology were compared on maternal age, maternal education, family income, race/ethnicity, and marital status. The two groups were not significantly different on any of these measures.
Demographics and AAI classifications

Women in the autonomous and non-autonomous groups were compared on maternal age, maternal education, family income, race/ethnicity, and marital status. The two groups differed significantly only on marital status (Fisher’s exact test, \( p < .05 \), two-tailed), with non-autonomous women more likely to be married or co-habiting than autonomous women (57% vs. 28%). As this finding did not result from a focal analysis, it was not interpreted further.

Life events and social support

Measures of stressful life events and social support were associated significantly with both AAI and SCID classifications. Autonomous women reported significantly lower levels of life stress (\( t \) [58] = 2.61, \( p < .05 \)) and higher levels of social support (\( t \) [57] = 2.14, \( p < .05 \)) than non-autonomous women. Women with psychopathology reported significantly higher levels of life stress (\( t \) [58] = 2.74, \( p < .01 \)) and lower levels of social support (\( t \) [57] = 4.33, \( p < .001 \)) than women without psychopathology.

Psychopathology and AAI status

There was a significant association observed between psychopathology and AAI classification, as observed in Table II. This association was tested using the uncertainty coefficient (U; Goodman & Kruskal, 1979), which is a measure of association indicating the proportional reduction in error when values of one variable are used to predict values of the other variable. A value of 0.184 indicates that knowledge of one variable reduces error in predicting values of the other variable by 18.4%. The non-autonomous groups had increased likelihood of SCID diagnosis, compared to the autonomous group (\( U \) [SCID dependent] = .184, \( T = 2.41, p < .01 \)). While 32% of women with autonomous AAI transcripts received SCID diagnoses, 63% of women with Dismissing, 100% of women with Preoccupied, and 65% of women with Unresolved transcripts received diagnoses.

The same data were analysed in a 2 (autonomous vs. non-autonomous) X 2 (SCID diagnosis vs. no diagnosis) cross-tabulation. Subjects diagnosed with current psychopathology were significantly more likely to be non-autonomous than autonomous: 80% of women diagnosed with psychopathology were classified in Group Ds, E, or U. In contrast, among women with no SCID diagnosis, 37% were in Group Ds, E, or U (kappa = .433, \( T = 3.40, p < .01 \); Odds Ratio [OR] = 6.91, 95% confidence interval [CI] = 2.16 – 22.10).

Table II. AAI classification by psychopathology diagnosis.

<table>
<thead>
<tr>
<th>Attachment classification</th>
<th>SCID outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diagnosis ( (n = 30) )</td>
</tr>
<tr>
<td>Autonomous (Group F; ( n = 25 ))</td>
<td>6 (.24)</td>
</tr>
<tr>
<td>Dismissing (Group Ds; ( n = 8 ))</td>
<td>5 (.625)</td>
</tr>
<tr>
<td>Preoccupied (Group E; ( n = 4 ))</td>
<td>4 (1.0)</td>
</tr>
<tr>
<td>Disorganized (Groups U, CC; ( n = 23 ))</td>
<td>15 (.65)</td>
</tr>
</tbody>
</table>

\( \chi^2(3) = 13.39, p < .01 \).

\( U \) (SCID dependent) = .184, \( T = 2.41, p < .01 \).

\textit{Note}: Values in parentheses are row proportions.
We explored this association by examining whether certain forms of psychopathology 
were associated with specific attachment classifications (see Table III). In particular, we 
examined the association between DSM III-R Axis I and Axis II psychopathology and 
adult attachment status by cross-tabulating the data in a 3 (no psychopathology vs. Axis I or 
Axis I and II comorbid vs. Axis II only) × 4 (F vs. Ds vs. E vs. U) analysis. There was a 
significant association between psychopathology and AAI status (U [SCID dependent] = .147, T = 2.49, p < .01). Women with Ds classifications were more likely 
than women in the other three groups to receive Axis II Personality Disorders (63% vs. 33%; 
OR = 3.33, 95% CI = .711 – 15.63). In contrast, women with E classifications were more 
likely than women in the other three groups to receive Axis I affective disorder diagnoses 
(75% vs. 14%; OR = 18.0, 95% CI = 1.66 – 195.22). Women with U classifications were 
equally likely to receive Axis II (30%) and Axis I or comorbid (35%) diagnoses.

**Psychopathology and attachment status within the U category**

Subjects receiving a U classification were further examined in a secondary analysis, as it was 
somewhat surprising to observe 8 of the 23 women with no SCID diagnosis in this group. Of 
these 23, 6 were classified Unresolved/Secure (U/F) and 16 were classified Unresolved/ 
Insecure (U/Ds, U/E, or U/CC). One woman’s transcript was classified CC, without 
unresolved status and so was eliminated from these analyses. As presented in Table IV, 
women with U/F classifications were significantly less likely to receive a diagnosis of 
psychopathology than women with U/Ds, U/E, or U/CC classifications (kappa = .585, 
T = 2.81, p < .01).

### Table III. AAI classification attachment by DSM-III-R, axis I and II diagnosis.

<table>
<thead>
<tr>
<th>Attachment Classification</th>
<th>SCID DSM-III-R diagnosis</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No (n = 30)</td>
<td>Any Axis I (n = 15)</td>
</tr>
<tr>
<td>Autonomous (F)</td>
<td>19 (.76)</td>
<td>3 (.12)</td>
</tr>
<tr>
<td>Dismissing (Ds)</td>
<td>3 (.375)</td>
<td>1 (.125)</td>
</tr>
<tr>
<td>Preoccupied (E)</td>
<td>0 (.00)</td>
<td>3 (.75)</td>
</tr>
<tr>
<td>Unresolved (U)</td>
<td>8 (.35)</td>
<td>8 (.35)</td>
</tr>
</tbody>
</table>

X² [6] = 17.73, p < .01.
U (SCID dependent) = .147, T = 2.49, p < .01.
Notes: Values in parenthesis are row proportions.Cannot Code subjects are included in the Unresolved group.

### Table IV. SCID diagnosis by unresolved attachment.

<table>
<thead>
<tr>
<th>Attachment Classification</th>
<th>SCID outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diagnosis (n = 14)</td>
</tr>
<tr>
<td>Unresolved/Non-Autonomous (U/Ds, U/E, U/CC n = 16)</td>
<td>13 (.83)</td>
</tr>
<tr>
<td>Unresolved/Autonomous (U/F n = 6)</td>
<td>1 (.15)</td>
</tr>
</tbody>
</table>

Kappa = .585, T = 2.81, p < .01.
Note: Values in parentheses are row proportions. One subject classified Cannot Code, but not Unresolved was omitted from the analysis.
All subjects in the U/F category had unresolved loss; there were no subjects with unresolved physical or sexual abuse in this cell. Although U/F subjects were significantly less likely to have psychopathology, there was evidence in their AAI transcripts that their unresolved loss affected daily functioning, even if their distress did not meet the criteria for diagnosis (e.g., they reported marital discord, physical symptoms).

**Child health status**

As 40% of the subjects in this study had a child with a diagnosis of failure-to-thrive, tests of association between SCID diagnosis and AAI classification reported above were repeated for the 36 subjects with normally growing children. Reported associations for the complete sample were significant for this group, suggesting that findings were not based in global maladaptation among women in the FTT group. Specifically, the cross-classification of four-group AAI by SCID diagnosis vs. no diagnosis was significant ($U_{[SCID dependent]} = .207, T = 2.03, p < .05$) for the 36-subject sub-sample. For the 24-subject sub-sample from the FTT group, only the two-group AAI association was marginally significant ($kappa = .36, T = 1.94, p = .053$).

**Logistic regression**

Because maternal psychopathology may have been a function of her child’s FTT status and the concomitant stress of caring for an ill child (Polan et al., 1991), child FTT status was included in a formal statistical analysis. The following set of six independent variables was included in a logistic regression analysis, using a forward stepwise method to predict psychopathology as diagnosed on the SCID: maternal education, marital status, life stress score, social support score, maternal AAI classification, and child FTT status. With the exception of education, each of the six variables had shown significant bivariate associations with SCID and/or AAI classifications. Education was included to represent socio-economic status.

The logistic regression equation included three variables: marital status ($W = 10.20, p < .01$), AAI classification ($W = 4.65, p < .05$), and maternal education ($W = 6.24, p < .05$). Measures of social support, life stress, and child FTT status were not included in the equation. Based on this equation, 82.8% of cases were correctly classified with respect to psychopathology status (86% of positive diagnosis and 79% of no diagnosis cases were predicted by this group of variables). This rate of prediction is a significant improvement over the base rate of 50% with positive diagnosis of psychopathology in this sample.

**Mediational analyses**

Both SCID diagnosis and AAI classification showed significant bivariate associations with measures of life stress and social support. In the interest of exploring further the processes that link psychopathology to states of mind with respect to attachment, life stress and social support were evaluated as mediators of the attachment-psychopathology association. Specifically, the Sobel statistic was used to test whether the indirect effects of attachment on psychopathology via life stress and social support were significantly different from zero, using the program of Preacher and Leonardelli (2001). Conditions for conducting mediational analyses were met here: attachment and psychopathology showed significant association and each of them was in turn associated significantly with life stress and social support.
Analyses indicated that life stress was not a significant mediator of the attachment/psychopathology association: Sobel statistic $z = 1.535$, n.s. Social support from partner, family, and friends showed only a marginally significant indirect effect: Sobel statistic $z = 1.844$, $p = .065$. Interestingly, the capacity to form satisfying and supportive social relationships out of security in early close relationships is predicted from attachment theory.

**Discussion**

The results of this study support the hypothesis that women diagnosed with psychopathology are significantly more likely to be classified non-autonomous (insecure) AAI classifications than are women without a diagnosis. This result is independent of the actual events of childhood and holds true even for subjects who have experienced maltreatment or loss of significant attachment figures.

*Secure-Autonomous attachment.* Seventy-six percent of the subjects with secure AAI classifications had no current psychopathology. Based on marginal distributions in the cross-tabulation, 50% of Secure-Autonomous mothers would have been expected to receive no diagnosis. In the AAI, a large percentage of Secure-Autonomous women described caregivers who provided “good enough” parenting in childhood, so that their caregivers served as secure bases or reliable sources of safety, protection, comfort, and support. As described by Main, the discourse of secure subjects in this sample showed moderate to high coherence and these women were at ease with the topic of the interview.

*Dismissing attachment.* In this study, eight women were assigned a Ds classification. Of those, five (62.5%) were diagnosed with personality disorders including self-defeating, paranoid, passive-aggressive, and personality disorder not otherwise specified.

Three participants classified Ds received no diagnosis of psychopathology. Interestingly, the qualitative SCID-I summary reports indicated that each of these individuals displayed an unusually restricted interpersonal style. In two of these three cases, participants had denied virtually all symptoms queried on the SCID interview, which is a highly unusual circumstance when interviewees provide forthright responses, leading the interviewer to question the validity of the diagnosis of no psychopathology (these questions were recorded before the AAI was administered). It is of note that the Dismissing category is assigned to individuals whose AAI interviews indicate a current attempt to limit the influence of attachment relationships and experiences. These interviewees frequently emphasize independence and normality in descriptions of their early relationships. There is often an idealization of the parents with few episodic memories to support their globally positive descriptions. Speech and affect of these subjects are limited, and their memories are sparse. When caregivers are not available for love and support, a child may redirect attention to non-attachment related experience, often to objects or events in the environment. In adulthood, this pattern of interaction may contribute to a lack of memory for attachment-related events, emphasis on independence, and denial of feelings of needing, or missing the relationship of others (Dozier & Lee, 1995; Koback & Scceery, 1988). It also appears that dismissing attachment may be associated with restrictions in reports of current emotional distress.

Pianta, Egeland, and Adam (1996) reported a study including the AAI and MMPI-2, an empirical measure of self-report for psychiatric symptoms, in 110 economically disadvantaged women. The results of this study illustrate potential effects of dismissing attachment on endorsement of psychological distress and symptoms. Women in the Dismissing (Ds) group endorsed the lowest levels of anxiety-related symptoms, compared to
women in the Autonomous and Preoccupied groups. Women with Dismissing attachments also had unusually high scores on masculinity compared to test norms, indicating endorsement of statements emphasizing strength and independence.

Although only five of eight subjects are involved, the findings in this study suggest further that dismissing attachments also may be associated with difficulties in maintaining typical patterns of interpersonal relationships. Personality disorders involve dysfunctional patterns of interpersonal assessment, appraisal, and interaction. Sadly, dismissing adults are thought to be poor candidates for therapeutic intervention because they have little insight, report few symptoms, and often find it difficult to establish a meaningful relationship with the therapist (Dozier, 1990).

**Preoccupied attachment.** The Preoccupied classification, along with the Cannot Code (CC) classification, has been strongly over-represented in clinical samples (Van IJzendoorn, 1995). In this community sample, only four participants were classified Preoccupied. Of those four subjects, all had a diagnosis of current psychopathology. Three had Axis I or co-morbid Axis I and II mood disorders and 1 was diagnosed with an Axis II personality disorder.

In the AAI, preoccupied subjects are unable to manage the boundaries of the discourse task. They often bring to the current task displaced anger from childhood events, irrelevant information, a diffuse self-concept and a notable inability to reflect upon their experience. They frequently seem to be reliving the affective experience of historical events with little consciousness of the current discourse task. Despite a small sample size, the findings from this study suggest that these adults also may be at risk for affective disorders.

**Unresolved regarding trauma or loss.** U discourse is noted on one or both of two scales: unresolved loss and unresolved physical and/or sexual abuse. In the AAI, the interviewee is asked specific questions concerning events related to the experience of loss and abuse in childhood and adulthood. Responses to these queries that evidence significant lapses in reasoning, discourse, or behavior meet criteria for unresolved. In this sample, two-thirds of women who provided discourse labeled unresolved also received diagnosis of psychopathology, both Axis I and Axis II.

The suggestion that lack of resolution of loss or abuse may be associated with psychopathology is not a novel one. Breuer and Freud (1957) held that traumatic events, when remembered and discussed with the experience of full affect, brought relief from pathological symptoms. However, in many cases they found that the patient was genuinely unable to recollect the traumatic event and had no suspicion of the causal connection between the real event and the pathological phenomenon. From 1896 to 1906 Freud’s understanding of the factual realities of trauma and its contribution to pathological symptoms underwent a critical transformation. He shifted his attention from memories of actual events to the fantasies expressing unconscious infantile wishes (Schimek, 1975). In light of current research with the AAI, the pre-analytic perspective, that is, the effect of memories of actual events in the development of psychopathology may merit new consideration (see also Stalker & Davies, 1995).

In their writings, Breuer and Freud referred mainly to sexual trauma. However, Bowlby emphasized that the loss through death of an important attachment figure may contribute significantly to the development of psychopathology, particularly to the development of detached, dissociated, or constricted emotions (Bowlby, 1980).

To understand what the prevalence of unresolved loss and abuse might be in a community population, we reviewed the AAI transcripts in this study for mention of these events. All but
two of 60 participants had experienced the loss of important attachment figures either as a child or as an adult and 12 of those 58 (20% of 60) revealed unresolved loss. Thirty of the 60 women (50%) had experienced physical and/or sexual abuse and 10 of those 30 (17% of 60) were unresolved with regard to these abuse experiences. It is notable that all 10 subjects with unresolved abuse were diagnosed with psychopathology. Of the 22 unresolved subjects, six were classified U/F, four were classified U/Ds, nine were classified U/E, and three were classified U/CC.

Women with transcripts termed unresolved were more likely to have a diagnosis of psychopathology when unresolved status was accompanied by Ds, E, or CC attachment. Subjects with U/F codings were significantly less likely to have psychopathology than U/Ds, U/E, or U/CC subjects (see Table IV). We suggest that security may provide individuals with resiliency and integration that is protective from maladaptive pathological states of mind that might otherwise arise from the unresolved state of mind.

AAI classifications reveal differences in discourse style, in access to attachment memories and in ability to coherently discuss past attachment experience. Consistent with other research, psychopathology was associated with increased likelihood of non-autonomous patterns of attachment. Although AAI classifications do not correlate one-to-one with DSM-III-R diagnoses, the results of this study provide an intriguing suggestion that Dismissing attachment may be associated in particular with increased risk of personality disorders and Preoccupied classifications with increased risk of mood and anxiety disorders.

In summary, for this study the AAI and SCID were administered to 60 women from a community sample to address the question of whether adult psychopathology may be related to insecure mental representation of attachment. Results suggest that psychopathology was associated with insecure attachment, as classified in the AAI, in this community sample. Secondary analyses suggested that dismissing attachment may be associated with Axis II Personality Disorders, while preoccupied classification may be associated with affective and anxiety disorders. Of note is the evidence that underlying secure attachment within the unresolved classification is associated with reduced probability of psychopathology, suggesting that secure state of mind with respect to attachment may provide a subject with insight and resilience to protect against psychopathology, despite the impact on function associated with both loss and abuse.

This study supports the premise from attachment theory that early interaction with caretakers builds patterns of interpersonal expectations and behavior, as well as regulation of affect. These patterns, in combination with temperament, context, and experience, become the basis for cognitive strategies, interpersonal interactions, and social relationships. We see in secure, dismissing, and preoccupied attachments examples of genres of mental organization as revealed in discourse patterns. This mental organization may predispose a person to realistic, goal-oriented ego functioning in which self and others are valued, or to more dysfunctional interpersonal patterns.

Alternate explanations of our results are, of course, possible. Current psychopathology, including depression, is known to cause retrospective distortion of the recollection of life events. Whether current psychopathology may also influence the formal properties of discourse about those recollections is not known. Some patterns of psychopathology observed in this sample, such as affective and anxiety disorders, are now understood to have a genetic component, at least in part. Conceivably, the development of insecure attachment in childhood could be an early phenotypic manifestation of the genotype, which is later expressed as psychopathology in adulthood. It is hoped that this initial study will be
replicated in other populations, and that future research will distinguish among the possible explanations.

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